Personal Values and Electronic Media
Adoption & Postadoption in Urban China

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
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ABSTRACT

This thesis examines the adoption and postadoption of television, audio cassette recorder/player (ACR), telephone, and pager. Its objective is to reveal the relationship between these four media and the social and psychological characteristics of their adopters.

This study is a direct response to the problem of the pro-innovation bias and neglect of implementation in the field of innovation diffusion and/or characteristics research. Shijiazhuang City, China was chosen precisely because it was an ideal place to study the kind of adoption and postadoption suggested above. A total number of 548 respondents (fathers and grandfathers) were randomly selected for a survey research from two generation families in Chang An District, Shijiazhuang City.

This study shows that the earlier adopters do not have the highest degree of commitment to the media. The finding suggests that there are no grounds to ignore the postadoption for media characteristics research. This research also demonstrates that there is not even a generalized innovator within a product category (media). This finding not only enables us to reject the assumption that all innovations are equivalent units in a more specific level but also justifies the need for research, especially on subjective innovation characteristics.

This research shows that the four media have to be classified by both sociological variables and personal values directly or indirectly. It is a surprise to find that television is characterized by achievement oriented values for the father generation in Shijiazhuang City. This suggests that television is perceived differently across societies. However, the findings on the telephone are consistent with the Western experience. That is, the telephone is either job- or business-related
and is characterized by achievement-oriented values in its early stage of diffusion. Similarly, while the ACR is characterized by enjoyment oriented values, the pager is more identified by materialism oriented success. The subjective characteristics of media, however, can only be identified under certain conditions. It is found that not only the two generations perceive the four media differently but also the ability to pay, intergenerational mobility, education, and occupational prestige directly affect the adoption and post adoption to some degree.
ACKNOWLEDGEMENTS

I appreciate this opportunity to acknowledge my gratitude to the people who have helped me develop and finish this thesis. First, I would like to thank my two supervisors, Professors William Michelson and Edward Silva for their invaluable advice and encouragement during the project. My thesis proposal could not reach my committee members in April 1996 without Professor Silva’s generous help. Thanks to Professor Silva for his wisdom, patience, kindness, and goodwill. After Professor Michelson came back from his sabbatical in 1996, I realized that what I intended to do was quite similar to what he had done at Harvard University more than thirty years ago. However, this should not be a surprise. Rather, the similar approach and interest are mainly a result of being his student, teaching assistant, and research assistant for the past few years. Professors Michelson’s direction, good spirits, insightful comments, and keen editorial eyes have made this thesis a much better product. Thanks to Professor Michelson for not only his concern about my thesis but also his guidance and support during my time in the Ph. D. program at the University of Toronto.

The completion of the thesis was also greatly facilitated by having Professor John Hannigan and Robert MacKay as committee members. I am very grateful to them for the speed with which they read the drafts and the thought-provoking feedback they supplied. I am also indebted to my external examination committee for making helpful comments and suggestions. Special thanks to Dr. Paul Reed for his sound advice and constructive criticism.

Thanks to Dr. Shi Chen and Dr. Guang Xia for helping me translate the questionnaire from English to Chinese. Thanks to Professor Sing Lau at Hong Kong Baptist University, Professor Yanjie Bian at the University of Minnesota, and Professor Izak Benbasat at the University of British Columbia for sharing their questionnaire items and/or scales with me.

Thanks also to the Centre for International Studies and School of Graduate Studies, University of Toronto which provided a much-needed travel grant for the survey.

The survey I conducted in Shijiazhuang City, China, in 1996 enjoyed the kind cooperation and generous support of 19 elementary school principals. Without their assistance, this survey would be impossible. Among the 19 principals, I am very grateful to principal, Shuqin Lui, for introducing me to the other principals in Chang An District. Special thanks to Zhenyu Wang who not only opened the doors of elementary schools for me but also provided much-needed moral support during my visit to Shijiazhuang City. My deep gratitude also goes to all of the pupils and
their fathers and grandfathers who completed the questionnaires. I shall remember the encouraging and kind words some of the pupils and fathers wrote to me along with the questionnaires.

My family and friends are indispensable to my acadmic life at the University of Toronto. Thanks to my wife, Nan Wang, for her assistance and understanding. Thanks to my brother, Bocai, for helping me with the data collection. Bertha Yetman has been truly supportive since I applied for the Graduate School at the University of Toronto in 1991. Thanks to Bertha for being a wonderful friend. I am extremely grateful to my childhood friend, Siqi Zhao. Siqi and his family were always there for me whenever I needed them during my 1996 survey in Shijiazhuang City. Siqi read my questionnaire and provided valuable suggestions and did his best to help me contact some elementary schools.

In retrospect, as a student who has an engineering background, I particularly appreciate the help I have received from many professors and classmates during my graduate career in sociology at the University of Toronto. Among them, I am especially grateful to Professor Nancy Howell, Professor Lorna Marsden, and Professor Wsevolod Isajiw for their understanding, encouragement, and concrete support.
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INTRODUCTION

This thesis examines the diffusion (adoption) and implementation (postadoption) of television, audio cassette recorder/player, telephone, and pager in urban China. The objective is to reveal the relationship between the four electronic media and social and social psychological characteristics of their adopters.

The study of the spread of use and/or ownership of new technology is known as the study of technological diffusion. The diffusion process is perhaps one of the most widely researched and best documented social phenomena. Research on the diffusion of innovations has resulted in a body of literature consisting of several thousand articles, books, and assorted publications (see Rogers 1995). To date, research findings on the diffusion process have been reported in nearly two dozen distinct academic disciplines, including geography, sociology, economics, marketing, and education (Mahajan and Peterson 1985). Nevertheless, past diffusion research has been not only devoted primarily to the study of the adoption and diffusion of successful innovations alone in spite of the high rate of new product failure in the economy (Ram 1987) but also mainly based on the assumptions that (1) all innovations are equivalent units; (2) an innovation should be diffused and adopted by all members of a social system; (3) people would adopt an innovation as long as they are exposed to awareness-knowledge about the innovation (see Karshenas and Stoneman 1995; Rogers 1995). This is the so-called pro-innovation bias.

Successful innovations mean that they are beneficial to all to some extent. A concentration of study of adoption and diffusion of successful innovations enhances the assumption that all innovations are equivalent units. Thus, the pro-innovation bias is an oversimplification, and a dangerous one (Rogers 1995). To overcome the pro-innovation bias means that we have to reject the assumption that all innovations are equivalent units. Therefore, several leading diffusion scholars have been arguing that it is necessary to study innovation differences (Rogers and Shoemaker 1971; Rogers 1983, 1995; Gatignon and Robertson 1985, 1991; Ram 1987; Sirvastava, et al. 1985; Mahajan, Muller, and Sirvastava 1990).

To study innovation differences means that it is necessary to know something about implementation or postadoption. It has been suggested that "operationalizing innovation by the extent of implementation comes closer to capturing the variations in behaviour that we really want to explain" (Downs and Mohr 1976, p.709). Nevertheless, the dichotomous yes/no adoption decisions have been the focal point of innovation characteristics research studies. Tornatzky and
Klein's (1982, p.33) meta-analysis reveals that "almost all of the studies examined the relationship of innovation characteristics to adoption, not adoption and implementation, of the innovation."

As a response to the problem of pro-innovation bias and neglect of implementation, this thesis studies the adoption and postadoption of four electronic media (television, audio cassette recorder/player, telephone, and pager) and compares them in terms of their relations with the social and social psychological characteristics of adopters. Substantively, this involves a survey research on the diffusion and implementation of *Television, Telephone, Pager, and Audio Tape Recorder* in Shijiazhuang City, Hebei Province, People’s Republic of China. More specifically, there are two main research objectives:

1. Differentiate the electronic media by revealing how each medium is connected to its adopters in terms of personal value orientation if there is neither a generalized innovator nor a universal user across the electronic media. That is, the attributes of a medium may be indicated by its adopters' personal values.

Although personal values are closely related to sociological characteristics such as occupation, it would be naive to believe that personal values alone would account for all the variations as far as the media adoption and postadoption are concerned. Therefore, I shall also:

2. Illustrate the effects of sociological factors on the media adoption and postadoption.

This thesis starts with the question: why and how the pro-innovation bias is developed in the main stream of diffusion research. In Part 1, I try to find not only the answer for the question but also a theoretical solution for the problem by reviewing the major models of diffusion research. Following the review, a theoretical model is suggested and justified with respect to overcoming both the problems of pro-innovation bias and lack of sensitivity in the significance of its implementation.

The second part explains the methods of the present study. This includes an explanation why urban China should be an ideal place for the data collection. This part also gives a detailed account of definitions and transformation of variables used in the quantitative analysis.

The third part deals with the data analysis. In this part, I shall first empirically answer the questions (1) whether the media adoption is related to the postadoption; (2) whether there are generalized innovators. The remaining part focuses on revealing the differences among the four media in terms of personal values, specific reasons, and sociological variables.

The last part discusses the empirical findings.
PART I
LITERATURE REVIEW AND RESEARCH QUESTIONS
Introduction to Part I

Whether there is a generalized innovator across electronic media, or how a medium is used by its adopters, is an empirical question. However, it is necessary to examine the theoretical implications of those questions before discussing the two major research objectives stated earlier. In Chapter 1, the theoretical justification for identifying whether there is a generalized innovator or all innovations are equivalent units, and revealing how a medium is used is elaborated by reviewing (1) Rogers’ communication model and (2) the contribution of rural sociology to diffusion research. While Rogers’ model and the sociological tradition are featured in this Chapter, other significant arguments on diffusion research are also examined. Indeed, the research question of this particular project was generated precisely because of the implications of Rogers’ model and some of the arguments around Rogers’ model.

Based on the literature review, a theoretical model is suggested to summarize the possible relations between the social and social psychological factors and media adoption and postadoption in Chapter 2. Moreover, Chapter 2 also explains and operationalizes all the variables included in the model. Following the discussion and operationalization, specific hypotheses are suggested.
The purpose of this Chapter is to examine whether the traditional diffusion models are adequate to the present research. In so doing, I identify the relevant problem and suggest the theoretical solution for it by reviewing (1) Rogers' Communication Model, (2) the Sociological Tradition, and (3) other significant arguments on diffusion research. Rogers' model is emphasized not only because his approach is rooted in the sociological tradition but also because his theory has been dominating the diffusion research since the 1960s.

1. Rogers' Diffusion Theory: A Theory of Communication

i. The Model

Fliegel (1993) observes that Rogers' (1962) book on diffusion and its later successors probably influenced the direction taken by diffusion research more than any other single factor. To Rogers, diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. That is, diffusion is regarded as a particular type of communication in which the message content that is exchanged is concerned with a new idea. "The essence of the diffusion process is the information through which one individual communicates a new idea to one or several others" (Rogers 1995, p.18).

Rogers' model is based on the observation that research findings from different fields have been suggesting that diffusion usually follows a sigmoid time path.
Naturally, the general question that initially requires an answer is why it is that the adoption of new technology takes time. Therefore, the major independent variables concerned are communication oriented. They include *earliness of knowing about an innovation by members of a social system, rate of adoption of different innovations, innovativeness of members of social system, opinion leadership in diffusing innovations, diffusion networks, and communication channel use* (see Rogers 1995).

According to Rogers (1995), communication channels include mass media and interpersonal channels. That is, the interpersonal network is crucial to subjective evaluations of a new idea because diffusion occurs within a social system. A social system has its structure. Rogers (1995) argues that an informal type of structure exists in the interpersonal networks linking a system's members, determining who interacts with whom and under what circumstances. Different communication structures mean different adopting behaviour. For instance, research findings suggest that earlier adopters of an innovation, when compared to later adopters, are characterized by more formal education, higher social status, more social participation, more highly
interconnected in the interpersonal networks of their system, and greater exposure to interpersonal communication channels (Midgley 1987; Rogers 1995).

Different communication structures mean that individuals do not share the same degree of innovativeness. In other words, the individuals in a social system do not adopt an innovation at the same speed. Therefore, they can be classified into adopter categories on the basis of when they first begin using a new technology. Rogers' (1995) fundamental assumption is that the numbers of people falling into each category will approximate a normal distribution. After reviewing more than 500 research studies, Rogers and Shoemaker (1971) proposed a simple scheme that divides the market into five "types" of consumers, ranked from those who adopt the innovation first to those who come last to the adoption phase.

**Figure 1.2**

Adopter Categorization on the Basis of Innovativeness

The innovativeness dimension, as measured by the time at which an individual adopt an innovation or innovations, is continuous. The innovativeness variable is partitioned into five adopter categories by laying off standard deviations from the average time of adoption ($\bar{x}$).

Source: Rogers 1995.

**ii. The Pro-innovation Bias and Assumption that There is a Generalized Innovator across Product Categories**

The categorization scheme proposed by Rogers has its theoretical appeal. As Mahajan, Muller, and Srivastava (1990) observed, the proposed distribution has a number of advantages:

1). It is easy to use;
2). Because it offers mutually exclusive and exhaustive standardized categories, results can be compared, replicated, and generalized across studies;
3). Because the underlying diffusion curve is assumed to be normal, continued acceptance of the product can be predicted and linked to the adopter
categories.

Although the proposed distribution is powerful in a way, it has inherent difficulties. The normal distribution is based on the assumption that 100 percent of the members of the social system under study will eventually accept the product innovation. In other words, these categories have full meaning only when applied to successful innovations (Rogers and Eveland 1978). "This assumption is not in keeping with marketers' experiences, since very few, if any, products fit the needs of all potential consumers" (Schiffman and Kanuk 1984, p.512). Nevertheless, past diffusion research has been devoted primarily to the study of the adoption and diffusion of successful innovations alone in spite of the high rate of new product failure in the economy (Ram 1987).

The problem with the overwhelming focus on the adoption and diffusion of successful innovations is that it enforces the following assumptions (see Karshenas and Stoneman 1995; Rogers 1995):

1. all innovations are equivalent units;
2. an innovation should be diffused and adopted by all members of a social system;
3. people would adopt an innovation as long as they are exposed to awareness-knowledge about the innovation.

This is the so-called "pro-innovation bias". The pro-innovation bias naturally implies the existence of a generalized innovator across product categories. A generalized innovator across product categories means mindless consumers rather than adopters who actively and discriminatingly seek manmade products to satisfy their needs. Indeed, the pro-innovation bias is regarded as one of the most serious shortcomings of diffusion research. "The net result of the pro-innovation bias in diffusion research is a failure to learn certain very important aspects of diffusion; ..." (Rogers 1995, p.100). It is safe to assume that "a failure to learn certain very important aspects of diffusion" means a failure to reveal how a particular innovation is interactively related to certain sociological properties.

According to Rogers (1983, 1995), the pro-innovation bias is rooted in the earlier diffusion researches of rural sociology. Therefore, the proposed research questions may be further elaborated by tracing the earlier research on diffusion of agricultural innovations.

\footnote{Rogers (1995) acknowledges that his fivefold classification scheme is not exhaustive. But, he argues that the problem of incomplete adoption or non-adoption could be eliminated when a series of innovation are combined into a composite innovativeness scale.}
2. The Contribution of Rural Sociology

Rogers (1983, 1995) credits the earlier diffusion studies of rural sociology (e.g., Ryan and Gross' 1943 research on the diffusion of hybrid-seed corn) with forming what came to be known as the classical diffusion paradigm. The innovations (such as the hybrid-seed corn) investigated during the earlier time have "extremely high degree of relative advantage." In other words, those innovations are considered as beneficial to all (or almost all) members of a social system (Rogers 1983, 1995). Rogers (1983, 1995) observes that this is the root of the pro-innovation bias of diffusion research.

Because the field of diffusion research in the United States began with highly profitable agricultural innovations during the 1940s and 1950s, diffusion research was conducted to evaluate and improve "Agricultural Extension services, so that research on agricultural innovations could be more rapidly communicated to farmers and thereby improve the productivity of US farming" (Valente 1993, p.31). That is, "Diffusion research is inherently policy-oriented. The diffusion paradigm emerged in rural sociology to promote agricultural research results to farmers" (Valente 1993, p.31). More specifically, we have:

![Figure 1.3](image)

A Widely Accepted Approach to the Adoption of Agricultural Innovations

Source: Fliegel 1993, p.15

Hence, it becomes understandable that the classical diffusion studies mainly ask the following questions:
Which variables are related to innovativeness?
What is the rate of adoption of an innovation?
What factors (like the perceived attributes of the innovation) explain the speed of adoption?
What role do different communication channels play at various stages in the innovation-decision process?

The point is that the dominant tendency in diffusion research was clearly developed in the direction of treating all farm innovations as equivalent units with an emphasis on working toward better measures of farmers' presumed general propensity to adopt improved technology. That is, the research focus is on individual farmers' decision making behaviour with respect to technology assumed to be beneficial to them (Fliegel 1993, p.29). Therefore, particular attributes of innovations were not really emphasized in the "Widely accepted Approach to the Adoption of Agricultural Innovation." While a few diffusion studies have tried to define attributes of innovations, they mainly focus on the following characteristics:

1. Relative advantage
2. Relatively simple, easy to understand and use
3. Compatibility

According to Fliegel's (1993) review, particular attributes of innovations began to receive attention with the initiation of research on diffusion in agriculture. In fact, some researchers questioned whether all the innovations could be treated as equivalent units almost half a century ago (see Fliegel 1993, p.36). It was proposed that the measurement of adoption behaviour could be improved by classifying entire innovations (see Fliegel 1993). Nevertheless, "the emphasis on attributes of an innovation or types of innovations remained somewhat peripheral to the mainstream of activity, ..." (Fliegel 1993, p.6). The consequence is that "an overly close copying of the classical diffusion paradigm by later researchers who were often investigating diffusion of innovations of a quite different type led to inappropriate methodologies and mistaken theoretical thrusts" (Rogers 1995, p.54).

In sum, the classical paradigm was developed based on innovations such as hybrid-seed corn that was profitable for all the farmers. This very fact justifies the need to investigate a much wider range of innovations. In so doing, we may find that it is hard to ignore either innovation attributes or innovation implementations as long as we are interested in explaining why a particular

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2The assumption here is that an innovation better than what it is intended to replace, advantageous to the adopter relative to the old way of doing things, will be adopted relatively quickly.
innovation is perceived beneficial by some but not by others.

3. Solution

Thus far, I have reviewed the communication model and contribution of rural sociology. The simple point is that neither all of the innovations have an "extremely high degree of relative advantage" nor do they demonstrate the same "relative advantage" to consumers who share different sociological or social psychological characteristics. Therefore, we have no ground to (1) assume that people would adopt an innovation as long as they are exposed to awareness-knowledge about the innovation; (2) believe that all innovations are equivalent units; (3) ignore this implementation (usage).

i. Needs and Desires

As just mentioned above, the pro-innovation bias implies that people would adopt an innovation as long as they are exposed to awareness-knowledge about the innovation. Understandably, students of diffusion have been focussing on areas such as communication channels and messages. Other scholars of diffusion, on the other hand, insist that an individual gains awareness knowledge only through behaviour that must be initiated, and that awareness is not just a passive activity. That is, individuals will seldom expose themselves to messages about an innovation unless they first feel a need for the innovation, and that even if such individuals are exposed themselves to these innovation messages, such exposure will have little effect unless the individual perceives the innovation as relevant to his needs and as consistent with his existing attitudes and beliefs (Hassinger 1959). That is, people recognize themselves in their commodities (Carlton 1995).

Although the individualistic approach carries the argument to another extreme, its emphasis on needs and values should be appreciated because subjective motivation may be central to conduct

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3 See Coleman et al (1966) and Rogers (1983) for sociological examples.
(see Weber 1978, p.12; cf. Alexander 1987; Wallance 1994). For instance, Fischer (1992, p.150, 152) observes that telephone diffusion in the United States was driven by demand, rather than solely by marketing. In other words, "[p]eople decided whether or not to subscribe based on their tastes and needs" (Fischer 1992, p.261). Indeed, consumption is about needs (Carlton 1995). This study shares the assumption that needs come first as far as adopting electronic media is concerned.

The realization that consumption is about needs is necessary but not sufficient for overcoming the pro-innovation bias. We need to know not only whether an innovation is desired but also why it is preferred by some but not by others. Therefore, we have to question the assumption that all innovations are equivalent units.

ii. Innovation Characteristics

Although we have no ground to assume that all innovations are equivalent units, it is nevertheless an empirical question. Therefore, it is necessary to gather measures of innovation characteristics across several innovations, not a single innovation at a time. Rogers (1995) suggests that the pro-innovation bias may be countered by taking the following measures:

1. Alternate research approaches to after-the-fact data gathering about how an innovation has been diffused should be explored. It is possible to investigate the diffusion of an innovation while the diffusion process is still underway.

2. Diffusion researchers should become much more questioning of, and careful about, how they selected for investigation. In general a much wider range of innovations should be studied in diffusion research.

3. It should be acknowledged that rejection, discontinuance, and reinvention frequently occur during the diffusion of an innovation, and that such

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4 But Giddens (1984) argues that motives tend to have a direct purpose on action only in relatively unusual circumstances, situations which in some way break with the routine. Rubinstein (1977) also indicates that the simple actions can be thought of as unintentional. Nevertheless, adopting telecommunication means is neither a routine oriented nor a simple action. Rather, it is an intentional action. In other words, this research deals mainly with "reason actions." such actions are directly enacted by motive forces.

5 More recently, Turner (1987) argues that motivational dynamics have to be brought back into the mainstream of sociological theory and research.

6 Interestingly enough, Fischer's finding is consistent with one of the main research traditions in mass communication studies, the use and gratification approach. I will discuss the use and gratification approach in detail later.

7 Here, it is necessary to emphasize that this particular study only deals with electronic communication technologies. In other words, I am not suggesting that all innovations could be quickly diffused based on the tastes and needs of consumers. Rather, whether a technology needs to be heavily marketed or not may depend upon the nature (attributes) of that technology (see Rogers 1995 for concrete examples).
behaviour may be rational and appropriate from the individual's point of view, if only the diffusion scholar could adequately understand the individual's perceptions of the innovation and of his or her own situation, problems, and needs.

4. Researchers should investigate the broader context in which an innovation is diffused, such as how the initial policy decision is made to diffuse the innovation to members of a system, how public polices affect the rate of diffusion, how the innovations and to the existing practice(s) that it replaces, and how it was decided to conduct the R&D that led to the innovation in the first place.

5. It is necessary to increase our understanding of the motivations for adopting an innovation.

We need to investigate the diffusion of an innovation while the diffusion is still underway because it helps us avoid a concentration on successful innovations. Similarly, because we assume that not all innovations are equivalent units, it is crucial to know the differences among innovations in terms of their attributes. That is, "a much wider range of innovation" and "the motivations for adopting an innovation" have to be studied to overcome the pro-innovation bias. Nevertheless, it seems that Rogers is more concerned with how the properties of an innovation affect its rate of adoption than how one innovation is different from another in respect to the characteristics of adopters.

Rogers (1995, p.28) insists that "we need a standard classification scheme for describing the perceived attributes of innovations in universal terms. We would then not have to study each innovation as a special case to predict its rate of adoption." Thus, it becomes understandable that Rogers (1995) is mainly concerned about the attributes of an innovation such as relative advantage, compatibility, complexity, trialability, and observability.

The degree of relative advantage is often expressed as economic profitability, social prestige, or other benefits (Rogers 1995). By compatibility, Rogers (1995, p.224) refers to "the degree to which an innovation is perceived as consistent with existing values, past experiences, and needs of potential adopters." Like social prestige, compatibility is also subjectively oriented. Here, it is necessary to note that the "existing values" are largely socio-cultural or societal values. Hence, it becomes understandable that "a majority of the compatibility studies did not actually measure compatibility in any direct way, but simply inferred that the innovation was compatible to the potential user group" (Tornatzky and Klein 1982, p.38). In other words, diffusion research on compatibility has mainly focussed on whether a particular innovation is compatible with the
culture of an ethnic group or a country (see Rogers 1995).

While it may be acceptable to classify innovations in broad terms if one's primary concern is aggregate such as the rate of adoption, a broad classification becomes inadequate when one wants to know why some innovations are perceived differently by their adopters. According to Downs and Mohr (1976) and Susskind and Zybkow (1978), the weakness of Rogers and Shoemaker's (1971) classification of innovation attributes is that it says nothing about the importance of "subjective" factors. The subjective factors have to be emphasized for they are crucial in explaining why an innovation is rarely the same thing to two organizations. Therefore, it is necessary to make the "distinction between the characteristics whose influence is independent of the nature and circumstance of the potential adopter and those whose influence depends on certain adopter characteristics" (Susskind and Zybkow 1978, p.130). According to Susskind and Zybkow (1978), the former are qualities of the innovation itself. Therefore, it is called "adopter-independent." For the later, the nature and circumstance of the adopter are intervening variables in the determination of their influence. That is, it is "adopter-dependent." Nevertheless, although Susskind and Zybkow (1978, p.141) suggest that the concepts of "relative advantage" and "compatibility" embrace a considerable complexity and "will probably have to undergo further refinement as the diffusion-research field develops," they acknowledge that Rogers and Shoemaker's (1971) classification offers a sound basis for proceeding as a set of adopter-dependent characteristics of innovation. Indeed, Marshall's more recent study (1990) shows that "relative advantage", "compatibility", and "complexity" are powerful predictors of implementation level as far as using online information technology by health professionals is concerned.

Downs and Mohr (1976) also point out that the traditional diffusion model failed to emphasize the distinction between objective and subjective characteristics. According to Downs and Mohr (1976), there are two kinds of attributes, Primary and Secondary. Primary attributes are seen as inherent to the innovation or technology and invariant across settings and organizations; secondary attributes are defined as perceptually based (or subjective) characteristics. The significance of the distinction is that

When we recognize that [culturally] different organizations classify the same innovation into different categories, and also that determinants vary in existence or strength depending upon the category into which the innovation is classified, we are by these very facts recognizing the existence of

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8This is Downs and Mohr's argument. The empirical evidence for the argument is from Winter (1968).
interaction [italic mine]. Further, the interaction may be built into our designs and used to advantage (Downs and Mohr 1976, p.703).

Rogers and Eveland (1978, p.276) do not believe that it is necessary to make the subjective-objective distinction because "it matters little whether or not the innovation has a great deal of 'objective' advantage, or judged by experts in the field." "What does matter is whether or not the individual perceives the innovation as being advantageous. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption" (Rogers and Eveland 1978, p.276).

Rogers' approach is practical and rewarding. A comprehensive review indicates that from 49 to 87 percent of the variance in the rate of adoption is explained by the five attributes (Rogers 1995). The point is, however, if we do not make the subjective-objective distinction, we may have difficulty to understand adopting behaviours such as why culturally different organizations classify the same innovation into different categories. In other words, identifying Susskind and Zybkow's (1978) "adopter-dependent" attributes or Downs and Mohr's (1976) "secondary" attributes are necessary as far as either overcoming the pro-innovation bias or illustrating that there is not a generalized innovator across product categories is concerned.

In short, the innovation adoption is very relevant to needs. Because not every innovation fits the needs of all potential consumers, we have no ground to assume that all innovations are equivalent units. Therefore, it becomes crucial to study the innovation attributes. Though one's primary concern is adoption or rate of adoption, it is necessary to emphasize the "adopter-dependent" attributes in order to overcome the pro-innovation bias and illustrate the differences among innovations.

iii. Sociological Characteristics

To emphasize subjective characteristics (adopter-dependent attributes) does not mean that sociological factors can be ignored. When we state that neither all of the innovations have "extremely high advantage" nor they demonstrate the same "relative advantage" to consumers who share different sociological and/or social psychological characteristics, we have already admitted that some of the innovations may be regarded as either beneficial to all or having higher degree of "relative advantage" to certain groups. The point is that the diffusion of innovation that is beneficial to all may be a direct function of income and/or wealth while the diffusion of innovation that is biased towards certain groups may be better explained by sociological variables such as social prestige. Indeed, influential sociologists from different theoretical backgrounds have either
argued or demonstrated the significance of sociological factors in consumption research.

In the 1950s, Parsons and Smelser (1956, p.223) argued that consumers’ different positions in the class structure of their society make “class and prestige symbolization ... a major area of role involvement for the consumption unit. In so far as the specific items in a family’s standard of living are culturally defined as symbols of class prestige, differential spending on class symbols obtains from class to class.” While Parsons and Smelser’s proposition is very general and can be interpreted in a number of ways, it is clear that it is suggesting that social class and/or symbols of class prestige are very relevant to consumption. More than twenty years later, Bourdieu (1984) took an entirely different approach and showed us that consumers perceived the products offered in the market differently and had developed a structure of tastes as a response to their conditions of existence. In other words, the sphere of consumption is heterogenous because each social class has its specific habits. While it is easy to see the difference between Parsons’ theory and Bourdieu’s approach, it is also clear that they both emphasize the significance of social class as far as consumption is concerned.

But the subjective characteristics and sociological attributes are not necessarily two separated spheres. As Kohn (1963, p.471) argued more than three decades ago:

Members of different social classes, by virtue of enjoying (or suffering) different conditions of life, come to see the world differently - to develop different aspirations and hopes and fears, different conceptions of the desirable.

In other words, it is from participation in a group, or membership of a community that individual come to their distinctive values (van Deth and Scarborough 1995). In sum, the sociological variables are either part of (e.g. social prestige) or related to the subjective characteristics and/or “adopter-dependent” attributes. Thus, it is necessary to illustrate the effects of sociological factors as far as differentiating the electronic media is concerned.

iv. The Significance of Implementation

The emphasis on "adopter-dependent" attributes is necessary. However, it may not be very

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9 For instance, according to Parsons’ theory, it may be argued that the poor will be less likely to save in order to conform to culturally defined expectations of a decent life while the rich will be more likely to save due to their sense of public responsibility as far as consumption is concerned.

10 Bourdieu’s approach is different because it shows class conflicts rather than equilibrium. For instance, according to Bourdieu (1984), differences in consumption patterns are more or less subconscious strategies of classes opposing each other.
meaningful unless we know something about implementation (post-adoption). Nevertheless, dichotomous yes/no adoption decisions have been the focal point of innovation characteristics research studies.\textsuperscript{11} While it may be justifiable for the traditional diffusion model to ignore postadoption to some degree because its primary commitment is predicting and explaining the rate of adoption, it becomes inadequate when the major concern also includes the linking between innovation characteristics per se and characteristics of adopters. In other words, unless we have a good understanding of the relationship of innovation characteristics to adoption as well as implementation of innovation, we may have difficulty fully to reveal the nature of an innovation.

Dichotomous yes/no adoption decisions are inadequate as far as explaining the linkage between innovation characteristics per se and characteristics of adopters is concerned because adoption could be an extremely insensitive measure of innovation (Tornatzky and Klein 1982). Degree of implementation could vary widely across a group of adopting individuals or organizations. For instance, it has been long recognized that early adopters do not have the highest degree of commitment to the innovation in many cases (Downs and Mohr 1976).

A low correlation between adoption and implementation implies that the motive or need for the adoption is different from the one for the use. For instance, all other things being equal, either vanity or some practical reasons may be sufficient for a potential adopter to make a "yes" adoption decision. The point is, unless we know the adopter's commitment to the innovation, we may have difficulty in distinguishing whether the innovation is adopted for practical reasons or vanity. The distinction is significant because it not only allows us to make a more accurate explanation about why a particular technology is adopted but also makes it possible to demonstrate less misleading correlation of innovation characteristics with innovation behaviour. For instance, Tornatzky et al (1980) observe that correlations (between innovation attributes and adoption) of a given magnitude and sign may reverse in sign and change in magnitude when computed relative to implementation. That is, "operationalizing innovation by the extent of implementation comes closer to capturing the variations in behaviour that we really want to explain" (Downs and Mohr 1976, p.709).\textsuperscript{12}

\textsuperscript{11}Tornatzky and Klein's (1982, p.32) meta-analysis reveals that "almost all of the studies examined the relationship of innovation characteristics to adoption, not adoption and implementation, of the innovation."

\textsuperscript{12}The issue of postadoption is much more direct to the students in consumer behaviour. More recently, Gatignon and Robertson (1991, p.325) suggest that it is useful to focus on postadoption and satisfaction. This suggests that adoption should be measured not only by initial commitment but also by width (the number of applications or
It may be important to note that when I argued that there was a lack of implementation research in diffusion literature, I was not suggesting that there would be no research on media use in general. I was merely suggesting that very few studies, if any, examined the relationship of innovation characteristics to adoption as well as implementation of the innovation. In fact, mass media use has been a major research topic in communication studies.

Contrary to the diffusion model of communication, theories of mass media audiences are almost exclusively devoted to media implementation. These theories often concern the question of what people do with the media. One of the central and comparably stable elements of major mass communication theories and research is the notion of "an active audience". That is, it is assumed that audiences are, to varying degrees, active participants in media use, rather than purely passive or reactive objects. For instance, the use and gratifications approach to mass communication research examines what people do with the media. As Katz, Blumer, and Gurevitch (1974, p.20) defined the approach, it is concerned with:

(1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media or other sources which lead to (5) differential patterns of media exposure (or engagement in other activities), resulting in (6) need gratifications and (7) other consequences, perhaps mostly unintended ones.

That is, while the traditional diffusion model of communication focuses on explaining or predicting the rate of diffusion, the theory of media audiences primarily concerns how people are related to mass media. As stated at the beginning, one of the objectives of the present study is to classify the electronic media by revealing how each medium is connected to its adopters in terms of personal value orientation. Therefore, although the use and gratification approach does not completely fit in with the requirements of the present study, it helps elaborate why subjective factors are significant to understand the nature of a medium.

In sum, it is necessary to emphasize innovation implementation or postadoption in diffusion research because (1) the strength and direction of a correlation between adoption and

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difference of usage) and depth (the amount of usage) of adoption. Width and depth may be predictive of purchasing additional units, enhanced products, or complementary products (such as peripherals or software for computers, or programming for VCRs).
implementation may tell us whether the motive or need for the adoption is different from the one for the implementation, (2) the nature of use reveals why it is possible that an innovation is beneficial to some but not to others.

4. Summary

As just reviewed, although the traditional communication model has laid the foundation for diffusion research, its framework is inadequate for sociological research because of its preoccupation with explaining or predicting the rate of adoption. The source of the inadequacy is primarily from the so-called pro-innovation bias and neglect of innovation implementation.

In order to avoid the pro-innovation bias, it is necessary to:

(1) Investigate the diffusion of an innovation while the diffusion process is still underway;
(2) Study a much wider range of innovation;
(3) Identify the "adopter-dependent" attributes of innovation;
(4) Reveal the reason for implementation.

While an in-process diffusion research design allows us to investigate less successful as well as more successful cases of innovation diffusion, a study of a wider range of innovation enables us to make the necessary comparison. The comparison becomes significant when it involves "adopter-dependent" attributes of innovation. This means that we have to identify the perceptually based (or subjective) innovation characteristics. In so doing, we come to realizing that operationalizing innovation by the extent of implementation comes closer to capturing the variations in behaviour that we really want to explain. In the next chapter, a theoretical framework is suggested for the present study to implement these points.
Chapter 2
The Congruence Perspective and Hypotheses

Based on the literature review of Chapter 1, this chapter suggests a theoretical model that serves to guide the analyses reported in subsequent parts or chapters. Figure 2.1 depicts the relationships between the independent variables (values, reasons, and sociological factors) and dependent variables as well as the relationship among the independent variables (See next page). As illustrated by the figure, the model is a response to the problem of pro-innovation bias and neglect of implementation. That is, it not only investigates several technologies simultaneously but also emphasizes subjective factors and innovation implementation.

This chapter consists of two sections. The first section discusses the adopted perspective and its basic assumptions. The second section elaborates the model, operationalizes the variables and hypothesizes specific relationships between the variables for statistical testing.

1. The Congruence Perspective and Assumptions
i. Perspective

Though the traditional diffusion model of communication and use and gratification approach differ sharply from each other in terms of their treatments of innovations, they all emphasize that an innovation or medium has to meet the requirements (or needs) of adopters or audiences in order to be diffused or implemented. For instance, while Rogers' model (1995) concerns whether a particular innovation is compatible with the culture of an ethnic group or a country, the use and gratification approach insists that people actively select and use communication sources and messages to satisfy felt needs or desires (see Rubin 1993). Indeed, this compatibility with needs is positively related to the rate of adoption (Rogers 1995). As far as mass media use is concerned, it has been long recognized that people's predispositions - in any direction - get reinforced when messages conflict (Klapper 1960). This implies congruence.

In his Man and his Urban Environment, Michelson (1976) suggested an intersystem congruence model. Congruence refers to how well a given context accommodates the needs of a given person or group (Michelson 1987). The congruence perspective emphasizes "the

13It is necessary to note that the two models are not really comparable because the former deals with innovations in general while the later only refers to mass media. Here, I contrast the former with the later merely for the purpose of introducing the concept of congruence.
accommodation of particular activities, consisting of patterned physical movements, by the built environment" (Michelson 1976, p.230). Therefore, the residents who highly value individualism prefer larger lot sizes as far as land use is concerned (Michelson 1976). This study shares the congruence perspective and argues that the congruence of personal values and media selection (adoption) and usage has to be identified in order to understand the adopting behaviour sociologically. That is, it is assumed that consumers with different values are capable of selecting and using the media that really meet their needs.

ii. Assumptions

Based on the previous literature review, the very first step to take for overcoming the pro-innovation bias has to be the rejection of the assumption that all innovations are equivalent units. Rather, different media may accommodate consumers differently. Therefore, the first assumption for the model is:

There are inherent differences among electronic communication technologies.

Different innovations may be adopted for different reasons. Media use may be assumed to be goal-directed or motivated. The purpose of media use is to satisfy wants or interests. That is, as far as personal values and needs are concerned, it is assumed that:

A particular technology is adopted and used by an individual because the innovation is relevant to his needs and consistent with his existing values.

It may be naive to believe that one can find some personal values that determine human behaviour because individuals live in environments. For example, innovation adoptions can be restrained by cost or ability to pay. That is, sociological factors can affect a particular adopting behaviour either directly or indirectly (e.g., through specific reasons). As far as the relationship between the value and sociological factors is concerned, it is assumed that it is from participation in a group, or membership of a community that individuals come to their distinctive values. More specifically, I assume that

Personal values are related to social environments.

To a large degree, the above assumptions are also empirical questions. They are further clarified in the following section when the model is elaborated in detail.

2. Model Justification and Hypotheses

The justification consists of three steps. First, I discuss the significance of theoretical relationships between the electronic media adoption and postadoption. Then, I explain why
personal values should be introduced to account for their adoption and postadoption. Last, I clarify the relevance of sociological factors to the personal values or social psychological characteristics with respect to media adoption and postadoption. Following each step, I operationalize the variables involved and hypothesize testable relations among the variables.

i. Adoption and Postadoption: The Dependent Variables

Based on the previous literature, the present study concludes that the nature or attributes of an electronic medium can be best revealed if both the adoption and postadoption are studied. In other words, this particular project focuses on adoption and postadoption rather than the rate of adoption. Therefore, the electronic media are operationalized by the time of adoption as well as the extent of implementation.

This study acknowledges that the problem that past research has been devoted primarily to the study of the adoption and diffusion of successful innovations alone may be solved by investigating the diffusion of an innovation while the diffusion process is still underway. In urban China today, electronic media such as the telephone and pager are currently being diffused. Therefore, the diffusion of telephone and pager are extensively studied in this research.

In order to avoid the pro-innovation bias, we also need to reject the assumption that all innovations are equivalent units. This demands that a wider range of innovations be studied. Thus, the present study chooses and investigates the adoption and postadoption of television, audio cassette recorder/player, telephone, and pager because of their obvious and qualitative differences as far as the "adopter-independent" characteristics of media (the qualities of a medium itself) are concerned. However, one of the major objectives of this study is to identify the "adopter-dependent" characteristics of a medium. That is, it is necessary to classify the media (the innovations) in terms of not only when and for what purpose they are adopted but also how and why they are used by adopters who share different sociological and social psychological characteristics. Therefore, the following indicator variables are used to examine each medium:

i. the time when the medium was adopted
ii. time spent on the medium or the frequency of usage of the medium
iii. the nature of usage

(1) Operationalization

a. Adoption

In this research project, adoption means the initial commitment to a medium. That is, it refers to making the choice to adopt a communication technology. Therefore, the major indicator
for the concept is the time of adoption.

b. Postadoption

By Postadoption, I mainly refer to the following aspects:

* Television
  - the frequency and/or amount of TV watching
  - the type of program favoured

* Audio Tape Recorder
  - the frequency of usage
  - the nature of usage

* Telephone
  - the frequency of telephone usage
  - the nature of telephone calls (e.g., business or social)

* Pager
  - the number of messages received
  - the nature of messages (e.g., paged by friends or business partners)

(2) The Relationship between Time of Adoption and Postadoption

The relationship between the time of adoption and postadoption is regarded as correlation in this study. It is significant to examine the correlation because its properties (e.g., strength and direction) can help us decide whether both the adoption and use are related to the same or similar set of social psychological factors. For instance, a zero or near zero correlation between the adoption and use means that the reason for the adoption is independent of the reason for the use.

As reviewed earlier, it has been long recognized that the relationship between time of adoption and degree of commitment to an innovation is not necessarily either positive or strong, or linear. Therefore, it becomes necessary and rewarding to examine the correlation.

(i) Television

a. The Time of Adoption vs. The Time Spent on Television Watching

Rogers (1983, 1995) has classified the adopters in terms of the time at which an individual adopts an innovation or innovations. A review of research across product categories by Robertson, Zielinski, and Ward (1984) shows some tendencies for innovators to bear the following characteristics: higher income, higher education, younger, more socially mobile, more favourable attitudes toward risk, greater social participation, and higher opinion leadership. Audience studies reveal that heavy television viewing is identified as part of a complex syndrome, which includes lower education, lower mobility, lower aspirations, higher anxieties, and bad work
situations (see Gerbner et al. 1979; Frissen 1996). Because the characteristics of heavy television viewers are somehow opposite to the characteristics of innovators, we may suggest that:

The earlier the adoption, the less time spent on television watching.

b. The Time of Adoption vs. The Nature of Television Usage.

Studies such as those by McQuail et al. (1972) explore the possibility of differential gratifications of the television audience. In these studies, topologies of viewer gratifications are developed showing a certain diversity and complexity of motives for viewing behaviour. A recent report indicates that ‘information gratification’ has a relatively strong positive effect on watching television news (Van Snippenburg 1996). However, structural variables such as income are also linked to watching information-oriented programs (Van Snippenburg 1996). While we are not very clear about the relationship between information gratification and income, we are more certain that higher income is often one of the major characteristics of innovators. Hence, I suggest that:

The time of television adoption is related to the nature of television programs watched.

(ii) Audio Cassette Recorder/Player

a. The Time of Adoption vs. The Frequency of Audio Tape Recorder/Player Usage.

An Audio Cassette Recorder/Player is similar to television in terms of some of its functions. For instance, both are able to function as either an entertaining medium or an educational tool. Nevertheless, unlike television, the cost of an Audio Cassette Recorders in China has been dramatically reduced since the early 1980s. In other words, a late adopter may decide to get an Audio Cassette Recorder/Player not much because he or she badly needs it but because he or she could spare and spend an insignificant amount of money discretionally. Hence, we may suggest that:

The time of Audio Tape Recorder/Player adoption is positively related to the frequency of Audio Tape Recorder/Player.

b. The Time of Adoption vs. The Nature of Audio Cassette Recorder/Player Usage.

How the time of adoption is related to the nature of usage is relatively complex as far as Audio Cassette Recorder/Player is concerned. When a considerable number of urban youth started to learn foreign languages in the middle of 1970s, they met a lot of difficulties in locating qualified teachers and textbooks because China was still closed to the outside of the world. Interestingly enough, the Audio Cassette Recorders/Players became available for the general public to purchase
during that period. Therefore, when some urban residents adopted the Audio Cassette Recorder/Player for entertainment purpose, others got it because it was a good tool for learning foreign languages. That is, it is reasonable to suggest that:

While the earlier adopters more frequently use the Audio Cassette Recorder/Player for either entertaining or educational purposes or both, the later adopters most likely use it for entertainment purposes.

(iii) Telephone

a. The Time of Adoption vs. The Frequency of Telephone Communication

The telephone in China is still in an earlier stage of the diffusion process. According to American experiences, early subscribers wanted a home telephone for job-related reasons. These people typically included doctors, certain types of business people, farm owners, and specific white-collar workers (Fischer 1992). That is, they installed the telephone for instrumental reasons to a large degree. Hence, I suggest that:

The time of telephone adoption is positively related to the frequency of telephone communication.

b. The Time of Adoption vs. The Nature of Telephone Conversation

While earlier American subscribers wanted the telephone for job-related reasons, the majority of subscribers were found to have used the telephone mainly for social reasons. Therefore, I suggest that:

The time of telephone adoption is related to the nature of telephone usage.

(iv) Pager

a. The Time of Adoption vs. The Frequency of Pager Contact

The pager phenomenon is relatively new in both developed and developing countries. While specific information on the diffusion of the pager has been appeared on newspapers, academic publications on the matter are difficult to find. Based on the data collected by private market researchers and pager suppliers, a report of Wall Street Journal indicates that African-Americans have become a disproportionately large piece of the market for pagers (Brownlee 1996, p. B6). In terms of Brownlee's summarization, the diffusion of the pager is not only ethnic specific but also closely related to other social and economic factors such as age, image or status, peer pressure, business necessity, necessity of intensive contact between a mother and her teenaged children, and low cost. The point is that these factors imply achievement oriented needs and activities. Therefore, we may suggest that:
The time of pager adoption is positively related to the frequency of pager contact.

b. The Time of Adoption vs. The Nature of Pager Contact

Because many important social and economic factors are operating as far as the diffusion of the pager is concerned, I am not expecting a linear relation between the time of pager adoption and the frequency of pager contact. However, it may be reasonable to expect that:

*All other things being equal, while the earlier adopters are more likely to use a pager for business purposes, the later adopters are more likely to use a pager for social reasons.*

In short, I have hypothesized the relationship between the dependent variables. That is, media adoption and postadoption may not be always correlated. Therefore, the reasons and/or personal values for the media adoption may not be always the same as the ones for the postadoption. I shall discuss these values and reasons in the next section.

ii. Values and Media Adoption and Postadoption

Values have been long recognized as one of the most significant variables that directly or indirectly affect human behaviour. Traditionally, sociologists have found values to be useful in describing society's collective consciousness (Durkheim 1960), differentiating between Gemeinschaft and Gesellschaft social structures (Tonnies 1957), and as determinants of social conduct (Blau 1964) and various aspects of social behaviour (Rokeach 1968-1969).

As far as diffusion of innovations is concerned, from the consumer literature, we understand that different consumers form different choice criteria according to their value systems (Howard and Woodside 1984). Indeed, values are particular useful in identifying the attributes of innovations (see Rogers 1995) because of their subjective nature (Downs and Mohr 1976). However, it is necessary to note that values have different levels and not all values are directly related to empirical phenomena. For instance, while diffusion scholars frequently point out that certain diffusion campaigns failed because the innovations were incompatible with existing cultural values, very few researchers, if any, have successfully demonstrated that variations in the general value orientations of individual persons are congruent with the varying types of their life activities (behaviour spheres). In fact, the difficulty in demonstrating the relationship becomes particular salient when we try to use general value orientations to predict specific behaviour within a group

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14 A typical example may be the diffusion campaign on boiling water in the Peruvian village of Los Moinos. Local tradition links hot foods with illness. Boiling water makes it less "cold," and hence, appropriate only for the sick. But if a person is not ill, he is prohibited by village norms from drinking boiled water. Naturally, the campaign that aimed at persuading housewives to boil drinking water failed (see Rogers 1995).
or society.

While variations in the general value orientations are not very successful in predicting specific behaviour, they may be used to guide us to locate the significant lower-level value patterns of individual persons. The identification of lower-level value patterns is important because it is believed that the patterns direct behaviour spheres. In this section, I first explain why general value orientations are usually not appropriate to predict specific behaviours as well as their relations with lower level value orientations such as personal values. Then, I discuss why personal values should be employed as the independent variables. Finally, I clarify why specific reasons for media adoption have to be included in order to illustrate the differences among the four media. Following the discussion, I define the variables involved and make the testable hypotheses.

(1) General Value Orientations and Lower-level Value Orientations: The Issue of Macro-Micro Linkage

In this section, I examine the significance of general value orientation and its linkage with the lower-level value orientation. The examination is necessary because (1) it justifies the use of lower-level value orientations to classify the media and predicts the adopting and postadopting behaviour; (2) the structure of general value orientations may be useful to map out lower-level value patterns or rank orders.

a. Macro vs. Micro Value Variables

How macro variables are related to empirical phenomena is one of the major issues in sociology. As far as the value orientation is concerned, what we have known is that while cultural values (dominant values) affect the rate of adoption (see Rogers 1983, 1995), they are not effective in terms of predicting or explaining adopting or postadopting behaviour.

Rogers (1995) observes that the attributes of innovations have been considered as independent variables in explaining variances in the dependent variable of the rate of adoption of innovations. One of the five attributes, compatibility, means compatibility with values and beliefs. Here the values and beliefs mainly refer to cultural values. That is, the independent variables, cultural values, are contextual independent variables. The dependent variable, rate of adoption, is aggregate.\(^{15}\)

Rogers' theoretical rationale for grouping individuals into behaviourally homogeneous

\(^{15}\)It is interesting to note that some scholars in consumer research completely agree with Rogers' macro model. They trust that social system values should be employed as the independent variables (see Gatignon and Robertson 1985).
aggregates is justifiable because his primary purpose is a theory of the rate of adoption. Therefore, the between-unit variance in aggregate is crucial to his model. However, the macro-level analysis largely ignores individual properties (within-unit variances in aggregate) that may be vital to identify the nature of an innovation. If we follow Coleman (1986), there are two distinct theoretical questions: 1) How do micro actions combine to yield macro characteristics (the micro-to-macro link)? 2) How are micro actions shaped and constrained by macro characteristics? We may illustrate the issue by the following figure:

Figure 2.2
The Macro-Micro Linkage
Culture Value System Rate of Adoption & Mean of Usage
Macro Level

Micro Level
Personal Values Adopting Behaviour

That is, while Macro-level analysis (e.g., culture value system and rate of adoption) is important to diffusion research, the micro-level analysis is also indispensable in order to understand the adopting behaviour at individual level (within-unit variances). Micro-level variables (such as personal values) may not be as theoretically rich as macro-level variables (such as culture value system). However, culture value system or rates of adoption do not reveal the necessary information about the nature of an innovation. Students in consumer behaviour have pointed out that there is not a generalized innovator across product categories and that distinct innovator profiles must be obtained by product category or interest domain (Robertson, Zielinski, and Ward 1984; Gatignon and Robertson 1985). Therefore, the within-unit variance in aggregates matters if the primary concern is to demonstrate the differences among types of electronic media. In other words, personal values matter in this study.

b. Macro-Micro Linkage

16 Coleman's (1986, p.1312) original questions are: how the purposive actions of the actors combine to bring about system-level behaviour, and how those purposive actions are in turn shaped by constraints that result from the behaviour of the system.

17 See Robinson (1950) for a classical demonstration about that measures of correlation for propositions can vary widely at different levels of aggregation and thus that it is incorrect to make inferences from results on aggregate data to the individual level.
While it is necessary to emphasize the importance of lower-level value orientations, it is equally significant to examine the structure of general value orientations of individual persons and the relationship between the general value orientations and lower-level value orientations.

Kluckhohn and Strodtbeck (1961) argue that there is a systematic variation in the realm of cultural phenomena. When general value domains are used to classify the individuals, they can demonstrate an interlocking network of dominant (most preferred) and variant value orientations, with the variants either permitted or required by the complexity of the social structure (see Kluckhohn and Strodtbeck 1961).18

The lower-value orientations are mainly about personal needs or wants or desires. For instance, as reviewed earlier, telephone diffusion in the United States was driven by demand. In other words, people decided whether or not to subscribe based on their tastes and needs. Therefore, we may suggest that the general value or value orientations are, at least to some degree, derived from human requirements in needs. Understandably, the values derived and abstracted from human requirements in needs may form an interlocking network of dominant (most preferred) and variant value orientations. According to Kluckhohn and Strodtbeck (1961), the variation is not only limited but also systematic and patterned. Because the general value orientations are derived from the lower-level value orientations, they may be used to map out lower-level value patterns. In other words, while variations in the general value orientations are not very successful in predicting specific behaviour, they could be used to guide us to locate the significant lower-level value patterns of individual persons.

The lower-level value patterns have to be identified and examined because different patterns or rank orders may be associated with different behaviour spheres. Each general value orientation may consist of more than one lower-level value dimension. For instance, the achievement value orientation (domain) may be derived from lower-level phenomena such as need for recognition (status ambition), need for luxury material goods, and need for power. Therefore, it is possible for people to share the same general value orientation without sharing the same rank order of needs. The significance is that different needs may be associated with different behaviour spheres. The implication is that individual persons may not demonstrate the same behaviour

18For instance, Kluckhohn and Strodtbeck (1961) contend that the individual’s values can be indexed by five separate dimensions which reflect his or her values orientations: human nature is good or evil; past, present, or future time perspective; being, being-in-becoming or doing; subjugation to, in harmony with, or mastery over nature; linearity, collaterality, or individualism.
sphere though they share the same general value orientations. Therefore, it is reasonable to suggest that understanding how the lower-level value orientations are patterned (or rank ordered) is crucial to predict some specific behaviour.

In sum, it has been suggested that (1) personal values should be emphasized in this study; (2) the general value orientations are derived from the lower-level value orientations; (3) a general value orientation usually has more than one lower-level value dimension; (4) the lower-level value orientations are not only dimensional but also personal; (5) the general value orientations are useful to guide us to locate the lower-level value patterns or rank orders of individual persons.

c. Personal Value Orientations and Specific Reasons for Media Adoption

In this study, personal values are emphasized because they affect choices and shunt motivational energies in one direction or another. Indeed, individual values not only provide potentially powerful explanations of human behaviour because of their close relationship with motives (McClelland 1985) but also tend to be limited in number and remarkably stable over time (Rokeach 1974, 1979; Inglehart 1985; Rokeach and Ball-Rokeach 1989). Hence, they are appropriate to be employed as the independent variable. That is, it is logical to assume that a specific action may not affect the value pattern in any significant way. "Personal Value" is a widely used term with a number of meanings. Williams (1979) observes that it has been used variously to refer to interests, pleasures, likes, preferences, duties, moral obligations, desires, wants, goals, needs, aversions and attractions, and many other kinds of selective orientations. By personal values, I mainly refer to the lower-level value dimensions that are derived from items such as desires and wants. The personal value is revealed by asking what is generally desired or should be valued in some aspects of life in this study.

However, although lower-level value orientations are selective in nature and may include various desires or needs (see Williams 1979), only some of the orientations may be able to be translated into concrete actions because there are structural constraints such as income or wealth. Therefore, it becomes necessary to identify and differentiate the unconstrained lower-level values from the constrained ones. The specific reasons for media adoption are elicited because they are not only free from structural constraints but also able to bridge the gap between personal values and media adoption and postadoption. The specific reasons are directly elicited from the respondents by asking them for what reasons they have adopted the media. Thus, they can be regarded as being already translated into the adoption or postadoption. In contrast to the elicited
ones, although personal values are identified by needs or wants, they are not particularly free from structural constraints as far as their relations to action are concerned. The difference between personal values and reasons may tell us when and where the structural factors start to interact with the subjective attributes and affect the media adoption and postadoption. Indeed, one's desires or wants could be either blocked or facilitated by one's socio-economic characteristics. For instance, "theorists usually see needs for power, prestige, and approval as mediating what humans value in social relations" (Turner 1987, p.16). Of course, it is debatable whether "motive" and "value" could be treated as synonymous. Nevertheless, a further discussion on the matter is beyond of the scope of this present study. What really matters to this study is how and what kinds of social psychological characteristics could be related to the action of media adoption and postadoption.

As reviewed earlier, personal values affect choices and shunt motivational energies in one direction or another. Indeed, the personal value orientations are introduced also because they can be linked with the specific reasons for media adoption. Howard and Woodside (1984, p.5) argue that "in order for values to perform their role in guiding choices of the product, a buyer must ask, 'what are the important characteristics of the product and using the product?' 'How do these characteristics relate to my value systems?'". The specific reasons are not only allowing us to illustrate the product characteristics but also enable us to separate motives from behaviours because they are elicited from the adopters or buyers by asking them for what reasons they have adopted or bought the products (media). That is, the specific reasons help us explain why certain personal values affect media adoption and postadoption while others do not. In other words, the congruence between the characteristics of a medium and personal values may be better identified through

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19Scheibe (1970) even assumes that motivation is the source of values, that what is desired automatically is valued. In other words, value judgements suggest the operation of wishes, desires, goals, passions, valences, or morals (Scheibe 1970, Pp.41-42). Kilby (1993) observes that Scheibe's treatment of values and motivations is rather typical of that of a number of writers, especially writers with philosophy backgrounds. Indeed, according to Schwartz and Bilsky (1987)'s extensive review on the contents of values studied, some of the individual values can probably be derived partly from the human requirements in needs. For example, Schwartz and Bilsky (1987) notice that some needs and social motives are found in Rokeach's value list as indicators or markers.

20For instance, Kilby (1993, p.40) argues that it may be possible to differentiate the value and motive and to limit the extent of valuing in motives by granting that all motivation involves valuing, but only a portion of it produces conceptions of the desirable. That is, all forms of motivation produce at least implicit valuing, but only a portion of it produces perceived (experienced) values. Here, at least, it is reasonable to suggest that adopting electronic communication technologies such as telephone in Third World countries is a highly intentional action that means strong and conscious motives. The point is, strong and conscious motives suggest valuing. Therefore, it is safe to assume that values are directly linked to motivations as far as adopting electronic media in China is concerned.
specific reasons sometimes. Therefore, while the specific reasons tell us what is actually embedded in an adopted medium, the personal value allows us to characterize the media in a relatively more abstract level.

In short, while personal values are appropriate to be employed as the independent variables, specific reasons for media adoption also need to be elicited in order to (1) identify structural effects; (2) bridge the gap between personal values and media adoption and postadoption whenever it is necessary.

(1) Empirical Phenomena, Specific Reasons, and Personal Value Orientations

The empirical phenomenon refers to the behaviour of media adoption and postadoption. For the convenience of discussion, I first list and elaborate the possible relationship between the specific reasons and media adoption and postadoption. Then, I hypothesize and discuss the relationship between the personal values and reasons, and media adoption and postadoption.

a. Specific Reasons for Media Adoption

While it is reasonable to suggest that the specific reasons elicited are already translated into action, it is quite another to list all the possible reasons that the adopters had rationalized before they made the adoption. Therefore, in order to raise the sensitivity of measurement, only the highly intentional behaviour spheres and some relevant motivational dynamics will be examined. The specific reasons for media adoption primarily include the following:

* Family or individual entertainment
* Learning
* Business
* Social
* Vanity or Fashion
* Following Others

b. Specific Reasons and Media Adoption and Postadoption

The congruence approach implies discrimination. As argued, the characteristics (or dimensions) of a medium may be defined in terms of the degree of congruence between the specific reasons and adopting and post-adopting behaviour. That is, the different reasons may be associated with different communication technologies as far as adoption and implementation are concerned. In other words, all the reasons are related to goals. Different goals are reflected on the variation of media adoption and postadoption.

(i) Family or Individual Entertainment

As far as the media are concerned, family entertainment may be mainly a mass media
phenomenon. For instance, not only television sets are often located in the living room, but also many television shows are about families especially during the prime-time (Mahajan and Luthra 1993; Leibman 1995). In urban China, television is also considered as part of a family (Lull 1991; Chu and Ju 1993). While buying a television set may be often a family decision in China, watching television becomes a family routine (Lull 1991; Chu and Ju 1993). Therefore, I suggest that:

The stronger the need for family entertainment, the earlier the TV adoption and the more time spent on watching television.

Similar to the phenomenon of television, audio cassette recorders/players are suggested to be a striking example for entertainment in China. Lull (1991, p.131) observes that "the most common delivery system for pop music in China - the audio cassette recorder/playback unit - has become an extremely important piece of cultural equipment. In our home interviews, we found that nearly every urban home in China has an audio cassette recorder/player."

Unfortunately, researches on audio cassette recorders/players are very scarce as far as the adoption and postadoption are concerned. Nevertheless, it seems reasonable to hypothesize that:

The stronger the need for entertainment, the earlier the audio cassette recorder/player adoption and the higher frequency of usage.

(ii) Learning

Here, learning is regarded as achievement or accomplishment oriented motivation or need. The idea of using television or radio as an educational tool is not new in both West and East. One of the very first applications of television in China was a direct response to the people’s demand for education (Lull 1991). That is, "television is generally regarded by both the government and the people as an effective and convenient educational medium. In addition to college degree and vocational training programs, television has become an attractive alternative to the in-person adult education classes that were popular before. Beyond this, even the non-educational television channels carry much informal educational programming, including self-help and practical advice programming and foreign language training" (Lull 1991, p.80). Therefore, I suggest that

Learning related reasons are positively related to the time of TV adoption and educational program watching.

As far as learning is concerned, an audio cassette recorder/player is particular useful for learning foreign languages. Thus, I hypothesize that

Learning related reasons are positively related to the time of audio cassette recorder/player adoption and educational program recording or listening.
(iii) Business

Doing business is an interactive process. Naturally, it suggests two-way communications. Therefore, it is no accident to find that the telephone is associated with productive economics (Saunders 1983; Fischer 1992). Accordingly, I expect that

*Business related reasons are positively related to the time of telephone adoption, overall frequency of use, and business oriented usage.*

Although the pager adoption and use are far from universal, it is closely related to telephone communications. In its earlier stage of diffusion, it is expected that, like that of the telephone, it is more business oriented. Therefore, it is reasonable to suggest that

*Business oriented reasons are positively related to the time of pager adoption and frequency of being paged.*

(iv) Social

It has been observed or reported that both the telephone and pager are used for social purposes (Wellman and Tindall 1993; Brownlee 1996). Nevertheless, it is necessary to mention again that the earlier American telephone subscribers often indicate that they installed the telephone for job-related rather than social reasons (Fischer 1992). Although there are no available statistics to suggest that it is the same for pager, it is reasonable to hypothesize that

*Social related reasons are positively related to the frequency of social contact through telephone or pager but negatively related to telephone or pager adoption.*

(v) Vanity or Fashion

There have been many discussions on the issue of “face” in Chinese societies (e.g., Bond 1991). Indeed, the trait aspects of achievement vanity may be very relevant to the present research. Although there is lack of empirical evidence on how contemporary northern Chinese people organize their social hierarchy, relevant studies have consistently found that overseas Chinese societies favour a status system based almost exclusively on wealth (Omohundro 1981; Redding 1990; Oxfeld 1993). New communication technologies could be regarded as status symbols. Therefore, it is reasonable to suggest that

*Fashion or symbolic reasons are positively related to the time of media adoption.*

Being fashionable requires certain level of income. However, accumulation of wealth often means more years of education or longer working hours. Thus, I hypothesize that

*Fashion or symbolic reasons are positively related to telephone*
communication or pager contact but negatively related to the time spent on watching television or using audio cassette recorders/players.

(vi) Following Others

The very concept, "conformity," is inherently social. While the research finding that diffusion usually follows a sigmoid path suggests many things, it may also imply that individuals vary in terms of their reaction to not only a particular technology per se but also social or peer pressure. Indeed, it is reasonable to assume that some of the people feel it important to "keep up with the Jones" when comes to the media adoption.

Conformity oriented behaviour such as yielding to peer pressure means lack of initiative. For instance, researching findings have suggested that valuing conformity is related to heavy television watching. Therefore, I hypothesize that

Conformative oriented reasons are positively related to passive media consumption such as watching TV shows but negatively related to the media adoption.

c. Personal Values and Specific Reasons and Media Adoption and Postadoption

My theoretical approach to the value examination is mainly guided by the approach of Rokeach (1973). Rokeach (1979, p.17) observes that in every full-fledged society, every one of Rokeach's 36 values will appear-as will each the values or themes listed by C. Kluckhohn, F. Kluckhohn, R. F. Bales and Couch, C. Morris, M. Opler, and R. Williams. Yet as total systems, societies differ radically in their patterns of values.

As far as the present study is concerned, these personal values may be organized under the following domains:

a. Achievement Domain\(^{21}\)
b. Enjoyment Domain
c. Restrictiveness Domain
d. Conformity Domain

The above domains are chosen because they are not only clearly located in the realm of conception of the desirable but also directly linked with goals of life and ways to live.\(^{22}\) Moreover, the domain selection is also encouraged by the fact that most of the domains and their relations with consumer

\(^{21}\)There have been many publications on the issue of "face" in Chinese societies (see Bond 1991). Hence, the trait aspects of Achievement Vanity are included as part of the achievement domain.

\(^{22}\)According to Williams (1970), those conceptions of desirable states of affairs are utilized in selective conduct as criteria for preference or choice or as justifications for proposed or actual behaviour.
behaviour have been widely tested recently (see Lau 1988; Lau and Wong 1992; Kamakura and Mazzon 1991; Schwartz 1992; Yamauchi and Yan 1993; Wang and Rao 1995).

(i) Achievement Oriented Personal Values

Achievement values are directly related to goal oriented motivations. Although what constitutes achievement may vary across cultures, whatever is so defined should be the basis for social recognition and admiration. In this study, achievement values are defined and operationalized mainly in terms of competitiveness, Status Aspirations, and Materialism.

*Competitiveness

Competitiveness might be defined in terms of capability, confidence, courageous, and leadership. It is expected that competitive oriented values should be consistent with activity resulting in accomplishment. Hence, it is reasonable to suggest that:

Individuals who indicate a strong competitive value orientation will be more likely to adopt and use an electronic medium for instrumental reasons.

Instrumental reasons refer to learning, business, and/or vanity or fashion. That is, it is assumed that competitive oriented values are positively related to the needs or reasons for informative electronic media because accomplishment related activities could be facilitated by information oriented technologies. Here, informative communications may be frequent telephone conversations or other activities such as seeking information from programs offered on television.

*Status Aspiration

This concept stems from the notion of human social behaviour in terms of pecking orders in a social hierarchy. In other words, it is inherently relational oriented. Status aspiration may also include achievement vanity. Achievement vanity affects consumer behaviour (Netemeyer, Burton, and Lichtenstein 1995). Although trait aspects of vanity are psychological, an excessive concern for one's personal achievements may be manifestation of the power of social relations or structure at least to some degree. Moreover, it is reasonable to link status aspirations with achievement oriented behaviours. This leads to the hypothesis:

Individuals who show strong status aspiration more likely adopt a particular medium for fashion or symbol reasons and use media for business and/or work related reasons.

In other words, I am suggesting that status aspiration is positively related to the use of a telephone and/or pager.
*Materialism*

Materialism has been extensively treated as a cultural variable for purposes of comparing cultures. Examining individual differences in materialism could be also rewarding because it not only reveals factors that might provide insight into the roots of materialism at a cultural level but also permits the study of interactions between materialism and various marketing activities (see Richins and Dawson 1992).

Materialism could be regarded as possession-defined success. That is, materialists tend to judge their own and others' success by the number and quality of possessions accumulated. Hence, I suggest that:

\[ \text{The higher the degree of materialism, the lower the degree of discrimination in terms of adopting new communication technologies;} \]

\[ \text{The higher the degree of materialism, the higher the degree of telephone and pager use for business purposes.} \]

That is, materialism is positively related to business or work related media use. In short, the more dimensions of achievement oriented values one shows, the easier it is to find and adopt a medium which meets individual needs.

(ii). **Enjoyment Oriented Values**

The sociological structure of human values includes the dimension of pleasure or gratification (Williams 1968). In this study, indicators for the enjoyment domain include a comfortable life, pleasure, and happiness. Clearly, valuing pleasure or gratification means less adherence to Weber's Protestant Work Ethic. Hence, it is reasonable to expect that there may be also a difference in consumer behaviour-adopting and implementing new electronic communication technologies. For instance, it is reported that heavy television users ranked significantly higher than light television users on the value "happiness" and significantly lower on the values "exciting life" and "capable" (Becker and Conner 1981). Hence, I hypothesize that:

\[ \text{Individuals who agree with or show enjoyment oriented values will be more likely to adopt and use a medium for social or entertaining reasons.} \]

This means that enjoyment oriented values are positively related to the time of television and/or ACR adoption, degree of television and/or ACR use, and entertainment related media use.

(iii) **Restrictive-Conformity Oriented Values**

Valuing something is often a social phenomenon. This is particular true to the case of

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23 See Rassuli and Hollander (1986) for examples.
restrictive-conformity oriented values. For instance, parents from lower socioeconomic strata emphasize conformity (Becker and Conner 1981). As mentioned earlier, research findings have suggested that valuing conformity is related to heavy television watching. Indicators for a restrictive-conformity domain are obedient and self-controlled values. Therefore, I suggest that

Individuals who show a strong tendency toward restrictive-conformity oriented values more likely adopt a medium for reasons such as peer pressure and spend more time on watching television.

In short, I have illustrated the relationships based on the proposed model (See Figure 2.1). While the hypotheses seem numerous, they may be roughly organized into the following Table as far as differentiating the four media are concerned.

<table>
<thead>
<tr>
<th>Hypothesized Media Characteristics</th>
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<td>Media</td>
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iii. The Sociological Factors, Personal Values, Reasons, and Media Adoption and Postadoption

Thus far, I have elaborated the relationship between the subjective variables (personal values and reasons) and media adoption and postadoption. This section discusses the effects of sociological variables with respect to the media adoption and postadoption.

(1) Sociological Characteristics

In Chapter 1, I discussed the significance of social class and social prestige in consumption research (cf. Parsons and Smelser 1956; Bourdieu 1984). It is well known that sociologists rarely link the term "values" to individual-level preferences, motives, needs, and attitudes. Rather, they employ the term as a social concept when they talk of norms, customs, manners, ideologies, commitments, and the like (see Van Deth and Scarborough 1995). However, as explained in Chapter 1, the subjective characteristics (values and reasons) and sociological variables are not necessarily two separate spheres. Indeed, the proposed model is interested in the lower-level value orientations and their variations rather than the general ones such as norms and customs because
they not only are more closely related to individual behaviour but also may be directly linked with structural positions such as occupation or income. In this study, sociological characteristics include:

* Occupational prestige
* Education
* Ability to Pay
* Social Mobility
* Generation (Age)

While occupational prestige, education, and ability to pay indicate social class, social mobility features the dynamic side of social status. Generation is significant because it sets parameters to our lives to some degree.

(2) Sociological Characteristics and Personal Values

One of the classical investigations in social psychology has been the empirical demonstration that social class is not only related to values but also significant for human behaviour (Kohn 1969; Kohn and Schooler 1983; Kohn and Slomczynski 1993). Indeed, social class may be (at least partly) responsible for the development of personal value orientations. However, although we know that position in larger social structures affects more proximate conditions of life, we are less certain whether there is a causal priority between the values and social class. The problem is that temporal succession (or temporal order) is often not a good indication of causal priority. As Marini and Singer (1988, p.377) have argued:

Because human beings can anticipate and plan, much human behaviour follows from goals, intentions, and motives; i.e., it is teleologically determined. As a result, causal priority is established in the mind in a way that is not reflected in the temporal sequence of behaviour or even in the temporal sequence of the formation of behaviour intentions.

The problem is particularly salient to this proposed research due to the nature of the key variables involved. Thus, correlation coefficient is used to measure the association between the personal values and social class. More specifically, it is expected that the personal values are related to the socio-economic variables. Moreover, it is suggested that while upward mobility is positively

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The values that Kohn investigated are mainly parental values. To be clear and cautious, it may be necessary to point out that some students in cultural studies have argued that there is no longer a stable hierarchy of values running from "high" to "low" culture, and that "high" and "low" culture can no longer, if they ever could, be neatly correlated with a hierarchy of social classes in the advanced capitalist world (see Frow 1995).

Kohn's (1990) solution to the problem is to allow for the possibility of reciprocal effects.
related to achievement oriented values, downward mobility may reflect changes in subjective needs. 

Vertical mobility means social status change. The degree of vertical mobility may be a better predictor of personal values. Vertical mobility implies dissatisfaction with one's current social position. For instance, Bengston (1975) found that individualism oriented values such as achievement were the only significant family transmission effects that emerged in value socialization in the United States. In any case, it is logical to expect that upward mobility is closely related to achievement values.

Downward mobility may also reflect changes in subjective needs. Although the philosophical background to the central paradox of the corruption debate - that material progress entails moral decline - is wide ranging and complex (see Jack 1989), the theory of the leisure class is able clearly to state that when one has accumulated enough wealth and joined the superior pecuniary class, he became more likely to condemn and avoid vulgar surroundings, mean (inexpensive) habitations, and vulgarly productive occupations (Veblen 1994). Here, the point is that it is possible for a man to be corrupted by luxury and become disassociated with certain achievement values.

(3) Sociological Characteristics and Specific Reasons for Media Adoption

Samuels (1984, p.205) observes that "while we certainly have urges and drives within us, need, we do not have automatic ways to satisfy them. We must relay, ...., on society, to teach us how to satisfy them. We attach ourselves to, identify with, groups to learn, for protect, for survival". The specific reasons are not general desires or wants. Rather, they are rationalized goals or needs. Thus, media adopters in different socio-economic positions (or groups) may give different reasons for a particular adoption. Moreover, it is possible that some media are adopted

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because they can be used to indicate status change (social mobility) for the purpose of attachment.

(4) Sociological Characteristics and Media Adoption and Postadoption

As discussed in Chapter 1, there are basically two kinds of innovations. One is considered as beneficial to all. The other is regarded as beneficial to some but not to others. Theoretically, if a particular medium is welcomed by all the members of a society, the time of its adoption will be a function of ability to pay. In practice, the diffusion process is rarely so simple. For instance, Bourdieu (1984) observes that the dominating classes constantly outdistance the consumption patterns of other classes, through rejecting as banal pleasures which they formerly considered exquisite, and consequently always distinguishing themselves from others. That is, social prestige and/or class may be very relevant to media adoption even if the medium is considered as beneficial to all. The point is, it is entirely possible that a medium adoption and postadoption are more closely related to ability to pay or social prestige than personal values.

It is also possible that a medium is welcomed by some but not by others because, for example, there are different age groups. Generational differences mean not only different tastes about music or television shows but also role differences. While different tastes about music and TV shows indicate different media use, role (generational) differences can lead to different media evaluation. In other words, role differences may mean different priorities in life.\(^\text{39}\) Different priorities in life could affect the media adoption dramatically. That is, age may have direct impact on the media adoption and postadoption.

Thus far, I have discussed the variables and illustrated the major and specific hypotheses derived from the theoretical model described earlier. The next part explains the data collection and variable measurement.

\(^{39}\)Biddle (1986, p.69) observes that "many roles are not associated with identified social positions, ...". Nevertheless, it should be safe to compare the role difference between generations and assess its effects. That is, different generations may have different needs and responsibilities because they play very different roles in society.
PART II

METHODOLOGY

Introduction to Part II

This part is mainly concerned with the method of data collection as well as variable measurement. The data was collected through a questionnaire delivered to a random sample of two-generation families in Chang An District, Shijiazhuang City, People's Republic of China. The survey was conducted from June to September 1996. The design was cross-sectional. Chapter 3 discusses specific techniques and methods employed for the data collection. In Chapter 4, the specific measures are explained. The findings will be reported and discussed in subsequent parts.
Chapter 3
Data Collection

1. A Survey Analysis

Survey analysis is the central methodological technique employed in this study. The cross-sectional survey was undertaken in order to reveal whether and how people with different sociological or social psychological characteristics are associated with different media adoption and postadoption. In this particular study, the theoretical model demands mobility data for the hypothesis testing. Hence, the sampling list consists of two generations in Chang An District, Shijiazhuang City.

i. The Location

As reviewed earlier, in order to overcome the pro-innovation bias, it is necessary to (1) investigate the diffusion of an innovation while the diffusion process is still underway; (2) study a wider range of innovations in diffusion research. Urban China was chosen for the data collection precisely because it met the above requirements. The present research is interested in studying telephone, pager, television, and audio cassette recorder/player. While the telephone and pager are being diffused in today’s urban China, the audio cassette recorder/player and television have gradually become part of the Chinese life for the past two decades.

The pattern of urbanization in China from the start of the century to the present day is complex. The growth of cities or pattern of urbanization in China has been heavily influenced by imperialism, industrialization, political policies (e.g. past and recent opening up to the outside world), geographic locations, and recent economic reform (See Wang 1994; Yusuf and Wu 1997). In 1994 China had 32 mega-cities, 42 large cities, 173 medium cities, and 375 small cities. According to Wang (1994), these cities may be classified into five levels from the centres of international exchange to small cities such as county towns as far as economic activities are concerned. Currently, China’s urban economy-industry plus services-is the source of two-thirds of gross domestic product (GDP) (Yusuf and Wu 1997). It might be desirable to conduct a national survey for this study. However, it is not practical due to resource constraints. Therefore, a city, the city of Shijiazhuang, is chosen for the data collection. Shijiazhuang City is selected for a

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The numbers are from Yusuf and Wu (1997). Their definitions are: (1) Megacities have more than 1 million population; (2) Large cities have between 0.5 million and 1 million; (3) Medium cities have between 0.2 million and 0.5 million; (4) Small cities have less than 0.2 million.
number of reasons. Shijiazhuang City is a typical northern Chinese city with a population of 1-million (see Lai 1991, p.4). It is also the capital of Hebei Province and located about 350 kilometres south of Beijing. Hebei Province has two central cities as far as economic development is concerned. As one of the two provincial central cities, Shijiazhuang City belongs to the third level (See Wang 1994).

Hebei Province was part of the ancient Central Kingdom, the homeland of Confucianism. In other words, the data gathered from Shijiazhuang City is regional and culturally specific. It could be used for comparison purposes. Indeed, the southern part of China, especially the coast provinces, has been the pioneer of commercialism and market approach, which is clearly inconsistent with some of the major doctrines of Confucius. A comparison between the North and South could be significant as far as diffusion research is concerned.

While the largest Chinese cities such as Beijing, Tianjin, Shanghai, and Canton may be suitable locations for some survey topics, they are not considered in this particular survey because their size, living standards, and education levels in general are much higher than the other cities in China. In other words, as far as generalizing survey results is concerned, the mega cities may not be the best choice for a survey on diffusion research because they are atypical in terms of the composition of Chinese cities.

In terms of its population size, Shijiazhuang City may be classified as a marginal megacity. According to a recent assessment by China Central Assessment of Cities, Shijiazhuang City is in the middle of the 50 strongest Chinese cities (Shen 1993). Among the 104 indicators for the ranking, Shijiazhuang City scored high in the areas of (1) quality and structure of labour force; (2) industrial infrastructures; (3) social and cultural development; (4) transportation and telecommunication. Within Shijiazhuang City, the research location was further limited to a representative district, the Chang An District, due to resource and time constraints. Shijiazhuang City has four districts. The Chang An District had a population of 340,925 in 1990 (Lai 1991, p.4). It is more representative than the others because it is not only the home of one third of the city’s

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31 In terms of a 1990 survey, Lai (1991) reported that the population was 1,021,946. Here, the population only refers to the urban residents. In China, a middle sized city or bigger often has jurisdiction over the counties around the city. Consequently, the city’s population varies in different books or documents depending upon whether the population of counties is included.

32 The homeland of Confucianism mainly refers to the provinces along the middle and lower Yellow River. It does not necessarily include the southern provinces of China.
residents but also the home of the city’s major industrial, cultural, commercial, political, and educational sectors. Hence, the data gathered from Chang An District should not be too biased toward any particular direction simply because it only covers one district.

ii. The Population and Sampling List

The population includes all the fathers and grandfathers whose sons/daughters or grandsons/granddaughters are either grade 4 or 5 or 6 students and attending a school in Chang An District.

The sampling list consists of all the grade 4, 5, and 6 students who not only are attending elementary schools in Chang An District but also have indicated that both their fathers and grandfathers are alive and currently lived in Shijiazhuang City. In other words, a grade 4, or 5, or 6 student will be included on the sampling list if, only if, both his or her father and grandfather are alive and residents of Shijiazhuang City.

The students were sampled because it was the only feasible way to reach the targeted respondents, the middle-aged men and their fathers. In urban China, a resident usually not only works for a ‘unit’ (company, firm, government, institution, etc. are all referred as a unit in China) but also depends upon the unit for housing. This means that a significant proportion of city dwellings in urban China are owned and managed by various units. Hence, it becomes extremely difficult to get a complete list of residents in any City district. However, we know that the vast majority of middle-aged urban Chinese men are married and have one child. In Shijiazhuang City, 100 percent of children of school-age attend schools (Xu 1988, p.74). Hence, the students were randomly sampled and contacted in order to reach their fathers and grandfathers. That is, the selected students of grade 4, 5, and 6 were asked to bring the copies of the questionnaire to their fathers and grandfathers and get them back when they were answered.

Ideally, a student should not be excluded from the sampling list simply because his or her grandfather lives in another city or rural area as far as mobility data is concerned. However, this

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With rare exception, a student could registered in a elementary school of Chang An District only if his or her father lives in that District.

According to Ma’s recent review (1994), the number of single people from age 28 to 49 was about 2 percent in 1987. Moreover, the ratio of single male people to female is 15 to 1. The majority of single male people are concentrated in rural areas. Hence, excluding the single male people from this survey is not considered as a serious problem because of their insignificant number in urban China.

The single-child policy has been applied to the middle-aged urban Chinese men or women since they got married.
problem is not very serious because only fewer than 5 percent of the students surveyed indicate that their grandfathers are alive and living in places other than Shijiazhuang City.

iii. The Respondents

As just mentioned, in this survey, a respondent was reached through his son/daughter or grandson/granddaughter who was in grade 4 or 5 or 6 and attending an elementary school in Chang An District. That is, whenever a qualified student is randomly selected, his or her father and grandfather are automatically chosen as two of the respondents for this survey.

While some of the fathers or grandfathers are automatically chosen as the respondents because they have the qualified sons/daughters or grandsons/granddaughters, the residents who have no children or whose children are either younger than the grade 4 students or older than the grade 6 are automatically excluded. This means that some of the residents are excluded though they belong to the two-age-category (fathers and grandfathers).

Because the vast majority of middle-aged urban Chinese are married and have one child, the problem of excluding residents who do not have a child is not serious. Rather, whether we could exclude the fathers and grandfathers whose children or grandchildren are either younger than the grade 4 students or older than the grade 6 students has to be justified.

While we do not know exactly how many age-qualified fathers and grandfathers were excluded in this survey, we know that the age distribution of our respondents is not only normal to some degree (skewness=0.805) but also low in variability (sd=2.66).\(^\text{35}\)

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\(^{35}\)Skewness will be close to zero if a distribution is normal. When data are skewed, the direction is usually to the right. As a rule-of-thumb, a distribution that has a skewness greater than 0.8 is noticeably skewed (see Bourque and Clark 1992, p.69). The absolute value in this particular case (of 0.805) reached the ceiling value, suggesting skewness is somewhat noticeable.
While the relatively normal distribution suggests that there are almost equal number of younger and older fathers, the low variability indicates the percentage of younger and older fathers is not substantial. The basic question is whether the people who were relatively either young or old when they had their single-child significantly differ from their own age group in terms of adopting and postadopting electronic media are concerned. While the question cannot be empirically answered due to lack of comparison groups, the age factor may be controlled and analyzed to some degree.

As demonstrated above, the father's age distribution suggests that we have captured the two sides of the spectrum, the older and younger. Although we do not know for sure whether the younger and older fathers surveyed are different from their own age-group as far as media adoption
and postadoption behaviour is concerned, we may be able to compare them with the group of 38-year-old to determine the impact of age factors.

Another matter is that the respondents are limited to males. While we have no data to indicate who makes the decision for the telephone and/or pager adoption in an urban Chinese family, Sha (1995, p.166) shows that the majority of couples (husband and wife) in urban China make the decisions together when it comes to the television and audio cassette recorder/player adoption. While it would be desirable to survey both the husband and wife in this study, limit resources suggest that it is more practical to focus on only the husband in order to achieve a relatively larger sample size. Hence, the selected students were asked to bring the copies of the questionnaire to their fathers rather than to their mothers. In short, all the respondents in this survey have the following characteristics:

A. Male
B. Having a son/daughter or grandson/granddaughter who is in grade 4 or 5 or 6 and attending schools in Chang An District
C. A resident of Shijiazhuang City

iv. The Questionnaire

All the respondents of the two generations used the same questionnaire. The original questionnaire is in English. It had been translated into Chinese before I left Toronto for Shijiazhuang City. The English version was translated by two Chinese Ph. D. students in Sociology and one Chinese Ph. D. student in East Asian Studies at the University of Toronto. Great attention was paid to the part on social values. They were discussed in detail and interpreted with great care. The final Chinese version of the questionnaire was verified by a former university English instructor at Shijiazhuang City. The format of the Chinese version was finalized based on some intensive consultation with two of the middle-aged Shijiazhuang residents.

The final Chinese version has 41 pages. A relatively bigger size of the font was adopted for the convenience of the aged respondents who might suffer poor eyesight. The final version of the questionnaire only includes telephone, television, audio tape recorder/player, and pager. Other electronic media were excluded because they were still scarce (such as cellular phone) in Shijiazhuang City. Moreover, the length of the questionnaire has to be considered for practical

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36 According to Sha, 27.12 percent of the husbands made the decision alone on the ACR adoption while only 8.7 percent of the wives did so. The remaining 61.01 percent made the decision together. As far as the television is concerned, 18.71 percent of the husbands made the decision alone on the television adoption while only 8.8 percent of the wives did so. 72.49 percent of the couples made the decision together.
reasons. Therefore, the final Chinese version was limited to 41 pages.

2. Specific Procedures

a. The sampling list

As explained earlier, the questionnaire was distributed to the fathers and grandfathers through their sons/daughters or grandson/granddaughters who were randomly selected because they were students of grade 4, 5, and 6 and attending schools in Chang An District. Hence, the first step is to get a copy of the complete list of grade 4, 5, and 6 for sampling from each and every one of elementary schools in Chang An District. I approached 15 of the 18 state run elementary schools in Chang An District through personal ties or networks.

While personal ties were vital to approach the school principals, a letter stamped with Huamei College’s official seal also helped clear any doubt that the principals might have on the survey (see Appendix 1.1). Huamei College is a community college in Shijiazhuang City. The President of the College kindly agreed to let me conduct the survey in the name of his college whenever it was necessary. Nevertheless, one school principal did ask for an official letter from a higher authority, the Chang An District Bureau of Education. I was able to get the letter and present it to the principal by the end of June (see Appendix 1.2). The school principal was satisfied and provided the necessary assistance to the survey.

All the 15 schools approached provided the list and other necessary assistance to me. The 15 schools are:

- Yuejin Elementary School
- Zhaiyin Elementary School
- Yudong Elementary School
- Jianming Elementary School
- Fanxi Elementary School
- Yuhua Elementary School
- Qingyuan Elementary School
- Dongming Elementary School
- Huaibei Elementary School
- Jiannan Elementary School
- Fuqiang Elementary School
- Tannan Elementary School
- Tancun Elementary School
- Yangxi Elementary School
- Huayuan Elementary School

Three of the 18 state run schools, Changdong, Huaqing, and Jianbei, were excluded from this survey not only because they were very small and located in the suburbs but also because they
had a significant number of students whose grandparents were living in the countryside as peasants. Hence, they were not approached to participate this survey.

In Chang An District, seventeen factories and institutions also own and run elementary schools. About 11 percent of elementary students go to the 17 schools. Nevertheless, most of those schools are not only very small but also limit their admissions to the children of employees in certain industrial sectors. In urban China, sizeable manufactures or institutions are allowed to set up and run their own elementary schools for their employees. In other words, only the children of the employees are admitted to these schools. The fathers of those students are either workers, or managerial staff, or engineers as well as other professionals. Hence, only four factory and one university owned schools were selected to represent the 17 schools.

The School of Huabei Pharmaceutical
The Railway's No.5 Elementary School at Shijiazhuang
The School of No.2 Cotton Mill at Shijiazhuang
The Attached School of Hebei Normal University

The School of Huabei Pharmaceutical was chosen because not only its students accounted for about 30 percent of all the students in factory-run schools in Chang An District but also the fathers of its students were among the highest-paid employees in Shijiazhuang City. The Railway's No.5 Elementary School is a middle-sized school. It is well known that the Chinese Railway has been financially in the red for sometime due to economic reform. It means that most of the fathers of the students in the Railway School could only receive the basic salary. The School of No.2 Cotton Mill is one of the smallest factory run schools. The economic performance of No.2 Cotton Mill is average. In short, school size and factory performance are the two major criteria for choosing the three factory-run schools for this survey.

The attached school of Hebei Normal University was chosen because it was an elitist school in Shijiazhuang City. It is necessary to include the fathers and grandfathers of the students of this school for representative purposes.

37Fifteen of them are owned and run by various sizeable factories. The other two are owned and operated by university and research institute respectively.

38In today's urban China, basic salary may only make up half of the income. Bonus and other form of subsidy are the other major income sources. However, whether one could receive bonus or other subsidy depends upon the economic performance of the firm or company she or he works for. In other words, the income variation among people who share same occupation might be significant if they work for different companies.
b. Sampling

Sampling was conducted through two rounds. By using the random table, one in every twelve students on the list of grade 4, 5, and 6 was selected in the first round. Then, the selected students were asked to fill one-page questionnaire (see Appendix 1.3). Only the students who indicated that both their fathers and grandfathers were alive and living in Shijiazhuang City were qualified for the second-round selection.

The second-round selection was based on (1) the number of the students qualified after the first round and (2) the total number of grade 4, 5, and 6 students. The criterion for the second-round selection is that the ratio of the selected students to the total number of grade 4, 5, and 6 students has to be equal or smaller than 1 to 30. Hence, the second-round selection could be achieved by examining the ratio of the students selected during the first round to the total number of students on the sampling list. If the ratio is higher than 1 to 30, the number of students selected during the first round will be systematically reduced.

The students who passed the two-round selection were asked to bring the copies of the questionnaire to their fathers and grandfathers. All but one school helped distribute and collect the questionnaire. Each and every one of the nineteen schools was given a case of (24) soft drinks for their assistance. During the period of questionnaire distribution and collection, the local temperature had remained 35°C or higher. The soft drink was appreciated.

Although one school was unwilling to help distribute and collect the copies of the questionnaire, it provided the list of its grade 4, 5, and 6 students. Hence, I was able to get the home addresses of its students after the first round selection. Subsequently, the fathers and grandfathers of the chosen students were directly approached for the survey.

c. The questionnaire package and auxiliary materials

Each and every one of the selected students received a letter. The letter explained to the student about the nature of the survey as well as his or her role in the survey (see Appendix 1.4). Each selected student also received a pen and RMB$5 (Chinese currency). The pen was a small gift to the students. Most of the selected students did not live with their grandparents. The RMB$5 would cover the bus tickets if they decided to bring the questionnaire package to their grandparents by bus.

The questionnaire package brought to each respondent contained the following:

(1) A covering letter informing the respondents about the nature of the research and about ethical concerns (see Appendix 1.5 or 1.6). The respondents were
usually given a week to answer the questions. The letter to the respondents had two versions because not all the schools were prepared to give full support to this particular survey research. One version indicated that the survey was conducted by the University of Toronto and assisted by Huamei College. This version of the letter was sent to the respondents when a school was willing to tell its students that they were encouraged to participate in the survey. The other version stated that Huamei College was responsible for the survey. This letter was stamped with a red official seal. It was distributed when a school was unwilling or unable to give the necessary explanation to its students.

(2) Specific instructions for filling in the questionnaire (see Appendix 1.7). The questionnaire instruction emphasized that the survey was a serious academic affair and only the father or grandfather could give valid answers. The questionnaire instruction also included a pager number. The respondents were encouraged to page me whenever they had questions. The idea of the pager was constructive. Various questions were asked and answered by means of the channel of the pager.

(3) The questionnaire itself (see Appendix 1.8).

iii. Response Rate

A total number of 274 students were randomly selected. Because each selected student was asked to bring a copy of the questionnaire to not only his or her father but also his or her grandfather, the total number of questionnaires distributed was 548. A respondent was normally given a week for completing the questionnaire. A total of 512 questionnaires was returned between July and September 1996. Hence, the response rate was 93.4 percent.

Thirty-six of the selected students were unable to help me with the questionnaire distribution and collection for personal reasons. I was told that their parents were either having a divorce or not in the city during that period of time.

iv. Available Statistics From the Government or Other Sources

It is important to point out that the telephone and pager are still in the earlier stages of diffusion process. Hence, in addition to choosing survey as the central methodological technique, it was desirable to consult the municipal and national government statistics or media distributors for a national or city wide picture as to what degree each media has been diffused. Such data may be crucial in order to safeguard the quality of generalization. However, the attempt to get those statistics from the government and media distributor was not very successful.

Due to the mixed socialist and "market" approach in China, the government statistics become either classified or for sale only. The media distributors also do not want to disclose the
information for reasons of competition.

What we do know now is that there was about one telephone for every eighteen people in Shijiazhuang City in 1993 (Ren 1995). Moreover, according to Statistics Shijiazhuang City, there are 103 colour television sets per 100 households in 1996.  

v. Strengths and Weaknesses of Data Gathering Methodology

The common approach in survey research is to either use a self-administered questionnaire or employ a team of interviewers, or both. Because the method used in this survey differs from the common approach, it also shows different strengths and weaknesses.

As other self-administered surveys, this survey is able to not only avoid the problem of interviewer bias but also increase anonymity and privacy that tend to encourage more candid response. Similar to self-administered surveys, this mode of data collection is relatively economical and facilitates the collection of large amounts of data. Unlike typical self-administered surveys, this survey research does not suffer a low response rate due to the assistance of the grade 4, 5, and 6 students.

Like many other surveys, this survey uses standardized questionnaires. The standardized questionnaire does have its obvious advantages. However, it has been argued that the data collected through standardized questionnaires suffers potentially from artificiality and superficiality. This study tried to reduce the weakness by taking several measures. The questionnaire construction benefitted from an extensive review of both qualitative and quantitative literature on diffusion and implementation of innovations. Almost all the items used in the questionnaire have been empirically tested by other survey researchers as far as their validity is concerned. The item selection was also benefitted from my informal chats with a few mainland Chinese immigrants and students on electronic media adoption in urban China. Nevertheless, a larger scale of qualitative research was desirable for both the constructions of questionnaire and subsequent interpretation of the quantitative analyses. Unfortunately, the financial and time constraints prevented me from the practice.

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Chapter 4
Variable Distribution, Transformation, and Construction

In this chapter, I shall examine the independent, mediating, and dependent variables. I shall discuss the structure, and where necessary, the derivation of the variables. The independent variables consist of occupational prestige, education, ability to pay, social mobility, generation, and personal values. The mediating variables are specific reasons for the media adoption. The dependent variables consist of the time of media adoption, degree of use, and nature of use. The distribution of each variable is examined for certain statistical requirements. For instance, regression analysis requires that the variables involved show normal distributions. Therefore, an appropriate transformation will be applied to variables that have either positive or negative skew.\footnote{An appropriate transformation means either logarithmic [e.g. \( \ln(x) \)] or hyperbolic [e.g. \( -\frac{1}{x} \)], or square [e.g. \( x^2 \)], or cube [e.g. \( x^3 \)].}

Moreover, while the occupational prestige is arranged according to the ranking scores of respondents, the intergenerational mobility is simply the prestige difference between the fathers and grandfathers. As far as personal values are concerned, they are latent and presented in this chapter, as grouped with appropriate manifest variables. The specific reasons are elicited from the respondents by asking them for what reasons they have adopted the media.

1. Sociological Variables
(1) Occupational Prestige

The occupation is measured by questionnaire item 6. There are totally 46 occupations on the list. The 46 occupations are divided into five groups (See Questionnaire item 55). There are 10 occupations in each group. An occupation is randomly selected and only assigned to one of the five groups. However, in each group, there is the occupation, \textit{elementary teachers}, for a reference purpose.

Within a group, the ranking score of an occupation is calculated in terms of its distance and direction to the reference occupation, \textit{elementary teachers}. For instance, the following is one of the five groups

- ( ) Entering level managerial cadres in a foreign owned firm
- ( ) Drivers
- (6) Police Officer
- ( ) Train attendants
- ( ) Self-employed
(1) Housemaid
(2) Various service positions in institutions
(3) Elementary school teachers
(4) Waiters or attendants working in a guest house which receive foreign guests
(5) Lecturers or teaching assistants in universities

The respondents rank the 10 occupations from 1 to 10 (the most prestigious occupation gets 10, the least receives 1). If police officers received a ranking score 6 while elementary school teachers got 3, the real score that the occupation, police officers, would get should be $6 + (6 - 3) = 9$. Similarly, if waiters got only 2, their real rating score would be $2 + (2 - 3) = 1$. The prestige score of each respondent will be assigned according to his own occupation. It is hoped that the prestige scores will have the sufficient variation so that the occupations can be differentiated. The distribution of ranking results for the father generation is nearly symmetric (Skewness = .478) but double-peaked while the distribution for the grandfather generation is symmetric but triple-peaked (See Appendix 2 for the ranked list).

(2) Intragenerational Mobility

The score of intragenerational mobility is calculated by subtracting the rank of the first job from the rank of the current job. While its distribution is near symmetric, it has multiple modes for both the generations.

(3) Intergenerational Mobility

This variable refers to the mobility from a grandfather’s current occupation to a father’s current occupation. The scores of Intergenerational mobilities are calculated by subtracting the rank of the grandfather’s current occupation from the rank of the father’s current occupation. The distribution of this variable is normal for both the generations.

(4) Education

Levels of education are measured by the questionnaire item five. It is an ordinal variable and has a normal distribution for both generations.

1 = Illiterate/semiliterate
2 = 4-year elementary school
3 = 6-year elementary school
4 = Junior High
5 = High School
6 = University
7 = Postgraduate
(5) Ability to Pay

Ability to pay means how much one paid for a particular medium in terms of his family's monthly income. For instance, if one paid three months' family income while another paid five months', the former would have a higher ability to pay. The questionnaire items for this variable are 11, 18, 24, and 35.

(6) Generation

This is a categorical variable. It consists of father and grandfather generations. All the questionnaires with odd serial numbers were distributed to the fathers while all the questionnaires with even numbers were distributed to the grandfathers.

2. Personal Values

The personal values are higher-level value orientations comparing with the elicited reasons. They are latent and derived from the various kinds of selective orientations such as pleasure, likes, preference, duties, moral obligations, desires, wants, goals, needs, aversions and attractions, and so on (manifest variables). The reliability of measurement is estimated by Cronbach's alpha. Cronbach's alpha (the size of reliability coefficient) is based on both the average correlation among items (the internal consistency) and the number of items. That is, if the coefficient alpha proves to be very low, either the test is too short or the items have very little in common (See Nunnally 1978). This includes the situations that there are subsets of items correlating more strongly with each other. Nevertheless, according to Nunnally (1978), a coefficient alpha should be always computed for any multiple-item scale because it sets an upper limit to the reliability of tests. As mentioned in Chapter 2, in this particular research, the selective orientations are organized under four value domains. Factor analysis is used for constructing and determining the number of latent variables. The newly created variables are saved as independent variables for later statistical analyses.

i. Achievement Oriented Value Domain and Personal Value Constructs

As one of the most important indicators of a scale's quality, coefficient alpha can vary from .00 to .100. DeVellis (1991) suggests that: below .60, unacceptable; between .60 and .65, undesirable; between .65 and .70, minimally acceptable; between .70 and .80, respectable; between .80 and .90, very good; much above .90, one should consider shortening the scale. Here, it may be necessary to note that a number of item problems such as a noncentral mean, poor variability, negative correlations among items, low item-scale correlations, and weak inter-item correlations tend to contribute to a smaller value of alpha.
In this research, the achievement value domain consists of two groups of manifest variables.

a. Competitiveness and Status Aspiration (See Questionnaire Q.40 & 41)

*It is ok to take advantage of a few people in order to succeed.
*If the odds are against you, it will be impossible to come out on top.
*If you want to succeed, you cannot be too squeamish on the means you use.
*I always want to be successful.
*I often attempt tasks that I am not sure I can do than tasks I know I can do.
*I often do things at which I feel confident and relaxed.
*It annoys me when other people perform better than I do.
*Achieving greater success than my peers is important to me.
*My achievements are highly regarded by others.
*I have higher devotion to my work than most people I know.
*I do less interesting or less enjoyable work in order to get ahead.
*I keep quiet on something I think it is wrong in order to achieve certain goals.
*I want others to look up to me because of my accomplishments.
*I want my accomplishments to be recognized by others.
*I enjoy having authority over other people.
*I like to give orders and get things going.

The Cronbach's alpha of reliability coefficient for this composite is very respectable (.77).

Principal component analysis revealed five factors of competitiveness and status aspiration for the father and grandfather generation respectively (See Table 4.1a next page).

For the father generation, the first factor clearly shows Authority & Status Aspiration. The second one reveals the dimension of Success at the Expense of Others. The third factor demonstrates another dimension of competitiveness. That is, one is willing to do less enjoyable or less interesting job and able to keep quiet about something that is wrong for achievement oriented purposes. Therefore, this factor may be called Determined to Succeed. The fourth factor simply indicates that achievements are the most important. Hence, it is named Achieving Spirit. The last factor has very little to do with competitiveness. Rather, it shows the opposite. Hence, it is called Prudence & Modest.
Table 4.1a

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Competitiveness &amp; Status Aspiration</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Want To Be Recognized</td>
<td>.76159</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Enjoy Authority Over Others</td>
<td>.69971</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Want Others to Look Up to Me</td>
<td>.68750</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.37675</td>
</tr>
<tr>
<td>Like to Give Orders</td>
<td>.59976</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>-.32118</td>
</tr>
<tr>
<td>Annoyed When Others Do Better</td>
<td>.38772</td>
<td>.60573</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Ok to Take Advantage of People</td>
<td>.</td>
<td>.84689</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Not too Squeamish on Means</td>
<td>.</td>
<td>.77842</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cannot Beat the Odds</td>
<td>.</td>
<td>.42172</td>
<td>.42026</td>
<td>.31438</td>
<td></td>
</tr>
<tr>
<td>Willing to Do Less Enjoyable Job</td>
<td>.</td>
<td>.</td>
<td>.75447</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Keep Quiet For Purposes</td>
<td>.</td>
<td>.</td>
<td>.73933</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Attempt Tasks Not Sure Can Do</td>
<td>.</td>
<td>.</td>
<td>.69941</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Always Want To Be Successful</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.67104</td>
<td>.</td>
</tr>
<tr>
<td>Achieve Greater Success</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.62656</td>
<td>.</td>
</tr>
<tr>
<td>Higher Devotion To Work</td>
<td>.55911</td>
<td>.</td>
<td>.</td>
<td>.36661</td>
<td>.</td>
</tr>
<tr>
<td>Achievements Highly Regarded</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.33346</td>
<td>.</td>
</tr>
<tr>
<td>Do Confident &amp; Relaxed Things</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.88636</td>
</tr>
</tbody>
</table>

Father Generation: N = 205

*Factor 1 = Authority & Status Aspiration
*Factor 2 = Success at the Expense of Others
*Factor 3 = Determined to succeed
*Factor 4 = Achieving Spirit
*Factor 5 = Prudence & Modest

For the grandfathers, as Table 4.1b shows, the boundaries among the five factors are more blurred. Similar to the father generation, the first factor and the second may be called Authority & Status Aspiration and Succeed at the Expense of Others. The third one is somewhat difficult to name because of the item “do confident and relaxed” things. Nevertheless, it mainly features Prudent & Standing. The fourth one shows Achieving Spirit. The last one is the dimension of Determined to Succeed.
Table 4.1b

| Factor Loading and Dimensions of Competitiveness & Status Aspiration |
|------------------|------------------|------------------|------------------|------------------|
| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
| Want To Be Recognized | .81453 | --- | --- | --- | --- |
| Achievements Highly Regarded | .66061 | --- | --- | --- | --- |
| Enjoy Authority Over Others | .57205 | --- | .54381 | --- | --- |
| Like to Give Orders | .56894 | --- | .48483 | --- | --- |
| Want Others to Look Up to Me | .48276 | --- | --- | .32226 | --- |
| Higher Devotion To Work | .46085 | --- | --- | .34507 | .36284 |
| Not too Squeamish on Means | --- | .80270 | --- | --- | --- |
| Ok to Take Advantage of People | --- | .77946 | --- | --- | --- |
| Cannot Beat the Odds | --- | .49607 | --- | --- | --- |
| Annoyed When Others Do Better | --- | .36341 | .61513 | --- | --- |
| Willing to Do Less Enjoyable Job | --- | --- | .57421 | --- | .45933 |
| Do Confident & Relaxed Things | --- | --- | .57421 | --- | --- |
| Always Want To Be Successful | --- | --- | --- | .76406 | --- |
| Achieve Greater Success | --- | --- | --- | .60679 | --- |
| Attempt Tasks Not Sure Can Do | --- | --- | --- | --- | .76075 |
| Keep Quiet For Purposes | --- | .32104 | .30101 | --- | .59514 |

Grandfather Generation: N = 200

*Factor 1 = Authority & Status Aspiration
*Factor 2 = Success at the Expense of Others
*Factor 3 = Prudence & Standing
*Factor 4 = Achieving Spirit
*Factor 5 = Determined to Succeed

b. Materialism

There are 15 items for the measurement of materialism (See Questionnaire Q42 & 43). The reliability analysis for this composite yields a respectable alpha value (.73).

*I am bothered when I see people who buy anything they want.
*When friends have things I cannot afford, it bothers me.
*I argue with my wife about money.
*I think about what I might do to earn a great deal of money.
*I put less emphasis on material things than most people I know.
*I like a lot of luxury in my life.
*To me, my work is just a way of making money.
*I feel that money is the only thing that I can really count on.
*I firmly believe that money can solve all my problems.
I do not place much emphasis on the amount of material objects people own as an important sign of success.
* The things I own are not all that important to me.
* The things I own say a lot about how well I am doing in life.
* The most important achievement in life is wealth.
* The best way to evaluate a person is his ability to make money.
* I would work for a lower salary if the job was pleasant.

Principal component analysis reveals that five factors are extracted from the 15 items for the father and grandfather generations respectively.

As Table 4.1c shows, for the father generation, the first factor is almost all about money.

Table 4.1c

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Materialism</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money Solves All My Problems</td>
<td>.75632</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Wealth is the Most Important</td>
<td>.75207</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Money is the Only Thing</td>
<td>.72680</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Work Only For Money</td>
<td>.57630</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Ability To Make Money</td>
<td>.56940</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Things I Own Speak For Me</td>
<td>.33386</td>
<td>.30598</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Bothered With Shopping Power</td>
<td>--------</td>
<td>.86647</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Jealous Of Friends’ Possession</td>
<td>--------</td>
<td>.85724</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Think To Make Big Money</td>
<td>--------</td>
<td>--------</td>
<td>.71347</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Concern High Pay Not Pleasance</td>
<td>--------</td>
<td>--------</td>
<td>.58884</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Like Luxury Things in Life</td>
<td>--------</td>
<td>--------</td>
<td>.34051</td>
<td>.52530</td>
<td>--------</td>
</tr>
<tr>
<td>Less Emphasis On Material Thing</td>
<td>--------</td>
<td>--------</td>
<td>-.38478</td>
<td>.69821</td>
<td>--------</td>
</tr>
<tr>
<td>Success Does Not Equal Material</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>.73495</td>
<td>--------</td>
</tr>
<tr>
<td>Argue With Wife On Money</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>.70238</td>
</tr>
<tr>
<td>Things Owned Not All Matter</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>.72717</td>
</tr>
</tbody>
</table>

Father Generation N = 200

* Factor 1 = Money
* Factor 2 = Jealous of Other’s Wealth
* Factor 3 = Material Desires
* Factor 4 = Less Materialistic
* Factor 5 = Stingy

Therefore, it is named Money. The second factor shows one’s sensitivity to the material things when one is related to the others. So it is called Jealous of Other’s Wealth. The third factor
indicates the degree of Material Desires. The fourth factor verifies the degree of materialism from the opposite side. It is called Less Materialistic. The last factor is somewhat difficult to define. If a husband often argues with his wife about money and thinks that the things he owns are not all important to him, he may be called stingy at least to some degree.

The grandfather generation does not differ from the father generation in any significant way as far as the five dimensions are concerned.

Table 4.1d

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money Solves All My Problems</td>
<td>.82271</td>
<td>.48985</td>
<td>.30337</td>
<td>.37202</td>
<td>.49183</td>
</tr>
<tr>
<td>Money is the Only Thing</td>
<td>.77386</td>
<td>.68838</td>
<td>.53679</td>
<td>.49183</td>
<td>.40853</td>
</tr>
<tr>
<td>Work Only For Money</td>
<td>.68838</td>
<td>.48490</td>
<td>.53679</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Argue With Wife On Money</td>
<td>.53679</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Wealth is the Most Important</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Ability To Make Money</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Bothered With Shopping Power</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Jealous of Friends’ Possession</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Concern High Pay Not Pleasance</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Think To Make Big Money</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Things Owned Not All Matter</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Less Emphasis On Material Thing</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Success Does Not Equal Material</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Things I Own Speak For Me</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Like Luxury Things in Life</td>
<td>.49183</td>
<td>.49183</td>
<td>.49183</td>
<td>.37202</td>
<td>.40853</td>
</tr>
<tr>
<td>Grandfather Generation N = 198</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Factor 1 = Money
*Factor 2 = Jealous of Other’s Wealth
*Factor 3 = Material Desires
*Factor 4 = Less Materialistic
*Factor 5 = Stingy

The five factors share the names with that of fathers because there is a high degree of similarity between the two generations.
ii. Enjoyment Value Domain and Personal Value Constructs

There are 9 enjoyment oriented value items (See Questionnaire Q44 & Q45). The reliability analysis for this composite shows that its alpha value is rather respectable (.76).

*It is better to spend your money on things you can enjoy now, rather than save it for the future.
*You cannot take anything to go with you when you die, so it is important to indulge yourself in pleasure promptly.
*Life would be more meaningful if we had had more leisure time.
*Success means having ample time to seek pleasure.
*The less hour one spends on working and the more leisure time available the better.
*Unless one has a lot of money, one cannot have a really happy life.
*One should live for today and let tomorrow take care of itself.
*I am the kind of person who does not let his plans for the future keep me from enjoying the present.
*A comfortable life is my life goal.

From the 9 items, we are able to construct 3 latent variables through principal component analysis for the father generation.

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Enjoyment Value Orientations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Successful Means More Pleasure</td>
</tr>
<tr>
<td>Money Means Happy Life</td>
</tr>
<tr>
<td>Comfortable Life</td>
</tr>
<tr>
<td>Less Work &amp; More Leisure</td>
</tr>
<tr>
<td>Live For Today</td>
</tr>
<tr>
<td>Enjoy Now Not Future Plan</td>
</tr>
<tr>
<td>Indulge In Pleasure</td>
</tr>
<tr>
<td>Spend Money &amp; Enjoy Now</td>
</tr>
<tr>
<td>Leisure Means More Meaningful Life</td>
</tr>
<tr>
<td>Father Generation: N = 221</td>
</tr>
</tbody>
</table>

*Factor 1=Money & Pleasure
*Factor 2=Spending & Indulge
*Factor 3=Leisure & Comforts

For the fathers, the first factor seems very *Money and Pleasure* oriented. The second factor emphasizes spending money and living for today. The last factor may be called *Leisure and Comforts.*
For the grandfather generation, the three factors are very interrelated. Nevertheless, it is decided to have three factors instead of 2 or 1 for the grandfather generation because each factor still captures the unique nature of the dimension to some degree.

Table 4.2b

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Enjoyment Value Orientations</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Work &amp; More Leisure</td>
<td>.74149</td>
<td>-</td>
<td>.31458</td>
</tr>
<tr>
<td>Successful Means More Pleasure</td>
<td>.73976</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indulge In Pleasure</td>
<td>.63508</td>
<td>.43955</td>
<td>-</td>
</tr>
<tr>
<td>Money Means Happy Life</td>
<td>.56582</td>
<td>.40699</td>
<td>-</td>
</tr>
<tr>
<td>Comfortable Life</td>
<td>.42593</td>
<td>-</td>
<td>.33023</td>
</tr>
<tr>
<td>Spend Money &amp; Enjoy Now</td>
<td>-</td>
<td>.71175</td>
<td>-</td>
</tr>
<tr>
<td>Live For Today</td>
<td>-</td>
<td>.68158</td>
<td>-</td>
</tr>
<tr>
<td>Enjoy Now Not Future Plan</td>
<td>-</td>
<td>.55001</td>
<td>.66045</td>
</tr>
<tr>
<td>Leisure Means More Meaningful Life</td>
<td>-</td>
<td>-</td>
<td>.76804</td>
</tr>
</tbody>
</table>

Grandfather Generation: N = 213

*Factor 1=Money & Pleasure
*Factor 2=Spending & Indulge
*Factor 3=Leisure & Comforts

It is really difficult to give each factor a distinct name because of the high interrelations among the factors. Nevertheless, the three factor names still reflect the nature of the factors to some degree. Therefore, they are maintained.

iii. Restrictive Value Domain and Personal Value Constructs

This composite has 7 items (See Questionnaire Q44 & 45). Its alpha value is only .36. The unacceptable low alpha value for this composite is mainly due to not only the small number of items included but also the number of latent variables involved.\(^2\) Table 4.3 shows that there are three uncorrelated subsets of items. While the low alpha value indicates the need for more items for each subset, the relatively high loadings for each factor suggest that we may still use the factors as the independent variables. The items include:

*I am proud of my ability to save money.
*Being frugal always pays off in the end.

\(^2\)DeVellis (1991) points out that the inter-item correlation need be only .14 to yield an alpha of .80 for a 25-item.
*Buying things gives me a lot of pleasure.
*I like to try new things.
*I buy only the things I need.
*I say “I can’t afford it” whether I can or not.
*Human desires have to be controlled.

Table 4.3a

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Restrictive Value Orientations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Being Frugal Pays</td>
</tr>
<tr>
<td>Only Buy Things Needed</td>
</tr>
<tr>
<td>Proud of Saving Ability</td>
</tr>
<tr>
<td>Shopping Gives Pleasure</td>
</tr>
<tr>
<td>Like New Things</td>
</tr>
<tr>
<td>Say “Cannot”</td>
</tr>
<tr>
<td>Control Human Desire</td>
</tr>
</tbody>
</table>

Father Generation: N = 228

*Factor 1=Frugal
*Factor 2=Innovating & Spending
*Factor 3=Restraint

For the father generation, Factor 1 features frugality. The second factor shows the dimension of “being a innovator”. The third factor is somewhat opposite of the second one. Therefore, it is called restraint.

For the grandfather generation, while the second factor clearly indicates Innovating & Spending, the first and third are rather similar for the grandfather generation. The first may be called Thrifty & Control. The last one is named Frugal.
Table 4.3b

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Restrictive Value Orientations</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only Buying Things Needed</td>
<td>.68746</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Control Human Desire</td>
<td>.68340</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Being Frugal Pays</td>
<td>.64466</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Shopping Gives Pleasure</td>
<td>.----</td>
<td>.83008</td>
<td>.----</td>
</tr>
<tr>
<td>Like New Things</td>
<td>.----</td>
<td>.77471</td>
<td>.----</td>
</tr>
<tr>
<td>Say &quot;Cannot&quot;</td>
<td>.----</td>
<td>.----</td>
<td>.76099</td>
</tr>
<tr>
<td>Proud of Saving Ability</td>
<td>.----</td>
<td>.----</td>
<td>.72975</td>
</tr>
</tbody>
</table>

Grandfather Generation: N = 217

*Factor 1=Thrifty & Control
*Factor 2=Innovating & Spending
*Factor 3=Frugal

iv. Conformity Value Domain and Personal Value Constructs

The conformity oriented values are measured by the following 11 items (See Questionnaire Q46):

*In this complicated world, the only way to know what to do is to rely on leaders and experts.
*Any good leader should be strict with people under him in order to gain their respect.
*Parents are never wrong.
*The world is too uncertain to plan ahead.
*There is little one can do to alter his fate in life.
*Obedience and respect for authority are the most important virtues children should learn.
*Following the mainstream in a calm and controlled manner is the best way to cope in life.
*The one who wants to be different from others gets hurt first.
*The most desirable life is a simple and peaceful one.
*I hate to be different from others.
*To get along with people one must put on an act.

The alpha value for this composite is only minimally acceptable (.64). The reliability analysis reveals that the low correlation (.04) between the item "desire a simple life" and rest of the items may be responsible for the marginal alpha value. Four factors are extracted from the 11 items for the father generation.
Table 4.4a

<table>
<thead>
<tr>
<th>Factor Loading and Dimensions of Conformity</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obedient Children</td>
<td>.80445</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Rely on Leaders</td>
<td>.38284</td>
<td>.</td>
<td>.42661</td>
<td>.</td>
</tr>
<tr>
<td>Follow Mainstream</td>
<td>.67540</td>
<td>.37988</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Being Different Gets Hurt</td>
<td>.51466</td>
<td>.37415</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Put On An Act For Getting Along</td>
<td>.45344</td>
<td>.45264</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cannot Plan Ahead</td>
<td>.</td>
<td>.77372</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Cannot Alter Fate</td>
<td>.</td>
<td>.76098</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Desire a Simple Life</td>
<td>.</td>
<td>.</td>
<td>.73575</td>
<td>.</td>
</tr>
<tr>
<td>Hate To Be Different</td>
<td>.</td>
<td>.</td>
<td>.73434</td>
<td>.</td>
</tr>
<tr>
<td>Good Leaders Strict</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.69808</td>
</tr>
<tr>
<td>Parents Never Wrong</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.75850</td>
</tr>
</tbody>
</table>

Father Generation: N = 215

*Factor 1 = Obey & Follow
*Factor 2 = Resign to Fate
*Factor 3 = Being Ordinary
*Factor 4 = Submissive

For the fathers, the first factor may be called Obey & Follow. The second emphasizes Resign to Fate. The third one features Being Ordinary. The last factor clearly shows some aspects of authoritarian personality. According to Adorno, et al. (1950), authoritarian personality is supposed to be characterized by respect for convention, submission, stereotypical beliefs, admiration for power and toughness, destructive and cynical tendencies, projection and exaggerated concerns with sexual morals (cf. Cherry and Byrne 1977).

For the grandfathers, three factors are constructed by means of the principal component analysis.
Table 4.4b

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow Main Stream</td>
<td>.77778</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Cannot Alter Fate</td>
<td>.74126</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Being Different Gets Hurt</td>
<td>.73152</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Put On AN Act To Getting Along</td>
<td>.50207.</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Obedient Children</td>
<td>.58769</td>
<td>.43378</td>
<td>---</td>
</tr>
<tr>
<td>Good Leaders Strict</td>
<td>---</td>
<td>.72190</td>
<td>---</td>
</tr>
<tr>
<td>Rely On Leaders</td>
<td>---</td>
<td>.69630</td>
<td>---</td>
</tr>
<tr>
<td>Parents Never Wrong</td>
<td>---</td>
<td>.47127</td>
<td>---</td>
</tr>
<tr>
<td>Cannot Plan Ahead</td>
<td>.34187</td>
<td>.37164</td>
<td>-.53025</td>
</tr>
<tr>
<td>Hate To Be Different</td>
<td>---</td>
<td>---</td>
<td>.76647</td>
</tr>
<tr>
<td>Desire a Simple Life</td>
<td>---</td>
<td>---</td>
<td>.60233</td>
</tr>
</tbody>
</table>

Grandfather Generation: N = 207

*Factor 1 = Follow & Resign to Fate
*Factor 2 = Obey & Submissive
*Factor 3 = Being Ordinary

The first factor seems emphasizing *Follow & Resign to Fate*. The second factor features authoritarian personality. The last one shows *Being Ordinary*.

3. Specific Reasons For Media Adoption

The reasons for the medium adoption differ from the value described above because they are directly related to the media purchases rather than general wants or desires. In this section, the distribution and dimensions of the reasons are illustrated or identified. The dimensions are constructed by means of factor analysis. The factors are used to assist or guide the illustration of relationships between the reasons and time of medium adoption, use, and nature of use. For instance, it is possible that the time of a medium adoption is affected by more than one reason. Knowing that whether the reasons identified are belonging to the same dimension will help interpret the findings.

i. Television

The measurement of reasons for television adoption consists of 11 Likert-scale items.

1) I wanted to learn foreign languages or other skills offered on TV.
2) It was for my children to learn foreign languages or other skills.
3) It was fashionable.
4) It was broadening my horizons.
5) It was entertaining.
6) It was a symbol of status in that time.
7) My family wanted to get one.
8) It was novel at that time.
9) Most of my friends already had one.
10) Most of my relatives already had one.
11) High profile people had one.

Cronback’s alpha of reliability coefficient is acceptable (Alpha = .70 and .61 for the two generations respectively), indicating that the items in this measure are consistent. Table 4.5a, 4.5b, and 4.5c show the distributions and dimensions of the 11 variables for the two generations.

a. Distribution

<table>
<thead>
<tr>
<th>Table 4.5a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Distribution of the Reasons for Television Adoption</td>
</tr>
<tr>
<td>Not at All/Not Much</td>
</tr>
<tr>
<td>F(%)</td>
</tr>
<tr>
<td>Entertainment</td>
</tr>
<tr>
<td>Broaden My Horizons</td>
</tr>
<tr>
<td>Family Wanted One</td>
</tr>
<tr>
<td>Friends Had One Already</td>
</tr>
<tr>
<td>Relatives Had One Already</td>
</tr>
<tr>
<td>Children Learn English, etc.</td>
</tr>
<tr>
<td>Novel</td>
</tr>
<tr>
<td>High Profile Men Had One</td>
</tr>
<tr>
<td>Learn English/Other Skills</td>
</tr>
<tr>
<td>A Symbol of Status</td>
</tr>
<tr>
<td>Fashionable</td>
</tr>
</tbody>
</table>

Total number of cases for the father generation = 252
Total number of cases for the grandfather generation = 249

*F=Father Generation
*G=Grandfather Generation

The above table suggests that majority of the respondents bought their first television set mainly for being entertained, broadening their horizons, and satisfying their family’s requests. Factor analysis further reveals that the three major reasons mainly belong to the dimension of family
entertainment.

b. Dimensions

<table>
<thead>
<tr>
<th>Table 4.5b</th>
<th>Factor Loading and Dimensions of Reasons for TV Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor 1</td>
</tr>
<tr>
<td>Relatives Already Had One</td>
<td>.915</td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>.848</td>
</tr>
<tr>
<td>High Profile People Had One</td>
<td>.859</td>
</tr>
<tr>
<td>Learn English/Other Skills</td>
<td>.----</td>
</tr>
<tr>
<td>Children Learn English, etc.</td>
<td>.----</td>
</tr>
<tr>
<td>Novel</td>
<td>.----</td>
</tr>
<tr>
<td>Fashionable</td>
<td>.----</td>
</tr>
<tr>
<td>A Symbol of Status</td>
<td>.----</td>
</tr>
<tr>
<td>Broaden Horizons</td>
<td>.----</td>
</tr>
<tr>
<td>Entertainment</td>
<td>.----</td>
</tr>
<tr>
<td>Family Wanted Have One</td>
<td>.----</td>
</tr>
</tbody>
</table>

*Generation=Father
*Factor 1=Following Others
*Factor 2=Learning
*Factor 3=Vanity
*Factor 4=Family Entertainment

The above table shows the dimensions of reasons for the television adoption for the father generation. The first factor is named Following Others because of its passive implications. In contrast to the first factor, the second factor displays initiative. The third one suggests Vanity. The last factor for the father generation reflects the dimension of family viewing as far as adopting and postadopting television in Shijiazhuang City is concerned. That is, it is assumed that a father had to buy the television set because his family members wanted to get one for the reasons of entertainment and broadening horizons.

For the grandfather generation, three items are loaded by more than one factor. However, it seems that the boundaries among the four factors are still observable. Moreover, although the item, entertainment, is loaded on the factor 3 instead of the factor 4, the two factors are still labelled as vanity and family entertainment respectively for the purpose of illustration.
Table 4.5c

Factor Loading and Dimensions of Reasons for TV Adoption

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatives Already Had One</td>
<td>.913</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>.890</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>High Profile People Had One</td>
<td>.863</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Learn English/Other Skills</td>
<td>-</td>
<td>.807</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Children Learn English, etc.</td>
<td>-</td>
<td>.893</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Entertainment</td>
<td>-</td>
<td>-.304</td>
<td>.418</td>
<td>.</td>
</tr>
<tr>
<td>Novel</td>
<td>.337</td>
<td>.</td>
<td>.476</td>
<td>.489</td>
</tr>
<tr>
<td>Fashionable</td>
<td>-</td>
<td>-</td>
<td>.827</td>
<td>.</td>
</tr>
<tr>
<td>A Symbol of Status</td>
<td>-</td>
<td>-</td>
<td>.757</td>
<td>.</td>
</tr>
<tr>
<td>Broaden Horizons</td>
<td>-</td>
<td>.472</td>
<td>-</td>
<td>.606</td>
</tr>
<tr>
<td>Family Wanted Have One</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.789</td>
</tr>
</tbody>
</table>

*Generation=Grandfather
*Factor 1=Following Others
*Factor 2=Learning
*Factor 3=Vanity
*Factor 4=Family Entertainment

ii. Audio Cassette Recorder/Player (ACR)

The measurement of the reasons for the ACR adoption is the same as the ones used for the television adoption. While this composite of Likert-scale type items also yields a respectable value of the alpha for the father generation, the value for the grandfather generation is relatively low (.61) (see Footnote 3).

a. Distribution

Table 4.6a shows that the three highest rated reasons for the two generations are "entertainment" (father=80.1%; Grandfather=74.8%), "broadening horizons" (Father=41.2%; Grandfather=52.7%), "family wanted to have one" (Father=40.7%; Grandfather=57.1%).
Table 4.6a
Frequency Distribution of the Reasons for the ACR Adoption

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Not at All/Not Much</th>
<th>Somewhat</th>
<th>A Lot/Exactly</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(%) G(%)</td>
<td>F(%) G(%)</td>
<td>F(%) G(%)</td>
<td>F G</td>
</tr>
<tr>
<td>Entertainment</td>
<td>7 8.4</td>
<td>12.9 16.8</td>
<td>80.1 74.8</td>
<td>201 107</td>
</tr>
<tr>
<td>Broaden My Horizons</td>
<td>31.5 19.8</td>
<td>27.3 27.5</td>
<td>41.2 52.7</td>
<td>165 91</td>
</tr>
<tr>
<td>Family Wanted One</td>
<td>29.9 25.3</td>
<td>29.3 17.6</td>
<td>40.7 57.1</td>
<td>167 91</td>
</tr>
<tr>
<td>Children Learn English, etc.</td>
<td>53.5 52.8</td>
<td>16.4 15.7</td>
<td>30.2 31.5</td>
<td>159 89</td>
</tr>
<tr>
<td>Novel</td>
<td>63 68.8</td>
<td>18.5 17.5</td>
<td>18.5 13.8</td>
<td>162 80</td>
</tr>
<tr>
<td>Learn Foreign Languages</td>
<td>63.5 70.9</td>
<td>18.9 15.1</td>
<td>17.6 14</td>
<td>159 86</td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>65 73.8</td>
<td>20.2 10</td>
<td>14.7 16.3</td>
<td>163 80</td>
</tr>
<tr>
<td>Relatives Already Had One</td>
<td>73.6 79.5</td>
<td>16.4 7.7</td>
<td>10.1 12.8</td>
<td>159 78</td>
</tr>
<tr>
<td>High Profile Men Had One</td>
<td>77.1 85</td>
<td>13.4 6.3</td>
<td>9.6 8.8</td>
<td>157 80</td>
</tr>
<tr>
<td>Fashionable</td>
<td>79.9 87.2</td>
<td>14.3 7.7</td>
<td>5.8 5.1</td>
<td>154 78</td>
</tr>
<tr>
<td>A Symbol of Status</td>
<td>82.8 88.5</td>
<td>11.5 5.1</td>
<td>5.7 6.4</td>
<td>157 78</td>
</tr>
</tbody>
</table>

Total number of cases for the father generation = 223
Total number of cases for the grandfather generation = 134

b. Dimensions

As Table 4.6b and 4.6c show, four factors are constructed for the two generations respectively.

For the father generation, the first factor clearly indicates Following Others. The second features the dimension of Vanity. The third factor is the Learning dimension. The last dimension is named Family Entertainment because it is assumed that the family members who pushed the adoption also share the needs to be entertained and broaden their horizons.
Table 4.6b
Factor Loading and Dimensions of Reasons for the ACR Adoption

<table>
<thead>
<tr>
<th>(Father Generation)</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatives Already Had One</td>
<td>.903</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>.895</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Profile People Had One</td>
<td>.892</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fashionable</td>
<td>.300</td>
<td>.819</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Symbol of Status</td>
<td></td>
<td>.870</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novel</td>
<td></td>
<td>.724</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learn Foreign Languages</td>
<td></td>
<td></td>
<td>.818</td>
<td></td>
</tr>
<tr>
<td>Children Learn English or Others</td>
<td></td>
<td></td>
<td>.833</td>
<td></td>
</tr>
<tr>
<td>Broaden Horizons</td>
<td></td>
<td></td>
<td></td>
<td>.699</td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
<td>.549</td>
</tr>
<tr>
<td>Family Wanted Have One</td>
<td></td>
<td></td>
<td></td>
<td>.739</td>
</tr>
</tbody>
</table>

*Factor 1=Following Others
*Factor 2=Vanity
*Factor 3=Learning
*Factor 4=Family Entertainment

Table 4.6c
Factor Loading and Dimensions of Reasons for the ACR Adoption

<table>
<thead>
<tr>
<th>(Grandfather Generation)</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatives Already Had One</td>
<td>.950</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>.913</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Profile People Had One</td>
<td>.910</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broaden Horizons</td>
<td>-.304</td>
<td>.611</td>
<td></td>
<td>.419</td>
</tr>
<tr>
<td>Family Wanted to have One</td>
<td>.321</td>
<td>.715</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td>.695</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novel</td>
<td></td>
<td></td>
<td>.687</td>
<td></td>
</tr>
<tr>
<td>Fashionable</td>
<td></td>
<td>.358</td>
<td>.344</td>
<td></td>
</tr>
<tr>
<td>A Symbol of Status</td>
<td></td>
<td></td>
<td>.895</td>
<td></td>
</tr>
<tr>
<td>Learn Foreign Languages</td>
<td></td>
<td></td>
<td></td>
<td>.777</td>
</tr>
<tr>
<td>Children Learn English or Others</td>
<td></td>
<td></td>
<td></td>
<td>.788</td>
</tr>
</tbody>
</table>

*Factor 1=Following Others
*Factor 2=Family Entertainment
*Factor 3=Vanity
*Factor 4=Learning
Although the boundaries among the four dimensions for the grandfather generation are not as sharp as the ones for the father generation, the dimensions can still be easily identified for the illustration purpose.

iii. Telephone

Thirteen Likert-scale type items are used for measuring the reasons for the telephone adoption. The reliability analysis shows that the alpha is very respectable for both the generations (.75 & .76).

1) It was necessary for my work.
2) It was necessary for business.
3) It was fashionable.
4) It was a symbol of success.
5) My family wanted to have the phone installed.
6) It would make daily life more convenient.
7) It would allow me to keep contact with my friends.
8) It would allow me to keep contact with my relatives.
9) It would allow me to keep contact with my family members.
10) Most of my friends already had one.
11) Most of my relatives already had one.
13) High profile people had one.

a. Distribution

Table 4.7a shows the frequency distribution of the 13 items. The frequency distribution clearly shows that the reasons received highest ratings are social and kin. Nevertheless, some other reasons are also valued by a significant number of adopters. For instance, more than 40 percent of the fathers showed that they adopted the telephone mainly for their work.
Table 4.7a
Frequency Distribution of the Reasons for the Telephone Adoption

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not at All/Not Much</th>
<th>Somewhat</th>
<th>A Lot/Exactly</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(%)</td>
<td>G(%)</td>
<td>F(%)</td>
<td>G(%)</td>
</tr>
<tr>
<td>Convenience</td>
<td>0</td>
<td>2.4</td>
<td>11.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Contact with Relatives</td>
<td>4.5</td>
<td>4.3</td>
<td>13.6</td>
<td>12.9</td>
</tr>
<tr>
<td>Contact with Family</td>
<td>7</td>
<td>7.5</td>
<td>11.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Contact with Friends</td>
<td>3.5</td>
<td>7.8</td>
<td>20.4</td>
<td>20.3</td>
</tr>
<tr>
<td>Family Wanted to Have</td>
<td>17.3</td>
<td>12.1</td>
<td>24.5</td>
<td>18.2</td>
</tr>
<tr>
<td>Work</td>
<td>40.2</td>
<td>70.1</td>
<td>19.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Business</td>
<td>63.1</td>
<td>80.3</td>
<td>18.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Relatives Already Had One</td>
<td>64.1</td>
<td>51.6</td>
<td>15.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>69.9</td>
<td>55.4</td>
<td>16.5</td>
<td>23.1</td>
</tr>
<tr>
<td>Symbol of Success</td>
<td>72.3</td>
<td>85.7</td>
<td>18.8</td>
<td>9.5</td>
</tr>
<tr>
<td>High Profile Men Had One</td>
<td>75.5</td>
<td>74.6</td>
<td>15.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Novel</td>
<td>86.1</td>
<td>75.8</td>
<td>8.9</td>
<td>16.1</td>
</tr>
<tr>
<td>Fashionable</td>
<td>86.4</td>
<td>92.1</td>
<td>9.7</td>
<td>7.9</td>
</tr>
</tbody>
</table>

F=Father Generation
G=Grandfather Generation
Total number of cases for the father generation = 139
Total number of cases for the grandfather generation = 101

b. Dimensions

Factor analysis reveals that the 13 reasons may be classified into 4 dimensions for the two generations respectively. For both the generations, the dimensions are easy to be identified. The grandfather generation differs from the father generation on the second factor because of its loading on the variable, "fashionable". The inclusion of "fashionable" in the second factor sharpens the dimension of following others.
Table 4.7b
Factor Loading and Dimensions of Reasons for the Telephone Adoption

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Members Wanted</td>
<td>.617</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact with Family</td>
<td>.798</td>
<td>.612</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convenience</td>
<td>.764</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact with Friends</td>
<td>.808</td>
<td>.817</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact with Relatives</td>
<td>.802</td>
<td>.653</td>
<td>.612</td>
<td></td>
</tr>
<tr>
<td>Relatives Already Had One</td>
<td>.313</td>
<td>.817</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td></td>
<td>.881</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Profile Men Had One</td>
<td></td>
<td>.718</td>
<td>.457</td>
<td></td>
</tr>
<tr>
<td>Fashionable</td>
<td></td>
<td></td>
<td>.840</td>
<td></td>
</tr>
<tr>
<td>Symbol of Success</td>
<td></td>
<td></td>
<td>.688</td>
<td></td>
</tr>
<tr>
<td>Novel</td>
<td></td>
<td></td>
<td></td>
<td>.778</td>
</tr>
<tr>
<td>Work</td>
<td></td>
<td></td>
<td></td>
<td>.901</td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td></td>
<td></td>
<td>.842</td>
</tr>
</tbody>
</table>

*Factor 1=Social & Kin
*Factor 2=Following Others
*Factor 3=Vanity
*Factor 4=Achieving
Table 4.7c
Factor Loading and Dimensions of Reasons for the Telephone Adoption

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Members Wanted</td>
<td>.732</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Contact with Family</td>
<td>.713</td>
<td>.----</td>
<td>-.433</td>
<td>.----</td>
</tr>
<tr>
<td>Convenience</td>
<td>.744</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Contact with Friends</td>
<td>.798</td>
<td>.----</td>
<td>.320</td>
<td>.----</td>
</tr>
<tr>
<td>Contact with Relatives</td>
<td>.876</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Relatives Already Had One</td>
<td>.----</td>
<td>.874</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Friends Already Had One</td>
<td>.----</td>
<td>.900</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>High Profile Men Had One</td>
<td>.----</td>
<td>.833</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Fashionable</td>
<td>.----</td>
<td>.605</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Novel</td>
<td>.----</td>
<td>.303</td>
<td>.731</td>
<td>.----</td>
</tr>
<tr>
<td>A Symbol of Success</td>
<td>.----</td>
<td>.----</td>
<td>.788</td>
<td>.----</td>
</tr>
<tr>
<td>Work</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
<td>.803</td>
</tr>
<tr>
<td>Business</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
<td>.850</td>
</tr>
</tbody>
</table>

Generation=Grandfather

*Factor 1=Social & Kin
*Factor 2=Following Others
*Factor 3=Vanity
*Factor 4=Achieving

iv. Pager

As discussed earlier, the pager adoption is a phenomenon of the father generation only. The items used for the measurement of the reasons for the pager adoption is the same as the ones used for the telephone adoption. However, the value of alpha in this case is only .64.
a. Distribution

<table>
<thead>
<tr>
<th>Frequency Distribution of the Reasons for the Pager Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All/ Not Much</td>
</tr>
<tr>
<td>Contact with Friends</td>
</tr>
<tr>
<td>Convenience</td>
</tr>
<tr>
<td>Contact with Relatives</td>
</tr>
<tr>
<td>Work</td>
</tr>
<tr>
<td>Contact with Family</td>
</tr>
<tr>
<td>Friends Already Had One</td>
</tr>
<tr>
<td>Business</td>
</tr>
<tr>
<td>Family wanted me to Have</td>
</tr>
<tr>
<td>High Profile Men Had One</td>
</tr>
<tr>
<td>A Symbol of Success</td>
</tr>
<tr>
<td>Relatives already Had One</td>
</tr>
<tr>
<td>Novel</td>
</tr>
<tr>
<td>Fashionable</td>
</tr>
</tbody>
</table>

Total number of cases = 43

As Table 4.8a showed, the most popular reason for the pager adoption is “keep contact with friends” (85.7%). Other social reasons such as “keep contact with relatives” (71.4%), and “keep contact with family members” (66.4%) are also highly rated by the majority of the adopters. However, what really distinguishes the pager adoption from the others is that majority of the pager adopters also indicated that they adopted the pager for their work (69.4%) or business (51.5%).

b. Dimensions

Five dimensions are emerged from the 13 items. As Table 4.8b shows, although the boundaries between some of the dimensions are blurred to some degree, the patterns can be still recognized.
The first dimension may be called *Social & Kin*. The second is the dimension of measuring up (*Following Others*). The third shows the side of *Vanity & Business*. The fourth dimension could be named *Family*. The last factor is strongly correlated to the third and fourth factors. However, it still shows *Work* oriented features.

4. Media Adoption, Degree of Use, and Nature of Use: The Dependent Variables and Their Distributions

The dependent variables include the time of media adoption, degree of use, and nature of media use. An innovation diffuses through time. The time of adoption was measured by four questionnaire items (9, 16, 22, and 33), for there were four media. Although the time of adoption implies innovativeness and may be partitioned into discrete categories, it is a continuous variable. As far as the time of adoption is concerned, all the media concerned but the telephone have an approximately normal distribution when plotted over time on a frequency basis. It is suggested that the normality for the distribution of telephone adoption has not been achieved because the diffusion

| Factor Loading and Dimensions of Reasons for the Pager Adoption |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                         | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
| Convenience             | 0.913    | -       | -       | -       | -       |
| Contact with Friends    | 0.834    | -       | -       | -       | -       |
| Contact with Relatives  | 0.814    | -       | -       | 0.329   | -       |
| Friends Already Had One | -       | 0.923   | -       | -       | -       |
| Relatives Already Had One | -    | 0.818   | -       | -       | -       |
| High Profile Men Had One | -       | 0.802   | -       | -       | -       |
| Novel                   | -       | 0.313   | 0.741   | -       | -       |
| Symbol of Success       | -       | -       | 0.844   | -       | -       |
| Fashionable            | 0.309    | -       | 0.647   | -       | -0.557 |
| Business                | -       | -0.376  | 0.454   | -0.509  | -       |
| Family Wanted Me to Have | -   | -       | -       | 0.885   | -       |
| Contact with Family     | -       | -       | -0.561  | 0.509   | -       |
| Work                    | -       | -       | -       | -       | 0.819   |

*Factor 1=Social & Kin
*Factor 2=Following Others
*Factor 3=Vanity
*Factor 4=Family
*Factor 5=Work
process of the telephone is still underway.

Time is one of the main methodological difficulties in studying a process like diffusion because of the recall problem involved. Nevertheless, the recall problem may be not very salient in this case because this survey only deals with big item purchase events.

The degree of media use is measured by either time (e.g., hours) or counts (e.g., frequencies). More specifically, while the time spent on watching television is measured by hours, the frequency of audio cassette recorder, or telephone, or pager use is measured by counts. This is based on the consideration that watching television may be a more regular activity than other media uses. (See questionnaire items 14, 21, 28, and 37).

The items for measuring the nature of media use were developed based on an extensive literature review and some consultation with a few Chinese graduate students in Sociology, East Asian Studies, and Economics at the University of Toronto. The items are Likert-scale type (See questionnaire items 15, 20, 29, 30, 31, and 38).

i. Television

(1) Time of Television Adoption

This variable, measured by questionnaire item nine, is normally distributed for both the father and grandfather generations. The time of adoption is indicated by season and year. Because the values of the variable correspond with the time of adoption (i.e., the later the adoption, the higher the values), they are reversed for statistical analysis.43

(2) Time Spent on Television

This variable is based on questionnaire item 14. The value is simply a total number of hours one spent on watching television in a typical week. Its distribution is positively skewed (towards fewer hours).

(3) Distribution and Nature of the Shows Watched

a. Distribution

There are fifteen Likert-scale type items in the measure of nature of television use (See questionnaire item 15). The items include:

1) Children (Kids TV)
2) Classical Music Shows
3) Culture & Arts
4) TV Dramas

43 This is also true for the other three media.
5) Educational shows  
6) Chinese Folk Arts Forms  
7) Game shows  
8) Military  
9) Movies  
10) Nature  
11) News  
12) Chinese Operas  
13) Popular Music  
14) Science & Technology  
15) Sports

Table 4.9a is the frequency distribution of the shows watched.

<table>
<thead>
<tr>
<th>Shows</th>
<th>Never/Rarely</th>
<th>Sometimes</th>
<th>Often/Whenever it's on</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(%)</td>
<td>G(%)</td>
<td>F(%)</td>
</tr>
<tr>
<td>News</td>
<td>.4</td>
<td>.8</td>
<td>9.6</td>
</tr>
<tr>
<td>Sports</td>
<td>11.1</td>
<td>34.6</td>
<td>30.6</td>
</tr>
<tr>
<td>Chinese Folk</td>
<td>7</td>
<td>8.9</td>
<td>37.4</td>
</tr>
<tr>
<td>Nature</td>
<td>13.2</td>
<td>14.4</td>
<td>40</td>
</tr>
<tr>
<td>Shows on Military</td>
<td>11.6</td>
<td>25.3</td>
<td>43.1</td>
</tr>
<tr>
<td>Movies</td>
<td>12.5</td>
<td>16.7</td>
<td>43.3</td>
</tr>
<tr>
<td>TV Drama</td>
<td>9.7</td>
<td>10.8</td>
<td>52</td>
</tr>
<tr>
<td>Culture &amp; Arts</td>
<td>16</td>
<td>22.6</td>
<td>56</td>
</tr>
<tr>
<td>Popular Music</td>
<td>30.9</td>
<td>75.3</td>
<td>41.1</td>
</tr>
<tr>
<td>Education</td>
<td>37.4</td>
<td>43.4</td>
<td>41.3</td>
</tr>
<tr>
<td>Science &amp; Technology</td>
<td>38.1</td>
<td>37.7</td>
<td>42.9</td>
</tr>
<tr>
<td>Game Shows</td>
<td>48.2</td>
<td>62.5</td>
<td>39.8</td>
</tr>
<tr>
<td>Children's TV</td>
<td>57.4</td>
<td>63.9</td>
<td>32.3</td>
</tr>
<tr>
<td>Chinese Opera</td>
<td>63.9</td>
<td>13.2</td>
<td>26.2</td>
</tr>
<tr>
<td>Classical Music</td>
<td>67</td>
<td>78.3</td>
<td>22</td>
</tr>
</tbody>
</table>

F=Father Generation (N=252); G=Grandfather; Generation (N=249).

Clearly, the most popular shows are "news," "sports," and Chinese Folk" (father generation) or "news," "Chinese folk," and "dramas" (grandfather generation).
b. Dimensions

Principal component analysis revealed five factors of the nature of television use for the father and grandfather generations respectively. All items have a loading of .40 or greater for the two generations. Cronbach’s alpha of reliability coefficient is high (Alpha = .76 and .81 for the two generations respectively), suggesting that the items in this measure are consistent (Carmines and Zeller 1979).

| Table 4.9b |
|---------------------|-----|-----|-----|-----|-----|
| Factor Loading and Dimensions of TV Use (Father Generation) |
|                     | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
| Children’s TV       | .758     | ---     | ---     | ---     | ---     |
| Game Shows          | .706     | ---     | ---     | ---     | ---     |
| Culture & Arts      | .424     | ---     | ---     | ---     | ---     |
| Movies              | .548     | ---     | .338    | ---     | .328    |
| Education           | .455     | ---     | -.360   | ---     | ---     |
| Popular Music       | .395     | -.308   | ---     | .424    | .400    |
| Chinese Operas      | .361     | ---     | .353    | ---     | -.425   |
| Science & Technology| .391     | .752    | ---     | ---     | ---     |
| Nature              | ---      | .764    | ---     | ---     | ---     |
| Shows on Military   | ---      | .570    | .429    | ---     | .375    |
| TV Dramas           | ---      | ---     | .715    | ---     | ---     |
| Chinese Folk        | ---      | ---     | .654    | ---     | ---     |
| Classical Music     | ---      | ---     | ---     | .830    | ---     |
| Sports              | ---      | ---     | ---     | .652    | ---     |
| News                | ---      | ---     | ---     | ---     | .738    |

No. of Cases = 158

*Factor 1 = Family
*Factor 2 = Informative
*Factor 3 = Entertainment
*Factor 4 = Appreciation
*Factor 5 = Informational

For the father generation, Table 4.9b shows that the boundaries among the dimensions of the television use are not very sharp because some of the items such as “culture & arts”, “education”, “military”, “operas”, “popular music”, and “science and technology” are loaded by more than one factor. Nevertheless, the boundaries can still be recognized for the illustration purpose. The first
factor is named *Family*. Lull (1991) observes that cartoons and animal shows also appeal to some older viewers in China. Nevertheless, the high loading on children’s TV and Game Shows may refer to the parents who watch those shows with their children. The second dimension is called *Informativeness* because of its knowledge nature. The third factor is the dimension of *Entertainment*. Although the fourth factor is not fundamentally different from the third one in nature, it shows different appreciation or taste to some degree. Therefore, it is termed *appreciation*. The last factor features the *Informational* dimension.

As the Table 4.9c shows, the grandfather generation differs from the father generation in terms of the value of loading and dimensions.

| Table 4.9c |
| Factor Loading and Dimensions of TV Use (Grandfather Generation) |
|-------------|-------------|-------------|-------------|-------------|-------------|
| **Science & Technology** | .738 | .---- | .---- | .---- | .---- |
| **Education** | .650 | .---- | .---- | .---- | .---- |
| **Culture & Arts** | .674 | .---- | .---- | .---- | .---- |
| **Classical Music** | .---- | .322 | .---- | .---- | .---- |
| **Popular Music** | .477 | .322 | .---- | .489 | -.331 |
| **Sports** | .420 | .597 | .---- | .---- | .---- |
| **Shows on Military** | .---- | .768 | .---- | .---- | .---- |
| **Nature** | .---- | .510 | .385 | .---- | .---- |
| **News** | .---- | .542 | .434 | .---- | .---- |
| **TV Dramas** | .---- | .---- | .790 | .---- | .---- |
| **Movies** | .---- | .---- | .787 | .---- | .---- |
| **Children’s TV** | .---- | .---- | .---- | .822 | .---- |
| **Game Shows** | .---- | .---- | .---- | .814 | .---- |
| **Chinese Operas** | .---- | .---- | .---- | .---- | .867 |
| **Chinese Folk** | .---- | .---- | .---- | .---- | .631 |

No. of Cases = 126

Factor 1=Informative; Factor 2=Modern; Factor 3=Entertainment; Factor 4=Family; Factor 5=Traditional.

According to the factor loading, the patterns of television watching for the grandfather generation seem easier to interpret. The first factor is information and knowledge based. Therefore, it is termed *Informativeness*. The second factor is named *Modern* because it shows active and
competitive spirit. The third factor features *Entertainment*. The fourth factor implies watching television with the grandchildren. The last factor for the grandfather generation clearly refers to the *Traditional* dimension.44

In sum, the television watching is patterned in terms of the nature of the shows. Although the majority of the television viewers most frequently watch either entertainment or information oriented programs rather than informative programs, the two generations differ from each other to some extent in terms of the type (or clusters) of shows preferred.

ii. Audio Cassette Recorder/Player (ACR)

An Audio Cassette Recorder/Player often has built-in radio. Therefore, like the television, it belongs to the category of mass media and can be used for listening to news or other radio shows.

(1) Time of ACR Adoption

Similar to the time of TV adoption, the time of ACR adoption is also indicated by season and year (See questionnaire item 22). Its distribution is normal for both the generations.

(2) Degree of ACR Use

The degree of ACR use is indicated by the frequency of ACR use (e.g. "daily", "3 or 5 times a week", etc.) during the year when it was adopted (See Questionnaire item 21). The design of this question is based on the consideration that the ACR might be used less frequently or regularly than the television. It has a normal distribution for the father generation. However, the distribution for the grand father generation is somewhat positively skewed.

(3) Distribution and Nature of ACR Use

The measure of nature of ACR use consists of six items:

1) Listening/Recording Foreign Languages
2) Listening/Recording Academic lectures
3) Listening/Recording Music
4) Listening/Recording News
5) Listening/Recording Chinese Operas
6) Listening/Recording Sports

Although the six items are carefully selected in order to capture different aspects of ACR use, this composite does not yield an acceptable value of the alpha. While the value of the alpha was only

44This dimension seems particularly significant to the grandfather generation. According to Lull (1991), young people like contemporary drama serials while older viewers lean toward the Chinese opera. Here, it is necessary to point out that although the operas and folk are traditional art forms, they are entertainment in nature.
.48 for the father generation, it only reached .12 for the grandfather generation. As noted earlier, the coefficient alpha is a direct function of both the number of items and their magnitude of intercorrelation. As far as the present 6-item measure is concerned, the low value of alpha may be primarily caused by the small number of items rather than lower internal consistency because some respectable magnitudes of intercorrelations between the items are observed.

a. Distribution

The distribution of the six variables is showed by the Table 4.10a.

<table>
<thead>
<tr>
<th></th>
<th>Never/Rarely</th>
<th>Sometimes</th>
<th>Often/Very Often</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(%)</td>
<td>G(%)</td>
<td>F(%)</td>
<td>G(%)</td>
</tr>
<tr>
<td>Music</td>
<td>6.7</td>
<td>29.7</td>
<td>33.3</td>
<td>27.7</td>
</tr>
<tr>
<td>News</td>
<td>33.9</td>
<td>29.7</td>
<td>24.9</td>
<td>15.8</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>60.7</td>
<td>71.9</td>
<td>19.7</td>
<td>14.6</td>
</tr>
<tr>
<td>Sports</td>
<td>51.2</td>
<td>64.4</td>
<td>32.7</td>
<td>16.7</td>
</tr>
<tr>
<td>Chinese Operas</td>
<td>69.6</td>
<td>25</td>
<td>23.4</td>
<td>29.6</td>
</tr>
<tr>
<td>Academic Lectures</td>
<td>72.1</td>
<td>76.7</td>
<td>17.6</td>
<td>8.1</td>
</tr>
</tbody>
</table>

F=Father Generation
G=Grandfather Generation
Total number of cases for the father generation = 223
Total number of cases for the grandfather generation = 134

While both of the generations listen to or record news and music most frequently, more than 45 percent of the grandfathers also prefer Chinese operas. Here, it may be important to note that the proportion of grandfathers who bought the ACR are much smaller than that of the fathers (134 vs. 223).

The six categories of ACR use can be further classified into three dimensions by means of factor analysis.

b. Dimensions

Principal component analysis reveals that three factors are extracted for the two generations respectively. A 0.39 or greater value is achieved for the loading.
The first factor for the father generation is *achievement* oriented for either learning English or listening academic lectures signals the desire to get ahead in urban China. Although the second factor has not only high loading on “news” and “sports” but also modest loading on “Chinese operas”, it is still labelled as informational oriented because of its relatively high loading on “news” and “sports”. The third factor shows the dimension of *Entertainment*.

Table 4.10c shows the loading and factors for the grandfather generation.

For the grandfather generation, the first dimension is almost identical to the one for the father generation. However, the second and third dimensions distinguish the grandfathers from the fathers. That is, while the second factor seems more tradition oriented, the third one displays the
modern side of ACR use.

Regardless of the generational difference, while the boundary between the second and third factors is not very sharp, the distinction between the first and the remaining two factors is clear. The most frequent use of ACR involves only the second and third dimensions. That is, the ACR adopters use the ACR mainly for *Entertainment* and *Information* rather than *Learning* in general.

### iii. Telephone

**1) Time of Telephone Adoption**

The time of telephone adoption is measured by questionnaire item 22. The process of telephone diffusion is still under way in urban China. The distribution of time of adoption is positively skewed.

**2) Frequency of Local Telephone Calls**

The time of telephone adoption is measured by questionnaire item 28. This variable refers to the overall frequency of receiving and making local calls. Its distribution is normal for both the generations.

**3) Distribution and Nature of Telephone Calls**

The nature of telephone use may be partly revealed by identifying who is calling whom. The following set of Likert-scale type items deals with the callers and frequency of the calls (See questionnaire items 29):

1. Call Business Partners
2. Call Clients
3. Call Classmates
4. Call Colleagues
5. Call Friends
6. Call Family Members
7. Call Relatives

The value of the alpha is either unacceptable (.50 for the father generation) or minimum acceptable (.61 for the grandfather generation). However, considering the composite set is only 7-item in length, the lower value of internal consistency was understandable.
a. Distribution

Table 4.11a shows how each item was rated by the respondents.

<table>
<thead>
<tr>
<th></th>
<th>Never/Rarely</th>
<th>Sometimes</th>
<th>Often/Very Often</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F(%)</td>
<td>G(%)</td>
<td>F(%)</td>
<td>G(%)</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>7.4</td>
<td>5.2</td>
<td>21.3</td>
<td>14.4</td>
</tr>
<tr>
<td>Call Friends</td>
<td>7.9</td>
<td>25.6</td>
<td>37</td>
<td>62.8</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>14</td>
<td>13.3</td>
<td>45.5</td>
<td>49.4</td>
</tr>
<tr>
<td>Call Colleagues</td>
<td>37.4</td>
<td>34.2</td>
<td>40</td>
<td>52.1</td>
</tr>
<tr>
<td>Call Classmates</td>
<td>45.7</td>
<td>80.3</td>
<td>32.4</td>
<td>18.2</td>
</tr>
<tr>
<td>Call Clients</td>
<td>67.0</td>
<td>84.1</td>
<td>13.6</td>
<td>8.7</td>
</tr>
<tr>
<td>Call Business Partners</td>
<td>75.5</td>
<td>90.9</td>
<td>14.3</td>
<td>9.1</td>
</tr>
</tbody>
</table>

F=Father Generation
G=Grandfather Generation
Total number of cases for the father generation = 139
Total number of cases for the grandfather generation = 101

The frequency distribution clearly indicates that the majority of the adopters for both the generations use the telephone for social and kin communications. The difference between the two generations is that the majority of the father adopters often or very often call not only their family members (71.8%) but also their friends (55.1%) while the grandfather adopters mainly use the phone for family contacts (80.4%). Nevertheless, the adopters do use the telephone for other purposes. For instance, more than 19 percent of the father adopters call their clients often or very often.

b. Dimensions and Nature of Telephone Calls

Eigenvalue and Scree Criteria indicated that 2 factors should be extracted from the data set of 7 items. As I will show in the following, in this case, however, 3 factors seemed to provide an adequate and satisfactory solution.
The three dimensions are shared by the two generations. The first dimension is named friendship because it features communication between classmates or colleagues or friends. The second one is termed entrepreneurship because both of the items (calling business partners and clients) deal with the activity of economic ventures. The last factor is the kinship dimension.

In sum, the most popular telephone use is either friendship or kinship oriented.
iv. Pager

(1) Time of Pager Adoption

Pager users belong to the father generation in Shijiazhuang City. Although the diffusion of the pager is far from the saturation point, the distribution of time of adoption is normal. This variable is measured by questionnaire item 41.

(2) Degree of Pager Use

The degree of pager use was measured by the frequency of getting paged (e.g. “More than 6 times a day”, “5 or 6 times a day”, etc.. See questionnaire item 37). Its distribution is normal.

(3) Distribution and Nature of Pager Use

A 7-item measure was developed in order to identify who pages whom. The items include:

1) Family Members Page
2) Relatives Page
3) Friends Page
4) Colleagues Page
5) Classmates Page
6) Business Partner Page
7) Clients Page

Similar to the telephone case, this composite measure did not yield a high value of the alpha (.48) due to the relatively small number of items.

a. Distribution

Table 4.7 shows the frequency distribution for the 7 variables.

<table>
<thead>
<tr>
<th>Frequency Distribution of the Pager Use</th>
<th>Never/Rarely</th>
<th>Sometimes</th>
<th>Often/Very Often</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends Page</td>
<td>5%</td>
<td>35%</td>
<td>60%</td>
<td>40</td>
</tr>
<tr>
<td>Family Members Page</td>
<td>15</td>
<td>37.5</td>
<td>47.5</td>
<td>41</td>
</tr>
<tr>
<td>Colleagues Page</td>
<td>14.6</td>
<td>39</td>
<td>46.3</td>
<td>40</td>
</tr>
<tr>
<td>Clients Page</td>
<td>39.4</td>
<td>24.2</td>
<td>36.4</td>
<td>33</td>
</tr>
<tr>
<td>Business Partner Page</td>
<td>45.5</td>
<td>18.2</td>
<td>36.4</td>
<td>33</td>
</tr>
<tr>
<td>Relatives Page</td>
<td>36.8</td>
<td>44.7</td>
<td>18.4</td>
<td>38</td>
</tr>
<tr>
<td>Classmates Page</td>
<td>51.4</td>
<td>35.1</td>
<td>13.5</td>
<td>37</td>
</tr>
</tbody>
</table>

The pager adopters are more likely paged by friends than by any other category. However, a
significant percentage of the pager adopters (36.4%) also indicated that they were often or very often paged by either their business associates or clients.

b. Dimensions and Nature of Pager Use

Principal Component Analysis indicated that three factors might be extracted from the data set.

<table>
<thead>
<tr>
<th>Table 4.12b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor Loading and Distribution of Pager Use</td>
</tr>
<tr>
<td>Factor 1</td>
</tr>
<tr>
<td>Business Partners Page</td>
</tr>
<tr>
<td>Clients Page</td>
</tr>
<tr>
<td>Friends Page</td>
</tr>
<tr>
<td>Colleagues Page</td>
</tr>
<tr>
<td>Relatives Page</td>
</tr>
<tr>
<td>Family Members Page</td>
</tr>
<tr>
<td>Classmates Page</td>
</tr>
<tr>
<td>No. Of Cases = 31</td>
</tr>
</tbody>
</table>

*Factor 1 = Entrepreneurship
*Factor 2 = Friendship
*Factor 3 = Kinship

The first factor clearly shows the dimension of *entrepreneurship*. The second and third dimensions are social in nature. As far as the last factor is concerned, besides family members and relatives, classmates also have a high loading on this factor. Redding (1990, p.112) observes that “one of the most obvious ways for the generational network to establish itself is in the classroom. Being at school or university together creates special bonding in context usually seen as significant by Chinese . . . it is as if the classmate group were extensions of the family core, almost honorary members in the Confucian tradition of a specific limited friendship bond.” Therefore, the last one may be called *kinship*.

Thus far, I have examined the variable distributions and made the necessary variable construction. In the next part, I shall examine the relationship among the variables.
PART III
DATA ANALYSIS
Introduction to Part III

This part focuses on data analysis. The major research objective of this study is to differentiate the electronic media by revealing how each media is connected to its adopters in terms of their personal values and sociological characteristics. The classification is based on the basic assumption that the media are not equivalent units as far as their subjective and objective attributes are concerned. In other words, the major objective of this study is to identify media attributes. Accordingly, this involves a careful examination of the relationship between media adoption and postadoption and adopter’s social and social psychological characteristics.

In Chapter 1, I argued that the time of innovation adoption and use are not necessarily related to each other. Therefore, the attributes of a medium may not be fully revealed unless both the time of adoption and implementation are studied. Nevertheless, whether the time of adoption and use are positively related to each other is an empirical question. This part begins with data analysis on the relationship between the time of media adoption and postadoption in Chapter 5. Following Chapter 5, I examine the sociological characteristics of innovators in Chapter 6. The examination is significant to this study because “a generalized innovator” across the four electronic media implies that all the four media are equivalent units while “an non-generalized innovator” means that it is necessary to differentiate the media and explore why there is the difference. This leads to Chapter 7 and 8.

As discussed in Chapter 1, the attributes of a medium may be defined in terms of the sociological and social psychological characteristics of its adopters. That is, it is assumed that a medium is adopted and used because it is congruent with the values or needs of its adopters. In Chapter 7, I examine the relationship between personal values and media adoption and postadoption.

In Chapter 8, I try to reveal how the time of media adoption, overall use, and nature of use are related to specific reasons for media adoption. The examination will shed light on how personal values are linked with the media adoption and postadoption directly and/or indirectly. Moreover, although the reasons are needs oriented, they are inherently sociological. For instance, the reason, [one adopted a medium because] “his relatives already had one”, directly refers to the
impact of his primary group on his adoption decision. However, knowing just the primary group without knowing which of the individual’s value orientations that group will evoke regarding the media adoption and postadoption is insufficient; knowledge of the value orientation is necessary, even if it may in case differ from what might be called dominant value orientations.\(^4\) Therefore, following Chapter 8, I explore the relationship between the personal values and reasons in chapter 9.

It is reasonable to expect that the personal values and reasons are related to social roles. Thus, in Chapter 9, I shall also qualify the relationship between the personal values identified through the specific reasons and media adoption and postadoption by examining how the sociological variables are related to both the values and reasons. However, it is entirely possible that (1) some of the values and reasons are independent of the sociological variables; (2) some of the media characteristics are best identified by sociological variables. Therefore, Chapter 9 also examine the relationship between the sociological variables and media adoption and postadoption.

The findings will be discussed in Part IV.

\(^4\)Michelson made the argument on urban form in 1965.
Chapter 5
The Time of Adoption and Postadoption

In Part 1, I have argued that postadoption cannot be ignored because the correlation between time of adoption and degree of commitment to an innovation is not necessarily either positive, or strong, or linear. As far as this particular study is concerned, an either negative, or weak, or nonlinear relation implies the operating of potential factors or variables that affect the rate of adoption and implementation differently. For instance, a low correlation between adoption and implementation suggests that the motive or reason for the adoption is different from the one for use. Therefore, it is necessary to examine the properties of implementation as well as their relations to the time of adoption in order to reveal how the characteristics of adopters are linked with the electronic media. In this chapter, the hypotheses on the adoption and postadoption are examined and tested.

1. Television
   a. The Time of Adoption vs. The Time Spent on Television Watching

   Rogers (1983, 1995) has classified the adopter in terms of the time at which an individual adopts an innovation or innovations. While the diffusion of television in Shijiazhuang City suggests that the numbers of people falling into each category approximate a normal distribution, the time spent on watching television does not necessarily correspond to the pattern of time of adoption. In Chapter 2, I hypothesized that:

   *The earlier the adoption, the less time spent on television watching.*
Although the statistics indicates that the hypothesis is supported for the father generation, the strength of the correlation is weak. The statistics also shows that the correlation for the grandfather generation is almost zero. Here, it is necessary to point out that a weak or insignificant correlation does not mean that the adopters spent the same or approximate same amount of time on television viewing. In fact, the dispersion for the two generations is relatively high in respect to the time spent on television watching (See Table 5.2).

<table>
<thead>
<tr>
<th>Time Spent on Watching Television</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Father</td>
</tr>
<tr>
<td>Grandfather</td>
</tr>
</tbody>
</table>

It is not unusual to find that the correlation between the time of television adoption and time spent on television is weak or insignificant. In fact, it has been long recognized that early adopters do not have the highest degree of commitment to the innovation in many cases (Downs and Mohr 1976). However, the weak correlation naturally leads to the assumption that there may be two different sets of reasons or values for the television adoption and postadoption. This point can be elucidated by revealing how the time of adoption is correlated to the television programs watched.
b. The Time of Adoption vs. The Nature of Television Usage

Television shows vary greatly from pure entertainment to highly educational. The viewership of a particular kind of show can be socio-structurally specific (Van Snippenburg 1996). In the previous chapter, I hypothesized that:

*The time of television adoption is related to the television shows watched.*

The Table 5.1 shows that only a very modest and negative correlation (-.227) between the time of adoption and factor of entertainment (TV-dramas/TV-folk) is found to be significant for the father generation. Similarly, we conclude with confidence that only one of the five factors (Traditional Shows: TV-folk/TV-opera) is modestly correlated to the time of adoption for the grandfather generation (-.269).

Both the direction and strength of correlation suggested by the statistics above are consistent with that of relation between the time of adoption and time spent on television viewing. For the father generation, while the weak and negative correlation between the time of adoption and time spent on watching television shows that television adoption and use are two different things, either the statistically non-significant or the modest and negative correlation between the time of adoption and television shows watched further indicates that the adopters bought the television set not really for the purpose of being entertained or informed. The case of the grandfather generation makes the point even sharper. In urban China, although older viewers were identified with Chinese opera (Lull 1991), the earlier adopter of grandfather generation did not buy the television for the purpose of watching the traditional Chinese shows. In fact, there is a negative correlation between the time of adoption and factor of traditional shows.

In sum, as far as the correlation between the time of television adoption and postadoption is concerned, both the direction and strength of correlation imply that the motives for television adoption may be very different from the one for the postadoption. Studies such as those by McQuail et al. (1972) explore the possibility of differential gratifications of the television audience. In these studies, topologies of viewer gratifications are developed showing a certain diversity and complexity of motives for viewing behaviour. I will try to locate those motives or personal values and examine their relations with the time of television adoption and postadoption in Chapter 7, 8, and 9.

2. Audio Cassette Recorder/Player (ACR)

An Audio Cassette Recorder/Player (ACR) is similar to television in terms of some of its
functions. However, it is more affordable than the television. In Chapter 2, I hypothesized that:

The earlier the adoption, the higher the frequency of ACR use.
The time of adoption is related to the program listened or recorded.

<table>
<thead>
<tr>
<th>Correlations between the Time of ACR Adoption and Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR Use</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Frequency of ACR Use</td>
</tr>
<tr>
<td>Information Oriented</td>
</tr>
<tr>
<td>Entertainment Oriented</td>
</tr>
<tr>
<td>Learning Oriented</td>
</tr>
<tr>
<td>Tradition Oriented</td>
</tr>
<tr>
<td>Modern Oriented</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level.

The data suggest that the first hypothesis has to be rejected because there is not even a weak and statistically significant relationship between the time of adoption and ACR use for the two generations. As far as the second hypothesis is concerned, the only statistically significant correlation for the father generation is between the time of adoption and factor of achievement (learning foreign languages or taking academic lectures by means of ACR). Although the strength of correlation is weak (-.208), its negative direction implies that the earlier adopters did not buy the ACR for learning purposes. The data suggest that we have to reject the two hypotheses for the grandfather generation because there is simply no relationship. Thus, like the case of television, we conclude that the either negligible or statistically insignificant correlations between the ACR adoption and postadoption imply that the reason to buy an ACR may be different from the one to use it.

3. Telephone

A telephone is very different from television or an audio cassette recorder/player because it allows two-way communication. In chapter 2, I hypothesized that:

The time of telephone adoption is positively related to the frequency of use.
The time of telephone adoption is related to the nature of telephone usage.
The statistics do support the first hypothesis for the father generation. The time of telephone adoption is positively related to the frequency of local calls. Although the value of the correlations is small (0.38**), it is statistically significant and not negligible. The data do not support the first hypothesis for the grandfather generation.

While the earlier adopters of the father generation indicate that they more likely make and receive local telephone calls, they do not show that their adoption is related to either primary group or reference group as far as the frequency of telephone call is concerned. This may be understandable in some cases. For instance, although an adopter installed the telephone primarily for the purpose of keeping contact with his parents, he might decide that it was sufficient to speak to his father and mother through the telephone once or twice a week. Similarly, the fathers who installed the telephone for business reasons might also make a substantial number of social calls.

In short, the findings show that although the time of telephone adoption correlated to the frequency of overall telephone calls to some degree for the father generation, there is no evidence to indicate that the time of adoption is correlated to the nature of telephone calls. Thus, we have some reason to assume that the motive for telephone adoption may not always be the same as the one for use. The situation with the grandfather generation is somewhat different. While the time of adoption is not related to the frequency of calls, it has a weak and negative but statistically significant relation with the frequency of calling family members or relatives.

4. Pager

The pager adoption is basically a phenomenon of the father generation. For the self paid pager adopters, only one belongs to the grandfather generation. In Chapter 2, I hypothesized that:
The time of pager adoption is positively related to the frequency of pager contact. The time of pager adoption is related to the nature of pager contact.

Table 5.5

<table>
<thead>
<tr>
<th>Correlations between the Time of Pager Adoption and Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pager Use</td>
</tr>
<tr>
<td>Frequency of Being Paged</td>
</tr>
<tr>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Friendship</td>
</tr>
<tr>
<td>Kinship</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level.

The statistics indicate that the time of pager adoption is positively correlated to the frequency of being paged. However, the correlation is not statistically significant due to the small sample size. Similarly, although we find that the time of adoption is positively related to the factor of entrepreneurship (business associates' and clients' page), it is negatively related to the social factor (friends' and colleagues' page). We cannot conclude that there is a correlation because it is not statistically significant. Nevertheless, the data imply that it is very likely that both pager adoption and postadoption involve the need for business communication.

Thus far, I have examined whether adoption is correlated to the postadoption. The findings indicate that the correlation is either weak or negligible. An insignificant or negligible correlation implies that there may be different reasons or values for the adoption and use. In the following chapters, I explore these different reasons or values.
Chapter 6
Innovators and Their Characteristics

As discussed in Chapter 1, the very first step in overcoming the pro-innovation bias may be questioning the assumption that there is a generalized innovator across product categories. Nevertheless, whether there is a generalized innovator is an empirical question. In this chapter, I try to answer this question by examining the characteristics of innovators across the four media and compare them with each other and with the remaining sample.

The adoption of an innovation usually follows a bell-shaped curve when plotted over time on a frequency basis (Rogers 1995). According to Rogers’ categorization (1995), the innovators refer to the first 2.5 percent of the individuals in a system to adopt an innovation. While it is desirable to examine the first 2.5 percent of the individual adopters in order to clarify the issue of generalized innovators, it is not practical because this particular study has a relatively small sample size. Therefore, instead of the first 2.5 percent, the first 10 percent of the adopters are used as the innovators for the purpose of examination and comparison. This means that the majority of early adopters are also included.

A review of research across product categories by Robertson, Zielinski, and Ward (1984) shows some tendencies for innovators to bear the following characteristics:

*Higher income  
*Higher education  
*Younger  
*More socially mobile  
*More favourable attitudes towards risk  
*Greater social participation  
*Higher opinion leadership

However, the above characteristics may apply more to some product categories than others (See Gatignon and Robertson 1985). Gatignon and Robertson (1985, p.861) observe that innovators must be identified and characterized on a product category basis and that there is not a generalized

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46 As far as this particular study is concerned, it may be necessary to note that the adoption of an electronic medium only refers to a direct purchase.

47 Accordingly, the first 16 percent of the individuals in a system to adopt an innovation is called the earlier adopters.
innovator across product categories or interest domains.\(^{48}\)

This study only deals with one product category, electronic media. Hence, the question becomes whether there is a generalized innovator or earlier adopter across the four media. In order to answer the question, I examine all the characteristics listed above but the higher opinion leadership for there is no relevant data available for that indicator. More specifically, the characteristics include:\(^{49}\)

(1) Income: In this case, “income” is replaced by “ability to pay”. The ability to pay refers to the family’s ability to pay. The electronic media were not diffused at the same period of time in urban China. This study does not have the data on how much the innovators made when they bought each medium. However, how much the innovators’ families were making when they adopted a medium may be estimated by making a comparison between how many months’ family income the innovators paid for the medium and how many months’ family income the remaining sample paid for it on the average. Both the television and audio cassette recorder/player started to be diffused in urban China in the 1970s. Instead of directly asking how much they paid for the media, I asked them to indicate how many months’ family income they had to spend for getting the media. During the 1970s and early 1980s, when the average salary was extremely low for the urban Chinese, people became very conscious to rationalize about how many months’ salary a television set or an audio cassette recorder/player would cost them. It was assumed that it would be easier for them to recall how much they paid for a medium in terms of their monthly family income. Therefore, the cost of a TV set or other type of media is related to monthly family income. In other words, if an adopter spent more than the remaining sample did for a medium in terms of their monthly family income average, his family would have lower income or ability to pay. That is, the income difference between the innovators and remaining sample is roughly determined by how many months’ family income they spent on the medium

\(^{48}\)However, based on a recent and extensive literature review on variables related to innovativeness, Rogers (1995) made a series of generalisations about the earlier adopters. Some of the generalizations are either identical or similar to the characteristics of the innovator reviewed above. For instance, (1) Earlier adopters are not different from later adopters in age; (2) Earlier adopters have more years of formal education than later adopters; (3) Earlier adopters have higher social status than later adopters; (4) Earlier adopters have a greater degree of upward social mobility than later adopters; (5) Earlier adopters have more social participation than later adopters; (6) Earlier adopters have a more favourable attitude towards change than later adopters; (7) Earlier adopters are better able to cope with uncertainty and risk than later adopters.

\(^{49}\)The indicators that are used to indicate the characteristics of innovators such as social participation and attitudes towards risk in this study may not be identical to the ones used in the studies reviewed by Robertson, Zielinski, and Ward (1984). Moreover, only the intragenerational mobility data are available for the grandfather generation.
concerned.50

(2) Education: years of schooling (See Chapter 4)

(3) Occupational prestige: The occupational prestige is calculated in terms of the ranking score of father generation and grandfather generation respectively (See Chapter 4).

(4) Age: Because this particular survey only deals with two specific generations, the variability of age within each generation is limited. Nevertheless, it may still show some direction. Moreover, generation per se is an age related variable that may shed some light on this characteristic. For instance, if a particular medium is very biased towards a generation as far as its adoption is concerned, it will imply that not only the media but also the innovators are characterized by age.

(5) More socially mobile: This characteristic is indicated by two items. The first is intragenerational mobility. The second is intergenerational mobility. Here, the mobility is measured in terms of occupational prestige (See Chapter 4).

(6) More favourable attitudes towards risk: It is indicated by two Likert scale type items. The first is a statement on whether one is more often to attempt things that one is not sure one can do than things one knows one can do. The second refers to whether one likes to try new and different things.51

(7) Social participation: This characteristic is indicated by how often one is calling his primary group (family members and relatives) or reference groups (friends). While this high frequency of calling family members or relatives may mean limited social life, high frequency of calling friends suggests greater social participation.52 Here, it is necessary to point out that only about half of the households surveyed have a telephone. Hence, the number of available cases will be shrunk accordingly for the necessary

50This technique does not assume that the price of a medium will remain constant. For instance, a colour TV is much more costly than a black and white one. The colour TV started to be diffused in the late 1980s. However, the Chinese who directly purchased a colour TV set instead of black and white one in the late 1980s also had higher income due to salary increase. For instance, the monthly income for the entire sample was about 584 yuan in the summer of 1996, which was roughly 10 times their average salary 10 years ago. It is a similar situation with the telephone service. The Chinese government has steadily increased the installation fees over the years. While the telephone industry is still a state monopoly, the pager is not. I was informed that the fee for the pager service has been dropped since the summer of 1996 due to market competition. However, this does not concern this researcher much because the survey was conducted before the rapid fee change of the pager service.

51For the first item, 5 means "strongly agree"; 4 means "agree"; 3 means "neutral"; 2 means "disagree"; 1 means "strongly disagree". For the second item, 5 means "always"; 4 means "usually"; 3 means "sometimes"; 2 means "rarely"; 1 means "never".

52As far as the frequency of telephone call is concerned, 5 refers to "very often"; 4 refers to "often"; 3 refers to "sometimes"; 2 refers to "rarely"; 1 refers to "never".
To say that the characteristics of innovators are higher or more or greater means comparison. Therefore, the T-Test is performed to test whether the mean difference between the innovators and remaining sample is statistically significant.53

1. Television

Recent statistics revealed that there were 93 colour television sets per 100 households in Shijiazhuang City (Shen 1993). If we are willing to assume that the rest may have black and white television sets in their homes, we may say that a saturation point has been reached. The data from this particular survey seems consistent with saturation speculation. This survey received 512 returned questionnaires. More than 98 percent of the respondents (N=503) indicated that they had television sets in their houses or apartments. While 25 innovators are identified from the TV adopters for the father generation, 26 are selected for the grandfather generation in terms of the time of adoption. Table 6.1a and 6.1b show the mean differences, if there is any, for the two generations.

a. Father Generation

As Table 6.1a shows, although the innovators differ from the remaining sample in almost every category as far as the means are concerned, only the differences in education (marginal) and ability to pay for the first television set are statistically significant at the .05 level.

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53Not all the mean differences are appropriate to be tested because some of them may have insufficient sample size.
Table 6.1a

Mean Difference Between the Characteristics of TV Innovators and Remaining Sample

<table>
<thead>
<tr>
<th>Characteristics (Father Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Level of Education</td>
<td>4.44</td>
<td>25</td>
<td>4.77</td>
</tr>
<tr>
<td>Ability to Pay for the First TV</td>
<td>5.42</td>
<td>24</td>
<td>8.13</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>18.72</td>
<td>25</td>
<td>19.56</td>
</tr>
<tr>
<td>Age</td>
<td>38.80</td>
<td>25</td>
<td>38.06</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.55</td>
<td>20</td>
<td>2.68</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>3.36</td>
<td>22</td>
<td>3.04</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>3.92</td>
<td>12</td>
<td>4.10</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.46</td>
<td>11</td>
<td>3.41</td>
</tr>
<tr>
<td>Call Friends</td>
<td>3.64</td>
<td>11</td>
<td>3.61</td>
</tr>
<tr>
<td>Intrigenerational Mobility</td>
<td>7.55</td>
<td>20</td>
<td>8.98</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
<td>-5.57</td>
<td>23</td>
<td>-9.34</td>
</tr>
</tbody>
</table>

It seems that the innovators' families had higher income than that of the remaining sample when they purchased their first TV sets. The statistics indicate that the innovators only spent about 4.42 months' family income for their first TV sets on the average while the remaining sample spent 7.13 months' for their first ones.\(^5^5\) As explained earlier, this is an indirect measure of whether the monthly income of innovators is different from that of the remaining sample when they purchased their first TV set. Because the number of months' family incomes the innovators spent is fewer, we may say that they had a higher income than the remaining sample. The mean difference is statistically significant at the .01 level. Therefore, we can say that this particular characteristic is consistent with the innovator theory.

\(^{54}\) The actual monthly income equals to the value of ability to pay minus one in terms of the coding book. This is also true for the remaining three media.

\(^{55}\) Television purchases become possible mainly because the urban Chinese families often have savings. Unlike the West, the cost of housing was relatively insignificant especially before the 1990s. So, the families were able to save if the spending was controlled carefully. Moreover, the lack of various insurances also push the idea of saving to some degree.
Contrary to the innovator theory, the innovators’ education is lower than that of the remaining sample on the average (3.23 vs. 3.61). The difference is statically significant but marginal. That is, we have about 95 percent confidence to say that such difference exists in the population. The innovators have not only lower education level but also lower occupational prestige (18.72 vs. 19.56). According to Lin and Xie (1988), occupational prestige ratings were more affected by education levels than by income levels in the middle of 1980s in Beijing. The findings from this survey seem consistent with the observation of Lin and Xie. Hence, it is understandable that the score of prestige varies with the education level to some degree.

Other than the education and income, we cannot conclude with confidence that the innovators and remaining sample differ in terms of the characteristics mentioned above. Nevertheless, speaking for the sample only, the differences between the innovators and remaining sample still show clear directions as far as the other characteristics are concerned. For instance, the innovators have lower intragenerational mobility (7.6 vs. 12.2) and older (38.8 vs. 38.1). They are also less likely to attempt things that they are not sure they can do (2.55 vs. 2.68). However, they tend to have a higher intergenerational mobility (-5.57 vs. -9.34). As far as social participation is concerned, the results are mixed and the mean differences are negligible. Here, it is necessary to point out that about half of the TV innovators of father generation do not have a telephone. This suggests the possible absence of universal innovators.

b. Grandfather Generation

The situation of grandfather generation is similar to that of fathers. Table 6.1b shows the statistics.

---

56The data from this survey reveal that the correlation between fathers’ occupational prestige and monthly income is less than .10 while the correlation between the fathers’ occupational prestige and level of education is about .50**.
Table 6.1b

<table>
<thead>
<tr>
<th>Characteristics (Grandfather Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Level of Education</td>
<td>3.23</td>
<td>26</td>
<td>3.62</td>
</tr>
<tr>
<td>Ability to Pay the First TV</td>
<td>4.28</td>
<td>25</td>
<td>5.63</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>27.64</td>
<td>25</td>
<td>28.88</td>
</tr>
<tr>
<td>Age</td>
<td>67.39</td>
<td>26</td>
<td>66.96</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.76</td>
<td>25</td>
<td>2.67</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>2.67</td>
<td>24</td>
<td>2.64</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>4.07</td>
<td>15</td>
<td>4.33</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.21</td>
<td>14</td>
<td>3.28</td>
</tr>
<tr>
<td>Call Friends</td>
<td>2.85</td>
<td>13</td>
<td>2.91</td>
</tr>
<tr>
<td>Intragenerational Mobility</td>
<td>9.83</td>
<td>18</td>
<td>9.53</td>
</tr>
</tbody>
</table>

Like the father generation, the innovators’ families of grandfather generation had higher ability to pay when they bought their first TV set than the remaining sample. The mean difference is statistically significant at the .05 level. The innovators of grandfather generation also show higher intragenerational mobility and more favourable attitudes towards risk. However, the mean differences are rather small and not statistically significant.

Contrary to what Robertson, Zielinski, and Ward (1984) observed but consistent with the findings on the father generation, the innovators have lower education (3.23 vs. 3.62) and lower occupational prestige (27.64 vs. 28.88). They also tend to be older (67.39 vs. 66.96) as far as the sample is concerned. The results on social participation demonstrate very little difference between the innovators and the remaining sample.

Overall, for the two generations, only the characteristic of ability to pay is consistent with the innovator theory. Other characteristics showed by the TV innovators either contradict what Robertson, Zielinski, and Ward (1984) had observed or very weak (negligible).

2. Audio Cassette Recorder/Player (ACR)

More than 68 percent of the 512 respondents (N=350) indicated that they bought and owned
an ACR. Among the 350 adopters, only about 37 percent belong to the grandfather generation. This unbalanced ACR diffusion implies that innovators are more likely younger in general. Based on the time of ACR adoption, 25 innovators are identified for the father generation while 24 innovators are selected for the grandfather generation. Table 6.2a & 6.2b show the statistics for the two generations.

a. Father Generation

As Table 6.2a shows, the characteristics of ACR innovators do not differ much from that of the TV innovators.

<table>
<thead>
<tr>
<th>Characteristics (Father Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean N</td>
<td>Mean N</td>
<td>t</td>
</tr>
<tr>
<td>Level of Education</td>
<td>4.84 25</td>
<td>4.72 232</td>
<td>.683</td>
</tr>
<tr>
<td>Ability to Pay the First ACR</td>
<td>3.21 24</td>
<td>4.70 191</td>
<td>-3.25</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>18.80 25</td>
<td>19.55 231</td>
<td>-2.291</td>
</tr>
<tr>
<td>Age</td>
<td>38.67 24</td>
<td>38.07 231</td>
<td>1.04</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.65 23</td>
<td>2.66 205</td>
<td>-.073</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>3.24 25</td>
<td>3.05 216</td>
<td>.854</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>4.00 14</td>
<td>4.10 125</td>
<td>-.311</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.25 12</td>
<td>3.43 126</td>
<td>-.593</td>
</tr>
<tr>
<td>Call Friends</td>
<td>3.80 15</td>
<td>3.59 129</td>
<td>.828</td>
</tr>
<tr>
<td>Intragenerational Mobility</td>
<td>7.05 21</td>
<td>9.04 184</td>
<td>-9.48</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
<td>-8.43 23</td>
<td>-9.04 217</td>
<td>.173</td>
</tr>
</tbody>
</table>

With more than 99 percent confidence, we can say that the ACR innovators’ family had a higher ability to pay than that of the remaining sample when they purchased their first ACR. That is, the average monthly income of innovators’ families was higher so that the innovators only needed to spend their 2.21 months’ income compared with the remaining sample’s 3.70 months.

Although the mean differences are not significant, the ACR innovators do have higher education (4.84 vs. 4.72) but lower occupational prestige (18.80 vs. 19.55) as far as the sample is concerned. Although it is difficult to explain why the education level and occupational prestige
are not in the same direction, it is clear that neither the education difference nor the prestige difference is significant. In other words, the difference may be mainly due to a sample error.

The innovators also show more favourable attitudes towards risk (like to try new & different things, 3.24 vs. 3.05), greater social participation (call friends, 3.8 vs. 3.6; call relatives, 3.25 vs. 3.43), and higher intergeneration mobility (-.8.43 vs. -.903) than the remaining sample. Nevertheless, the characteristics of age and intragenerational mobility contradict the innovator theory. Overall, the ACR innovators of father generation bear more innovator characteristics than the TV innovators of father generation as far as the sample is concerned.

b. Grandfather Generation

Unlike the above findings, none of the mean differences is statistically significant for the grandfather generation. Speaking for the sample only, it seems that the ACR innovators' families of grandfather generation had higher ability to pay than that of the remaining sample when they bought their first ACR. This is consistent with the father generation. That is, on the average, they only spent 2.25 months' family income while the remaining sample had to spend about 2.50 months'.

Table 6.2b

<table>
<thead>
<tr>
<th>Characteristics (Grandfather Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Level of Education</td>
<td>3.79</td>
<td>24</td>
<td>3.55</td>
</tr>
<tr>
<td>Ability to Pay the First ACR</td>
<td>3.25</td>
<td>24</td>
<td>3.50</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>27.87</td>
<td>23</td>
<td>27.85</td>
</tr>
<tr>
<td>Age</td>
<td>65.05</td>
<td>22</td>
<td>67.19</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.87</td>
<td>23</td>
<td>2.67</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>2.48</td>
<td>23</td>
<td>2.67</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>4.31</td>
<td>16</td>
<td>4.30</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.07</td>
<td>15</td>
<td>3.30</td>
</tr>
<tr>
<td>Call Friends</td>
<td>2.94</td>
<td>16</td>
<td>2.90</td>
</tr>
<tr>
<td>Intragenerational Mobility</td>
<td>10.93</td>
<td>15</td>
<td>9.44</td>
</tr>
</tbody>
</table>

The ACR innovators of grandfather generation also show higher education (3.79 vs. 3.55).
However, there is almost no prestige difference between the innovators and remaining sample (27.87 vs. 27.85). As far as the other characteristics are concerned, the innovators have a younger age (65.05 vs. 67.19), greater social participation (call relatives 3.07 vs. 3.30; call friends, 2.94 vs. 2.90), and intragenerational mobility (10.93 vs. 9.44). Although the innovators are more likely to attempt things they are not sure they can do, they are less likely to try new and different things as far as attitudes towards risk are concerned. Overall, the innovators of grandfather generation are similar to that of the father generation.

3. Telephone

The diffusion of the telephone has been rapid since 1994. Currently, more than 46.68 percent of the households surveyed subscribed a private line (N=239). Based on the time of telephone adoption, the first 27 adopters are identified as the innovators for the father generation while 23 are selected for the grandfather generation. Table 6.3a and 6.3b show their characteristics in comparison with the remaining sample.

a. Father Generation

Table 6.3a shows the statistics for the father generation.

<table>
<thead>
<tr>
<th>Characteristics (Father Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>N</td>
<td>Mean</td>
<td>N</td>
</tr>
<tr>
<td>Level of Education</td>
<td>5.04</td>
<td>27</td>
<td>4.70</td>
</tr>
<tr>
<td>Ability to Pay the First Telephone</td>
<td>6.67</td>
<td>27</td>
<td>5.64</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>21.52</td>
<td>27</td>
<td>19.24</td>
</tr>
<tr>
<td>Age</td>
<td>38.46</td>
<td>26</td>
<td>38.09</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.68</td>
<td>25</td>
<td>2.67</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>3.24</td>
<td>25</td>
<td>3.05</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>3.86</td>
<td>22</td>
<td>4.13</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.29</td>
<td>24</td>
<td>3.44</td>
</tr>
<tr>
<td>Call Friends</td>
<td>3.88</td>
<td>25</td>
<td>3.55</td>
</tr>
<tr>
<td>Intragenerational Mobility</td>
<td>12.65</td>
<td>20</td>
<td>8.43</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
<td>-4.44</td>
<td>25</td>
<td>-9.50</td>
</tr>
</tbody>
</table>
As far as the sample is concerned, the characteristics of telephone innovators of the father generation are more consistent with the innovator theory. With more than 95 percent confidence, we can say that the mean of the innovators’ education is higher than that of the remaining sample’s in the population (5.04 vs. 4.70). Accordingly, their occupational prestige is also higher (21.52 vs. 19.24). While the results of the remaining means comparisons did not reach a significant level, all the directions but two are consistent with the innovator characteristics mentioned earlier in this chapter. All the telephone innovators subscribed to the telephone service in 1993 or earlier. Compared with the remaining sample, their families had less ability to pay when they adopted the telephone. That is, they had to spend 5.67 months’ family income to get connected while the remaining sample only needed to spend 4.64 months’. Moreover, the innovators tend to be older compared with other father adopters (38.46 vs. 38.09).

b. Grandfather Generation

The characteristics of grandfather innovators are similar to that of the father generation to a large degree. However, as Table 6.3b shows, they differ in a number of items. Probably because of the small number of innovator cases available, none of the mean differences observed is statistically significant.

<table>
<thead>
<tr>
<th>Characteristics (Grandfather Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Education</td>
<td>3.68 22</td>
<td>3.56 231</td>
<td>.335 .738</td>
</tr>
<tr>
<td>Ability to Pay the First Telephone</td>
<td>6.95 22</td>
<td>5.88 81</td>
<td>1.373 .173</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>26.38 21</td>
<td>27.99 227</td>
<td>-.510 .611</td>
</tr>
<tr>
<td>Age</td>
<td>66.41 22</td>
<td>67.06 228</td>
<td>-.536 .592</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.71 21</td>
<td>2.67 206</td>
<td>.172 .863</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>2.38 21</td>
<td>2.67 211</td>
<td>-.122 .223</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>4.19 21</td>
<td>4.32 109</td>
<td>-.522 .602</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.33 21</td>
<td>3.25 94</td>
<td>.374 .709</td>
</tr>
<tr>
<td>Call Friends</td>
<td>3.16 19</td>
<td>2.84 92</td>
<td>1.60 .112</td>
</tr>
<tr>
<td>Intragenerational Mobility</td>
<td>8.43 14</td>
<td>9.65 173</td>
<td>-.393 .695</td>
</tr>
</tbody>
</table>
As far as the sample is concerned, although the innovators of the grandfather generation tend to have higher education than the remaining sample, the difference is small (3.68 vs. 3.56). The small difference on education seems unable to be translated into a higher score of occupational prestige. In fact, the innovators have lower occupational prestige than the remaining sample (26.38 vs. 27.99). For the grandfather generation, the occupational prestige is also moderately related to current monthly income (.52**). Therefore, it is possible that the lower occupational prestige is partly due to lower income level as far as the innovators are concerned. Indeed, innovators have lower current monthly income than the remaining sample (566.57 yuan vs. 577.44 yuan).

The innovators also have younger age (66.41 vs. 67.06) and greater social participation (call family members, 4.19 vs. 4.32; call friends, 3.16 vs. 2.84). There is no real mean difference on the item, “call relatives” (3.33 vs. 325). However, it seems that the innovators’ families of the grandfather generation had a lower ability to pay when they subscribed to the telephone in 1993 and earlier. Moreover, the innovators of grandfather generation tend to have lower intragenerational mobility (8.43 vs. 9.65). The result on attitudes towards risk is mixed as far as the two relevant items are concerned. This is also different from that of the father generation.

In sum, as far as the characteristics of telephone innovators are concerned, the grandfather generation differs from the father generation in occupational prestige, attitudes towards risk, and age (within the generation)

4. Pager

Only 8.4 percent of the respondents reported that they had subscribed to pager services in the summer of 1996. The diffusion of the pager seems very biased towards the father generation. All the pager adopters but one belong to the father generation. This very fact indicates that the pager adoption is age oriented.

The most salient characteristic of the pager innovator is that they have high intergenerational mobility comparing with that of the remaining sample (-2.92 vs. -9.65). The difference is statistically significant at the .05 level. The higher intergenerational mobility is reflected on the higher occupational prestige. Table 6.4 shows the results of mean comparisons.

---

57 The correlation between the intergenerational mobility and fathers’ occupational prestige is .52**. However, the intergenerational mobility is not really correlated to either the level of education (.12) or the monthly income (-.02).
Table 6.4

<table>
<thead>
<tr>
<th>Characteristics (Father Generation)</th>
<th>Innovators</th>
<th>Remaining Sample</th>
<th>T-Test (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Level of Education</td>
<td>4.74</td>
<td>27</td>
<td>4.73</td>
</tr>
<tr>
<td>Ability to Pay the First pager</td>
<td>3.92</td>
<td>26</td>
<td>3.17</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>22.89</td>
<td>27</td>
<td>19.08</td>
</tr>
<tr>
<td>Age</td>
<td>37.26</td>
<td>25</td>
<td>38.23</td>
</tr>
<tr>
<td>Attempt Things Not Sure Can Do</td>
<td>2.76</td>
<td>25</td>
<td>2.66</td>
</tr>
<tr>
<td>Like To Try New &amp; Different Things</td>
<td>3.42</td>
<td>26</td>
<td>3.03</td>
</tr>
<tr>
<td>Call Family Members</td>
<td>3.82</td>
<td>22</td>
<td>4.14</td>
</tr>
<tr>
<td>Call Relatives</td>
<td>3.10</td>
<td>20</td>
<td>3.47</td>
</tr>
<tr>
<td>Call Friends</td>
<td>3.68</td>
<td>22</td>
<td>3.60</td>
</tr>
<tr>
<td>Intragegenerational Mobility</td>
<td>10.67</td>
<td>18</td>
<td>8.67</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
<td>-2.92</td>
<td>24</td>
<td>-9.65</td>
</tr>
</tbody>
</table>

The innovators' occupational prestige is higher than the remaining sample on the average (22.89 vs. 19.08). However, the innovators' education level is almost identical with that of the remaining sample (4.74 vs. 4.73). Moreover, like the case of the telephone for the father generation, the 26 pager innovators' families had a lower ability to pay when they purchased the pager service in 1994 or earlier than the remaining 18 pager adopters' families.

As far as the other characteristics are concerned, none of the mean differences is statistically significant. However, like the telephone innovators of the father generation, the pager innovators do show that they have more favourable attitudes towards risk, greater social participation, and higher generational mobility, and younger age compared to the remaining sample of father generation.

5. Summary

Thus far, I have examined the seven characteristics of the innovators. Although the mean differences between the innovators and remaining sample are observed, the differences vary in
degree and do not show a clear pattern. In order to identify whether there is a generalized innovator, it is necessary to examine the six characteristics across the four media respectively. Table 6.5 briefly summarizes the findings.

Table 6.5

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>TV F</th>
<th>G</th>
<th>ACR F</th>
<th>G</th>
<th>Phone F</th>
<th>G</th>
<th>Pager F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Ability To Pay at the Time of Adoption</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Higher Education</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>-</td>
<td>-</td>
<td>s</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Younger</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>More Socially Mobile</td>
<td>+</td>
<td>+</td>
<td>m</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Favourable Attitudes Towards Risk</td>
<td>m</td>
<td>+</td>
<td>m</td>
<td>+</td>
<td>m</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Greater Social Participation</td>
<td>m</td>
<td>m</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

"+" means consistent with the hypothesized innovator characteristic.
"-" means opposite to the hypothesized innovator characteristic.
"s" means almost the same or identical to the characteristics of remaining sample.
"m" means mixed results.
F=Father Generation
G=Grandfather Generation

As one of the major indicators of socio-economic status, income has been linked to various social actions. As far as this study is concerned, it is clear that the innovators of the two mass media had higher ability to pay while the innovators of the two-way media had lower ability to pay when the media were adopted regardless of the generational difference. Although the difference is not statistically significant for the cases of ACR (grandfather generation only), telephone, and pager, its direction is clear as far as the sample is concerned. Now the question becomes why the innovators of the mass media had a higher ability to pay while the innovators of two-way media were not. Is it possible that the difference is because the two kinds of media have different attributes that are congruent to different people? Such a question will be gradually answered in the later chapters. What we know now about the sample is that the telephone innovators of the father generation had a much higher salary than the remaining sample on average when the survey was conducted. However, it does not apply to the case of the pager when the generation is considered.
conducted in the summer of 1996. Does this imply that the telephone is more a productive tool than anything else for the telephone innovators of the father generation? Again, the answer has to be explored in the later chapters.

Is income related to roles in urban China? The data reveals that it is not in current urban China for the father generation. Even in the middle of 1980s, Lin and Xie (1988), as noted earlier, found that occupational prestige ratings were more affected by education levels than by income levels in Beijing. This is reflected in the characteristics of the innovators. As Table 6.4 showed, occupational prestige is more consistent with the level of education than with the level of ability to pay.

All the media innovators but that of television have higher or similar levels of education than the remaining sample. Although the mean differences of education for both the television and telephone innovators of the father generation are statistically significant, they are in an opposite direction. That is, the former is significant lower while the later is substantially higher. Like income, education is regarded as an important indicator of socio-economic status. A moderate correlation between occupational prestige and education level is observed for both the generations (Father: +.50**; Grandfather: +.56**). Hence, the innovators' occupational prestige also varies with their level of education to some degree. Therefore, we need to further explore whether this implies that the diffusion of the ACR or the telephone or the pager is positively related to prestige or status related reasons or values.

As discussed earlier, examination on the comparison of age is limited because this research only deals with two specific generations. Nevertheless, the unbalanced diffusion of the ACR and/or the pager per se suggests that these two media are age oriented. Moreover, within the generation, the ACR and telephone innovators of the grandfathers and pager innovators of the father generation appear younger. However, the television innovators of both generations and ACR and telephone innovators of the father generation tend to be older than the remaining sample of their own generation respectively. Overall, this is not a clear pattern as far as age is concerned. What needs to be further explored is that why there are different age biases toward different media as far as the generational difference is concerned.

---

3Here, it is necessary to point out that the zero-order correlation coefficient between income and education is almost zero (.07) for the father generation in this study probably due to the economic reform in urban China. For the grandfather generation, the correlation coefficient only reached .334**. It is assumed that the radical social and economical change is responsible for the negligible or weak correlation.
As far as the remaining three innovator characteristics (more socially mobile, favourable attitudes towards risk, and greater social participation) are concerned, only the telephone and pager innovators of father generation show full consistency. The telephone innovators of the grandfathers reported that they have greater social participation. However, they indicated either negative or mixed results on the characteristics of intragenerational mobility and attitudes towards risk. Here, it is assumed that the difference between the innovators of the two generations is mainly age related. That is, the grandfather generation may have a different agenda from the father generation when it comes to the telephone adoption. This may be further clarified when the relationship between the adoption of the telephone and the reasons for its adoption are explored in Chapter 8.

While the television innovators of both generations showed more social mobility, only the ACR innovators of grandfathers did so. The result for the ACR innovators of the father generation is mixed as far as social mobility is concerned. However, the television and ACR innovators of both generations did not show any degree of consistency concerning the characteristics of attitudes towards risk and greater social participation. It is rather medium-specific.

In sum, while the innovators of the four media showed certain patterns in terms of ability to pay (mass media vs. two-way media), they did not demonstrate any consistency towards the remaining characteristics examined. In the beginning of this chapter, I quoted Gatignon and Robertson's observation (1985) that there is not a generalized innovator across product category or interest domains. The findings from this chapter show that there is not even a generalized innovator within a product category (media). Rather, the four media are not equivalent units and the characteristics of innovators are product (medium) specific. This tentative conclusion warrants a further investigation on why an electronic medium is diffused in urban China. In other words, we need to know the reasons for media adoption and postadoption.
Chapter 7  
Personal Values and Media Adoption and Postadoption

The main objective of this chapter is to examine the relationship between personal values and media adoption and postadoption through regression analysis. The reason for using personal values instead of the more general ones such as the Kluckhohn scheme is because it has been observed that it is difficult to demonstrate the relationship between more general value orientations and specific behaviours.60 Indeed, we are forced to scrutinize and use value orientations at lower levels of generalization for the guidance gained from knowledge of such empirical relationships as exist (Michelson 1970, p. 142). Therefore, instead of deriving values on a general level from all aspects of a person’s life, I constructed the personal value variables on a lower level from some aspects of a person’s life (See Chapter 4). More specifically, while twenty personal values are constructed for the father generation, nineteen are extracted from a total of 58 specific items for the grandfather generation through factor analysis. The values are classified into five categories: (1) Achievement and Status Aspiration; (2) Materialism; (3) Enjoyment; (4) Restrictiveness; (5) Conformity.

The behaviour of adopting or using a medium is assumed to be intentional. Here, I am suggesting that either the adoption or use will be much less likely to occur if the relevant personal values are not congruent with the attributes of a medium. In other words, it is assumed that the subjective attributes of a medium can be defined in terms of its adopters’ values at least to some degree. In Chapter 5, I explored the relationship between the time of adoption and use. Ideally, a medium could be easily identified if the time of medium adoption, degree of use, and nature of use all share the same set of values. In reality, as I demonstrated in Chapter 5, the low correlation between the time of adoption and use are often observed. The low correlation implies that there may be different values for the adoption and post adoption. When there are two sets of values, it becomes necessary to observe how the values related to (1) the time of adoption and specific use and (2) the degree of use (overall use) and specific use (nature of use). In Chapter 2, I hypothesized that:

(1) Authority and status aspiration or materialism oriented values are positively related to the time of media adoption.

---

60 See Michelson (1970, Chapter 6) for empirical examples on value orientations and the urban physical environments.
(2) Authority and status aspiration or materialism oriented values are positively associated with business or work related media use but negatively associated with social or entertainment related media use.

(3) Enjoyment oriented values are positively related to the time of television or ACR adoption, degree of television and ACR use, and entertainment related media use.

(4) Restrictiveness and conformity oriented values are positively related to the degree of television and ACR use.

Regression analysis is performed to test the above hypotheses. The variable selection for the models is based on the stepwise procedures.

1. Television

In Chapter 5, I demonstrated that while there is a small and negative correlation between the time of adoption and time spent on watching television for the father generation, no statistically significant relationship is observed for the grandfather generation. Moreover, the time of television adoption is negatively correlated to the frequency of watching entertainment oriented shows for both the generations (father generation: -.227*; grandfather: -.269**). Such findings suggest that it is necessary to examine the relationships between personal values and television adoption and postadoption respectively.

i. Personal Values and Time of Television Adoption

No statistically significant relationship between personal values and time of adoption is found for the father generation. As Table 7.1 shows, only a weak and negative association is observed for the grandfather generation.

<table>
<thead>
<tr>
<th>Table 7.1</th>
</tr>
</thead>
</table>

**Standardized Regression Coefficients for Model Predicting Time of the First TV Adoption**

<table>
<thead>
<tr>
<th>Independent Variable (Personal Values)</th>
<th>Fathers (Beta)</th>
<th>Grandfathers (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure &amp; Comfort</td>
<td>.----</td>
<td>-.163*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R²</th>
<th>Adjusted R²</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>.03</td>
<td>.02</td>
<td>211</td>
</tr>
</tbody>
</table>

In fact, not only the strength of the relationship is negligible but also its direction contradicts the

---

61 Although the shows for the grandfathers are traditional in nature, they are entertaining.
hypothesis. That is, the time of television adoption is independent of personal values to a great degree.

**ii. Personal Values and Time Spent on Watching Television**

Although the time of television adoption is independent of personal values to a large degree, the time spent on watching television is not. As Table 7.2 shows, statistically significant relationships are observed for both the generations.

| Table 7.2 |
|-------------------|------------------|------------------|
| **Standardized Regression Coefficients for Model Predicting Time Spent on Television Watching** | | |
| Independent Variables | Fathers (Beta) | Grandfathers (Beta) |
| (Personal Values) | | |
| Success at the Expense of Others | .201** | .---- |
| Being Ordinary | .---- | -.176* |
| Money & Pleasure | .---- | .148* |
| R² | .04 | .06 |
| Adjusted R² | .04 | .05 |
| No. of Cases | 197 | 181 |

* p<.05  
** p<.01

For the father generation, it is the competitive value, *success at the expense of others*, rather than any of the enjoyment, or restrictiveness, or conformity oriented values leads to more time spent on watching television. For the grandfather generation, while the statistics support the hypothesis that "enjoyment oriented values are positively related to the overall television use," it contradicts the hypothesis that conformity oriented values are positively related to the degree of television use. Nevertheless, the value profile of heavy television users is somewhat different from the findings on Western societies, especially for the father generation (See Frissen 1996).

**iii. Personal Values and Nature of Television Use**

Lull (1988) observes that Chinese viewers, like people everywhere, watch television primarily for its entertainment values. This study also found that the most watched television shows were news and other entertainment oriented programs. We have known that certain values are related to either the time of television adoption (grandfather only) or overall time spent on watching television. As argued earlier, we also need to know how these values are related to the specific shows in order to define the medium. Table 7.3a and 7.3b show the statistics for the two generations respectively.
For the father generation, *success at the expense of others* is the only value identified when related to time spent on watching television. Table 7.3a shows that although it is one of the achievement oriented values, it is negatively related to educational shows. Rather, it is positively related to entertainment oriented shows, such as popular music.

<table>
<thead>
<tr>
<th>Standardized Regression Coefficients for Model Predicting TV Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables (Personal Values)</td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
<tr>
<td>Dependent Variable (TV Use)</td>
</tr>
<tr>
<td>Popular Music</td>
</tr>
<tr>
<td>Educational</td>
</tr>
<tr>
<td>.177*</td>
</tr>
<tr>
<td>-.163*</td>
</tr>
<tr>
<td>.03</td>
</tr>
<tr>
<td>.03</td>
</tr>
<tr>
<td>185</td>
</tr>
<tr>
<td>186</td>
</tr>
</tbody>
</table>

* *p<.05

That is, the fathers who value *success at the expense of others* not only spend more time on watching television in general but also are more likely to watch entertainment oriented show, popular music in particular. However, although *success at the expense of others* belongs to the achievement oriented value domain, it is negatively related to the frequency of watching educational shows. The point is, we have difficulty to define the television as an achievement oriented medium because not only do the findings contradict the hypothesis but also the relationship is weak.

For the grandfather generation, as Table 7.1 and 7.3b show, the value, *leisure & comfort*,

<table>
<thead>
<tr>
<th>Standardized Regression Coefficients for Model Predicting TV Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables (Personal Values)</td>
</tr>
<tr>
<td>Leisure &amp; Comfort</td>
</tr>
<tr>
<td>Money &amp; Pleasure</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
<tr>
<td>Dependent Variable (TV Use)</td>
</tr>
<tr>
<td>News</td>
</tr>
<tr>
<td>Dramas</td>
</tr>
<tr>
<td>Games</td>
</tr>
<tr>
<td>Operas</td>
</tr>
<tr>
<td>Folk</td>
</tr>
<tr>
<td>-.217**</td>
</tr>
<tr>
<td>.----</td>
</tr>
<tr>
<td>.----</td>
</tr>
<tr>
<td>.----</td>
</tr>
<tr>
<td>.----</td>
</tr>
<tr>
<td>.143*</td>
</tr>
<tr>
<td>.155*</td>
</tr>
<tr>
<td>.148*</td>
</tr>
<tr>
<td>-.142</td>
</tr>
<tr>
<td>.05</td>
</tr>
<tr>
<td>.02</td>
</tr>
<tr>
<td>.02</td>
</tr>
<tr>
<td>.02</td>
</tr>
<tr>
<td>.02</td>
</tr>
<tr>
<td>208</td>
</tr>
<tr>
<td>196</td>
</tr>
<tr>
<td>164</td>
</tr>
<tr>
<td>193</td>
</tr>
<tr>
<td>193</td>
</tr>
</tbody>
</table>

*---- Variable not included in the equation
* *p<.05;
** *p<.01

is negatively related to the time of television adoption as well as the frequency of watching television news. This suggests that the grandfathers who value *leisure & comfort* are more likely
to be the late adopters and less likely to watch television news.

Although *being ordinary* is somewhat related to the overall time spent on television for the grandfather generation, it is independent of specific television use. However, the grandfathers who value *money & pleasure* show some consistency as far as overall television use and specific television use are concerned. That is, *money & pleasure*, as hypothesized, is positively related to not only the degree of television use but also the frequency of watching a number of entertainment oriented shows. In short, for the grandfather generation, we cannot conclude that the television is an enjoyment oriented medium in terms of the time of television adoption. Although the grandfathers who value enjoyment spend more time on watching television and are more likely to watch entertainment shows, the findings are tentative because only a small proportion of variances are explained by the model.

In sum, I have demonstrated the relationship between the personal values and television adoption and postadoption. Clearly, the insufficient findings suggest that we cannot give a definite conclusion on the subjective characteristics of television at the level of personal values. Although some of the values are linked with television, they do not predict television adoption and postadoption with any degree of accuracy. Indeed, neither of the models discussed explain a significant proportion of variances. Therefore, it is necessary to ask whether personal values are still too general to explain the behaviour of television adoption and postadoption or whether the choice of personal values is problematic. While both questions are theoretical, they may be partially answered when I shift the examination from the level of personal values to specific reasons of adoption in the next chapter. From this point, the limited findings on the relationship between personal values and television adoption and postadoption can be used for comparison purposes.

2. Audio Cassette Recorder/Player (ACR)

Similar to that of television, the time of ACR adoption is independent of the degree of overall ACR use for both the generations. However, for the father generation, a weak and negative correlation between the time of ACR adoption and frequency of watching achievement oriented shows such as shows on learning foreign languages or skills. Although the strength of correlation is weak (-.208*), its negative direction implies that earlier adopters are less likely to buy the ACR for learning purposes. In this section, I examine what is the personal value that account for adoption and postadoption respectively.
i. Personal Values and Time of ACR adoption

As Table 7.4 shows, the two generations vary from each other in terms of their value orientations.

<table>
<thead>
<tr>
<th>Table 7.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Time of the First ACR Adoption</td>
</tr>
<tr>
<td>Independent Variables (Personal Values)</td>
</tr>
<tr>
<td>Authority &amp; Status Aspiration</td>
</tr>
<tr>
<td>Achieving Spirit</td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
</tbody>
</table>

While the findings support the hypothesis for the father generation, they contradict the hypothesis for the grandfather generation. That is, the grandfathers who have a higher degree of achieving spirit and value spend & indulge are more likely to be the later adopters. Although the achievement value, authority & status aspiration, is positively related to the time of adoption for the father generation, the relationship is negligible for the model only explains 3 percent of the variance.

ii. Personal Values and Frequency of Overall Use

No statistically significant relationship between personal values and frequency of overall ACR use is found for the father generation. For the grandfather generation, the frequency is negatively related to the value, spend & indulge. This contradicts the hypothesis.

<table>
<thead>
<tr>
<th>Table 7.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting ACR Use (Grandfather Generation Only)</td>
</tr>
<tr>
<td>Independent Variables (Values)</td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
</tbody>
</table>

That is, the grandfathers who value spend & indulge are not only less likely to be the early ACR
adopters but also less frequently use the ACR as a whole.

iii. Personal Values and Nature of ACR Use

No statistically significant relationship between personal values and frequency of specific ACR use is found for both the generations.

In sum, the case of ACR is even more ambiguous than that of television as far as the relationship between personal values and adoption and postadoption is concerned. The findings are insufficient to define the characteristics of the ACR. Again, a different approach has to be explored in order to achieve the objective of this thesis.

3. Telephone

Unlike either television or the ACR, the telephone is a two-way communication medium. It seems that such difference is reflected in the relationship between the time of telephone adoption and frequency of local calls for the father generation. That is, there is a small but definite positive correlation between the time of adoption and frequency of local calls (.381*). However, there is no relationship between the time of telephone adoption and frequency of local calls for the grandfather generation. For the grandfather generation, what we know is that the time of telephone adoption is negatively related to the frequency of calling family members.

i. Personal Values and Time of Telephone Adoption

It is hypothesized that achievement oriented values are positively related to the time of telephone adoption. However, as Table 7.6 shows, this is only true for the father generation.

<table>
<thead>
<tr>
<th>Independent Variables (Personal Values)</th>
<th>Father (Beta)</th>
<th>Grandfathers (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success at the Expense of Others</td>
<td>.275**</td>
<td>----</td>
</tr>
<tr>
<td>Money</td>
<td>----</td>
<td>-.295**</td>
</tr>
<tr>
<td>Material Desires</td>
<td>----</td>
<td>-.246*</td>
</tr>
<tr>
<td>R²</td>
<td>.08</td>
<td>.14</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.07</td>
<td>.12</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>115</td>
<td>80</td>
</tr>
</tbody>
</table>

*.p<.05  
**.p<.01

While the early adopters of the father generation are more likely to be competitive (success at the expense of others), the late adopters of the grandfather generation are more likely to have higher
material desires and be money oriented.

ii. Personal Values and Frequency of Local Calls

The generational difference is also obvious when we use personal values to predict the frequency of local calls. Table 7.7 shows the statistics.

Table 7.7

<table>
<thead>
<tr>
<th>Independent Variables (Personal Values)</th>
<th>Fathers (Beta)</th>
<th>Grandfathers (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determined to Succeed</td>
<td>.205*</td>
<td>.----</td>
</tr>
<tr>
<td>Martial Desires</td>
<td>.----</td>
<td>.376***</td>
</tr>
<tr>
<td>Innovating &amp; Spending</td>
<td>.----</td>
<td>.328**</td>
</tr>
<tr>
<td>R²</td>
<td>.04</td>
<td>.24</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.03</td>
<td>.21</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>92</td>
<td>63</td>
</tr>
</tbody>
</table>

*p<.05  
**p<.01  
***p<.001

While the relationship between the value, determined to succeed, and frequency of local calls is weak for the father generation, its direction supports the hypothesis. For the grandfather generation, the hypothesis is partially supported as the value, innovating & spending, does not belong to the achievement value domain. In other words, the grandfathers who value material desires or innovating & spending, or both, tend to make more local telephone calls.

iii. Personal Values and Nature of Telephone Calls

As far as the father generation is concerned, neither success at the expense of others nor determined to succeed is related to any specific telephone use. For the grandfather generation, it is clear that material desires are positively related to the frequency of calling clients while innovating & spending is positively related to the frequency of calling relatives.
Table 7.8

<table>
<thead>
<tr>
<th>Independent Variables (Personal Values)</th>
<th>Call Clients</th>
<th>Call Relatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Desires</td>
<td>.267*</td>
<td>---</td>
</tr>
<tr>
<td>Innovating &amp; Spending</td>
<td>---</td>
<td>.295**</td>
</tr>
</tbody>
</table>

--- Variable not included in the equation
*p<.05
**p<.01

To summarize, the findings for the father generation support the hypothesis as far as using personal values to predict the time of adoption and frequency of local calls is concerned. This is consistent with what we found on the relationship between the time of adoption and postadoption. However, neither success at the expense of others nor determined to success is related to any specific telephone communication. That is, while we are certain that the telephone is somewhat related to achievement oriented values in terms of the time of adoption and frequency of local calls, we are not sure whether achievement oriented values are materialized in specific telephone communications.62

Contrary to the case of the father generation, the late adopters are more likely to demonstrate a higher degree of achievement oriented values such as money and material desires. For the grandfathers who show higher degree of material desire, they not only make or receive more telephone calls but are also more likely to call clients. The finding on postadoption supports the hypothesis. Nevertheless, there is another side of the grandfathers when it comes to the postadoption of the telephone. That is, the grandfathers who value innovating & spending also make and receive more local telephone calls and call their relatives more often. Thus, for the grandfather generation, the findings are mixed. The telephone can be either a tool for material achievement or a tool for enjoyment. Overall, we could not fully define the telephone in terms of the values observed as far as the time of adoption, frequency of local calls, and nature of calls are concerned.

---

62I suggest that the achievement oriented values are somewhat related to the time of adoption and frequency of local calls because the models only explain a small proportion of variance.
While these mixed findings are reflected in an inconsistent value orientation, they may be
directly related to a generational difference. Being elderly often means role changes. This could
be a major factor for restructuring one’s value priorities. For instance, one’s lifestyle may be
revalued and social networks become reorganized when one becomes elderly. I shall continue to
pay attention to this point in the following chapters and hope that it will be clarified gradually.

4. Pager

The pager is age biased and belongs to the father generation in Shijiazhuang City.\(^{63}\) Although weak and positive correlations between the time of pager adoption and frequency of
being paged overall and frequency of being paged by business partners are observed, they are not
statistically significant. Hence, it is necessary to examine how personal values are related to the
pager adoption and post adoption respectively.

i. Personal Values and Time of Pager Adoption

It seems that not all achievement oriented values function toward the same direction as far
as adopting the pager is concerned. As Table 9 shows, while determined to succeed affects the
time of adoption positively, success at the expense of others has a negative impact on the time of
pager adoption.

<table>
<thead>
<tr>
<th>Table 7.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Time of the First Pager Adoption</td>
</tr>
<tr>
<td>Independent Variables (Personal Values)</td>
</tr>
<tr>
<td>Determined to Succeed</td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
</tr>
<tr>
<td>( R^2 )</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
</tbody>
</table>

\( *p<.05 \)

The above model not only has a better fit (\( R^2 = .24 \)) than most of the models discussed to this point
but also reminds us how important the level of value orientation is when the values are used to
predict behaviours. Both the values, determined to succeed and success at the expense of others,
are competitive in nature and belong to the achievement oriented value domain. But their impacts

\(^{63}\) This seems also true for the case of the cellular telephone. Francese (1994) reports that adults aged 55
and older are unlikely to use wireless telephone.
on the time of pager adoption go in the opposite direction.

**ii. Personal Values and Frequency of Being Paged**

No statistically significant relationship is found for both the generations.

**iii. Personal Values and Nature of Pager Communications**

No statistically significant relationship is found for both the generations.

As far as the pager is concerned, what we know is that the fathers who are determined to succeed are more likely to be the earlier pager adopters. Clearly, the findings are insufficient in terms of using personal values to define the characteristics of the pager.

**5. Summary**

At the beginning of this chapter, I indicated that a medium might be best defined in terms of both adoption (time of adoption) and postadoption (the degree and nature of use). To this point, I have examined the relationship between personal values and media adoption and postadoption. Table 7.10a and 7.10b briefly summarize the findings for the two generations respectively.

<table>
<thead>
<tr>
<th>Media</th>
<th>Values that Affect the Time of Adoption (Beta)</th>
<th>Values that Affect the Overall Use (Beta)</th>
<th>Values that Affect the Specific Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television</td>
<td>Success at the Expense of Others (.20*)</td>
<td>Success at the Expense of Others.</td>
<td></td>
</tr>
<tr>
<td>ACR</td>
<td>Authority &amp; Status Aspiration (.17*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>Success at the Expense of Others (.28*)</td>
<td>Determined to Succeed (.21*).</td>
<td></td>
</tr>
<tr>
<td>Pager</td>
<td>Determined to Succeed (.36*); Succeed at the Expense of Others (.32*).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Clearly, it is difficult to define any of the four media in terms of personal values for the father generation because these values are independent of either adoption or postadoption. While there are some associations observed between the values and media adoption or postadoption, the strength of association is weak and often negligible. Moreover, it is necessary to point out that the value, success at the expense of others, functions rather ambiguously. Success at the Expense of Others belongs to the achievement oriented value domain. However, it is positively related to the frequency of watching popular music on television (.177*) but negatively related to the frequency of watching achievement oriented television shows (educational shows, -.163*). As far as the
telephone and pager are concerned, the fathers who value success at the expense of others are more likely to be the earlier telephone adopters but later pager adopters. This suggests that it is not safe to lump all the achievement oriented values into one category and treat them equally.

For the grandfather generation, as Table 7.10b shows, the picture is not clear either.

<table>
<thead>
<tr>
<th>Media</th>
<th>Values that Affect the Time of Adoption (Beta)</th>
<th>Values that Affect the Overall Use (Beta)</th>
<th>Values that Affect the Specific Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television</td>
<td>Leisure &amp; Comfort (-.16*)</td>
<td>Being Ordinary (-.18*); Money &amp; Pleasure (.15*).</td>
<td>Leisure &amp; Comfort; Money &amp; Pleasure.</td>
</tr>
<tr>
<td>ACR</td>
<td>Achieving spirit (-.25*); Spend &amp; Indulge (-.22*).</td>
<td>Spend &amp; Indulge (-.26*).</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>Money (-.30**); Material Desires (-.25*).</td>
<td>Material Desires (.38***); Innovate &amp; Spend (.33**).</td>
<td>Material Desires; Innovate &amp; Spend.</td>
</tr>
</tbody>
</table>

The grandfathers who value money & pleasure do use the television for the purpose of enjoyment. However, this does not mean that either the earlier adopters value leisure & comfort or the heavier television viewers like to be ordinary. This is somewhat consistent with the case of father generation. The point is, we cannot label the television as either enjoyment oriented or achievement oriented based on the values observed.

The case of ACR or telephone is rather different from that of father generation as far as the time of adoption is concerned. While the earlier ACR adopters of grandfather generation are more likely to have either a lower level of achieving spirit or lower level of spend & indulge or both, the earlier ACR adopters of father generation are more likely to have a higher level of authority & status aspiration. Similarly, the earlier telephone adopters of the grandfather generation are much less likely to be materialistic. Nevertheless, like the case of the father generation, it is difficult to define the characteristics of either the ACR or the telephone in terms of the values observed because the findings are limited or mixed. For instance, achieving spirit and spend & indulge are independent of specific ACR use. Although material desires and innovating & spending affect the frequency of local calls and specific telephone communications positively, they do not belong to the same value domain.

The above conclusions lead to two questions. The first is why personal values are often either weakly associated with or totally independent of media adoption and postadoption. The second question is what accounts for the generational difference as far as the relationship between
the values and media adoption and postadoption is concerned.

There are two tentative answers to the first question. It is possible that even the level of personal values is too general to predict or explain behaviours such as media adoption and postadoption. It is true that the values used in this study are less general than others. However, it is entirely possible that the behaviour situations that the personal values represent are much wider than specific media use. Hence, the values do not vary with a person's use of media. If personal values are too general, will a lower level of values vary with the behaviour of media adoption and postadoption? The next chapter will answer this question empirically.

It is also possible that the choice of the value per se is inappropriate. In other words, personal values that could account for the variation of media adoption and postadoption are not included in the equations or models. Although the choice of the values was guided by established theory and some empirical findings, it could be inadequate as far as predicting media adoption and postadoption is concerned. While this argument may be true, the fact is that only empirical work can falsify a theory. Indeed, some qualitative data or a pilot study is very desirable as far as selecting the proper personal values is concerned.

As far as the generational difference is concerned, the question is why the grandfathers are more likely to be either enjoyment oriented (in the case of television) or enjoyment and materialism oriented (in the case of the telephone) as far as their postadoption is concerned while the fathers are more likely to be achievement oriented. It may be more appropriate to give the necessary answer or explanation after examining the specific reasons for media adoption in the next chapter because the findings of this chapter are limited. However, it is necessary to note that generational differences are often caused by the aging process. For instance, being old often means changing roles which may lead to different social needs (Blau 1981). Such change may be related to the telephone adoption and postadoption. This may become more clear after the examination of reasons for the telephone adoption and postadoption in the next chapter.

In sum, the two generations do differ in terms of the relationship between their values and media adoption and postadoption. However, the fact is that the media cannot be fully characterized by personal values. Therefore, a different approach to media adoption and postadoption has to be employed. This leads to the next chapter: Specific Reasons For Media Adoption and Postadoption.
Chapter 8
Specific Reasons For Media Adoption and Postadoption

To this point, I have shown that (1) the correlation between the time of adoption and postadoption is either low or negligible; (2) personal values are insufficient to characterize the media. While the former means that there may be different reasons for adoption and postadoption, the later implies that a lower level of value orientation has to be used to define the media.

In this chapter, I try to link specific reasons with media adoption and postadoption. As discussed in chapter 2, these reasons are directly elicited from the media adopters by asking them for what reasons they have adopted the media. In other words, the adopters were asked to recall and report the reasons that led to their adoption decision. As explained in Chapter 4, time is one of the main methodological difficulties in studying a process like diffusion because of the recall problem involved. Nevertheless, it is decided that the recall problem may not be very salient in this study because this particular survey only deals with big item purchase events.

In Chapter 4, I showed the frequency distribution of reasons for the adoption as well as the frequency distribution of specific medium use. While the frequency distributions of reasons and specific medium use give us a general idea about how the different groups are divided, they (the distributions) are breakdowns and do not show relationships. For instance, it is possible for a TV adopter to indicate that he prefers a particular show to the others but actually spends very little time on watching television as a whole. In order to fully define a medium, we need to know not only the aggregates but also the relationships. In fact, as argued in the previous chapter, a medium may be best defined in terms of the relationship between values and both adoption (time of adoption) and postadoption (the degree of use and nature of use). This chapter examines how the reasons are related to adoption and postadoption. In so doing, I first examine what is the reason that is related to the time of media adoption and degree of use. Second, I examine how the reasons identified are related to the nature of media use.

1. Television

Table 4.5a showed that majority of the respondents bought their first television set mainly for three reasons: (1) "entertainment" (Father=79.3%; Grandfather=72.2%); (2) "broadening horizons" (Father=70%; Grandfather=72.2%); (3) "family wanted to have one" (Father=52.7%; Grandfather=58.8%). Factor analysis further reveals that the three major reasons mainly belong to the dimension of Family Entertainment (See Table 4.5b&c). In Chapter 5, I suggested that the
motives for television adoption are different from the one for postadoption. In this section, regression analysis is used to reveal the relationships between the reasons and time of adoption, use, and nature of use.  

i. Reasons and Television Adoption

The motivation for television adoption is one of the major concerns in this research. In the previous chapter, I hypothesized:

1. The stronger the need for family entertainment, the earlier the television adoption;
2. Learning related reasons are positively related to the time of television adoption;
3. Vanity related reasons are positively related to the time of television adoption;
4. Following others is more likely to lead to later television adoption.

Regression analysis reveals that only some of the items from the dimensions of Family Entertainment, Learning, Vanity, and Following Others are related to the initial commitment to the television adoption with statistical significance at the .05 level or lower. More specifically, while the model for predicting the time of the first television set for the father generation includes “entertainment”, “children learn English, etc.”, and “relatives already had one”, the model for the grandfather generations contains “relatives already had one”, and “a symbol of success”. Table 8.1 presents the two regression equations predicting time of the first television adoption.

---

64In this chapter, the variable selection for the model construction is assisted by the procedures of stepwise selection. Variables that could not meet the two criteria (F=3.84 & p<.05) are automatically excluded.

65Here, “others” refer to the adopters who are later than the earlier adopters (the top 15%) or earlier than the so called laggards (the bottom 16%).

66Originally, the independent variables in the model for the grandfather generation also include the reason, “friends already had one”, but not the reason, “a symbol of success” in terms of the procedure of stepwise variable selection. However, high collinearity is detected because the reason, “friends already had one” is highly correlated to the reason, “relatives already had one” (.78***). The high collinearity led to the large standard errors of regression coefficients. Correlation analysis shows that, like the reason, “relatives already had one”, the reason, “friends already had one” is negatively correlated to the time of television adoption. However, the later relationship is not statistically significant. Therefore, the variable, “friends already had one”, is dropped. The final equation should include “a symbol of success” and “relatives already had one” in terms of the stepwise selection.
Table 8.1

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Father (Beta)</th>
<th>Grandfather (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment</td>
<td>-.315***</td>
<td>----</td>
</tr>
<tr>
<td>Kids learn English, etc.</td>
<td>-.164*</td>
<td>----</td>
</tr>
<tr>
<td>Relatives already had one</td>
<td>-.146*</td>
<td>-.258***</td>
</tr>
<tr>
<td>A Symbol of Status</td>
<td>----</td>
<td>.174*</td>
</tr>
</tbody>
</table>

R² \[.15 \] \[.09 \]
Adjusted R² \[.14 \] \[.07 \]
No. of Cases \[166 \] \[154 \]

"----" Variables not included in the equation

* \[p<.05 \]
** \[p<.01 \]
*** \[p<.001 \]

Contrary to what I hypothesized earlier, the reasons, "entertainment" and "children's foreign language learning" are negatively related to the time of television adoption for the father generation. However, as hypothesized, the time of television adoption is negatively related to the reason, "relatives already had one" (the dimension of Following Others) for both the father and grandfather generations.

To the grandfather generation, the time of television adoption is positively related to the reason, "a symbol of status". The reason, "relatives already had one" is part of the dimension, following others and negatively related to the time of television adoption. Hence, the fourth hypothesis is supported. That is, like the case of father generation, the grandfathers who measure up against their relatives are more likely to be the later adopters. Correlation analysis shows that the reason, "relatives already had one" is also negatively related to ability to pay (-.170*) and intragenerational mobility (-.23*). This is consistent with what we found about the characteristics of innovators in Chapter 6.

The third hypothesis is not supported. In urban China, television broadcasting started in the later 1950s. When the urban Chinese began to rapidly adopt the television in the later 1970s, they had already had chances to watch television either at their friends' homes or in their working
Therefore, it is suggested that this is the reason why such reasons as novelty are not related to the time of TV adoption.

In short, while the hypotheses on vanity and following others are supported for the grandfather generation, only the hypothesis on following others is supported for the father generation.

**ii. Reasons and Time Spent on Watching Television**

How much time viewers spent on watching television has been a social issue. In Chapter 2, I suggested that:

1. The stronger the need for family entertainment, the more time spent on watching television;
2. Vanity related reasons are negatively related to the time spent on watching television.

Table 8.2 shows the relationship between the reasons and time spent on television for the two generations.

<table>
<thead>
<tr>
<th>Table 8.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Time Spent on Television Watching</td>
</tr>
<tr>
<td>Independent Variables (Reasons)</td>
</tr>
<tr>
<td>Children Learn English, etc.</td>
</tr>
<tr>
<td>Family Wanted to Have</td>
</tr>
<tr>
<td>Entertainment</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
</tbody>
</table>

"-----" Variables not included in the equation

* .p<.05
** .p<.01

The stepwise procedure was used to select the variables for the two models. For the father generation, the first hypothesis is supported because "family wanted to have one" belongs to the dimension of family entertainment (See Table 4.5b). In contrast to that of the father generation, the relationship between the "family wanted to have one" and time spent on television is negative.

---

67 Much like the radio, the television has been regarded as an effective tool for propaganda by the Chinese government. Hence, the government owned companies or institutions are often equipped with television sets for group viewing. By the way, the word, "propaganda" in Chinese does not connote any negative sense.
This is probably because grandfathers bought their first television much earlier than the fathers. In other words, the television might not be regarded as an important part of family when the grandfathers started to buy the TV sets in the middle of 1970s. For instance, it was the vanity oriented reason that positively influenced the grandfathers’ adoption decisions. Nevertheless, the reason, “entertainment” is positively related to the time spent on the television as far as the grandfather generation is concerned. Here, it may be necessary to note that the two reasons, “family wanted to have one” and “entertainment” do not even belong to the same dimension for the grandfather generation (See Table 4.5c).

No statistically significant relationships is found for the second hypothesis for both the generations. In short, the fathers (52.7%) and grandfathers (72.2%) who adopted the television for reasons of either “family wanted to have one” (fathers) or “entertainment” (grandfathers) are more likely to spend time on watching television. Therefore, it is suggested that the television is an entertainment oriented medium as far as the time spent on television is concerned. This point can be further illustrated by the negative relationship between the “children learn foreign languages” and time spend on television for the father generation.

iii. Reasons and Nature of Television Use

The majority of the Shijiazhuang respondents not only indicate that they adopted the television mainly for the purposes of family entertainment but also show that they were primarily watching entertainment oriented television shows (See Table 4.9a).

It was hypothesized that the reasons for television adoption were closely related to television use. More specifically,

(1) The stronger the need for family entertainment, the more likely they are watching non-educational television shows;
(2) Conformity oriented reasons (following others) are positively related to non-educational program watching;
(3) Learning related reasons are positively associated to the educational program watching.

Table 8.3a and 8.3b demonstrate the relationship between the reasons and specific TV shows for the two generations.
Table 8.3a

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Dependent Variables (TV Use)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Education</td>
</tr>
<tr>
<td>Children Learn English</td>
<td>.41***</td>
</tr>
<tr>
<td>Entertainment</td>
<td>----</td>
</tr>
<tr>
<td>Broaden Horizons</td>
<td>----</td>
</tr>
<tr>
<td>Relatives had one</td>
<td>----</td>
</tr>
<tr>
<td>R²</td>
<td>.17</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.16</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>174</td>
</tr>
</tbody>
</table>

"----" Variables not included in the equation
* p<.05
** p<.01
*** p<.001

For the father generation, as far as the dimension of family entertainment is concerned, although the reason, "family wanted to have one", is not related to any particular show watched, the other two reasons (broadening horizons and entertaining) are positively related to the frequencies of watching movies or Chinese folk. It should be noted that the reason, "children learn English or other skills" also affects the frequency of movie watching. In urban China, parents focus a great deal on their children, especially now that the one-child policy has had such a profound impact. If a father were able to consciously adopt the television for his children for learning purposes, he might also monitor and watch entertaining shows such as movies with his child.68

Besides "broadening horizons", the reason, "relatives already had one" also has a positive contribution for the frequency of watching dramas and popular music shows respectively. This is consistent with what I have hypothesized.

In sum, a number of points can be made from the examination for the father generation:

(1) There are different reasons for television adoption and postadoption;

(2) The adopters who adopted the television for learning oriented reasons are

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68As far as choosing television programs is concerned, Lull (1991) observes that many Chinese family members defer to the wishes of older members of the household, though this was more often the case in the traditional northern cities than in the south. However, the wishes of the older members may not always contradict that of their children especially when they are concerned about their children's education. According to Lull's (1991) qualitative report, selective viewing is part of a good education in China. The more ambitious families are especially likely to call attention to programs they believe will benefit the children.
more likely to be the *later adopters* and tend to be more likely to watch education oriented shows but spend *less time* on watching television.

(3) The higher the tendency to adopt the television for entertaining purposes, the later the adoption will occur. However, the reason is positively related to the frequency of watching drama and Chinese folk;

(4) The fathers who value their family’s requests for a television set are more likely to spend time watching television. However, this reason is not related to any particular show watched. Rather, the two reasons that share the same dimension, *family entertainment*, are responsible for watching the entertainment shows.

That is, on the one hand, the adopters who adopted the television for *learning purposes* tend to watch educational shows and spend less time on watching television as a whole. On the other hand, the adopters who adopted the television for *family entertainment* tend either to watch informational and entertainment shows or to spend more time on watching television. Thus, it is suggested that the television is a family and entertainment oriented medium. 69 Moreover, it seems that the fathers who are related to the family function contrast to the fathers who measure up to their relatives as far as the time of adoption is concerned.

Table 8.3b shows the relationship between the reasons and specific TV shows for the grandfather generation. For the grandfather generation, the first hypothesis is supported for the dimension of *family entertainment* is positively related to entertaining shows. More important, the reason, “entertainment”, is positively related to not only the overall time spent on watching television but also two entertainment oriented shows (Chinese Folk and Popular Music).

The second hypothesis is also supported to some degree. The conformity oriented reason, “relatives had one” is positively related to the show, “Culture & Arts”. However, it is negatively related to the time of TV adoption.

---

69 Here, it is necessary to point out that some of the adopters do adopt and use television for other purposes. In fact, the equations that contain achievement oriented reasons as the independent variables yield the best “fit” (relatively high R²) as far as predicting television use is concerned.
In sum, like the case of the father generation, there are two sets of reasons for television adoption and postadoption respectively. Unlike the case of the father generation, the reason, "entertainment" is positively related to not only the overall time spent on watching television but also the frequency of watching specific entertainment oriented shows. Some grandfathers, though, do watch non-entertaining shows for non-entertaining reasons. Those reasons are related to neither the time of adoption nor the overall time spent on television. Thus, it is suggested that the television is mainly an entertainment oriented media for the grandfather generation.

Similar to the case of fathers, whether the grandfathers adopt the television or spend time on it depend upon how they are related to the social and kin groups. For instance, the grandfathers who measure up to society as a whole (a symbol of success) are more likely to be the earlier TV adopters than the grandfathers who measure up to their relatives.

2. Audio Cassette Recorder/Player (ACR)

Similar to the case of television, the majority of the ACR adopters not only bought their first ACR mainly for the entertainment or family reasons (e.g. "entertainment": Father=80.1% vs. Grandfather=74.8%; "broadening horizons": Father=41.2% vs. Grandfather=52.7%; "family wanted to have one": Father=40.7% vs. Grandfather=57.1%) but also used the ACR primarily for...
listening or recording entertaining shows (e.g. music: Father=60% vs. Grandfather=41.3%; news: Father=41.6% vs. Grandfather=54.5%). Moreover, I have also shown that the correlations between the time of ACR adoption and ACR use are either negligible or statistically insignificant. This section examines the relationship between the reasons for the ACR adoption and postadoption.

i. Reasons and ACR Adoption

In chapter 2, I hypothesized that:

1. The stronger the need for family entertainment, the earlier the ACR adoption;
2. Learning related reasons are positively related to the time of ACR adoption;
3. Vanity related reasons are positively related to the time of ACR adoption;
4. The higher the tendency to follow others in general, the less likely to make an earlier commitment to an ACR adoption.

For both of the father and grandfather generations, models are constructed in terms of the procedure of stepwise variable selection. The regression analysis for the father generation reveals that the time of ACR adoption is related to three of the four dimensions of the reasons.

<table>
<thead>
<tr>
<th>Table 8.4</th>
<th>Standardized Regression Coefficients for Model Predicting Time of the First ACR Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables (Reasons)</td>
<td>Father (Beta)</td>
</tr>
<tr>
<td>Children Learn English</td>
<td>-.286***</td>
</tr>
<tr>
<td>Family Wanted</td>
<td>-.192*</td>
</tr>
<tr>
<td>Broaden Horizons</td>
<td>.218**</td>
</tr>
<tr>
<td>Novel</td>
<td>.251**</td>
</tr>
<tr>
<td>Relatives already had one</td>
<td>----</td>
</tr>
<tr>
<td>R²</td>
<td>.20</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.18</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>147</td>
</tr>
</tbody>
</table>

"----" Variables not included in the equation
* p<.05
** P<.01
*** p<.001

The model for the father generation suggests that while the reasons of "novel" and "broadening horizons" affect the time of adoption positively, "children learn English" and "family wanted to have one" function negatively. As discussed earlier, the two variables, "family wanted to have one" and "broadening horizons" belong to the same dimension in terms of the factor analysis. Table 8.4 shows that variables within the same dimension (factor) do not necessarily
affect the time of adoption in the same direction. Therefore, it is concluded that the fathers who rated “novel” and “broadening horizons” higher are more likely to make an earlier commitment to the ACR. The findings also suggest that the adoption of the ACR is an individual matter rather than a family related decision. The regression analysis gives the model a modest fit for the father generation (R^2 = .20).

The model for the grandfather generation not only gives a much better fit but also includes fewer independent variables compared to the father generation. About 30 percent of the variance is explained. With statistical significance, the model suggests that the time of adoption for the grandfathers is positively related to “novel” but negatively related to “relatives already had one”. Similar to the case of television adoption, the grandfathers who measure up against their relatives are more likely to be the later adopters. Unlike that of television, they are able to make an earlier adoption partly for novelty reason, probably because ACRs are less costly.

In short, while the hypothesis on the relationships between vanity and following others related reasons and time of adoption are clearly supported for the father generation, only the hypothesis on vanity is supported for the grandfather generation. Therefore, further analysis on the postadoption is necessary in order to determine the nature of the medium.

ii. Reasons and Overall Frequency of ACR Use

In Chapter 2, I hypothesized that:

1. The stronger the need for entertainment, the higher the overall frequency of ACR usage;
2. Vanity oriented reasons are negatively related to the overall frequency of ACR use.

The regression analysis shows that only the first hypothesis is supported for the father generation. Although it is clear that the grandfathers who bought the ACR for their children to learn foreign languages less frequently use the medium, it is not clear what makes the grandfathers use the ACR more frequently. In short, at least for the father generation, the ACR is identified with

---

70The reason, “friends already had one” was originally selected as one of the independent variables for the model in terms of the stepwise variable selection. However, like the case of father generation, its correlation with the reason, “relative already had one” is very high (.92***). As a result, high collinearity occurred and the variable had to be deleted from the equation.

71In urban China, audio recording or playback devices were extremely rare before the later 1970s. When the ACR became available, a father had to spend 3.5 months’ family income to buy one on the average while a grandfather only needed to spend 2.4 months’ family income for the same thing. By comparison, it was much less than the cost of a TV set (4.4 months’ family income).
entertainment as far as the overall frequency of ACR use is concerned.

Table 8.5

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Father (Beta)</th>
<th>Grandfather (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment</td>
<td>.319***</td>
<td>.----</td>
</tr>
<tr>
<td>Children Learn English, etc.</td>
<td>.----</td>
<td>-.250*</td>
</tr>
<tr>
<td>R²</td>
<td>.10</td>
<td>.06</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.10</td>
<td>.05</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>177</td>
<td>78</td>
</tr>
</tbody>
</table>

"----" Variables not included in the equation
* .p<.05
** *.p<.001

iii. Reasons and Nature of ACR Use

In Chapter 2, I hypothesized that:

1. The stronger the need for family entertainment, the higher the frequency of entertainment oriented usage;
2. Conformity oriented reasons are positively related to entertainment oriented usage.
3. Learning related reasons are positively related to the frequency of educational oriented use.

The following two tables show models and statistics for the relationships. The independent variables for all the five equations were selected by using stepwise procedures. For the father generation, family entertainment oriented reasons positively affect the frequency of listening news, music, Chinese operas, and sports.²² That is, the first hypothesis stated above is clearly supported. However, only the model predicating the use of the ACR for sport listening or recording explains a larger proportion of variances (R²=.23 vs. R²=.10 or .09).

²²An Audio Cassette Recorder/Player has built-in radio.
Recording or listening to the Chinese operas is not a common phenomenon among the younger generations. Only 7 percent of the ACR adopters from the father generation indicated that they listened to or recorded the Chinese operas often or very often. The frequency of opera listening or recording depends upon not only “entertainment” but also achievement oriented reason, “children learn foreign languages”. The relationship between “children learn foreign languages” and using the ACR for listening Chinese operas seems odd because the later is a very traditional art form. However, it may become understandable if we assume that achievement oriented adopters are less likely to follow the mainstream of the listening pattern of father generation.

The third hypothesis is also supported for the father generation. Once again, it is the learning related model that gives the most accurate predication. The model about learning foreign languages for the father generation explains 44 percent of the variance. Nevertheless, it is necessary to point out that the learning dimension is either negatively related to the time of ACR adoption or not related to the overall frequency of ACR use for the father generation. There is no supporting evidence found for the second hypothesis.

Overall, the findings suggest that the ACR is more identified with the dimension of family entertainment for the father generation.

Table 8.6b shows that the two generations do not share the same model as far as predicting
the listening to news or music or sports is concerned.

Table 8.6b

| Standardized Regression Coefficients for Models Predicting ACR Use (Grandfather Generation Only) |
|------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| Independent Variables (Reasons) | Dependent Variables (ACR Use) |
| Broaden Horizons | Music | Chinese Operas | Lectures | Languages |
| Novel | .29* | .26* | .19* | .34*** |
| Relatives Already Had | .26* | .34*** | .53*** |
| Learn English, etc. | .23** | -.39*** | -.28** |
| Kids Learn English, etc. | Entertainment |
| R² | .13 | .15 | .45 | .47 |
| Adjusted R² | .11 | .13 | .43 | .45 |
| No. of Cases | 77 | 77 | 76 | 77 |

"---" Variables not included in the equation

* .p<.05
** .p<.01
*** .p<.001

For the grandfather generation, the frequency of music listening is positively related to the reason, "novel" but negatively associated with the reason, "broadening horizons". Like the case of Chinese operas for the father generation, the grandfathers who adopted the ACR for the reason of "novel" probably also show interest in a more contemporary art form, "music". The second hypothesis is supported because the reason, "relatives already had one" positively affects the frequency of Chinese operas listening or recording.

As is the same in the case in the father generation, the learning hypothesis is supported. Indeed, the two learning oriented models explain the highest proportion of variances. Again, this dimension is negatively related to the overall frequency of ACR use and not related to the time of ACR adoption at all.

In short, for the grandfather generation, it is difficult to identify the nature of the ACR because the time of ACR adoption, overall frequency of use, and nature of use are affected by either different sets of reasons or the same reason in an opposite direction. In fact, the reason, "novel", is the only reason that affects both the time of adoption and frequency of listening music positively. However, "novel" does not belong to the dimension of family entertainment. Rather, it shares the
dimension of vanity with "the two reasons, "a symbol of success" and "being fashionable". Nevertheless, once again, the grandfathers identified "relatives already had one" as a relevant reason for the ACR adoption.

The inconclusive findings for the grandfather generation may mean that the grandfathers perceive the ACR very differently compared with the father generation. In other words, the ACR may be more a father generation medium than a grandfather one. For instance, on average, the fathers were willing to spend 3.5 months' family income to buy an ACR while the grandfathers were only willing to spend 2.4 months' family income for the same thing. Moreover, only 134 grandfathers bought the ACR while 223 fathers did so.

In sum, the ACR adoption and postadoption are more predictable in terms of the adoption reasons comparing with that of television. For the father generation, we are able to identify the nature of ACR based on the following findings:

(1) While the adopters who adopted the ACR for entertaining purposes tend to use the ACR more often (overall frequency) for entertaining purposes, the adopters who wanted to broaden their horizons are more likely to be the earlier adopters and use the ACR for informational and entertainment purposes. The two reasons, "Entertainment" and "Broaden Horizons" belong to the same dimension, Family Entertainment. That is, this dimension affects the time of ACR adoption, overall frequency of ACR use, and frequencies of listening or recording informational or entertainment shows;

(2) The adopters do use the ACR for some non-entertainment or non-informational reasons such as "Children Learn English" and "Family Wanted to Have One". However, these two reasons are not related to the overall frequency of ACR use and negatively associated with the time of ACR adoption;

(3) The reasons, "Novel", is positively related to the time of ACR adoption. However, it is not related to any kind of ACR use with statistical significance.

(4) The ACR adoption differs from the case of television for its adoption is more likely an individual decision rather than a family one.

As far as the grandfather generation is concerned, the reasons that are responsible for the time of ACR adoption are rather similar to the ones for the television adoption. However, as a whole, the evidence (findings) is insufficient to define the ACR probably because the ACR adoption is more a father generation phenomenon.
3. Telephone

The telephone is a two-way communication medium. The majority of the telephone adopters not only installed the telephone mainly for social and family reasons but also primarily used the telephone for social and family communications (See Table 4.6a & 11a). The previous correlation analysis reveals that while the time of telephone adoption is not correlated to the nature of telephone use for the father generation, it has a weak and negative but statistically significant relation with the frequency of calling family members or relatives for the grandfather generation (See Table 5.4). This section examines the relationships between the reasons and time of telephone adoption, degree of use, and nature of use.

i. Reasons and Telephone Adoption

In Chapter 2, I hypothesized that:

1. Business related reasons are positively related to the time of telephone adoption;
2. Social/kin related reasons are negatively related to the time of telephone adoption;
3. Vanity related reasons are positively related to the time of telephone adoption;
4. Conformity related reasons are negatively related to the telephone adoption.

The procedure of stepwise variable selection is used for the model construction. As Table 8.7 shows, while the reason, “telephone for work”, affects the time of adoption positively, the reason, “family wanted to have one”, goes in the opposite direction for the father generation.

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Father (Beta)</th>
<th>Grandfather (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>.266**</td>
<td>----</td>
</tr>
<tr>
<td>Family Wanted</td>
<td>-.302**</td>
<td>----</td>
</tr>
<tr>
<td>Contact Family Members</td>
<td>----</td>
<td>-.626***</td>
</tr>
<tr>
<td>Novel</td>
<td>----</td>
<td>.331***</td>
</tr>
<tr>
<td>R²</td>
<td>.14</td>
<td>.63</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.13</td>
<td>.62</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>102</td>
<td>62</td>
</tr>
</tbody>
</table>

"----" Variables not included in the equation
**. P<.01
***. p<.001

Although the value of the coefficient determination (R²) is small for the father generation, the result of regression analysis shows support for the first and second hypotheses. The negative relation
between the time of adoption and "family wanted" indicates that the telephone adoption is rather an individual matter for the father generation.

The model for the grandfather generation is much more powerful. It explains 63 percent of the variance and supports the second and third hypothesis.\(^7\) No statistically significant relationship is found between the conformity oriented reasons and time of telephone adoption.

The younger generation has strong obligations to their parents in general in China. In other words, it is the fathers' obligation to call their fathers (the grandfather generation) rather than the other way around. The finding suggests that the earlier the adoption, the less likely one is to call family members. Thus, it is important to identify whether the earlier adopters of grandfathers are more authoritarian oriented. I will come back to this point in the following chapters when the relevant information is revealed. Indeed, as mentioned earlier, there is a weak and negative correlation between the time of telephone adoption and calling family members or relatives for the grandfather generation.

In sum, while the time of adoption is identified with the achievement oriented reasons, "work", for the father generation, it is positively related to the reason, "novel" but negatively related to "contact family members" for the grandfather generation.

ii. Reasons and Overall Frequency of Local Telephone Calls

In Chapter 2, I hypothesized that:

1. Social or kin related reasons are positively related to the overall frequency of telephone contact;
2. Business related reasons are positively related to the overall frequency of telephone contact;\(^7\)
3. Vanity oriented reasons are positively related to the overall frequency of telephone communication.

As Table 8.8 shows, the second hypothesis is supported for the father generation. For the father and grandfather generations, the findings contradict the third hypothesis.

\(^7\)Originally, the equation also included the variable, "family wanted to have one" based on the stepwise variable selection. However, it is realized that the variable is very much correlated with the "contact family members" (.69**) but not really correlated to the time of telephone adoption. The higher correlation between the two variables could lead to serious larger standard error because of the relatively small sample size. Therefore, the variable, "family wanted to have one", is dropped.

\(^7\)The reason, "business" is different from the reason "work". While "business" mainly refers to one's own business venture, "work" includes working for others.
In short, the overall frequency of local calls is identified with business for the father generation. This is significant because the time of telephone adoption is also correlated with the frequency of overall local calls. What we know about the grandfathers is that if a grandfather adopts the telephone for being fashionable, he will be much less likely to make or to receive local calls overall.

iii. Reasons and Nature of Telephone Use

While the majority of the father adopters show that they often or very often call their family members (71.8%) and friends (55.1%), the majority of the grandfather generation almost exclusively use the phone for family contacts (80.4%) as far as social and kin calls are concerned. Nevertheless, the two generations do use the telephone for other purposes. For instance, more than 19 percent of the father adopters call their clients often or very often. In Chapter 2, I suggested that:

1. Social related reasons are positively related to the frequency of social contacts;
2. Conformity oriented reasons are positively related to the frequency of social contacts;
3. Vanity related reasons are positively related to the frequency of business contacts;
4. Achievement oriented reasons are positively related to the frequency of business contacts.

Based on the procedure of stepwise variable selection, seven models were constructed for the predication of telephone use. Table 8.9a & 8.9c present the statistics.

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Father (Beta)</th>
<th>Grandfather (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>.367***</td>
<td>.---</td>
</tr>
<tr>
<td>A Symbol of Success</td>
<td>-.350**</td>
<td>.---</td>
</tr>
<tr>
<td>Fashionable</td>
<td>.---</td>
<td>-.528***</td>
</tr>
<tr>
<td>R²</td>
<td>.15</td>
<td>.28</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.13</td>
<td>.26</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>88</td>
<td>52</td>
</tr>
</tbody>
</table>

"---" Variables not included in the equation

**. P<.01
***. P<.001

Table 8.8
Standardized Regression Coefficients for Model Predicting Frequency of Local Telephone Calls
Table 8.9a (Father Generation)

<table>
<thead>
<tr>
<th>Independent Variables (reasons)</th>
<th>Call Friends</th>
<th>Call Family</th>
<th>Call Relatives</th>
<th>Colleagues</th>
<th>Classmates</th>
<th>Call Clients</th>
<th>Business Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Friends</td>
<td>.31***</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Symbol of Success</td>
<td>-.35***</td>
<td>--</td>
<td>--</td>
<td>-.25**</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Work</td>
<td>.26**</td>
<td>-.27*</td>
<td>-.38***</td>
<td>.45***</td>
<td>.32**</td>
<td>.31**</td>
<td>--</td>
</tr>
<tr>
<td>Business</td>
<td>--</td>
<td>-.23*</td>
<td>--</td>
<td>--</td>
<td>.44**</td>
<td>.56***</td>
<td>--</td>
</tr>
<tr>
<td>Contact Family</td>
<td>--</td>
<td>.23**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Relatives had one</td>
<td>--</td>
<td>--</td>
<td>.25**</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Friends had one</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.21*</td>
<td>.23*</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Fashionable</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.18*</td>
<td>--</td>
</tr>
<tr>
<td>R²</td>
<td>.20</td>
<td>.30</td>
<td>.22</td>
<td>.24</td>
<td>.16</td>
<td>.46</td>
<td>.38</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.18</td>
<td>.28</td>
<td>.20</td>
<td>.22</td>
<td>.14</td>
<td>.45</td>
<td>.37</td>
</tr>
<tr>
<td>No. of Cases</td>
<td>100</td>
<td>99</td>
<td>100</td>
<td>97</td>
<td>95</td>
<td>95</td>
<td>97</td>
</tr>
</tbody>
</table>

--- Variables not included in the equation
* .p<.05
** .p<.01
*** .p<.001

The statistics shows that all four hypotheses are supported ether wholly or partially. The two models predicating the entrepreneurship kind of telephone use are the most parsimonious and explain the highest proportion of variances (46% & 38%).

It is interesting to note that the achievement oriented value (reason), “work”, is positively related to not only the frequency of calling clients but also the frequencies of calling friends, colleagues, and classmates. As showed in Chapter 4 (See Table 4.11b), “call friends”, “call colleagues”, and “call classmates” belong to the social dimension. However, the relationship between the reason, “work”, and the social dimension does not necessarily mean that the content of the telephone calls is social. The following more detailed correlation analysis indicates that the relationship is more business or utility in nature:
Recent research on the overseas Chinese reported similar findings. Based on a qualitative study on some Singaporean Chinese merchant-exporters, Menkhoff and Labig (1996) report that there is a strong tendency to rely on external commercial relationships with outsiders and friends rather than those related by blood or marriage.

For the father generation, the findings on the relationship between the reasons and time of adoption, overall use, and nature of use clearly indicate that the nature of the telephone is rather business and work oriented. However, the fathers do use the telephone for other purposes. In fact, the second most powerful model is the one that predicts the frequency of calling family members \((R^2=.30)\). That is, for the father generations, the adopters who installed the telephone for contacting their family members rather than for conducting business or work are more likely to call their family members. Nevertheless, it is also clear that calling family members and business partners or clients are two separate spheres for the reason that the business oriented reasons are negatively related to the frequency of calling family members.

For the grandfather generation, valuing the reason, “novel” means more likely to be the earlier telephone adopters. However, it is not related to specific telephone communications.

Although the vanity related reason, “fashionable”, is also positively related to the frequency of social and kin contacts, it is important to point out it is negatively related to the overall frequency of local calls.
Table 8.9c (Grandfather Generation)

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Call Family</th>
<th>Call Relatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Family</td>
<td>.54***</td>
<td>.___</td>
</tr>
<tr>
<td>Family Wanted</td>
<td>.___</td>
<td>.28*</td>
</tr>
<tr>
<td>Fashionable</td>
<td>.___</td>
<td>.26*</td>
</tr>
</tbody>
</table>

\[ \text{R}^2 = \text{.29} \]

\[ \text{Adjusted R}^2 = \text{.28} \]

\[ \text{No. of Cases} = \text{79} \]

\[ \text{No. of Cases} = \text{59} \]

\[ "-" \text{ Variables not included in the equation} \]

\[ * \text{.p}<.05 \]

\[ *** \text{.p}<.001 \]

In respect to the time of telephone adoption, overall frequency of local calls, and nature of calls, the later adopters of grandfather generation mainly regard the telephone as a tool for kinship oriented communications. However, it is not clear who are the grandfathers who will be more likely to use the telephone, and for what purposes. What we know is that the grandfathers who adopted the telephone because of its novelty are more likely to become earlier adopters.

In sum, while the telephone is characterized by work and business for the father generation, it is more a tool for kinship oriented communications for the grandfathers as far as its postadoption is concerned. Neither the reason, "work" nor the reason, "business" is related to the time of telephone adoption or frequency of overall local calls for the grandfather generation.

4. Pager

The pager adopters belong to the father generation only. The pager adopters are much more likely to adopt the pager for "keeping contact with friends" (85.7%) and be paged by friends (60%). However, what really distinguishes the pager from the other three media is that a significant proportion of the adopters also indicated that they adopted the pager for their work (69.4%) or business (50.5%) or both. This section examines how these reasons are related to the time of pager adoption, overall frequency of being paged, and nature of page.

i. Reasons and Pager Adoption

In Chapter 2, I hypothesized that:

1. Business related reasons are positively related to the time of pager adoption;
2. Social related reasons are negatively related to the time of pager adoption;
(3) Vanity oriented reasons are positively related to the time of pager adoption;
(4) Conformity related reasons are negatively related to the pager adoption.

Based on the stepwise variable selection, a model was constructed for predicting the time of pager adoption. Table 8.10 shows the statistics.

<table>
<thead>
<tr>
<th>Table 8.10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Regression Coefficients for Model Predicting the Time of Pager Adoption</strong></td>
</tr>
<tr>
<td>Independent Variables (Reasons)</td>
</tr>
<tr>
<td>Fashionable</td>
</tr>
<tr>
<td>Business</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>No. of Cases</td>
</tr>
</tbody>
</table>

**. P<.01

Clearly, only hypotheses 1 and 3 are supported by the statistics. Although the model does not provide very strong explanatory power (R²=.38), it is rather parsimonious and easy to interpret.

ii. Reasons and Overall Frequency of Being Paged

In Chapter 2, I hypothesized that:

(1) Business oriented reasons are positively related to the frequency of being paged;
(2) Vanity related reasons are positively related to the frequency of being paged.

The fathers who adopted the pager for business also receive pages more frequently. As Table 8.11 shows, the frequency of being paged depends upon four reasons, “novel”, “keep contact with family members”, “keep contact with relatives”, and “business”. 
The statistics not only support the above two hypotheses but indicate that the frequency of pager contact is also positively related to the reason, "keep contact with family members" but negatively related to the reason, "keep contact with relatives". This is consistent with the findings on the other media.

iii. Reasons and Nature of Pager Use

Besides the need to "keep contact with friends", other social reasons such as "keep contact with relatives" (71.4%) and "keep contact with family members" (66.7%) are also highly rated by majority of the adopters. Likewise, more than 36.4 percent of the adopters reported that they were often or most often paged by their either business associates or clients. In Chapter 2, I suggested that:

1. Business and work related reasons are positively related to the frequency of being paged by business associates or clients;
2. Vanity related reasons are positively related to the frequency of being paged by business associates or clients;
3. Social related reasons are positively related to the frequency of being paged by family members or friends or colleagues;
4. Following mainstream related reasons are positively related to the frequency of being paged by family members or friends or colleagues.

By means of the procedure of stepwise variable selection, four models were constructed to test the hypotheses. Table 8.12 shows the results.
Table 8.12

<table>
<thead>
<tr>
<th>Independent Variables (Reasons)</th>
<th>Clients</th>
<th>Business Partners</th>
<th>Friends</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novel</td>
<td>.43**</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Business</td>
<td>.37*</td>
<td>.51***</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Contact Friends</td>
<td>-----</td>
<td>.46**</td>
<td>.49**</td>
<td>-----</td>
</tr>
<tr>
<td>High Profile People Had</td>
<td>-----</td>
<td>-----</td>
<td>.32*</td>
<td>-----</td>
</tr>
<tr>
<td>Contact Relatives</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>.45**</td>
</tr>
</tbody>
</table>

--- Variables not included in the equation

* p<.05  
** p<.01  
*** p<.001

While the frequency of being paged by clients depends upon "business" and novel", the frequency of being paged by business partners is positively related the reason, "business" and "contact with friends". That is, although the first hypothesis is only partially supported, the two models predicing the use of pager for business purposes yield the most accurate predication (R^2=.39 & .44).

The statistics for the model predicing the frequency of being paged by family members clearly supports the third hypothesis. The reason of contacting friends is positively related to not only the frequency of being paged by friends but also the frequency of being paged by partners in business. This is somewhat similar to the case of telephone use for the father generation. In general, the predications are more accurate compared with that of the other three media.

The reason, "novel", is positively related to not only the overall frequency of being paged but also the frequency of calling clients. Its significance will be further elaborated in the next chapter. In sum, it is clear that the reason, "business" is positively related to the time of adoption, frequency of being paged, and frequency of being paged by either clients or business partners or both. Hence, the pager is identified as a business tool.

5. Summery

In this chapter, I have tried to define the four media by means of revealing the relationships between specific reasons and time of adoption, overall use, and nature of use. As other innovations, the four media diffuse through time. It is assumed that if a medium is diffused and used for certain
reasons, this medium may be identified in terms of those reasons. The procedure is that if a particular reason is related to either the time of adoption or overall use or both, it becomes more significant to further examine how the reason is related to the nature of use. Although the data analysis performed thus far did not yield a clear-cut result as far as the four media are concerned, they showed that the media concerned do differ from each other substantively. Table 8.13a and 8.13b summarizes the findings for the two generations:

<table>
<thead>
<tr>
<th>Media</th>
<th>Reasons That Affect the Time of Adoption (Beta)</th>
<th>Reasons That Affect the Overall Use (Beta)</th>
<th>Reasons That Affect the Specific Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>Entertainment (-.32)</td>
<td>Family Wanted (.21)</td>
<td>Broaden Horizons (+)</td>
</tr>
<tr>
<td></td>
<td>Kids Learn English (-.16)</td>
<td>Kids Learn English (-.17)</td>
<td>Entertainment (+)</td>
</tr>
<tr>
<td></td>
<td>Relatives Had One (-.15)</td>
<td></td>
<td>Kids Learn English (+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Relatives Had One (+)</td>
</tr>
<tr>
<td>ACR</td>
<td>Broaden Horizons (.22)</td>
<td>Entertainment (.32)</td>
<td>Broaden Horizons (+)</td>
</tr>
<tr>
<td></td>
<td>Novel (.25)</td>
<td></td>
<td>Entertainment (+)</td>
</tr>
<tr>
<td></td>
<td>Family Wanted (-.19)</td>
<td></td>
<td>Family Wanted (+)</td>
</tr>
<tr>
<td></td>
<td>Kids Learn English (-.29)</td>
<td></td>
<td>Kids Learn English (+)</td>
</tr>
<tr>
<td>Phone</td>
<td>Work (.27)</td>
<td>Business (.37)</td>
<td>Work (+)</td>
</tr>
<tr>
<td></td>
<td>Family Wanted (-.30)</td>
<td>Symbol of Success (-.35)</td>
<td>Business (+)</td>
</tr>
<tr>
<td>Pager</td>
<td>Business (.42)</td>
<td>Business (.29)</td>
<td>Symbol of Success (-)</td>
</tr>
<tr>
<td></td>
<td>Fashionable (.39)</td>
<td>Novel (.45)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact Family (.73)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contact Relatives (-.53)</td>
<td></td>
</tr>
</tbody>
</table>

(-) refers to negative effect
(+ ) refers to positive effect

For television, it is the relationship between the reasons and postadoption that gives a relatively clear picture about the entertainment oriented nature of television. Although the case of the ACR is similar to that of television, it has its uniqueness. While the ACR appears novel to its earlier adopters, it is more entertainment oriented after its adoption. The telephone and pager share some achievement reasons in common. However, the former has the element of “work” while the later adds “novelty” to its characteristics. Overall, the four media do show biases toward the adopters who have different needs as far as the father generation is concerned.

As Table 8.13b shows, the grandfather differs from the fathers in terms of why the media are adopted and how they are used.
Table 8.13b

<table>
<thead>
<tr>
<th>Media</th>
<th>Reasons That Affect the Time of Adoption (Beta)</th>
<th>Reasons That Affect the Overall Use (Beta)</th>
<th>Reasons That Affect the Specific Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>Symbol of Status (.17)</td>
<td>Entertainment (.24)</td>
<td>Family Wanted (+)</td>
</tr>
<tr>
<td></td>
<td>Relatives Had One (-.26)</td>
<td>Family Wanted (-.16)</td>
<td>Broaden Horizons (+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Entertainment (+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Relative Had One (+)</td>
</tr>
<tr>
<td>ACR</td>
<td>Novel (.48)</td>
<td>Kids Learn English (-.25)</td>
<td>Novel (+)</td>
</tr>
<tr>
<td></td>
<td>Relatives Had One (-.45)</td>
<td></td>
<td>Relative Had One (+)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kids Learn English (+)</td>
</tr>
<tr>
<td>Phone</td>
<td>Novel (.33)</td>
<td>Fashionable (-.53)</td>
<td>Contact Family (+)</td>
</tr>
<tr>
<td></td>
<td>Contact Family (-.63)</td>
<td></td>
<td>Fashionable (+)</td>
</tr>
</tbody>
</table>

(-) refers to negative effect; (+) refers to positive effect

The earlier television adopters among the grandfathers were more likely to indicate their reason as "a symbol of status" probably because the television was still conspicuous when they bought it in the 1970's. Similarly, the earlier ACR adopters of the grandfather generation were more likely to get the ACR for novel reasons in the 1970s. Moreover, the grandfathers do not identify the telephone with either "work" or "business". Nevertheless, the two generations do show some consistency as far as the reason, "relatives already had one" is concerned. That is, both the generations identify this reason as a negative factor for the adoption of the television (fathers & grandfathers) and the ACR (grandfather generation only). In other words, the impact of the primary group on the media adoption and postadoption is clear. Nevertheless, as discussed earlier, knowing just the group without knowing which of the individual’s value orientations that group will evoke regarding the media adoption and postadoption is insufficient. In the next chapter, I try to illustrate how these relevant reasons are rooted in more abstract values. It is hoped that the illustration will help explain the relationship between the reasons and media adoption and postadoption.
Chapter 9
Personal Values, Reasons, and Innovators' Characteristics

This chapter examines how the independent and dependent variables are related to each other in an overall picture. In Chapter 6, I demonstrated that there was not a generalized innovator across the four electronic media as far as the sociological characteristics are concerned. In other words, the four media are not necessarily equivalent units. This suggests that the media differ from each other in terms of their attributes or characteristics. Therefore, I have tried to reveal these characteristics by examining how media adoption and postadoption are related to personal values and reasons respectively. This chapter continues to identify these characteristics by examining relationships among personal values, reasons, innovators' characteristics, and sociological variables with respect to media adoption and postadoption.

In Chapter 7, I examined the relationship between the personal values and media adoption and postadoption. While some of these personal values are related to media adoption and postadoption to some degree, the relationships are often weak and insufficient as far as defining each medium is concerned. Therefore, the relationship between a lower level of value orientation, specific reasons, and media adoption and postadoption was investigated in Chapter 8. However, the relationship between personal values and reasons remains unexplored. The specific reasons for media adoption and postadoption belong to the sphere of motivation. It has been long recognized that values shunt motivational energies in one direction or another (French and Lesser 1964). I shall examine the relationship between the personal values and motivations (reasons) in this Chapter. In Chapter 2, I hypothesized that:

1. Individuals who indicate a strong competitive value orientation will be more likely to adopt and use an electronic medium for achievement oriented reasons such as business;

2. Individuals who show strong status aspiration are more likely to adopt a particular medium for fashion or symbolic reasons;

3. The higher the degree of materialism, the lower the degree of discrimination in terms of adopting new communication technologies;

4. Individuals who agree with or show enjoyment oriented values will be more likely to adopt and use a medium for social or entertainment reasons;

5. Individuals who show a strong tendency toward restriction or conformity
oriented values are more likely to adopt a medium for reasons such as following others.

Whatever the findings on the relationship between the personal values and reasons may be, it is necessary to compare the values that are related to the reasons with the values that are related to media adoption and postadoption. This chapter continues with the comparison. While similarities verify the findings, differences may reveal whether it is necessary to use reasons as the intervening variables.

While the comparison mentioned above is necessary, it may not be sufficient. It is possible that some of the personal values identified share the same value domain but function in opposite directions as far as the time of media adoption and postadoption are concerned. As argued in Chapter 2, roles such as occupations are closely related to personal values. Therefore, it is desirable to examine how the values identified are related to the following sociological variables in order to clarify the relationship between the values and media adoption and postadoption:

* Ability to pay
* Occupational Prestige
* Education
* Intragenerational mobility
* Intergenerational mobility (Father generation only)

Since the problem of causal priority has been remained unresolved as far as the relationship between the two sets of variables is concerned, correlation analysis is used for the examination. Consequently, the result will be compared with the characteristics of innovators as far as the time of media adoption is concerned.

It is also possible that either no relationship or weak or negligible relationships between certain personal values and reasons are observed. Therefore, it is also necessary to compare the values and reasons in terms of their association with the sociological variables. That is, although roles, such as occupations, are closely related to personal values, they are not necessarily identical. In other words, it is possible that media adopters who are in different social positions rationalize the reasons for the media adoption differently. Therefore, it is necessary to examine whether the sociological variables are associated with the reasons. Naturally, the examination also leads to a comparison with the characteristics of media innovators because the reasons are directly related to media adoption.

But knowing just the personal values and reasons is insufficient. We have known that either the relationship between personal values and media adoption and postadoption or the
relationship between the reasons and media adoption and postadoption is far from perfect. The lack of a respectable or significant relationship between personal values or reasons and time of media adoption may be because the media have "objective" attributes. For instance, it is possible that certain innovations are perceived to be beneficial to all (See Rogers 1995). This could mean that the adoption decision is mainly a function of ability to pay. This suggests that it is critical to know how the adopters identify themselves sociologically as far as the adoption decision is concerned. Therefore, this chapter also analyses whether sociological variables are directly related to media adoption and postadoption.

The findings are also compared with the characteristics of media innovators.

In short, in order to differentiate the four electronic media, this chapter has five specific objectives. It (1) analyses the relationship between personal values and reasons; (2) determines the correlation between the sociological variables and personal values identified; (3) demonstrates the relationship between the reasons and sociological variables; (4) examines the relationship between the sociological variables and media adoption and postadoption; and (5) compares the findings of previous chapters (6, 7, and 8) with the findings of this chapter. The comparison leads to the identification of media characteristics.

1. Television

a. Father Generation

From Chapter 5, we know that the reasons or values for the time of media adoption may be different from the ones for media use. However, no relationship is found between personal values and time of adoption in Chapter 7. From Chapter 8, we learned that the three reasons, "entertainment", "kids learn English, etc.", and "relative had one" are negatively related to the time of television adoption for the father generation. Although the model only explains about 15 percent of the variance, it is statistically significant and the direction of relationship is clear. Nevertheless, either the lack of relationship between personal values and time of television adoption or the negative and very modest relationship between the three reasons and time of television adoption suggests that it is necessary to examine whether the purchase of a television set is directly related to the sociological variables such as ability to pay.

As far as the television postadoption is concerned, I have revealed that:

*The personal value, success at the expense of others, is positively related to the time spent on television and frequency of watching music shows but negatively related to the frequency of watching educational shows;
*The reason, “family wanted”, is positively related to the overall time spent on watching television but not related to any specific television watching while the reason, “kids learn English, etc.” is negatively related to the time spent on watching television but positively related to the frequencies of watching educational and entertaining shows;

*The reasons, “broaden horizons”, “entertainment”, and “relative already had one”, are positively related to the frequencies of watching entertainment oriented shows.

The relationship between the reasons and television use is generally stronger and involved more dimensions. Although the value, success at the expense of others, is related to television use, the strength of relationship is marginal. This again suggests that it is necessary to examine the relationship between personal values and television use through the reasons. Moreover, the reasons, such as “family wanted to have one” and “relatives already had one”, are directly referring to primary groups. It is desirable to know which of the individuals value orientations that the group will evoke in regard to the television postadoption. Therefore, we need to examine the relationship between reasons and personal values.

Table 9.1a shows the statistics on the relationship between personal values and reasons. Clearly, the findings do not support either the hypothesis on the relationship between the entertainment oriented reasons and values or the hypothesis on the relationship between the following others oriented reasons and values. In the following section, I shall analyse the relationship between personal values and reasons and compare the results with the findings from the previous chapters in terms of the television adoption and postadoption.
### Table 9.1a (Father Generation)

<table>
<thead>
<tr>
<th>Independent Variables (Values)</th>
<th>Dependent Variables (Beta)</th>
<th>Family Wanted</th>
<th>Broaden Horizons</th>
<th>Entertain -ment</th>
<th>Relative Had One</th>
<th>Children Learn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority &amp; Status</td>
<td></td>
<td>.291***</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Achieving Spirit</td>
<td></td>
<td>.----</td>
<td>.199**</td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Determined to Succeed</td>
<td></td>
<td>.----</td>
<td>-.154*</td>
<td>.----</td>
<td>-.228**</td>
<td>.----</td>
</tr>
<tr>
<td>Frugal</td>
<td></td>
<td>.----</td>
<td>.----</td>
<td>.152*</td>
<td>.----</td>
<td>.188*</td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
<td></td>
<td>.----</td>
<td>.----</td>
<td>.152*</td>
<td>.----</td>
<td>.----</td>
</tr>
<tr>
<td>Jealous of Other’s Wealth</td>
<td></td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
<td>.265**</td>
<td>.----</td>
</tr>
<tr>
<td>Material Desires</td>
<td></td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
<td>-.230**</td>
<td>.----</td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td></td>
<td>.----</td>
<td>.----</td>
<td>.----</td>
<td>.172*</td>
<td>.----</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td>.09</td>
<td>.07</td>
<td>.02</td>
<td>.15</td>
<td>.10</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td></td>
<td>.08</td>
<td>.05</td>
<td>.02</td>
<td>.13</td>
<td>.09</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>136</td>
<td>172</td>
<td>188</td>
<td>134</td>
<td>155</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001

### i. Time of Television Adoption

As far as the time of television adoption is concerned, three relevant reasons, “entertainment”, “relative already had one”, and “kids learn English, etc.” are affected by three different sets of values. The reason, “entertainment”, is somewhat positively related to the value, success at the expense of others. This means that individuals who value success at the expense of others are more likely to adopt the television for the reason of entertainment. Because “entertainment” is negatively related to the time of television adoption, the individuals who value success at the expense of others are more likely to be the later adopters.\(^{75}\) Similarly, measuring up against relatives is negatively related to the time of television adoption. The reason, “relative already had one” depends upon three personal values, jealous of other’s wealth, material desires, and spend & indulge. In other words, individuals who measure up against their relatives are more likely jealous of other’s wealth and to spend & indulge but have lower degree of material desires. The reason, “kids learn English, etc.”, is also negatively related to the time of television adoption.

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\(^{75}\)Because almost 80 percent of the father adopters indicated that the “entertainment” was one of their main reasons for the adoption, the variation for this item is relatively low. Therefore, it is understandable that this particular reason is not associated with most of the values investigated.
Individuals who are *frugal* but not *determined to succeed* more likely to indicate the reason, "kids learn English, etc."

While the relationships between the personal values and reasons are not consistent with what had been hypothesized, they enable us to infer the relationship between personal values and television adoption. In terms of the relationship between the reasons and time of television adoption, we are able to infer that:

*The higher the values, *success at the expense of others, jealous of others, spend & indulge*, and *frugal*, the later the television adoption;

*The higher the values, *determined to succeed* and *material desires*, the earlier the television adoption.

However, although we can infer that the time of adoption is positively related to achievement oriented values such as *determined to success* and *material desires* to some degree, we have difficulty to define the television because some of the inferences either contradict each other or demonstrate very little effects. For instance, the value, *frugal*, contradicts the value, *spend & indulge*.

Correlation analysis shows that probably *frugality* is more likely associated with the later television adoption. Among all the values identified, only three of them somewhat related to some of the sociological variables. Table 9.1b shows the findings.

| Correlation between Personal Values and Sociological Variables | Education | N | Ability to Pay | N | Prestige | N |
|---|---|---|---|---|---|
| Frugal | -.197* | 228 | -.149* | 216 | --- |
| Determined to Succeed | --- | 194 | .145* | 194 | --- |
| Success at the Expense of Others | --- | 194 | --- | 194 | -.151* |

*.*p<.05

Although the correlations are small, they show the directions. That is, the lower the family's ability to pay and their level of education, the more likely they are associated with the fathers who are *frugal*. Consequently, they are more likely to become the later adopters for the reason, "relatives already had one". This is consistent with the characteristics of non-innovators found in Chapter 6. In contrast, the higher the family's ability to pay is associated with the fathers who are *determined to succeed*. They are more likely to be the earlier adopters because they less likely to measure up to their relatives. This is consistent with the characteristic of innovators as
far as the ability to pay is concerned. The fathers who value *success at the expense of others* are more likely to have lower occupational prestige and be later adopters for the reason, "entertainment". This is inconsistent with what we found about the occupational character of non-innovators.

Regression analysis on the relationship between the sociological variables and reasons may further show the significance of the ability to pay. Indeed, among the five sociological variables, only ability to pay is related to the reasons. Table 9.1c shows the findings.

<table>
<thead>
<tr>
<th>Table 9.1c (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Regression Coefficients for Model Predicting Reasons for TV Adoption</strong></td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Ability To Pay</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

That is, the direction of the relationship suggests that the fathers who indicated either the reason, "entertainment", or the reason, "kids learn English, etc.", or both, are more likely to have a lower ability to pay. This is consistent with what we found about the characteristics of non-innovators in Chapter 6.

Indeed, it seems that the ability to pay is a locus. Regression analysis also reveals that the time of television adoption directly depends upon the ability to pay and intergenerational mobility for the father generation. Table 9.1b shows the statistics.

<table>
<thead>
<tr>
<th>Table 9.1d (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Regression Coefficients for Model Predicting Time of TV Adoption</strong></td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
</tr>
<tr>
<td>Ability to Pay</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

*.p<.05
***:p<.001

The above findings indirectly verify the relationship between the personal values,
determined to succeed and frugal, and the reason, "kids learn English, etc." as well as the relationship between the ability to pay and "entertainment" and "kids learn English, etc.".

The findings are also consistent with the characteristics of innovators as far as the ability to pay and intergenerational mobility is concerned. Although the model does not explain a significant proportion of variances either, the positive relationship between the ability to pay and time of television adoption implies that the fathers adopted the television because of the quality of television itself at least to some degree. In other words, it is likely that the television is perceived beneficial by the majority of fathers.

In sum, the earlier television adopters of father generation are more likely to have a higher ability to pay, intergenerational mobility, material desires, and determination to succeed but less likely to be frugal or jealous of other's wealth.

ii. Overall Time Spent On Television

We have known that the fathers who value success at the expense of others are more likely to spend time on watching television. The examination of relationship between the personal values and reasons shows that more achievement oriented values are indirectly related to the time of spent on watching television. The overall time spent on watching television is positively related to the reason, "family wanted to have one" but negatively related to the reason, "kids learn English, etc.".

In terms of Table 9.1a, the fathers who value authority & status aspirations are more likely to indicate the reason, "family wanted to have one" while the fathers who value frugality rather than determination to succeed are more likely to refer to the reason, "kids learn English, etc." as far as spending time on television is concerned. Thus, we may infer that:

*The fathers who value authority & status are more likely to spend time on watching television;

*The fathers who value frugality but are not determined to succeed are less likely to spend time on watching television.

As far as the comparison is concerned, it is necessary to note that the fathers who value success at the expense others are likely to have lower occupational prestige than the fathers who value authority and status aspirations. Correlation analysis shows that the score of the father's occupational prestige is positively related to the value, authority and status aspirations (.17*) but negatively related to the value, success at the expense of others (-.15*). The point is, the fathers who value either success at the expense of others or authority & status aspirations are more likely to spend time on watching television regardless of their status differences. Indeed, success at the
expense of others shares the same value domain with authority and status aspirations and determined to succeed. Therefore, we may conclude that the time spent on watching television is positively related to achievement oriented values.

None of the sociological variables mentioned earlier is either directly related to the time spent on watching television or indirectly related to the overall television use through the reason, “family wanted to have one”.

iii. Nature of Television Use

The fathers use the television for either entertaining or learning purposes or both. However, the frequency of watching entertainment oriented shows is either directly or indirectly related to both achievement oriented values and enjoyment values (e.g. spend & indulge). Even for the fathers who value frugality and indicate that they bought the television set for their children to learn English, etc. also tend to watch movies more frequently.

In sum, for the father generation, the television adopters and television are connected by the entertainment quality of television per se to some degree. Therefore, the ability to pay is positively related to the time of television adoption. This is consistent with the characteristic of television innovators of the father generation. Nevertheless, the fathers who show stronger achievement oriented values tend to spend more time on watching television. Therefore, the television also demonstrates the successful side of the father generation to some degree as far as the subjective characteristics of television are concerned.

b. Grandfather Generation

Chapter 7 shows that only the personal value, leisure & comfort, is negatively related to the time of television adoption. However, the strength of the relationship is rather weak ($R^2=.03$). The findings from Chapter 8 reveal that the time of adoption is positively related to the reason, “a symbol of status” but negatively related to the reason, “relatives already had one”. In this case, the model predicting the time of adoption explains 9 percent of variance. As mentioned earlier, we need to know what kinds of values or roles characterize the grandfathers who are affected by vanity or the primary group as far as the decision of television adoption is concerned. Moreover, the weak relationship between either the personal values and television adoption or the reasons and time of television adoption suggests that it is necessary to examine whether the time of television adoption is mainly affected by the sociological variables such as ability to pay.

The grandfathers also watch various television shows. However, as reported in Chapter 7
and 8, we know that the grandfathers who value *money & pleasure* or indicate the adoption reason, “entertainment”, are more likely to spend time on watching television in general and watching entertainment shows in particular. In contrast, the grandfathers who value *being ordinary* or adopt the television for the reason, “family wanted to have one”, are less likely to spend time on watching television. Again, although the relationship between the reasons and time spent on the television is stronger in general, neither of the relationships mentioned above explains a significant proportion of variances. Nevertheless, it is necessary to examine the relationship between personal values and reasons for the purposes of comparison as far as television adoption and postadoption are concerned.

As Table 9.1e shows, like the case of father generation, the relevant hypotheses (the relationships between the values and entertainment oriented reasons and *following others* oriented reasons) are not supported.

<table>
<thead>
<tr>
<th>Table 9.1e (Grandfather Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables (Values)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Prudent &amp; Standing</td>
</tr>
<tr>
<td>Money &amp; Pleasure</td>
</tr>
<tr>
<td>Authority &amp; Status</td>
</tr>
<tr>
<td>Material Desires</td>
</tr>
<tr>
<td>Money</td>
</tr>
<tr>
<td>Jealous of Other’s Wealth</td>
</tr>
<tr>
<td>Stingy</td>
</tr>
<tr>
<td>Thrifty &amp; Control</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

*i.* Time of Television Adoption

The two reasons, “a symbol of status” and “relatives already had one” not only function in an opposite direction when it comes to the decision of television adoption for the grandfathers.
but also are related to two different sets of personal values. That is, while the reason, “a symbol of status” is positively related to authority & status aspirations, material desires, money, jealous of other’s wealth, and stingy, the reason, “relatives already had one” is positively related to jealous of other’s wealth but negatively related to stingy and thrifty & control. Therefore, we might infer that the grandfathers who have a strong achievement oriented value profile are more likely to be the earlier adopters for they think that the television is “a symbol of status”. The grandfathers who value stingy and thrifty & control are less likely to measure up against their relatives and be a later adopter. The value, jealous of other’s wealth, is regarded as independent of the time of adoption because it affects both the reasons, “relatives already had one” and “a symbol of success” positively. Thus, we have two inferences:

*The earlier television adopters of the grandfather generation are more likely to (1) value authority & status aspirations, money; (2) have higher material desires; (3) be stingy;

*The later adopters of grandfather generation are less likely to be stingy and thrifty & control.

As showed in Chapter 7, neither of the values discussed above is directly related to the time of television adoption. But, it seems that the first inference is consistent with the finding that the personal value, leisure & control, is negatively related to the time of television adoption. Nevertheless, it is important to note that the inference lacks accuracy to some degree because the relationship between the reasons and time of television adoption is weak for the grandfather generation.

Correlation analysis supports some of the above findings.

<table>
<thead>
<tr>
<th>Correlation between Personal Values and Sociological Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>Material Desires</td>
</tr>
<tr>
<td>Money</td>
</tr>
<tr>
<td>Stingy</td>
</tr>
</tbody>
</table>

* p<.05; ** p<.01; *** p<.001

Table 9.1f shows that the grandfathers who have higher material desires are more likely to have a lower level of education. The earlier regression analysis shows that the value, material desires, has more impact on the reason, “a symbol of status”, than any other values. That is, the
grandfathers who have higher material desires are more likely to have lower education and be an earlier adopter for the reason, "a symbol of status". This is consistent with the educational character of innovators. Similarly, the grandfathers who are stingy are more likely to enjoy higher intragenerational mobility. This is also consistent with the mobility characteristics of innovators.

Mixed findings are found when the relationship between money and sociological variables is compared with the relevant characteristics of innovators with respect to the relationship between the personal values and reasons. Therefore, money is not regarded as one of the personal values that affect the time of adoption through the reason, "a symbol of status". In short, the grandfathers who value material desires and stingy are more likely to be earlier television adopters for the reason, "symbol of status".

But regression analysis on the relationship between sociological variables and reasons shows that earlier television adopters are more likely to be able to pay. Table 9.1g shows the relationships.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
<th>Symbol of Status</th>
<th>Relatives Had One</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Pay</td>
<td></td>
<td>.195*</td>
<td></td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td></td>
<td>-.226**</td>
<td>-.288***</td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>.08</td>
<td>.08</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td>.07</td>
<td>.0</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>156</td>
<td>159</td>
</tr>
</tbody>
</table>

Table 9.1g (Grandfather Generation) clearly shows that grandfathers who have a higher ability to pay are more likely to adopt the television earlier for the reason, "symbol of status". This is consistent with the findings of Chapter 6 and supports the finding that material desires and stingy rather than money are more relevant to the time of television adoption for the grandfather generation. But the relationship between occupational prestige and "relative already had one" is inconsistent with the characteristic of innovators. The fact that occupational prestige is negatively related to both "a symbol of status" and "relatives already had one" suggests that occupational prestige is less likely to be related to the time of television adoption for the grandfather generation.
The above often weak or negligible relationships suggest that it is necessary to examine whether the sociological variables are directly responsible for television adoption. Table 9.2h shows the findings.

<table>
<thead>
<tr>
<th>Table 9.1h (Grandfather Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Regression Coefficients for Model Predicting Time of TV Adoption</strong></td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Ability to Pay</td>
</tr>
<tr>
<td>$R^2$</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

Indeed, like the case of father generation, the time of adoption of television is a direct function of family's ability to pay to some extent for the grandparents. Although the relationship is slight, its direction is consistent with the characteristic of innovators.

In sum, for the grandfather generation, the family's ability to pay and achievement values such as material desires, authority & status aspirations and stingy are more important than any other factors as far as making an earlier adoption decision is concerned.

**ii. Time Spent On Watching Television**

As reported in Chapter 7, the overall time spent on watching television is positively related to the personal value, money & pleasure but negatively related to the value, being ordinary. This somewhat consistent with the findings on the relationship between the personal values and reasons in this chapter. The reason, "entertainment" is positively related to the time spent on watching television but not related to any personal values. As revealed in Chapter 8, contrary to the case of the father generation, the reason, "family wanted to have one", is negatively related to the overall time spent on the television. For the grandfather generation, valuing a family's request for getting a television set means higher ratings on the value "Prudence & Standing" but lower ratings on the enjoyment value "Money & Pleasure". This is consistent with the finding of Chapter 7.

Prudence & Standing per se means honouring responsibility to some degree. Hence, it seems understandable that a grandfather who values Prudence & Standing but dislikes the life style of Money & Pleasure tend to spend less time on watching television. Of course, he still watches some specific entertainment shows but is more likely to be a lighter viewer. The value, prudence & standing is somewhat negatively correlated to the occupational prestige (-.196*, N=200) and
intragenerational mobility (-.199*, N=148). That is, the grandfathers who adopted the television for their family are more likely to have lower social status.

But, occupational prestige may not be a factor as far as spending time on watching television is concerned. Regression analysis shows that both the "family wanted to have one" and "entertainment" is negatively related to occupational prestige.

Table 9.1i (Grandfather Generation)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable (Beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family Wanted</td>
</tr>
<tr>
<td>Occupational Prestige</td>
<td>-.173*</td>
</tr>
<tr>
<td>Ability to Pay</td>
<td>.----</td>
</tr>
<tr>
<td>R²</td>
<td>.03</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.02</td>
</tr>
<tr>
<td>N</td>
<td>170</td>
</tr>
</tbody>
</table>

* p<.05  ** p<.01

We know that the reason, "family wanted to have one", is negatively related to the time spent on watching television while the reason, "entertainment" is positively associated with the television use. Therefore, the negative relationship between occupational prestige and the two reasons suggests that the time spent on watching television is independent of occupational prestige. This is consistent with the finding on the time of television adoption for the grandfather generation.

None of the sociological variables is related to the overall time spent on television with statistical significance.

In sum, although some relationships between personal values and time spent on the television are observed directly or indirectly, none of the relationship is sizable. Judging from the direction of relationship, we might conclude that the heavier television viewers are more likely to value money & pleasure but less likely to value prudent & standing and being ordinary regardless of occupational prestige.

iii. Nature of Television Use

All of the relevant values and reasons found in Chapters 7 and 8 are related to the frequency of entertainment shows but the value, leisure & comfort. The grandfathers who value leisure &
comfort tend to watch less news.

In sum, for the grandfather generation, the time of television adoption is affected by achievement values and the family’s ability to pay. Moreover, the grandfathers who have higher enjoyment oriented value tend to spend more time on watching television in general and watching entertainment shows in particular.

In retrospect, as argued in Chapter 8, the fathers were still young when the television started to be diffused in China in the 1970s. Therefore, when they began to purchase the television for their own families in the middle of 1980s or later, they were more likely to regard the television as something a successful family should have. In other words, for the father generation, we know that the later television adopters of father generation tend to be less likely determined to succeed and have lower material desires. On the contrary, the earlier adopters of father generation have higher ability to pay the television set and higher intergenerational mobility. While the fathers are more likely to watch entertainment shows in general, the ones who value authority & status and success at the expense of others are more likely to spend time on watching television.

In sum, for the father generation:

* The earlier adopters are more likely to have a higher ability to pay, intergenerational mobility, material desires, and determination to succeed but less likely to be frugal or jealous of other’s wealth;

* The heavier users of television are more likely to value success at the expense of others, authority & status aspirations, and determination to succeed.

For the grandfather generation:

* The earlier adopters are more likely to have a higher ability to pay and value material desires, authority & status aspirations, and stinginess,

* The heavier users of television more likely to value money & pleasure but less likely to value prudent & standing and being ordinary.

But, it is necessary to point out that none of the relationships discussed shows respectable strength. Indeed, it seems that the television is not radically biased towards any particular group of fathers or grandfathers in terms of adoption and postadoption. In other words, its informational and entertainment qualities are appreciated by the majority of the two generations to some degree. Therefore, the ability to pay becomes one of the factors that directly affect the time of television adoption.
2. Audio Cassette Recorder/player (ACR)

The ACR is similar to television in three ways in terms of its adoption and postadoption in China. First, it functions as a mass medium because it is often integrated with radio. Second, the ACR began to be diffused in the late 1970s; Finally, the time of ACR adoption is not related to the overall frequency of ACR use. Nevertheless, as mentioned earlier, an ACR is much cheaper than a television set on average. Moreover, unlike that of television, it lacks group (family) appeal. These similarities and differences are reflected on the following discussion.

a. Father Generation

For the father generation, as showed in Chapter 7, the time of ACR adoption is positively related to the personal values, authority & status aspirations. But the effect of the value on the time of adoption is negligible ($R^2=.03$). The analysis of relationship between the reasons and time of adoption yielded a stronger explanation ($R^2=.20$). That is, we have known that:

- The reasons, “broaden horizons” and “novel” are positively related to the time of ACR adoption;
- The reasons, “family wanted to have one” and “kids learn English, etc.” are negatively related to the time of ACR adoption.

Thus, it is necessary to know the values that are related to the above reasons identified because the personal values are not really directly related to the time of adoption. Moreover, reasons such as “family wanted to have one” and “kids learn English” are role related. Therefore, it is desirable to know to what kinds of personal values the role is related.

As far as the model predicting the time of ACR adoption is concerned, although 20 percent of variance is explained by the four reasons, it is far from perfect. Therefore, like the case of television, it is necessary to examine whether the time of ACR adoption is directly affected by the sociological factors such as ability to pay.

The situation with the ACR postadoption is different, as none of the personal values are directly related to the overall frequency of ACR use. However, Chapter 8 shows that the grandfathers who indicated the reason, “entertainment” for the ACR adoption tend to use the ACR more frequently. Thus, it becomes necessary to know how the reason, “entertainment” is related to personal values in order to define the ACR.

Table 9.2a shows how reasons are associated with values. While enjoyment and vanity related hypotheses are supported to some degree, the others are not. I shall analyses each relation in terms of the adoption and postadoption in the following section.
Table 9.2a (Father Generation)

| Independent Variables (Values) | Dependent Variables (Reasons) | | | | |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                                | Broaden Horizons               | Entertainment                  | Family Wanted                  | Novel                          | Children Learn                 |
| Authority & Status             | .253**                         | .194*                          | .171*                          | .168*                          | .171*                          |
| Jealous of Other’s Wealth      |                                |                                | .212*                          | .207*                          |                                |
| Frugal                         |                                |                                |                                | .181*                          |                                |
| Achieving Spirit               |                                |                                |                                |                                |                                |
| Innovating & Spending          |                                |                                |                                |                                |                                |
| Spend & Live For today         |                                |                                |                                |                                |                                |
| Money & Pleasure               |                                |                                |                                |                                |                                |
| R²                             | .14                            | .08                            | .10                            | .13                            | .07                            |
| Adjusted R²                    | .12                            | .07                            | .08                            | .11                            | .06                            |
| N                              | 123                            | 178                            | 126                            | 124                            | 145                            |

*a*. p<.05  
**a*. p<.01

a. Father Generation

i. Time of ACR Adoption

“Broaden horizons” and “novel” are the two reasons that affect the time of ACR adoption positively. Table 9.2a shows that the findings are consistent with what we found in Chapter 7. Therefore, we may say that achievement oriented values are indirectly related to the time of ACR adoption. Although two other values, frugal and innovating & spending are involved, their effects are relatively modest in size. Rather, it seems that authority & status aspiration and jealous of other’s wealth have stronger impact on the decision of ACR adoption.

The reason, “Family Wanted”, is positively related to the two values, Achieving Spirit and Innovating & Spending. It is difficult to explain why this particular reason is negatively related to the time of ACR adoption in terms of the two values observed. One explanation is related to the time period of ACR diffusion. The ACR began to be diffused among the fathers in the late 1970s when the majority of the fathers were in their earlier twenties and were still single. The reason, “family wanted to have one” implies responsibility for the family. Hence, when the fathers started to get married in the 1980s and were requested by their wives to get an ACR, they were more likely to be the later adopters. In other words, the ACR is more individual oriented than group (family) oriented regardless of the personal value orientation as far as the time of adoption is concerned.
Among the personal values identified, only authority & status aspirations and frugal are really related to some of the sociological variables.

Table 9.2b (Father Generation)

<table>
<thead>
<tr>
<th>Correlation between Personal Values and Sociological Variables</th>
<th>Education</th>
<th>Prestige</th>
<th>Intragene Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frugal</td>
<td>-.205**</td>
<td>.196**</td>
<td>.156*</td>
</tr>
<tr>
<td>Authority &amp; Status</td>
<td>.176</td>
<td>176</td>
<td>165</td>
</tr>
<tr>
<td>N</td>
<td>197</td>
<td>176</td>
<td>165</td>
</tr>
</tbody>
</table>

*p<.05  
**p<.01

That is, the fathers who are frugal are more likely to have lower education. Like the case of television, the reason, "kids learn English, etc." is positively related to the value, frugal. Because "kids learn English, etc. is negatively related to the time of ACR adoption, it seems logical to infer that being frugal hinders the speed of ACR diffusion. This is consistent with the findings that the ACR innovators of father generation tend to have higher education. Therefore, we may say that the fathers who are frugal are more likely to adopt the ACR later rather than sooner for the reason, "kids learn English, etc.". This is also consistent with the case of television as far as the relationship between the value, frugal, and time of television adoption is concerned. However, it is necessary to note that being frugal is also one of the three values that is responsible for the reason of "broaden horizons" which affects the time of ACR adoption positively. The difference is that being frugal is the only value that affects the reason, "kids learn English, etc." while it is only one of the three values for the fathers who gave the reason, "broaden horizons".

The correlation analysis helped clarify this point.

It is logical to find that the fathers who value authority and status tend to have higher occupational prestige and intragenerational mobility. However, this is inconsistent with the characteristics of innovators. The innovators have lower occupational prestige and intragenerational mobility on the average. The inconsistency may be mainly due to inaccurate predication in the case of regression analysis or the sample error. It is clear that the relationship between authority & status aspirations and either occupational prestige or intragenerational mobility is very small or almost negligible. Similarly, only a very small difference between the innovators and the remaining sample is demonstrated as far as occupational prestige and
intragenerational mobility are concerned. Hence, it is reasonable to say that the earlier ACR adopters of father generation are more likely to have higher authority & status aspirations but less likely to be frugal as far as the relationship between personal values and sociological variables are concerned.

Regression analysis on the relationship between the reasons and sociological variables does not help clarify the situation either. Among the five variables, only ability to pay is related to one of the reasons identified. As Table 9.2c shows, the ability to pay is positively related to the reason, "kids learn English, etc."

<table>
<thead>
<tr>
<th>Table 9.2c (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Reasons for ACR Adoption</td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Ability to Pay</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

***.p<.001

That is, the fathers who indicated that they bought the ACR for their kids to learn English, etc. rather than for any other purpose are more likely to become the later ACR adopters in spite of their higher ability to pay because they are frugal. This finding contradicts what we have learnt about the characteristics of ACR innovators. The innovators have a higher ability to pay than the remaining sample on the average. This is probably because the ACR is a more affordable medium so that the ability to pay becomes irrelevant to some extent.

But it is clear that there is a positive relationship between the father's intergenerational mobility and time of ACR adoption. As far as the sociological variables are concerned, regression analysis reveals that intergenerational mobility is the only variable that has some impact on the time of ACR adoption with statistical significance. This relationship is also consistent with what we found about ACR innovators in Chapter 6.
Table 9.2d (Father Generation)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intergenerational Mobility</td>
<td>.156*</td>
</tr>
<tr>
<td>R²</td>
<td>.02</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.02</td>
</tr>
<tr>
<td>N</td>
<td>211</td>
</tr>
</tbody>
</table>

*.p<.05

In short, for the fathers, the time of ACR adoption is positively associated with the value, authority & status aspirations and jealous of other's wealth directly or indirectly regardless of the role differences. The time of ACR adoption also depends upon intergenerational mobility to some degree. However, some value conflicts are also observed. For instance, while the value frugal is positively related to both the reasons, “broaden horizons”, and “kids learn English, etc.”, innovating & spending is positively related to the reason, “novel” and “family wanted to have one”. Therefore, the effect of a value may be judged in terms of how the value is weighted in one's overall value profile identified as a whole.

ii. Overall Frequency of ACR Use

No direct relationship between personal values and overall frequency of ACR use is found for the father generation. Similarly, none of the sociological variables is associated with the overall ACR use either. This means that we have to examine the relationship between the personal values and reasons in order to define the ACR.

"Entertainment" is the only reason that is related to the overall frequency of ACR use. Its explanatory power is modest in size (R²=.10). While it is not related to any of the sociological variables, it is positively related to three enjoyment oriented values, innovating & spending, spend & live for today, and money & pleasure. Although the strength of the relationship is not strong either (R²=.08), the direction is clear and consistent with what I have hypothesized. That is, the fathers who agree with or show enjoyment oriented values are more likely to use the ACR for entertainment purposes.

Among the three values, only money & pleasure is somewhat negatively correlated to education, (—.145*, N=192), ability to pay (—.181*, N=181), occupational prestige (—.159*, N=192), and intragenerational mobility (—.200**, N=180). This somewhat suggests the heavy ACR users have lower socio-economic status and social mobility.
iii. Nature of ACR Use

Neither of the personal values identified in chapter 7 is directly related to the specific use of the ACR. However, we know that the three reasons, "broaden horizon", "family wanted to have one", and "entertainment", are positively related to either the informational shows or entertainment shows or both regardless of what personal values with which they are associated. That is, the ACR to the father generation may be a more enjoyment oriented medium than anything else because the fathers who have higher enjoyment oriented values tend to use the ACR more frequently for entertainment purposes.

In sum, while the ACR is more related to the fathers who are achievement oriented in terms of the time of adoption, it is more associated with the fathers who are enjoyment oriented in terms of overall use.

b. Grandfather Generation

The findings from Chapter 7 did not reveal what kind of personal value the earlier adopters of the grandfather generation might have. Rather, they showed that the later adopters were more likely to value achieving spirit and spend & indulge. Further analysis on the relationship between the reasons and time of ACR adoption shows that the time of adoption is positively related to the reason, "Novel" but negatively related to the reason, "Relatives already had one". This is very similar to the case of television. Therefore, it is necessary to examine how the reasons identified are related to personal values. Table 9.2e shows the relationship for the grandfather generation.

<table>
<thead>
<tr>
<th>Table 9.2e (Grandfather Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Reasons for ACR Adoption</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variables (Values)</th>
<th>Dependent Variables (Reasons)</th>
<th>Novel</th>
<th>Relatives Had One</th>
<th>Children Learn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prudent &amp; Standing</td>
<td></td>
<td>.270*</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
<td></td>
<td>.263*</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Achieving Spirit</td>
<td></td>
<td>-.221*</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td></td>
<td>------</td>
<td>.262*</td>
<td></td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td></td>
<td>------</td>
<td>.247*</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>.18</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td>.16</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>75</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

*.p<.05
It is clear that the findings do not support the hypotheses.

i. Time of ACR Adoption

"Novel" is the only reason that affects the time of ACR adoption positively. Table 9.2e shows that it is positively related to the values, prudent & standing and success at the expense of others but negatively related to the value, achieving spirit. This is consistent with the finding that achieving spirit is negatively related to the time of ACR adoption in Chapter 7. Hence, we may infer that:

*The grandfathers who are the earlier adopters are more likely to value prudent & standing and success at the expense of others.

The grandfathers who measure up against their relatives are more likely to be the later ACR adopters. The reasons, “relatives already had one” is positively related to money and spend & indulge. This is also consistent with what we found on the relationship between the value, spend & indulge and time of ACR adoption in Chapter 7. Thus, we may infer that:

*The later ACR adopters of grandfather generation are more likely to value money and spend & indulge.

Correlation analysis indicates that although some of the personal values identified are associated with a number of sociological variables, all the findings but the one on money are inconsistent with the characteristics of innovators.

<table>
<thead>
<tr>
<th>Table 9.2f (Grandfather Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlation between Personal Values and Sociological Variables</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Money</td>
</tr>
<tr>
<td>Prudent &amp; Standing</td>
</tr>
<tr>
<td>Achieving Spirit</td>
</tr>
<tr>
<td>Expense at Expense of Others</td>
</tr>
</tbody>
</table>

* p<.05
** p<.01
*** p<.001

Thus, like the ACR case of father generation, for the ACR adopters of grandfather generation, the time of ACR adoption is directly and indirectly related to some specific values regardless of the role differences. In other words, the grandfathers who value prudent & standing and success at the expense of others but not achieving spirit, money, and spend & indulge are more
likely to be the earlier adopters. Again, this is possible probably because the ACR is a relatively affordable item. Regression on the relationship between the two reasons, "novel" and "relatives already had one", and occupational prestige reveals similar results.

The two reasons, "novel" and "relative already had one", function in opposite directions in terms of the time of ACR adoption but are negatively related to the same variable, "occupational prestige". This suggests that the ACR adoption for the grandfather generation is independent of roles to some degree. None of the other sociological variables are related to the two reasons.

Regression analysis shows that none of the sociological variables is directly related to the time of ACR adoption with statistical significance for the grandfather generation.

**ii. Overall Frequency of ACR Use**

Chapter 7 shows that only a weak and negative relationship was found between the enjoyment oriented value, *spend & indulge* and the overall frequency of ACR use ($R^2=.07$). As far as the reasons for the ACR adoption is concerned, only "kids learn English, etc." is identified as having some negative effect on the overall frequency of ACR use ($R^2=.06$). However, the reason, "kids learn English, etc." is not related to any of the personal values or the sociological variables with statistical significance. Clearly, neither of the two findings revealed sufficient information for characterizing the ACR in terms of the overall use. Furthermore, none of the sociological variables is related to the overall frequency of ACR use.

While it may be bold to claim that the degree of ACR use is very much random, it is true that the information revealed is insufficient to make a concluding statement about the ACR use. As the major part of postadoption, this information on the degree of media use is crucial in order to define a medium.
iii. Nature of ACR use

None of the values observed in Chapter 7 is related to the specific ACR use. But to the ACR users of grandfather generation, it is clear that learning and enjoyment are two completely different spheres. That is, the grandfathers who indicated the reasons, “novel” and “relatives already had one”, are more likely to concentrate on entertainment shows while the grandfathers who purchased the ACR for their children to learn English, etc. are more likely to focus on the learning oriented shows. The point is, the grandfathers who indicated the reason, “children learn English, etc.” are less likely to use the ACR as a whole. Therefore, we may say that the ACR is enjoyment oriented for the grandfathers to some degree.

In sum, both the generations showed that the ACR adoption and postadoption are independent of socioeconomic status to some degree probably because the ACR is more affordable. Thus, the subjective factors become more relevant. For the father generation, the time of ACR adoption is positively associated with:

* Authority & status aspirations,
* Jealous of Other’s Wealth, and
* Intergenerational mobility.

But negatively related to:

* Frugal

The use of the ACR is positively related to:

* Innovating & spending,
* Spend & live for today, and
* Money & pleasure.

For the grandfather generation, the time of ACR adoption is positively associated with:

* Prudent & status and
* Success at the expense of others.

but negatively related to:

* Achieving Spirit,
* Money, and
* Spend & indulge.

The use of the ACR is negatively related to:

* Spend & indulge.

That is, for the father generation, the time of ACR adoption is more identified with achievement values while the use of the ACR is more associated with enjoyment oriented values. Similar findings are found for the grandfather generation. However, for the grandfather generation, the
relationship between the personal values and ACR postadoption is vague.

3. Telephone

Unlike the case of either the television or the ACR, the telephone innovators had less ability to pay when they subscribed the service. This suggests that the telephone probably has more subjective oriented characteristics and the adoption of the telephone is not a function of ability to pay. This section examines these characteristics by comparing findings from this chapters with the findings from the previous chapters.

a. Father Generation

From Chapter 7, we have known that the time of telephone adoption is directly related to the value, *success at the expense of others* $(R^2=.08)$. In Chapter 8, we find that the time of telephone is positively related to the reason, "work" but negatively associated with the reason, "family wanted to have one". The model on the reasons and time of adoption explains only about 14 percent of variance. Therefore, it is necessary to examine with what personal values the two reasons are associated. Moreover, either "work" or "family wanted to have one" are role related. Thus, it is desirable to know how the two reasons are related to social positions. Moreover, although there is a definite relationship between the time of adoption and *success at the expense of others* or the two reasons, it is weak. Therefore, the direct relationship between the sociological variables and time of adoption is also examined.

As far as postadoption is concerned, the overall frequency of making or receiving local calls is directly and positively related to the value, *determined to succeed*. Similarly, the fathers who adopted the telephone for the reason, "business" also make and receive local calls more frequently. But, the fathers who adopted the telephone because it was "a symbol of success" are less likely to make or receive local telephone calls. In this section, I shall reveal to what personal values or sociological variables the two reasons are related and make the necessary comparisons. Moreover, the comparison can be sharpened by revealing whether the sociological variables are directly related to the overall use of the telephone.

Table 9.3a shows the relationship between values and reasons. The findings suggest that the hypotheses on the relationship between the values and "achieving reasons" or "social reasons" are supported to some degree.
Table 9.3a (Father Generation)

Standardized Regression Coefficients for Model Predicting Reasons for Telephone Adoption

<table>
<thead>
<tr>
<th>Independent Variables (Values)</th>
<th>Dependent Variables (Reasons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Work</td>
</tr>
<tr>
<td>Achieving Spirit</td>
<td>.435***</td>
</tr>
<tr>
<td>Determined to Succeed</td>
<td>.232*</td>
</tr>
<tr>
<td>Frugal</td>
<td>.305**</td>
</tr>
<tr>
<td>Material Desires</td>
<td>.405***</td>
</tr>
<tr>
<td>Money</td>
<td>.227*</td>
</tr>
<tr>
<td>Authority &amp; Status Aspirations</td>
<td>.281**</td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
<td>.278**</td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td>.206*</td>
</tr>
</tbody>
</table>

R² = .31
Adjusted R² = .28
N = 83

*p<.05; **p<.01; ***p<.001

i. Time of Telephone Adoption

As Table 9.3a shows, although the values associated with the reason, “work” are not identical with the value, *success at the expense of others*, they do not contradict it. In fact, both *achieving spirit* and *determined to succeed* share the same value domain with it. That is:

*The fathers who value *achieving spirit, determined to succeed*, and frugal are more likely to be the earlier telephone adopter;

*The fathers who are less competitive and value spend & indulge are more likely to adopt the telephone later for the reason, “family wanted to have one”.

These are consistent with what we found in chapter 7. However, the fathers who indicated the reason, “family wanted to have one” also value *authority & status aspirations*. *Authority & status aspirations* share the same value domain with both *achieving spirit* and *determined to succeed*. That is, there is a value overlap as far as the two relevant reasons are concerned.

Correlation analysis reveals that none of the identified values but *authority & status aspirations* is related to the sociological variables. *Authority & status aspirations* is positively related to the ability to pay (.198*, N=116). This is consistent with the finding of Chapter 6 since the reason, ‘family wanted to have one” is negatively related to the time of adoption. This suggests
that we can infer that:

*Authority & status aspirations* is negatively related to the time of telephone adoption through the reason, "family wanted to have one".

Regression analysis on the reasons and sociological variables shows that the fathers who have higher intergenerational mobility are more likely to adopt the telephone earlier for their work.

<table>
<thead>
<tr>
<th>Table 9.3b (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Reasons for Telephone Adoption</td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

This is consistent with the innovators’ character found in Chapter 6.

But it is the level of education and ability to pay that directly affect the time of telephone adoption as far as the sociological variables are concerned. Table 9.3c shows the findings.

<table>
<thead>
<tr>
<th>Table 9.3c (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Time of Telephone Adoption</td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Ability to Pay</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

That is, the fathers who have a higher level of education but a lower ability to pay are more likely to be the earlier adopters. This is consistent with the characteristics of innovators and verifies the findings that the later adopters are more likely to have a higher ability to pay as far as the correlation between the ability to pay and authority and status aspirations is concerned.

In sum, I have established that the earlier telephone adopters of father generation are more likely to value success at the expense of others and have higher level of education but a lower ability to pay. Some other personal values are also indirectly related to the time of telephone
adoption. For instance, while the fathers who are frugal are more likely to adopt the telephone earlier for the reason, “work”, the fathers who value spend & live for today are more likely to adopt the telephone later for the reason, “family wanted to have one.” Moreover, authority & status aspirations is more likely associated with the time of telephone adoption negatively.

ii. Overall Frequency of Telephone Use

Chapter 7 shows that determined to succeed is positively related to the overall frequency of making and receiving local calls. Table 9.3a demonstrates that the fathers who value material desires, money, determined to succeed, and frugal are more likely to make and receive telephone calls as whole. Although the fathers who adopted the telephone for reasons of status symbol also show achieving spirit, they more likely agree with the lifestyle of spending and living for today. This is the major difference between these fathers and the fathers who adopted the telephone for “business”.

But the following analysis demonstrates that money may not be one of the values that affect the frequency of making or receiving local telephone calls. Correlation analysis reveals that none of the values identified but money is related to the sociological variables. Money is negatively related to education (-.316**, N=113), occupational prestige (-.368**, N=113) and intragenerational mobility (-.398***, N=88). However, as Table 9.3d shows, regression analysis indicates that the occupational prestige is positively related to the frequency of making or receiving local phone calls.

<table>
<thead>
<tr>
<th>Table 9.3d (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Frequency of Local Phone Calls</td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Occupational Prestige</td>
</tr>
<tr>
<td>R²</td>
</tr>
<tr>
<td>Adjusted R²</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

Money is positively related to the reason business but negatively correlated with the occupational prestige. Both “business” and occupational prestige affect the frequency of local phone calls positively. Therefore, it is logical to conclude that money is more likely independent of the overall telephone use.

Regression analysis also shows that the reason, “business” is related to intergenerational
mobility and ability to pay while the reason, “a symbol of success” is only related to the ability to pay.

Table 9.3e (Father Generation)

| Standardized Regression Coefficients for Model Predicting Reasons for Telephone Adoption |
|-----------------------------------------------|-----------------|
| Independent Variables | Dependent Variable (Beta) |      |
| Intergenerational Mobility | .194* | .--- |
| Ability to Pay | -.199* | -.377*** |
| R² | .08 | .14 |
| Adjusted R² | .06 | .13 |
| N | 98 | 108 |

* p<.01; *** p<.001

Table 9.3e reveals that the ability to pay is negatively related to both the reasons, “business” and “a symbol for success”. While the reason, “business” affects the frequency of local calls positively, “a symbol of success” functions in opposite direction. Therefore, the ability to pay may not be a factor that affects the frequency of making and receiving local phone calls.

In short, the fathers who are determined to succeed and frugal rather than spending & indulging and have higher material desires and occupational prestige are more likely to make and receive local calls more frequently.

iii. Nature of Telephone Use

None of the personal values identified in Chapter 7 is related to the specific telephone communication. Nevertheless, the findings from Chapter 8 clearly show that the fathers who adopted the telephone for either “work” or “business” reason are much more likely to make business oriented calls. That is, the telephone is more a tool for achieving purposes.

In sum, for the father generation, the time of telephone adoption is characterized by:

* Higher degree of valuing success at the expense of others,
* Higher degree of achieving spirit,
* Higher degree of determination to succeed,
* Higher degree of valuing frugality,
* Lower degree of valuing authority & status aspiration,
* Lower degree of valuing spending & indulging,
* Higher education, and
* Lower ability to pay.

The use of the telephone features:
*Higher degree of material desires,
*Higher degree of determination to succeed,
*Higher degree of valuing frugality,
*Lower degree of valuing spending & living for today, and
*Higher occupational prestige.

Moreover, frugal is positively related to both the earlier telephone adoption and the higher frequency of local phone calls through the reason, “work” or “business”. This implies that the adoption of the telephone is more a business or work related investment at the current stage of diffusion. The finding is somewhat consistent with that of Fischer (1992).

**b. Grandfather Generation**

As Chapter 7 revealed, contrary to the case of the father generation, the adoption of the telephone is not achievement oriented for the grandfather generation. Rather, they more likely adopt the telephone sooner rather than later because they think that the telephone is novel.

As far as the postadoption is concerned, the grandfathers who have higher material desires and value innovating & spending are more likely to make and receive local phone calls. However, the grandfathers who subscribed to the telephone service for being fashionable are less likely to make and receive local calls. In this section, I shall examine whether the values that are related to the reasons identified are consistent with the values that are directly related to the telephone adoption and postadoption. Moreover, I also examine how the values and reasons are related to the sociological variables.

Table 9.3f shows how the reasons are related to the values.

<table>
<thead>
<tr>
<th>Table 9.3f (Grandfather Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables (Values)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Prudence &amp; Standing</td>
</tr>
<tr>
<td>Authority &amp; Status</td>
</tr>
<tr>
<td>Resign To Fate</td>
</tr>
<tr>
<td>Money &amp; Pleasure</td>
</tr>
</tbody>
</table>

| R²     | .13 | .24 | .15 |
| Adjusted R² | .12 | .21 | .14 |
| N      | 67  | 53  | 53  |

*.p<.05; **p<.01; ***p<.001

Like the case of the ACR, the findings do not support the hypotheses.
i. Time of Telephone Adoption

As far as the personal values are concerned, the time of telephone adoption is negatively related to money and material desires \((R^2=14)\). While the time of telephone adoption is positively related to "novel", it is negatively related to the reason, "contact family members". Therefore, we may infer that:

* The grandfathers who value money & pleasure are more likely to adopt the telephone earlier for the reason, "novel";
* The grandfathers who value authority & status aspirations are more likely to adopt the telephone later for the reason, "contact family members".

It is important to note that the two reasons, "novel" and "contact family members" predict the time of telephone adoption quite accurately \((R^2=.63)\). Therefore, knowing how the values and sociological variables are associated with the two reasons becomes particularly significant.

While it is difficult to directly compare money & pleasure with money or material desires, they may be analysed by revealing how they are related to the sociological variables.

Table 9.3g (Grandfather Generation)

<table>
<thead>
<tr>
<th>Correlation between Personal Values and Sociological Variables</th>
<th>Education</th>
<th>N</th>
<th>Occu. Prestige</th>
<th>N</th>
<th>Ability to Pay</th>
<th>N</th>
<th>Intragene. Mobility</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prudent &amp; Spending</td>
<td>.---</td>
<td></td>
<td>-.353**</td>
<td>79</td>
<td>.---</td>
<td></td>
<td>.---</td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>.---</td>
<td></td>
<td>-.293**</td>
<td>80</td>
<td>.---</td>
<td></td>
<td>.---</td>
<td></td>
</tr>
<tr>
<td>material Desires</td>
<td>.---</td>
<td></td>
<td></td>
<td></td>
<td>.247*</td>
<td>78</td>
<td>.---</td>
<td></td>
</tr>
<tr>
<td>Innovate &amp; Spend</td>
<td>.---</td>
<td></td>
<td>-.230*</td>
<td>87</td>
<td>.---</td>
<td></td>
<td>.---</td>
<td></td>
</tr>
<tr>
<td>Resign to Fate</td>
<td>-.293**</td>
<td>81</td>
<td>-.283**</td>
<td>82</td>
<td>.---</td>
<td></td>
<td>-.388***</td>
<td>54</td>
</tr>
</tbody>
</table>

* .p<.05  
** .p<.01  
*** .p<.001

Neither authority & status aspirations nor money & pleasure is related to the sociological variables.

Money is negatively related to the time of telephone adoption and occupational prestige. That is, the grandfathers who value money are more likely to be the later telephone adopters and have lower occupational prestige. This is inconsistent with what we found about the characteristic of non-innovators in Chapter 6. However, the inconsistency may not be a serious problem because the mean difference of occupational prestige between the innovators and remaining sample is rather small for the grandfather generation \((\text{Sig.}= .61)\).
Material desires is negatively related to the time of telephone adoption but positively related to the ability to pay. This means that the grandfathers who have higher material desires are more likely to be the later telephone adopter and have higher ability to pay. This consistent with what we found about the characteristic of non-innovators in Chapter 6.

Nevertheless, the relationship between the sociological variables and personal values does not really help link the values that are directly related to the telephone adoption with the values that are associated with the two reasons identified because neither authority & status aspirations nor money & pleasure is related to the sociological variables. Moreover, regression analysis shows that the sociological variables are related to neither the reasons nor the time of telephone adoption for the grandfather generation.

In short, personal values and reasons are more significant factors than the sociological variables as far as the telephone adoption is concerned. More specifically, the time of telephone adoption is positively related to the value, money & pleasure but negatively associated with authority & status, money, and material desires directly or indirectly. That is, in contrast to the case of the father generation, the telephone adoption is not achievement oriented for the grandfathers.

ii. Overall Frequency of Telephone Use

Chapter 7 reveals that the grandfathers who have higher material desires and value innovating & spending are more likely to make and receive local phone calls ($R^2=24$). Chapter 8 shows that the grandfathers who adopted the telephone because it was fashionable are less likely to make and receive local phone calls ($R^2=28$). In this chapter, we found that the grandfathers who value prudence & standing and are resigned to fate are more likely to indicate the reason, "fashionable". Thus, we may infer that:

*The frequency of making and receiving local calls is negatively related to prudence & standing and resignation to fate through the reason "fashionable".

We have known that both material desires and innovating & spending affect the frequency of local calls positively. As Table 9.3g shows, the overall use of the telephone seems independent of the ability to pay because the ability to pay is positively correlated to material desires but negatively related to innovating & spending. The correlation analysis shows that the grandfathers who value prudence & standing and are resigned to fate are more likely to have lower occupational prestige. However, the findings from the correlation analysis are insufficient to link material
desires or innovating & spending with prudence & standing or resignation to fate.

None of the sociological variables is related to either the reasons “fashionable” or the overall use of the telephone for the grandfather generation.

In short, the overall frequency of making and receiving local phone calls is positively and directly related to material desires and innovating & spending but negatively and indirectly related to prudence & standing and resignation to fate. Moreover, the grandfathers who make or receive fewer local phone calls are more likely to have lower occupational prestige.

iii. The Nature of Telephone Use

Chapter 7 shows that the grandfathers who value material desires are more likely call clients while the grandfathers who value innovating & spending are more likely to call their relatives. Chapter 8 demonstrates that the reason, “fashionable”, is also positively related to the frequency of calling relatives. However, the overall frequency of making and receiving local calls is positively related to innovating & spending but negatively associated with the reason, “fashionable”. This suggests that the overall use of the telephone is probably more business oriented. But innovating & spending is positively related to the overall frequency of local calls and frequency of calling relatives. Thus, although the overall use of the telephone for the grandfather generation is probably more business oriented, it is reasonable to conclude that it is both kin and business in nature. This is different from the case of the fathers’ generation.

In sum, for the father generation, the time of telephone adoption is characterised by achievement oriented values, a higher level of education but a lower ability to pay. The use of the telephone features not only achievement oriented values but also a higher occupational prestige.

For the grandfather generation, the enjoyment oriented value, money & pleasure, rather than achievement oriented values has a positive impact on the time of telephone adoption. The use of the telephone is also different from that of the father generation. It is both business and kin oriented. The sociological variables are not related to the telephone adoption and postadoption with statistical significance.

4. Pager

The time of pager adoption depends upon the values, determined to succeed and success at the expense of others (R²=24). The specific reasons that are responsible for an earlier pager adoption are “business” and “fashionable” (R²=38).

The frequency of being paged is not directly associated with any of the personal values.
However, the fathers who indicated that they adopted the pager for the reasons, "business", "novelty", "contact family members" are more likely being paged. In this section, I shall examine how values and reasons are related to each other and with the sociological variables. The findings are compared for the purposes of characterizing the pager.

Table 9.4a shows that these relevant reasons are rooted in the achievement value domain. The findings suggest that the hypotheses on the relationships between the competitive, materialistic, or restrictive values and relevant reasons are supported.

<table>
<thead>
<tr>
<th>Table 9.4a (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Regression Coefficients for Model Predicting Reasons for Pager Adoption</strong></td>
</tr>
<tr>
<td>Independent Variables (Values)</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Stingy</td>
</tr>
<tr>
<td>Money</td>
</tr>
<tr>
<td>Material Desires</td>
</tr>
<tr>
<td>Submissive</td>
</tr>
<tr>
<td>Restraint</td>
</tr>
<tr>
<td>Jealous of Other's Wealth</td>
</tr>
<tr>
<td>Frugal</td>
</tr>
<tr>
<td>Achieving Spirit</td>
</tr>
<tr>
<td>Resign to Fate</td>
</tr>
<tr>
<td>R2</td>
</tr>
<tr>
<td>Adjusted R2</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

*p<.05  **p<.01

**i. Time of Pager Adoption**

As Chapter 7 showed, the time of pager adoption is positively related to the value, *determined to succeed* (*Beta*=.36*) but negatively related to the value, *success at the expense of others* (*Beta*=-.32*). From Chapter 8, we know that the two reasons, "business" and "fashionable", affect the time of pager adoption positively. Table 9.4a reveals that while "business" is positively related to the values, *stingy* and *money*, "fashionable" is positively related to the value, *jealous of other's wealth* but negatively related to the value, *frugal*. Thus, we may infer that:

*The grandfathers who value *money, stingy, and jealous of other's wealth*
but not frugal are more likely to be the earlier pager adopters for the reasons of “business” and “fashionable”.

However, it is difficult to compare those values identified through reasons with the values that directly related to the pager adoption (determined to succeed and success at the expense of others) because none of the values but money is related to the sociological variables. Correlation analysis shows that money is negatively related to the level of education \( (r=-.424^{**}, \ N=43) \). Moreover, the reasons are also independent of the sociological variables. Like the case of the ACR, this is somewhat understandable because the pager is a relatively affordable medium. Therefore, personal values are able to account for a relatively large proportion of variances. Nevertheless, regression analysis shows that the time of pager adoption also depends upon intergenerational mobility.

<table>
<thead>
<tr>
<th>Table 9.4b (Father Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Regression Coefficients for Model Predicting Time of Pager Adoption</td>
</tr>
<tr>
<td>Independent Variables</td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
</tr>
<tr>
<td>( R^2 )</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
</tr>
<tr>
<td>( N )</td>
</tr>
</tbody>
</table>

\* \( p<.05 \)

Thus, we may conclude that earlier pager adoption is more likely to have a higher degree of valuing determination to succeed, money, stingy, and jealous of other’s wealth, but a lower degree of valuing success at the expense of others and frugality. The time of pager adoption also depends upon the intergenerational mobility.

ii. Frequency of Being Paged

None of the personal values are directly related to the frequency of being paged. This may be understandable because it is difficult to link a father’s personal values with other people’s communication actions (i.e. paging the father). However, the fathers who adopted the pager for certain specific reasons do show that they are more likely being paged in general. More specifically, the frequency of being paged is positively related to “business”, “novel”, and “contact family” but negatively related to the reason, “contact relatives”. This model explains about 61 percent of variance. Table 9.4a shows that the four reasons are related to either materialism, or restrictiveness, or conformity oriented values.

*Money* is negatively related to the reason, “novel” but positively related to the reason,
"contact family members". Thus, money is not regarded as one of the values that affect the time of pager adoption because both the reasons contribute to an earlier pager adoption positively. Similarly, submissiveness becomes irrelevant because it is positively related to both the reasons, "novel" and "contact relatives".

Thus, we may infer that:

*the frequency of being paged is positively related to the values, stingy and material desires but negatively related to the values, jealous of other's wealth, achieving spirit, restraint, and resignation to fate.

None of the sociological variables is related to the reasons identified and frequency of being paged with statistical significance.

iii. Nature of Pager Communication

None of the values identified is related to the specific pager communication. Chapter 8 shows that while the reason, "novel" is positively associated with the frequency of being paged by clients or business partners, "contact relatives" is positively related to the frequency of being paged by the family members. The reason, "contact family members" is not related to any specific pager communication. Therefore, we may conclude that the use of the pager is rather business in nature because "contact relatives" is negatively related to the overall frequency of being paged.

In sum, the pager adoption and postadoption are father generation oriented. Probably because of its affordability, the pager adoption is predicted by personal values with respectable accuracy. That is, the time of pager adoption is achievement oriented and directly linked with intergenerational mobility. The use of the pager is positively related to materialistic values. The nature of usage is more business in nature.

5. Summary

In this Chapter, I have examined the relationship between personal values and reasons and made the necessary inferences as far as media adoption and post adoption are concerned. The inferences are compared with the findings of Chapter 7 and 8. The similarities or differences between the inferences and findings of previous chapters are often sharpened by means of revealing whether the values or reasons identified share the same sociological characteristics. Moreover, the direct relationship between the sociological variables and media adoption and postadoption is also examined. The result of examination not only facilitated the comparison mentioned above but also showed the objective characteristics of certain media. In the following, I shall list the major findings and make a brief comparison and summary. Further discussion is reserved for the next
i. Time of Media Adoption

a. Father Generation

<table>
<thead>
<tr>
<th>Personal Values &amp; Sociological Characteristics &amp; Time of Media Adoption</th>
<th>TV</th>
<th>ACR</th>
<th>Phone</th>
<th>Pager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Pay</td>
<td>+^</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intergenerational Mobility</td>
<td>+^</td>
<td>+^</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Authority &amp; Status Aspirations</td>
<td>+^</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
<td>+^</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determined to Succeed</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+^</td>
</tr>
<tr>
<td>Achieving Spirit</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Jealous of Other's Wealth</td>
<td>-</td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Material Desires</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stingy</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Frugal</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

"+^" means positive impact on the time of adoption.
"-" means negative impact on the time of adoption.
"*" means direct impact on the time of adoption.

For the father generation, Table 9.5a shows that all the media share some value orientations in common as far as the time of adoption is concerned. However, the case of television adoption is different from that of the others for television adoption is a direct function of ability to pay to some degree. The situation with the telephone adoption is also unique. The telephone adopted earlier is associated with a higher level of education but also a lower ability to pay.
b. Grandfather Generation

<table>
<thead>
<tr>
<th>Personal Values &amp; Sociological Characteristics &amp; Time of Media Adoption</th>
<th>TV</th>
<th>ACR</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Pay</td>
<td>+.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority &amp; Status Aspirations</td>
<td>+</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prudence &amp; Standing</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieving Spirit</td>
<td>-.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>-.1</td>
<td>-.1</td>
<td></td>
</tr>
<tr>
<td>Material Desires</td>
<td>+</td>
<td>-.4</td>
<td></td>
</tr>
<tr>
<td>Stingy</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money &amp; Pleasure</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td>-.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>leisure &amp; Comfort</td>
<td>-.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"+" means positive impact on the time of adoption.
"-" means negative impact on the time of adoption.
"-" means direct impact on the time of adoption.

Like the case of the father generation, television adoption is a function of the ability to pay to some degree for the grandfather generation. However, neither the ACR adoption nor the telephone adoption is related to sociological characteristics. Moreover, the time of telephone adoption is positively related to the enjoyment oriented value rather than the achievement oriented values. This is the major difference between the two generations as far as media adoption is concerned.
ii. Overall Media Use

a. Father Generation

<table>
<thead>
<tr>
<th>Personal Values &amp; Sociological Characteristics &amp; Overall Media Use</th>
<th>TV</th>
<th>ACR</th>
<th>Phone</th>
<th>Pager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Prestige</td>
<td></td>
<td>+&lt;sup&gt;+&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority &amp; Status Aspirations</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Success at the Expense of Others</td>
<td>+&lt;sup&gt;+&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determined to Succeed</td>
<td>+</td>
<td>+&lt;sup&gt;+&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieving Spirit</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Jealous of Other’s Wealth</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Material Desires</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Stingy</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money &amp; Pleasure</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td>+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frugal</td>
<td>-</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovating &amp; Spending</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restraint</td>
<td></td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Resign to Fate</td>
<td></td>
<td></td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

"+" means positive impact on the overall use.
"-" means negative impact on the overall use.
"<sup>+</sup>" means direct impact on the overall use.

The overall use of media for the father generation appears media-specific. While overall television use is more related to values that feature authority and status, the overall use of the telephone or the pager is more material oriented. As hypothesized, the overall ACR use is more enjoyment oriented. Moreover, it seems that telephone adopters who have the higher occupational prestige are more likely to make and receive local calls.
b. Grandfather Generation

Table 9.5d

<table>
<thead>
<tr>
<th>Personal Values &amp; Sociological Characteristics &amp; Overall Media Use</th>
<th>TV</th>
<th>ACR</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prudence &amp; Standing</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Material Desires</td>
<td></td>
<td>+d</td>
<td></td>
</tr>
<tr>
<td>Money &amp; Pleasure</td>
<td></td>
<td>+d</td>
<td></td>
</tr>
<tr>
<td>Spend &amp; Indulge</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Innovating &amp; Spending</td>
<td></td>
<td>+d</td>
<td></td>
</tr>
<tr>
<td>Follow &amp; Resign to Fate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being Ordinary</td>
<td></td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

"+d" means positive impact on the overall use.
"-" means negative impact on the overall use.
"_" means direct impact on the overall use.

The overall use of media for the grandfather generation is less clear than that of the father generation as far as values are concerned. In contrast to the case of the father generation, the overall of television is enjoyment oriented. This supports what I have hypothesized in chapter 2. However, while the overall use of the telephone is mixed as far as the value domains are concerned, the overall use of the ACR is negatively related to the enjoyment oriented value. Clearly, the overall use of the media differentiates the grandfathers from the fathers.

iii. Nature of Media Use

The nature of use is revealed through the linking the values or reasons that affect either the time of media adoption or overall use with the specific media use. Table 9.5e summarizes the findings.

Table 9.5e

<table>
<thead>
<tr>
<th>Nature of Media Use</th>
<th>TV</th>
<th>ACR</th>
<th>Phone</th>
<th>Pager</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>G</td>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business/Work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"F"=Father Generation
"G"=Grandfather Generation
As far as specific use is concerned, the findings basically support the hypotheses made in Chapter 2. However, telephone adopters of the grandfather generation are also more likely to use the telephone for kinship oriented communications.

In short, the brief summarization on media adoption and postadoption shows that the two generations do have their value biases towards the four media respectively. The biases are related to sociological characteristics to some extent. However, a number of findings do contradict the hypotheses made earlier. Moreover, the generational difference is obvious in terms of both media adoption and post adoption. In the next chapter, I shall interpret these findings with respect to the hypotheses inventoried in Chapter 2.
PART IV
DISCUSSION

This is the final part. Naturally, it involves discussing the findings revealed in PART III and making the necessary conclusions. The discussion is organized in terms of the hypotheses made in Chapter 2. In doing so, first I shall review the findings. Then, I shall discuss the implications of findings with respect to each medium. Finally, I compare the four media and point out some areas which need further study.
Chapter 10
Findings and Their Implications

This thesis started by arguing that there is neither a generalized innovator across product categories nor necessarily a strong correlation between the time of adoption and postadoption. While Chapter 5 shows that there is not even a generalized innovator across the four media, Chapter 4 demonstrates that the correlation between the time of adoption and postadoption is either weak or negligible or negative. That is, the four media are neither equivalent units nor adopted and implemented for the same reasons or values. Thus, it becomes plausible to investigate what is the subjective factor (reasons and values) that affect not only the time of adoption but also postadoption. However, values and reasons are related to the roles of adopters, although they are not necessarily identical. Therefore, how the roles are associated with these values or reasons are also of interest in this analysis with respect to media adoption and postadoption. This includes examining whether the sociological variables affect the time of media adoption and postadoption directly because it is entirely possible that they may have a bigger impact on the adoption decision than either the values or reasons under certain circumstances.

As discussed in Chapter 1 and Chapter 3, Shijiazhuang City was chosen for this study mainly because of the need for investigating the diffusion of an innovation while the diffusion process is still underway. In Chapter 1, I also discussed the need for studying a wider range of innovation. Therefore, this research examined the diffusion of four electronic media instead of one. Among the four media, two (telephone and pager) are still being diffused. In this chapter, I start by reviewing the findings on each medium. This includes the findings on not only the relationship between the media and (1) personal values and (2) specific reasons for media adoption and (3) sociological variables, but also the relationship between the sociological variables and (1) personal values and (2) specific reasons. The review is conducted medium by medium. Considering the relatively large number of independent and dependent variables involved in this research, I shall review here those adding significantly to the knowledge of the analytic relationship suggested in PART I. Moreover, while I may make some clarifications during the review, I shall not attempt to interpret the findings in any way. Rather, an extensive discussion immediately follows after each review. After the discussion, a comparison among the four media is made with respect to the subjective characteristics (personal values) and objective characteristics or objective advantages of media (sociological factors). Finally, I make my concluding remarks and relevant suggestions
for future research.

1. Media

1. Television

In Chapter 2, I hypothesized that the use of television was enjoyment oriented while its adoption could be identified with achievement oriented values. That is, being an earlier television adopter does not necessarily mean being a heavier user. While there is a slightly negative correlation between the time of adoption and the time spent on watching television for the father generation (\(-.18^{**}\)), there is virtually no correlation between the two variables for the grandfather generation. Moreover, the innovators of the two generations are more likely to have a higher ability to pay and to be more socially mobile. This is the background for the following illustrations.

a. Father Generation

Figure 10.1a and 10.1b briefly summarize the findings scattered through the previous chapters for the father generation.\(^6\)

As Figure 10.1a shows, the time of television adoption is linked with certain reasons, personal values, and sociological factors directly or indirectly. Chapter 5 shows that there is a negative correlation between the time of television adoption and frequency of watching

\(^6\)The figures are for the purposes of summarization and illustration only. They are not path analysis and should not be treated as one. The same is true for the remaining figures in this chapter.
entertainment oriented shows for the father generation (-.23**). The negative correlation is reflected in the negative relationship between the reason, "entertainment", and the time of television adoption. Moreover, the relationship between the time of adoption and (1) ability to pay and (2) intergenerational mobility is consistent with the characteristics of television innovators found in Chapter 6.

Figure 10.1b shows the relationship between the time spent on watching television and (1) personal values, (2) reasons and (3) sociological variables.

**Figure 10.1b**

Frugal -> .19*

Determined to Succeed -> -.23** Kids Learn English, etc. -> -.17*

Success at the Expense of Others -> .20* Time Spent On TV

Authority & Status -> .29*** Family Wanted to Have One

" → " refers to causal relation.

The overall use of television is more entertaining in nature for the father generation.

b. Grandfather Generation

As far as the time of television adoption is concerned, the relationships are summarized and illustrated by Figure 10.1c.

**Figure 10.1c**

Authority & Status -> .18*

Material Desires -> .32*** Symbol of Status -> .17*

Stingy -> -.21** Ability to Pay -> .20* Time of TV Adoption -> .16*

Thrifty & Control -> -.16* Relatives Already Had One -> -.26*** Leisure & Comforts -> .16*

" → " refers to causal relation.

While the grandfathers who value material desires are more likely to have lower education, the grandfathers who value stinginess are more likely to have higher intragenerational mobility. These characteristics are consistent with that of television innovators of grandfather generation. Thus, we are more confident about the impact of the two values on the time of television adoption.
for the grandfather generation through the necessary reasons. Moreover, like the father generation, we found out that the higher the ability to pay, the earlier the television adoption. This is also consistent with what we found in Chapter 6.

The time spent on watching television involves reasons and personal values only. Figure 10.1d illustrates the relationships.

Figure 10.1d

```
Prudence & Status  .37***                      Entertainment  .24**
                   /                           /               \
                   /                           /               \
-17* Family Wanted to have One -16* Time Spent On TV
                   /                           /               \
                   /                           /               \
-18* Money & Pleasure .15*               Being ordinary
```

"→" refers to causal relation.

As with the father generation, overall television use is more entertaining in nature.

Thus far, I have illustrated the findings on the television for the two generations. Now I shall direct my attention to their implications.

Based on the congruence approach, I hypothesized that different value orientations are associated with the different communication technologies as far as adoption and post adoption are concerned. Developed and well established in the West, television has been receiving attention for its pervasiveness. For instance, extensive research on the impact of television has been carried out for decades in the West (e.g. Gerbner, et al. 1979; Frissen 1996).

Television is relatively new in China. Like many other developing nations, China embraced the television without asking any questions. Indeed, television was rapidly diffused in urban China during the 1980s and became a textbook example of a diffusion model for successful innovations. However, how the television is diffused and used in urban China has rarely been studied. Indeed, there seems to be no empirical report on the diffusion process of television in spite of its socio-economic implications. But when an urban Chinese spent a whole year’s salary for a colour television set, he probably had more than one reason for the adoption. In Chapter 2, I hypothesized that the time of television adoption may be positively related to the reasons, “family wanted to have one”, “entertainment”, and “vanity” but negatively related to the reason, “following others”. Reasons are guided by personal values. Thus, the adoption decision could be related to values directly and indirectly. In chapter 2, I also suggest that television adoption is characterized
by achievement oriented and enjoyment oriented personal values either directly or through relevant reasons.

For the father generation, none of the personal values are directly linked with the time of adoption. Rather, their impact on the adoption decision can only be realized through either the reason, "relative already had one" or the reason, "entertainment", or the reason, "kids learn English, etc.". The reason, "relatives already had one", is somewhat negatively related to the time of adoption. Although its contribution to the time of adoption is not big, its direction supports the hypothesis. To follow one's primary group is understandable because it is suggested that the primary group often has a greater impact on one's behaviour than other groups (See Michelson 1991). However, the question is why there is a negative rather than a positive influence upon the time of adoption.

The reason, "relatives already had one" is not related to any of the sociological variables with statistical significance. In other words, although some of the fathers are more influenced by their relatives, they cannot be further identified or characterized in terms of ability to pay or education or occupational prestige or social mobility as far as television adoption is concerned. Rather, they are more likely to be influenced by their relatives because they have a lower degree of material desires but a higher degree of jealousy of other's wealth. Similarly, neither material desires nor jealousy of other's wealth is related to any of the sociological variables with statistical significance. Thus, it is reasonable to conclude that:

While a higher degree of jealousy of other's wealth is more likely to contribute to a later television adoption, a higher degree of material desires functions in the opposite direction through the reason, "relatives already had one.

The reason, "kids learn English, etc." is also negatively related to the time of television adoption. This is somewhat understandable if we take the time path into consideration. Unlike that of grandfathers, the earlier adopters among fathers more likely purchased their own television set when they got married and started their own family. This means that the adoption decision has very little to do with their children's education. When some of the fathers wanted to buy the television for their children to learn English, etc., they were already a number of years late and became the later adopters. Moreover, the fathers who wanted their children to learn English, etc. from the relevant television shows are more likely to not only be frugal but also to lack the determination to succeed. In other words, the assumption that learning oriented reasons are
positively related to achievement oriented values is incorrect.

The relationship between the reason, "kids learn English, etc." and personal values can be further clarified by the sociological variable, ability to pay. As figure 10.1a shows, ability to pay is positively related to the determination to succeed but negatively related to frugality. In addition, the fathers who have a lower ability to pay are also more likely to indicate that they adopted the television for their children to learn English, etc. Thus, it becomes understandable that the reason, "kids learn English, etc." contributes to a later television adoption. That is,

The higher degree of frugality and lower degree of determination to succeed and ability to pay, the more likely the later adoption for the reason, "kids learn English, etc."

Among the three reasons, "entertainment" makes the biggest contribution to a later television adoption decision. But its direction contradicts the hypothesis. Almost 80 percent of the television adopters indicated that "entertainment" is either exactly or very much the reason for them to adopt the television. However, the fathers who really wanted television for entertainment are more likely to have a lower ability to pay. Thus, it becomes understandable why the reason, "entertainment" is negatively related to the time of television adoption.

Indeed, as Figure 10.1a shows, the time of television adoption is a direct function to pay to some degree for the father generation. This clearly shows the objective characteristic of television. In other words, the television may be regarded as beneficial by the majority of fathers. From this point of view, it is also understandable that the time of television adoption partly depends upon intergenerational mobility.

In short, the time of television adoption for the father generation is consistent with the traditional diffusion model. That is, an earlier adoption decision depends upon the ability to pay and achievement values.

Overall television use is positively related to the reason, "family wanted to have one" but negatively related to "kids learn English, etc.". While educational reasons cannot be regarded as an achievement or accomplishment oriented motivation or need in terms of their relationship to values, they are positively related to the frequency of watching educational shows. However, as Figure 10.1b shows, although the fathers who indicated that they adopted the television for their children to learn English, etc. are more likely watch educational shows, they tend to spend less time on watching television as a whole.

In light of the relationship between the reason, "kids learn English, etc.," and personal
values illustrated above, it is reasonable to conclude that:

The fathers who value achievement oriented values such as determination to succeed more likely spend time on watching television not particularly for education purposes.

As hypothesized, the fathers who honour their family’s requests for a television set are more likely to spend time on watching television for entertainment purposes. However, the reason, “family wanted to have one” is related to authority & status aspirations rather than any of the enjoyment oriented values. That is, the fathers who value authority & status aspirations are more likely to play the role of head of family and honour their responsibility such as getting a television set for their families. This is understandable in the context of Chinese society. The family is still the heart of Chinese society (Lull 1991; Chu and Ju 1993). In urban China, it has been observed that television is considered a part of the family (Lull 1991; Chu and Ju 1993). But the question is why the achievement oriented values are positively related to the time spent on watching television through the reason, “family wanted to have one”. In fact, the competitive value, success at the expense of others, is directly and positively related to the time spent on watching television. These may be understood by analysing how the fathers spent their leisure time. Lull (1991, p.62) observes:

...in China, TV entered an environment where leisure-time options are extremely scarce, where personal mobility is profoundly limited, where there is very little ritualistic activity (little organized religion and social clubs), and where program content suddenly made the world visible to a society that had lived in near totally isolation since 1949.

Television not only is almost irresistible to the majority of urban Chinese families, but also function as a replacement of “many-media diversions” sometimes.77 Shijiazhuang city is a quiet city after dark. While a number of night clubs have been opened for the past few years, they often involve some kind of prostitution. Thus, it becomes understandable that:

A father who is achievement oriented and responsible for his family is more likely to stay home and watch television as far as entertainment is concerned. This may mean more time spent on watching television.

In short, as far as the adoption and postadoption are concerned, the television is linked with achievement oriented values for the father generation. However, it is generally desired by the fathers as a whole as far as adoption is concerned. Therefore, its diffusion is also directly related

77Lull (1991) noticed that some Chinese use television viewing as an alternative to gambling.
The grandfathers do not significantly differ from the fathers as far as the time of television adoption is concerned. As hypothesized, an earlier television adoption is considered as a symbol of status. Understandably, the adoption reason, "a symbol of status", is positively related to authority & status aspirations, material desires, and stingy. As mentioned earlier, this reflects the situation when the television was introduced to urban China in the later 1970s and earlier 1980s. Again, the point is that achievement oriented values are linked with time of television adoption. This finding is further supported by the fact that ability to pay is positively related to both the reason, "a symbol of status", and time of television adoption.

Like the father generation, the grandfathers who follow their relatives are more likely to be later adopters. However, the negative relationship between the reason, "relatives already had one" and either stingy or thrifty & control is not as hypothesized in Chapter 2. In other words, measuring up against relatives is not necessarily either conformity or restrictiveness oriented. On the contrary, the grandfathers who are less stingy and/or less thrifty & control are likely to follow their relatives. Regression analysis also shows that the grandfathers who have lower intragenerational mobility are more likely to follow their relatives as far as adopting the television is concerned. We have known that stingy is positively associated with the intragenerational mobility. That is, it seems that the sociological factor, intragenerational mobility is operating in this case. The effect is the negative relationship between the reason, "relatives already had one" and either stinginess or the time of television adoption. Therefore, we understand that the grandfathers who are stingy are more likely to have higher intragenerational mobility but are less likely to follow their relatives. The result is an earlier adoption decision. However, we cannot interpret the relationship between thrifty & control and "relatives already had one" in a similar fashion, for thrifty & control is independent of the sociological factors. Nevertheless, it seems that both stingy and thrifty & control emphasize control or discipline to some extent. Moreover, with more than 95 percent confidence, we can say that the earlier television adopters of grandfather generation do not value leisure & comforts. Thus, we may conclude that:

The time of television adoption is positively associated with achievement oriented values and the ability to pay.

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78 The standardized regression coefficient = -.23. The equation is: "Relatives had one" = .62 - .23 "intragenerational mobility". R²=.05, N=116.
While the case of time of adoption is similar to that of the father generation, the situation with the postadoption is different. As hypothesized, the reason, "entertainment" is positively related to the time spent on watching television. Contrary to what I have hypothesized, the "family wanted to have one" is negatively associated with time spent on watching television. In the earlier discussion, I explained why the reason, "family wanted to have one" is positively related to the time spent on watching television for the father generation. That explanation clearly does not account for the case of grandfather generation, and it should not.

Similar to the fathers, the grandfathers who adopted their first television for honouring their family requests are much more likely to value prudence & status rather than money & pleasure. Unlike the fathers, the majority of grandfathers surveyed are in their middle 60s and retired or nearly retired. This means entering another life stage and changing roles. Role changes are often reflected in a change of the lifestyle. In urban China, elder people tend to go to bed earlier in the evening and get up earlier in the morning and go to the parks for exercise. Such routines directly affect the amount of television one could watch because the Chinese television is still mainly an evening and night phenomenon. Probably the grandfathers who value Prudence & standing rather than money & pleasure particularly enjoy the lifestyle mentioned above because it is considered as healthy.

While there is no research to support the above interpretation, the direct and positive relationship between money & pleasure and time spent on watching television clearly shows that the overall use of television is enjoyment oriented rather than achievement oriented. Indeed, as Figure 10.1d shows, money & pleasure is directly related to both the time spent on watching television and "family wanted to have". Overall, it is clear that:

The grandfathers who spend more time on television are more likely to be enjoyment oriented. However, they do not necessarily value being ordinary.

In sum, two findings seem particular salient. The first is that the two generations only differ significantly from each other in terms of overall television use. The difference may reflect the cohort or age effects. The second is that although the heavier television viewers of the two generations are either achievement oriented (fathers) or enjoyment oriented (grandfathers), they do not necessarily have lower education, lower mobility, lower aspirations, etc.. This is very

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79 There is virtually no research found in this area as far as elder people in mainland China is concerned.
different from the findings in the West. It implies that television could be a different thing in different societies.

II. Audio Cassette Recorder/Player

Similar to the case of television, I also hypothesized that the ACR was an enjoyment oriented media as far as its postadoption was concerned. However, its adoption would not be family oriented. Moreover, I hypothesized that achievement oriented values positively affect the time of ACR adoption.

There is no relationship between the time of ACR adoption and overall ACR use for the two generations. The ACR innovators of two generations are more likely to have a higher ability to pay, higher education, and greater social participation. In this section, I shall first illustrate what is the factor that affects the time of ACR adoption and degree of ACR use respectively.

a. Father Generation

Figure 10.2a and 10.2b summarize and illustrate the findings of previous chapters for the father generation.

```
Figure 10.2a

Jealous of Other's Wealth → Broaden Horizon

Authority & Status Aspirations

Frugal

Kids learn English, etc.

Family Wanted

Intergenerational Mobility

Time of ACR Adoption
```

As mentioned in Chapter 8, probably because the ACR is more affordable than the television, the time of adoption is not really a function of an ability to pay. Rather, it mainly depends upon some specific reasons. In contrast to the case of television, the reasons identified cannot be always classified in terms of personal values. Nevertheless, the three personal values, authority & status, jealous of other's wealth, and frugal, are particular salient in terms of affecting the reasons for the television adoption.

Figure 10.2b is about overall ACR use for the father generation.
Among the three personal values, only money & pleasure is somewhat negatively correlated to education (-.15*), ability to pay (-.18*), occupational prestige (-.16*), and intragenerational mobility (-.20**). While the correlations suggest that heavier ACR users may have lower socio-economic status and social mobility, it is important to note that the correlations are rather weak.

The nature of overall ACR use is enjoyment oriented.

b. Grandfather Generation

Figure 10.2c and 10.2d summarize and illustrate the findings for the grandfather generation.
The overall use of the ACR is more likely to be enjoyment oriented for the grandfather generation. Thus far, I have briefly summarized and illustrated the findings on the ACR for the two generations. While some of the findings are similar to that of television, they differ in a number of ways. Now, I shall discuss the findings.

Both the television and ACR began to be diffused in the later 1970s. I have pointed out that the earlier adopters of television belong to the grandfather generation during the 1970s because the fathers were still too young to have their own television sets back then. However, the situation with the ACR diffusion is different. The ACR was not only a novelty to the public but also more affordable when it was diffused. As I shall explain later, it was favoured by the father generation probably because of its novelty and affordability to some extent. For the father generation, the time of ACR adoption is directly and positively related to authority and status aspirations and intergenerational mobility. This is as hypothesized and consistent with Bourdieu’s notion of distinction. That is, the earlier ACR adopters more likely use the ACR as a status identity. This is similar to the case of television for the grandfather generation.

The negative relationship between the reason, “family wanted to have one” and time of ACR adoption shows that the ACR adoption is an individual behaviour. In the 1970s, the majority of fathers were still in their earlier twenties and less likely had their own family. That is, unlike the television, the ACR is relatively affordable and shows personal rather than group (family) identity. Therefore, the earlier ACR adopters of father generation are able to purchase the ACR for either the reason, “novel” and/or the reason, “broaden horizons”. While the reason, “broaden horizons” is positively related to jealousy of other’s wealth, the reason, “novel” is positively associated with authority & status aspirations. As Figure 10.2a shows, it seems that the fathers who have higher intergenerational mobility are also more likely to be earlier adopters. That is,

The time of ACR adoption is directly or indirectly characterized with achievement values and intergenerational mobility.

Like the case of television, the fathers who are frugal more likely to indicate the reason, “kids learn English, etc. as far as the ACR adoption is concerned. The reason, “kids learn English, etc.” affects the time of ACR adoption negatively. As just mentioned above, the diffusion of the ACR among the fathers started in the late 1970s. In other words, the earlier ACR adoption decisions should not be a function of “kids learn English, etc.” because the earlier father adopters might be still single during that period of time. On the other hand, when the fathers who were frugal and wanted to adopted the ACR for their children to learn English, etc., they were more
likely in their 30s and already in the category of late adopters. However, the positive relationship between frugal and “kids learn English, etc.” is inconsistent with what I have hypothesized. Chu and Ju (1993) found that there were exceptionally high aspirations for children’s education among the parents in China. However, this survey has consistently revealed that achievement oriented reasons such as “kids learn English, etc.” are not rooted in the achievement oriented values. Rather, we have consistently found that it is rooted in the restrictiveness oriented value, frugality. Indeed, it is intuitive that being frugal should not lead to an earlier adoption decision. And it does not in terms of the ACR and television adoption.

Neither the values nor the reasons that are related to the time of ACR adoption are associated with the frequency of overall use. The nature of overall ACR use is rather clear. Just as hypothesized, the frequency of overall use is positively related to the reason, “entertainment”. Accordingly, this particular reason is rooted in the enjoyment oriented values such as innovating & spending, spend & indulge, and money & pleasure. Thus, we conclude that:

The overall use of the ACR is enjoyment oriented.

In sum, while ACR adoption is characterized with achievement oriented values, its postadoption is associated with enjoyment oriented values. Unlike the television, the ACR is identified with individual fathers rather than families. Probably because of its affordability, the time of ACR adoption is not a function of the ability to pay.

Compared with the father generation, the number of grandfathers who adopted the ACR is much fewer. As mentioned in Chapter 8, only 134 grandfathers bought the ACR while 223 fathers did so. The difference between the two generations is probably due to the fact that the ACR by nature is biased towards the younger generation. Lull (1991, p.131) observes that “the most common delivery system for pop music in China - the audio cassette recorder/playback unit - has become an extremely important piece of cultural equipment.” In a sense, pop music means modernness and is youth centred. Thus, it becomes understandable that the ACR is more favoured by the father generation.

For the grandfathers who did purchase the ACR, the two reasons, “novel” and “relatives already had one” are the factors that affect the adoption decision. While “novelty” is positively related to the time of adoption, the reason, “relatives already had one” functions in the opposite direction. The findings are consistent with what I have hypothesized in Chapter 2.

While the grandfathers who value success at the expense of others and prudence & standing
are more likely to perceive the ACR as novel, the grandfathers who have a higher achieving spirit are less likely to do so. The three values, success at the expense of others, prudence & standing, and achieving spirit belong to the same value domain. However, success at the expense of others and prudence & standing provide much more specific guidance for behaviour than achieving spirit does. As mentioned, one does not need to pay big money to own an ACR. Therefore, it is not imprudent for a grandfather to have something affordable and novel especially because he thinks that owning something novel may improve his “standing”. Moreover, success at the expense of others is a very self-centred value. A selfish nature seems to match with the individualistic characteristic of the ACR. Thus, it is understandable that the grandfathers who value success at the expense of others are more likely to adopt an ACR earlier for the reason, “novelist”.

But achieving spirit is not only directly and negatively related to the time of ACR adoption but also indirectly and negatively related to the time of ACR adoption through the reason, “novelist”. How could this be? Achieving spirit is mainly derived from two items, (1) “I always want to be successful” and (2) “achieving greater success than my peers is important to me”. That is, achieving spirit is more career oriented. A career oriented grandfather may be much less likely to pay attention to novelties such as the ACR. The consequence is a later adoption decision. The implication is that not all the achievement values function in the same direction for they emphasize different goals.

Similarly, the ACR is not regarded as an appropriate medium to realize either materialistic goals or an enjoyment oriented life either. Rather, the opposite is true. Like the case of television, the grandfathers who measure up against their relatives are more likely to be the later adopters. The reason, “relatives already had one” is negatively related to the time of ACR adoption but positively associated with spend & indulge and money. While it is understandable that money is negatively related to the time of ACR adoption through the reason, “relatives already had one” because the ACR may not be a good tool to increase one’s wealth or money, it is difficult to explain why spend & indulge is negatively related to the time of ACR adoption for the grandfather generation. Spend & indulge is directly and indirectly (through the reason, “relatives had one”) related to the time of ACR adoption. This negative relation suggests that the grandfathers who value spend & indulge are more likely to follow their relatives but less likely to be the earlier ACR adopters. As discussed earlier, the ACR adoption is sensitive to specific personal values rather than value domains. Therefore, we are able to identify that the ACR is not “career related” or
“money related” at its earlier stage of diffusion. Rather, the earlier adopters use the ACR to indicate status (standing) or satisfy personal needs for showing off (competition). Similarly, it seems that the ACR is not regarded as a proper medium for *spending & indulgence*. Therefore, when the grandfathers who value *spend & indulge* purchased the ACR, they already became the later adopters.

In short, probably because the ACR is a less significant medium than television, it is characterized with very specific personal values. In other words, personal values that share the same domain may function in the opposite direction when they are linked with media such as the ACR. More specifically,

> While the earlier ACR adoption for the grandfather generation is characterized with status and self-centred values, later adoption is identified with achievement, enjoyment, and materialistic values.

The use of the ACR for the grandfather generation seems random to a large degree. While ‘kids learn English, etc.” is the only reason that is related to the frequency of overall use, *spend & indulge* is the only personal value that is directly associated with the frequency of overall ACR use. Both of the relationships are negative. Similar to the case of television for the father generation, the grandfathers who are *frugal* are more likely to adopt the ACR for their children to learn English, etc. but use the ACR less frequently as a whole. Moreover, the grandfathers who hold the value, *spend & indulge*, also use the ACR less frequently. This contradicts the hypothesis. There is no easy explanation on the negative relationship between the value, *spend & indulge* and frequency of overall ACR use. Probably the ACR is simply a wrong medium for indulgence. In other words, the grandfathers who value *spend & indulge* are probably occupied by other activities as far as their time budgets are concerned. After all, how much a grandfather could be indulged by an ACR. Moreover, as mentioned earlier, the ACR belongs to the younger people to some degree as far as its adoption and use are concerned. Therefore, although more than one hundred grandfathers adopted the ACR, they did not necessarily use it in any regular way. In other words:

> The use of the ACR is somewhat random for the grandfather generation with two exceptions. The grandfathers who either value *spend & indulge* or indicate that they bought the ACR for their children to learn English use the ACR less frequently.

In sum, for the two generations, the earlier ACR adoption is associated with status and competitiveness oriented values. However, the use of the ACR differentiates the two generations. While the overall use of the ACR is enjoyment oriented for the father generation, it is somewhat
random for the grandfather generation. Nevertheless, the grandfathers who either value *spend & indulge* or indicate that they bought the ACR for their children to learn English use the ACR less frequently.

But the examination of time of ACR adoption for the grandfather generation enables us to realize that we need be careful about the level of value orientation employed. For instance, the achievement oriented value, *achieving spirit* is at odds with *prudence & standing* and *success at the expense* of others as far as the time of ACR adoption for the grandfather generation is concerned. In this case, it seems that affordability affects the grandfathers' sensitivity to their value orientations and individualities while it comes to the ACR adoption.

### III. Telephone

In Chapter 2, I hypothesized that (1) the time of telephone adoption is positively related to business related reasons and/or vanity related reasons but negatively related to kin and/or social reasons; (2) different reasons lead to different telephone usage. As far as personal values are concerned, it is hypothesized that achievement oriented values either directly or indirectly (e.g. through the necessary reasons) affect the time of telephone adoption and use positively while the other kinds of values either negatively related to or independent of the time of telephone adoption and usage. That is, it is hypothesized that the telephone is characterized by achievement oriented values as far as its adoption and postadoption is concerned. Indeed, the telephone innovators of the two generations are more likely to have higher education, to be more socially mobile, and to have greater social participation.

Unlike the other three media, there is a statistically significant and definite correlation between the time of telephone adoption and frequency of overall local calls for the father generation (.38**). While the time of telephone adoption is not related to the frequency of overall local calls, it is negatively related to kinship oriented telephone communications for the grandfather generation (-.25*).
a. Father Generation

Figure 10.3a and 10.3b summarize and illustrate the findings for the father generation.

**Figure 10.3a**

- **Determined to Succeed** → Work
- **Achieving Spirit** → Work
- **Frugal** → Work
- **Success at the Expense of Others** → Work
- **Authority & Status Aspirations** → Work
- **Spend & Indulge** → Work

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Determined to Succeed  -23*
Achieving Spirit       -44***
Frugal                -31**
Success at the Expense of Others -28**
Authority & Status Aspirations -28**
Spend & Indulge        -22*
```

**→** refers to causal relation.

The overall use of television is illustrated in Figure 10.3b.

**Figure 10.3b**

- **Material Desires** → Business
- **Frugal** → Business
- **Determined to Succeed** → Business
- **Achieving Spirit** → Business
- **Spend & Indulge** → Business

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Material Desires       -41***
Frugal                -24*
Determined to Succeed -21*
Achieving Spirit       -23*
Spend & Indulge        -21*
```

**→** refers to causal relation.

b. Grandfather Generation

Figure 10.3c and 10.3d summarize and illustrate the findings for grandfathers.

**Figure 10.3c**

- **Authority & Status Aspirations** → Contact Family Members
- **Money & Pleasure** → Contact Family Members
- **Money** → Contact Family Members
- **Material Desires** → Contact Family Members

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Authority & Status Aspirations -36**
Money & Pleasure               -39**
Money                           -30*
Material Desires               -35*
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**→** refers to causal relation.

Figure 10.3d shows the findings on the frequency of local calls for the grandfather
Figure 10.3d

Prudence & Standing → Fashionable
Resign to Fate → Material Desires → Frequency of Overall Local Calls
Innovating & Spending

"→" refers to causal relation.

Now, I discuss the above findings.

For the father generation, five factors directly affect the time of telephone adoption. In contrast to the case of television, the earlier telephone adoption is characterized with a lower ability to pay and higher education. Accordingly, it is argued that the time of telephone adoption depends upon how it fits in with the goals or needs of its adopters. Besides the ability to pay and education, two reasons and one personal value are also identified for they directly affect the time of telephone adoption.

As far as reasons are concerned, the time of telephone adoption is positively related to "work" but negatively related to "family wanted to have one". It is quite understandable that "work" is rooted in the achievement oriented values, determined to succeed and achieving spirit. As discussed earlier, achieving spirit is somewhat career oriented. Therefore, it is positively related to "work". Similarly, if a father is determined to succeed in his career, the telephone may be a good investment for his work. Indeed, the telephone was also job-related in its earlier stage of diffusion in the United States (Fischer 1992). Although frugality is not part of the achievement oriented value domain, it suggests self-control or discipline. In other words, it is possible that being frugal is an important quality for the fathers who emphasize "work" when it comes to the telephone adoption.

While the earlier telephone adopters who want to be successful subscribed to the telephone for work, the later adopters who value authority & status aspirations and spending & indulging did it to honour their families' requests. Indeed, the reason, "family wanted to have one", is positively related to authority & status aspirations and spend & indulge but negatively related to success at the expense of others. It is relatively easy to understand that a head of family, who

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80Here, "later adopters" is a very relative term for the diffusion of the telephone is still underway in urban China.
values authority & status aspirations, is more likely to honour his family's request for a telephone. However, it is difficult to explain why spending & indulging has to be linked with the reason, “family wanted to have one” as far as the telephone adoption is concerned. It is true that the telephone is not the medium that possesses delivery - enjoinderment (indulgence) oriented services. But, although the value, spend & indulge, suggests that one should live for today, it does not mean that one should give up his family responsibility. Therefore, the fathers who value spend & indulge are more likely to be the later adopters for the only reason that they subscribed to the telephone at their families' requests.

But the fathers who value success at the expense of others are different. As discussed earlier, success at the expense of others is a very self-centred value. Therefore, it is understandable that it is negatively related to the reason, 'family wanted to have one”. However, it is directly and positively related to the time of telephone adoption. Thus, as far as the time of telephone adoption is concerned, we may conclude that:

*The earlier telephone adopters of father generation have a higher education but a lower ability to pay;

*While the values, determined to succeed, achieving spirit, and frugal, are positively related to the time of adoption through the reason, “work”, the values, authority & status aspirations and spending & indulgence are negatively related to the time of telephone adoption through the reason, “family wanted to have one”;

*The fathers who value success at the expense of others are more likely to be the earlier adopters.

In short, the earlier telephone adoption for the father generation is characterized with achievement, success, and frugality. However, achievement or success does not refer to authority or status. In fact, the earlier adopters are very insensitive to authority & status aspiration. Rather, they emphasize work and success at the expense of others.

The overall use of the telephone for the father generation is directly affected by:

**“business”**,  
* “a symbol of success”,  
* determination to succeed, and  
* occupational prestige.

The economic value of the telephone has been recognized across societies (Saunders 1983; Fischer 1992). Thus, the fathers who have higher material desires and are determined to succeed and frugal are more likely to subscribe to the telephone for their business. In turn, the reason,
“business” affects the frequency of overall local calls positively.

But the heavier telephone users do not make or receive local calls for the purpose of showing off. The adoption reason, “a symbol of success” is negatively related to the frequency of overall local phone calls. The fathers who value an achieving spirit and spending & indulgence are more likely to indicate that they adopted the telephone for the reason, “a symbol of success”. However, the fathers who adopted the telephone for that reason are much less likely to make or receive local phone calls. In chapter 8, we have established that the nature of the telephone is rather business and utility oriented. Naturally, this implies that the degree of the telephone use would be negatively related to the vanity oriented reason, “a symbol for success”. Accordingly, the fathers who value spending & indulgence and an achieving spirit are more likely to adopt the telephone for symbolic reasons but are less likely to make or receive local calls.

However, the question why an achieving spirit and spending & indulgence are positively related to the telephone adoption reason, “a symbol of success” remains unanswered. While it is understandable that the fathers who want to be successful would regard the telephone adoption as a symbol of success, it is hard to interpret the relationship between spending & indulgence and “a symbol for success”. Nevertheless, indulgence may have more than one dimension. In other words, spending & indulgence (indulgence in pleasure or enjoyment of the present or living for today) may include seeking pleasure from the fact that the telephone can be used as “a symbol of success”. Indeed, achievement and hedonism both express self-centredness. The point is, to adopt the telephone for symbolic purposes is one thing. To use it for that reason is quite another. While the telephone adoption may provide some sense of achievement or pleasure, the telephone usage could not do the same. Therefore, the fathers who value spending & indulgence and an achieving spirit less likely use the telephone to make or receive local calls for they adopted the telephone for symbolic reason. In short,

for the fathers, the use of the telephone is a business rather than symbolic behaviour in today’s Shijiazhuang city. Accordingly, the fathers who have higher degree of determination to succeed, material desires, and frugality but lower degree of achieving spirit and spend & indulge are more likely to use the telephone to make or receive local calls.

In sum, although the reasons for the telephone adoption are different from that of use, personal values are overlapped to some degree. For instance, while determination to succeed and frugality are positively related to the time of adoption and overall use directly or indirectly, spending & indulgence is negatively related to both the time of telephone adoption and overall use.
indirectly. This is consistent with the positive correlation between the time of adoption and overall use. The difference is that the time of adoption is more a work-related action and associated with higher education while overall use is more entrepreneur oriented and features occupational prestige.

Contrary to the case of father generation, the earlier telephone adopters of the grandfather generation do not subscribe to the telephone for achievement purposes. More specifically, the time of telephone adoption is negatively related to money, material desires, and “contact family members” but positively related to the reason, “novel”. It is clear that the earlier adopters of the grandfather generation did not subscribe to the telephone for material gains. It is true that the economic reform in China has provided many economic opportunities. However, as discussed earlier, the majority of grandfathers are in their middle-60s. Although it is possible, it is difficult to expect a retired grandfather to join economic ventures. In other words, the parameter is set by age.

The earlier telephone adopters of the grandfather generation did not subscribe to the telephone for contacting their family members either. This is as hypothesized in Chapter 2. Indeed, in terms of the size of beta, it is much more likely that a grandfather would be a later adopter if he adopted the telephone for keeping contact with his family members. This is possible because the telephone may not be an appropriate medium for the grandfathers to keep contact with his family members. Dordick (1983) observes that the telephone is an egalitarian technology and a very important part of horizontal communication systems. But a grandfather is usually on the top of family hierarchy in China. In other words, his relationship with the other family members is vertical. Hence, we understand that there is a negative relationship between the reason, “contact family members” and the time of adoption. This can be further illustrated by identifying with what the values the reason, “contact family” is associated.

The relationship between the value, authority & status aspirations and “contact family members” shows that the grandfathers who value authority & status aspirations are more likely to indicate that they adopted the telephone for contacting their family members. Therefore, they are more likely to be the later adopters. But why is the value, authority & status aspirations positively related to that of “contacting family members”?

For the grandfathers, authority & status aspirations are mainly extracted from the following items:

* want to be recognized
* achievements highly regarded
*enjoy authority over others
*like to give orders

The above four items are inherently relational and vertical. For the retired grandfathers who wanted to keep authority over others (e.g. give orders), probably the only objective left is their family members. Thus, we understand that there is a positive relationship between authority & status aspirations and “contact family members”. Accordingly, it becomes understandable that a grandfather who values authority & status aspirations is less likely use the egalitarian technology (telephone) for keeping contact with his family members.

While the grandfathers who value materialism or want to keep contact with their family members are more likely to be the later adopters, the grandfathers who regard the telephone as a novelty are more likely to be the earlier adopters. This is consistent with what I have hypothesized in Chapter 2. But why were the grandfathers able to adopt the telephone for its novelty?\(^1\) The answer is that the grandfathers who indicated the adoption reason, “novelty”, are more likely to have a strong enjoyment oriented value, money & pleasure. In other words, the grandfathers who value money & pleasure feel it pleasurable to adopt the telephone because it is novel.

In short, the earlier adopters of the grandfather generation are very different from those of father generation. The difference is due to the effect of age.

But the difference becomes smaller when it comes to the frequency of overall local telephone calls. Similarly in the case of the father generation, the grandfathers who adopted the telephone for being fashionable are much less likely to make or receive local calls. Moreover, while the value, material desires is positively but indirectly related to the frequency of making and receiving local calls for the father generation, it is directly and positively related to the frequency of local calls for the grandfather generation. For the grandfather generation, material desires is also directly related to the frequency of calling clients. Therefore, the nature of overall telephone use is business oriented to some degree. These are consistent with what I have hypothesized.

The heavier telephone user of grandfather generation is much less likely to adopt the telephone for it is “fashionable”. The negative relationship can be further illustrated by the values for which the reason, “fashionable”, is invoked. It is understandable that the reason, “fashionable”, is positively related to the value, prudence & standing because “standing” connotes competition

\(^1\)Unlike the ACR case, the telephone subscription is still very costly. On the average, it costs about 5 months' family income for the grandfather generation.
for higher social positions. But, *following & resignation to fate* also affects the reason, "fashionable", positively. In terms of the factor analysis, the reason, "fashionable" does not belong to the *vanity* dimension. Rather, it shares the dimension of *following others* with items such as, "relatives already had one," "friends already had one," and "high profile people already had one." Thus, it becomes understandable that the grandfathers who value *following & resignation to fate* are more likely to be identified with the reason, "fashionable". That is, the fathers who value *prudence & standing* and *following & resignation to fate* much less frequently use the telephone because the purpose of telephone adoption is to be fashionable.

Unlike the case of father generation, the grandfathers who value *innovating & spending* are also likely to make and receive more local telephone calls. While "innovating" refers to liking to try new things, "spending" means getting pleasure from buying things. In other words, *innovating & spending* is action oriented. The point is that activities such as attempting new things or shopping can be facilitated by the telephone. In Chapter 7, we noted that the grandfathers who value *innovating & spending* are more likely to call their relatives. Thus, we understand that while the overall use of the telephone is positively related to *innovating & spending*, the nature of use is kinship oriented. In short,

the overall use of telephone features material desires and *innovating and spending*. The nature of overall use is both business and kinship oriented.

In sum, I have interpreted the relationships on the telephone as far as adoption and postadoption are concerned. The discussion leads to a conclusion that the characteristics of the telephone have to be generation specific. In terms of both the telephone adoption and postadoption, the findings for the father generation support the hypothesis on the whole. That is, the telephone is congruent with achievement oriented values. In other words, the fathers who adopted the technology earlier and used it more frequently are driven by *material desires*, *determination to succeed*, and self-centred values despite the fact that they had a lower ability to pay when they subscribed to the service.

But the grandfathers demonstrated very different values as far as the telephone adoption and postadoption are concerned. In other words, the findings for the grandfathers are not very consistent with what I have hypothesized in Chapter 2. The earlier grandfather adopters more likely to show the enjoyment oriented value, *money & pleasure* than materialism oriented values. Although the grandfathers who have higher *material desires* are more likely to make and receive local phone calls, they are not the only grandfathers who use the telephone more frequently for
local calls. The grandfathers who value *innovating & spending* also make and receive local calls more frequently. While the grandfathers are by no means passive as far as the telephone adoption and use are concerned, they do not focus on business oriented communications only. What this implies is that the nature of the telephone cannot be regarded as a constant. The two generations perceive and characterize the medium differently due to the age difference. In other words, people in different life cycles perceive and use a medium differently due to role changes. That is, the age sets the parameters as far as the telephone adoption and postadoption are concerned.

**IV. Pager**

Just as we can parallel the ACR with the television somewhat, it is easy to see the similarities between the pager and telephone. Therefore, I hypothesized that the pager is characterized by achievement oriented values either directly or indirectly (i.e. through the reasons). Indeed, the pager innovators show higher occupational prestige, younger age, more socially mobility, favourable attitude toward risks, and greater social participation. Chapter 5 showed that the correlation between the time of pager adoption and overall use is not statistically significant. I shall review and discuss how adoption and postadoption are related to the personal values, reasons, and sociological variables respectively in the following section.

Figure 10.4a and 10.4b briefly summarize and illustrate the findings for the father generation.

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**Figure 10.4a**

- **Stingy** → **Business**
  - .46**
- **Money** → **Business**
  - .36*
- **Determined to Succeed** → **Intergenerational Mobility**
  - .36*
- **Intergenerational Mobility** → **Time of Pager Adoption**
  - .38*
- **Success at the Expense of Others** → **Time of Pager Adoption**
  - -.32*
- **Jealous of Other's Wealth** → **Fashionable**
  - .36*
- **Frugal** → **Business**
  - -.48*

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"→ " refers to causal relation.
Figure 10.4b shows the findings on the frequency of being paged.

Figure 10.4b

Stingy → .46** Business
Material Desires → .33* Novel
Jealous of Other's Wealth → .32* Frequency of Being Paged
Resign to Fate → .38* Contact Family
Achieving Spirit → .42** Contact Relatives
Restraint → .36* Contact Relatives

"→" refers to causal relation.

As mentioned before, the pager adoption only belongs to the father generation in Shijiazhuang City. This very fact suggests the significance of age as a factor that affects the diffusion of the pager. In other words, it is reasonable to say that the pager is not congruent with the needs or lifestyle of grandfathers.

As figure 10.4a shows, the earlier pager adopters subscribed the service for either their business or being fashionable. This is consistent with what I have hypothesized in Chapter 2. Like the case of the telephone, the earlier adopters value success. Indeed, the earlier pager adopters do have higher intergenerational mobility. However, they do not value success at the expense of others. Moreover, the positive relationship between the reason, "business" and stinginess and money further illustrates that some of the earlier pager adopters especially concern success in materialistic terms. As far as being fashionable is concerned, probably because the pager is the most inexpensive medium among the four media, some of the earlier adopters could afford to subscribe to the service for being fashionable. However, the relationship between the reason, 'fashionable' and jealous of other's wealth and frugality shows that the fathers who are jealousy of other's wealth and less frugality are more likely to adopt the pager as it is fashionable. Although the relationship is not exactly as hypothesized, it makes sense. In short,

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82 On the average, it costs 2.76 months' family income.
The pager is mainly identified with achievement oriented values. Unlike the case of the telephone, the earlier adopters are less likely to value success at the expense of others. Rather, they are materialistic and jealous of other’s wealth.

The use of the pager is somewhat consistent with the time of adoption as far as the values and reasons are concerned. As figure 10.4b shows, the fathers who subscribed to the pager service for reasons of “business”, “novelty”, and “contacting family” are paged more frequently. However, the fathers who adopted the pager in order to keep contact with their relatives are paged less frequently. While the fathers who have higher material desires are more likely to indicate the adoption reason, “novel”, the fathers who are stingy are more likely give to the adoption reason, “business”. Both “business” and “novelty” are related to the overall frequency of being paged as well as the frequency of being paged by either clients or business partners or both. Thus, the overall use of the pager is identified with materialistic values.

While “contacting family” is positively related to the frequency of being paged, it is not related to any specific pager contact. What we know is that the fathers who value jealousy of other’s wealth, an achieving spirit, and resignation to fate are much less likely to adopt the pager for keeping contact with their family members. However, the two achievement oriented values, jealousy of others’ wealth and an achieving spirit contradict the value, resignation to fate. This is not what I have hypothesized. The conflict value profile does not yield much useful information as far as interpreting the relationships is concerned. Nevertheless, it tells us that the fathers who either value jealousy of other’s wealth or an achieving spirit or resignation to fate are less likely to adopt the pager for keeping contact with their family members. Although we are not clear who are the ones that are more likely to adopt the pager for keeping contact with their family members, we are more positive about who are the ones that are more likely to indicate the adoption reason, “contact relatives”.

The fathers who value restraint are more likely to indicate that they adopted the pager for keeping contact with their relatives. In turn, “contacting relatives” is negatively related to the frequency of being paged. Moreover, “contact relatives” is positively related to the frequency of being paged by family members. Restraint is derived from (1) “human desires have to be controlled” and (2) “I say ‘I cannot afford it’ whether I can or not”. That is, the value, restraint is at odds with either stinginess or material desires. The point is, the fathers who are restrained are less likely to be paged because they are more likely to adopt the pager in order to contact their
relative. Therefore, the overall use of the pager is characterized with materialistic oriented achieving values. The nature of use is materialistic rather than kin oriented.

In sum, in spite of the similarities between the pager and telephone, the pager is more materialism oriented than the telephone as far as their relationship with the personal values is concerned.

To this point, I have interpreted the relationships on the four media respectively. While the nature of each medium was illustrated to some degree, not all the relationships have emerged as hypothesized in Chapter 2. In fact, some of the relationships even contradict what I have hypothesized. Moreover, subjective characteristics of media illustrated through values and reasons are sometimes restrained by sociological factors. In the next two sections, I shall compare the subjective characteristics of media and discuss the impact of sociological variables.

2. "Subjective Nature" of Media

As reviewed in Chapter 1, innovations usually have subjective characteristics that are "adopter-dependent" as well as objective characteristics that are "adopter-independent" (See Downs and Mohr 1976; Susskind and Zybrow 1978). While the former refers to those innovations that are perceived and used differently due to the subjective characteristics of adopters, the later are qualities of the innovation itself. This section focuses on the former and tries to answer the main research question:

Whether we could differentiate the electronic media by revealing how each medium is connected to its adopters in terms of personal value orientations.

The answer is yes but only to certain degree. The four media can be differentiated to some degree because each medium is unique in terms of its relations to personal values. I shall make the necessary comparison in terms of that uniqueness. But while the four media do show their uniqueness respectively, they differ in degrees. In other words, it is necessary to note that the media cannot be fully classified in terms of their subjective characteristics.

In order to compare the four media in terms of the personal values with which they are associated directly or indirectly, I first briefly illustrate the values identified for the two generations in this study.
In the beginning of this thesis, I cited Downs and Mohr's (1976, p.709) argument that "operationalizing innovation by the extent of implementation comes closer to capturing the variations in behaviour that we really want to explain." As Table 10.1 shows, this seems the case for the father generation. While the adoption of four media is identified by similar values, overall media use is characterized by personal values with significant variation. More specifically, although the values vary across the four media to some extent as far as the time of media adoption is concerned, they do not differ fundamentally. For instance, while jealousy of other’s wealth is part of materialism oriented values, the self-centred value, success at the expense of others is competitive in nature. That is, the value variation across the four media is not as significant as I have hypothesized in Chapter 2 as far as the time of adoption is concerned.

But the overall media use shows some significant differences. In order to illustrate these differences, four ideal types are constructed for the two generations respectively. For the father generation, how the adopters use a medium depends upon their social psychological characteristics.

a. Television

A middle-aged father will be more likely to spend time on watching television if he is more concerned with his family but is less interested in his child’s foreign language learning. To him, television is probably the focal point of his family life (cf. Chu and Ju 1993). As a father, he emphasizes authority and status and shows strong competitiveness. He is not frugal either. However, although he emphasizes status and competitiveness, he is actually less likely to watch educational TV shows. In fact, he could be rather self-centred and favours entertainment shows such as popular music. Nevertheless, he is not identified with the Western syndrome of heavy television users, which include lower education, lower mobility, and lower aspirations, higher
anxieties, and bad work situations (cf. Gerbner, et al. 1979; Frissen 1996). Indeed, regardless of economic reform in China, the majority of the labour force in Shijiazhuang City still enjoyed certain degree of job security and a less demanding working environment when I was conducting the survey in the summer of 1996. Moreover, the lack of leisure-time alternatives in the city may also contribute to the fact that the heavy television viewers are different from the Western ones. Lull (1991, p.64) observes that what used to be a common routine with three major activities (work, eat, sleep) now has four basic features (work, eat, watch TV, sleep) in urban China.

b. Audio Cassette Recorder/Player (ACR)

A father will more frequently use the ACR in general and listen to or record entertainment shows in particular if he adopts it for the reason, "entertainment". Like the case of television, he does not use the ACR for learning or any other achievement oriented purposes. Rather, he more likely emphasizes innovating & spending, spending & indulging, and money & pleasure. However, he cannot be identified in terms of social-economic status and social mobility.

c. Telephone

If a father is business oriented and determined to succeed, he will more likely use the telephone in general. He will be also more likely to call his classmates, colleagues, and friends for business and/or utility oriented purposes rather than any other kinds of reasons such as showing off. Indeed, a father who uses the telephone more frequently is much less likely to regard the telephone as a symbol of success. Rather, he is more likely to be frugal and have strong material desires. That is, if a father who (1) is frugal and pragmatic, (2) has strong material desires, (3) tends to communicate with his classmates, colleagues, and friends for business or utility purposes, he will be more likely a heavy telephone user. The heavy telephone users fit the image of the entrepreneur well. Probably because of the economic reform in China, entrepreneurs or owners of private enterprises enjoy high ratings of occupational prestige in Shijiazhuang City. The point is, they are the ones who are more likely to use the telephone.

What distinguishes the telephone from the other three media is not only that the heavy telephone users of the father generation are entrepreneur oriented but also that the earlier telephone adopters are more likely to value success at the expense of others. That is, fathers who value success at the expense of others are also more likely to value the telephone. But, why does telephone diffusion have to be linked with self-centred values? Indeed, the diffusion of the telephone is a consequence of the economic reform in China. However, “the economic policies
of the eighties, promoted by pragmatic considerations, violated basic tenets and challenged the fundamentals of communist ideology" (Kwong 1997, p.117). In fact, Kwong (1997) observes that just as the commitment to collective interest under classical socialism had encouraged false reporting and organizational corruption, the new materialistic political culture and the weakening moral restraints under reform socialism had inadvertently provided new pressure and incentives for more varied kinds of corruption. It seems that it is relatively easy for the fathers who value success at the expense of others to move from the “fundamentals of communist ideology” to market competition for personal gains. While who really benefits from the changes in China is an open and empirical question, it is not surprising to find that some of the people who did well during Mao’s years became new millionaires in Deng’s era. In a rare TV interview, a TV reporter asked a radical former Maoist how he got rich so fast. “Just listen to and follow our communist party,” the former Maoist and new millionaire replied. “You see,” the new millionaire explains, “when Chairman Mao and the party asked me to rebel during the cultural revolution, I did exactly what Chairman Mao expected me to do and I got promoted. Now our paramount leader Deng and the party wanted me to get rich, I responded to his call and became a millionaire”. While it is difficult to explain the new millionaire’s success without making the necessary linkage with the value, success at the expense of others, it is equally clear that the time of telephone diffusion is positively related to the fathers who value success at the expense of others.

d. Pager

In contrast to the case of the telephone, a father who values success at the expense of others is more likely to be the later adopter. Rather, an earlier father adopter is more likely to believe that having a pager is a fashionable thing to do and facilitates his business. He may be very materialistic and jealous of other’s wealth but does not seek success at the expense of others. Moreover, a materialistic father adopter is paged more frequently for business reasons in general.

In sum, overall television use is identified by achievement values for the father generation. But, as I explained earlier, the findings on television are not only inconsistent with what I have hypothesized in Chapter 2 but also rather tentative because only weak relationships are observed. As hypothesized in Chapter 2, overall ACR use is identified with enjoyment oriented values. The implication is that the ACR is not a tool for learning or any other achievement oriented purposes.

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81 I did not watch the TV interview. Rather, one of my relatives told me the story when I was in China in the summer of 1992.
Moreover, as revealed in Chapter 9, the heavy ACR users are more likely to have lower socio-economic status and lower social mobility.

Although both overall telephone and pager use feature materialism, the use of the telephone is particularly identified by a strong competitive value, **determined to succeed**. While the earlier telephone adopters of father generation are more likely to value **success at the expense of others**, the heavier telephone users of father generations are not. Instead, they emphasize **determination to succeed, material desires**, and **frugality**. Although the heavier pager users of the father generation also show strong **material desires**, they lack an **achieving spirit**.

Table 10.1a also shows that the four media are not equal in terms of the number of value dimensions identified for the father generation. The telephone and television are identified by more value dimensions than the ACR or the pager. This implies that values at the personal level are more appropriate to some media than others. I will come back to this point later.

But it is also clear that media adoption and postadoption are generation specific. Indeed, the grandfather generation perceives the media very differently as far as the adoption is concerned. First, they do not regard the pager as their medium. Second, a much smaller proportion of the grandfathers adopted the ACR. Third, contrary to the father generation, they adopted the telephone for enjoyment rather than any achievement value. Nevertheless, within the grandfather generation, the value variation across the four media is significant. **Table 10.2** shows the comparison.

<table>
<thead>
<tr>
<th>Media and Their Value Identifications (Grandfather Generation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time of Adoption</strong></td>
</tr>
<tr>
<td>Status; Materialism.</td>
</tr>
<tr>
<td><strong>Overall Use</strong></td>
</tr>
</tbody>
</table>

As far as the adoption is concerned, as discussed in Chapter 9, for the grandfather generation, it is understandable that the television and ACR are associated with achievement oriented values while the telephone is characterized with enjoyment because they are diffused in different periods of time. The grandfathers also identify the three media differently in terms of overall use. While overall television use is associated with enjoyment, the overall telephone use features materialism and unrestrictiveness.
a. Television

A retired or near retired grandfather was in his forties when the television was introduced to ordinary urban Chinese in the later 1970s. If he is an earlier TV adopter, he will be more likely to regard the television as a symbol of status. If he had to buy a TV set because most of his relatives already had one, he would be a later TV adopter. A later TV adopter is more likely to value leisure & comfort while an earlier adopter emphasizes status and materialistic achievements. Lull (1991, Pp. 59-60) recorded the following when he interviewed one of the TV innovators in Guangzhou city:

We had one of the first television sets in Guangzhou. Our work unit [a medical facility] even had to borrow it sometimes. We invited our neighbours to watch. They brought small chairs and sat in front of the TV in our front room. The house was so full of people we often had to stand to watch programs in our own house! (70-year-old female, retired nurse, Guangzhou). But now they don't come to watch, even though we have a colour TV and a VCR. We seldom visit each other any more. (79-year-old retired male medical doctor, husband to the woman cited above).

But what does a heavy grandfather television viewer look like? He adopted the television for the reason of entertainment. He values money & pleasure but not being ordinary. More important, he did not adopt the television because his family had wanted to have one. That is, the television becomes a companion for a grandfather who is not closely associated with his family.

b. Audio Cassette Recorder/Player

The grandfathers who adopted the ACR are unique in some ways. An earlier grandfather adopter should be at his forties when he bought the ACR. It is somewhat odd to see that a forty-year-old man uses an audio cassette recorder/player for pop music. But, it is the case of earlier ACR adopters of grandfather generation. An earlier ACR adopter would seek novelty regardless of what others such as his relatives think about him. He does not either indulge himself or have an achieving spirit. Rather, he is more likely to seek success at the expense of others. He shows his youth by indicating that he frequently listens to pop music. However, the earlier ACR adopters of grandfathers do not use the ACR for educational purposes, the grandfathers who use the ACR for educational purpose less likely use the ACR in general. In fact, the grandfathers who value spending & indulgence also less frequently turn on the ACR.

c. Telephone

Like the case of the ACR, an earlier grandfather telephone adoption is driven by novelty rather than by material desires or kinship concerns. That is, an earlier grandfather telephone
adopter more likely emphasizes pleasure rather than economic adventures. Therefore, an earlier grandfather telephone adopter is less likely to be a heavy telephone user, for a heavy telephone user values materialism rather than vanity or pleasure oriented reasons or values. To know that the overall use of the telephone features materialism even for the grandfather generation is important because it shows that the telephone is relatively independent of the age constraints as far as its postadoption is concerned. Indeed, the heavy grandfather telephone users are less likely to make social calls. These are consistent with I have hypothesized in Chapter 2.

In sum, the differentiation is relatively successful in the father case. But as a whole, comparison and differentiation are limited by factors from both the media and adopters. These factors are:

* Media's objective characteristics
* Age effects
* Level of personal values.

Naturally, it is necessary to know how these factors affect the media differentiation. This leads us to the next section.

3. "Objective Nature" of Media and Sociological Factors

This section focuses on media's "objective characteristics" and their relations to the sociological factors. As reviewed in Chapter 1, the concept, "objective nature" is derived or borrowed from Downs and Mohr (1976) and Susskind and Zybkow (1978). Tornatzky and Klein (1982) noticed that the distinction between "objective" or "primary" attributes of innovations and "subjective" or "secondary" attributes of innovations is not clear. However, I shall not try to further define or refine the concept, "objective nature" in this section. Rather, I merely use it for the purposes of introducing and illustrating the effects of sociological variables.

Just as not all the media share the same degree of subjective characteristics, they differ in terms of their objective characteristics. Among the four media, television seems perceived as beneficial by both the generations. In other words, the entertainment nature of television is recognized by the majority of the two generations. This explains not only why weak relationships between the television and values or reasons are often observed but also why the diffusion of television is a direct function of the ability to pay to some degree. Similarly, it becomes understandable that the fathers who showed higher intergenerational mobility are more likely to be the earlier television adopters.
In contrast to the case of television, the quality of the telephone seems more related to economic profitability especially for the father generation in the current stage of diffusion. However, while this advantage may be recognized by the majority of the two generations, it is only appreciated by some. In China, economic reform means economic opportunities for people who have higher material desires. But the use of residential telephones is not limited to the wealthier part of the population (ITU 1983, 1986; Independent Commission 1986). It seems that the fathers who have higher level of education but less ability to pay are particular sensitive to the economic advantage of having a telephone. In other words, they are more likely to be the earlier adopters probably because they have recognized that the telephone is a valuable tool to realizing their economic goals. In other words, while the less ability to pay or lower family income may give them the motive for change, a higher education gives them an edge in terms of taking advantage of economic opportunities. Thus, it is natural for a father who has lower family income but higher education to be sensitive to economic opportunities and to adopt the telephone for its economic potential. Indeed, as revealed earlier, the telephone adoption and postadoption are affected by materialism oriented values directly or indirectly for the father generation. In other words, it becomes a more confident explanation when we take the effects of the two sociological variables, income and education, along with those of personal values.

Both the ACR and pager are relatively more affordable. We have known that having an ACR or pager is regarded as beneficial by the fathers who are jealous of other's wealth and/or have higher status aspiration. That is, having an ACR or pager may enhance one's social prestige. The relationship between intergenerational mobility and time of ACR or pager adoption further verifies that both the earlier ACR and pager adoptions feature the characteristics of social prestige.

In short, the four media do show some sociologically related characteristics. However, they differ in degrees. For instance, while television is generally desired for its entertaining nature as far as objective characteristics are concerned, the telephone is mainly favoured by some for its economic potentials. These differences are explained by different sociological variables. However, it is clear that the sociological variables mentioned above are complementary to personal values in terms of explaining the media adoption or postadoption.

Since the 1960s, the ITU has occasionally addressed the issue of telecommunications for development. These ITU studies have pointed out that telecommunications, per se, are not elitist but provide an important infrastructure for all economic groups on the basis of distributional criteria.
But generation as a variable functions differently. As discussed earlier, it not only affects the media adoption but also reveals different media dimensions. For instance, while the telephone adoption is characterized by the father generation as achievement oriented, it is identified by the grandfather generation as enjoyment oriented. In other words, whether a medium is adopted (e.g. pager) or how a medium is characterized depends upon generation or age. As I have mentioned several times in the previous chapters, the difference between the two generations may be mainly due to the role changes. To the grandfather generation, "[t]he role changes that signify a permanent detachment from society's two principal institutional systems - the nuclear family and the occupational system - are far more important factors than physical changes" (Blau 1973, p.67). Therefore, we understand that a retired grandfather would watch television or adopt the telephone for enjoyment rather than for any achievement or competitive purposes. Similarly, the characteristics of the pager are hardly consistent with the life of the grandfather. However, it is necessary to point out that the value differences between the two generations with respect to media adoption and postadoption do not mean that the grandfathers have changed their general value profiles after their role changes. What was observed is more likely a value priority change at the personal level. Thus, for example, for the grandfather generation, enjoyment and unrestrictiveness oriented values are associated with the telephone.

The social psychological approach to the theory of value has been heavily influenced by Rocheach (1973) and Kluckhohn (1951). As reviewed in Chapter 2, this approach defines each particular value in terms of the type of motivational goal it expresses. While it is argued that values serve as guiding principles in people's lives, how the values are connected with behaviours is rather complicated and has remained an open question. Nevertheless, a good understanding of the level of values and the nature of behaviours should be the very first step to learn the relation of values to behaviours. Michelson's research (1965) demonstrates that we cannot link general value orientations with any individual's choice of urban form. This study shows that personal values are not always appropriate to be used as independent variables across the four media. In Chapter 7, I argued that it is possible that even the level of personal values used in this research is

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85 Dutton, Rogers, and Jun (1987)'s meta-research shows that the diffusion of computer is also related to age. That is, middle-aged individuals are more likely to adopt home computers than either younger or older individuals.

86 See Schwartz (1996) for a recent review.
too general to predict or explain behaviours such as media adoption and postadoption. This seems the case of the pager and the ACR. These two media are relatively inexpensive and can be adopted or used simply for the reason, “novel”. However, their inexpensiveness also makes it difficult to link with major personal values. In other words, personal values become too general to predict, especially the behaviour of postadoption for the two media. This is understandable because the less expensive the item, the less demand for the guidance of major values. For instance, it may not involve any major personal value involved if someone decides to go to a grocery store for a tube of toothpaste. Thus, as far as the media are concerned, the implication is that the cost of a medium has to be taken into consideration when we decide which level of value orientation has to be used for similar research.87

In sum, the relationship between the media and personal values is either to strengthen or to be restrained by the introduction of sociological variables. This suggests that while some media do show some relatively stable nature, others do not as far as personal values are concerned. For instance, the two generations construct the media rather differently. In doing so, they often reveal different value dimensions of the media. This finding is significant as far as media effects are concerned. In other words, it is not what media are doing to the two generations. Rather, the two generations are actively looking for the media dimensions that are congruent with their values and exploit the dimensions identified respectively. As far as deciding the level of values is concerned, this research shows that it is necessary to know how important a particular medium is to the individual in terms of cost or ability to pay.

4. Policy Implication

This study is conducted in a Third World country. It is hoped that the findings are helpful to Third World communication policy makers. Although scholars from different fields or disciplines have been doing research and developing theories to try to help the Third World improve its situation, many students in communications have thought that they are in a special position to assist in Third World development because they believe that modern communication tools are at the heart of the development process. Lerner (1958), Rogers (1962), and Schramm

87In terms of the psychological literature, the current thinking on relationship between attitude and behaviour is that there is not a direct causal link between attitude and behaviour. Rather, attitude is one of the many conditions that operate in a kind of causal network include a variety of factors related to the attitude itself (how specific is it, how important to the individual, for example) ... (See Fishbein and Ajzen 1975; cf. Hage and Meeker 1988).
(1964) did much to promote the use of communication in development but they stressed only the mass media aspects. Their suggestions were warmly received by Third World nations partly because many leaders of Third World nations realized that mass media such as radio and television could be easily used as propaganda tools. However, it is found that the adoption of mass media correlated to development in an inverse ratio (Jayweera 1983). In the 1980s, some communication and development scholars finally reached the conclusion that a communication system for Third World development has to be two-way, interactive, and participatory. Nevertheless, although they rejected the idea that the role of communication in human society was essentially to inform and influence people and emphasized "a balanced exchange of information and experience", they did not link the "balanced exchange of information and experience" with telecommunications (two-way communication media) (See Ryan and Kaplan [1980] for the proposed two-way communication system).

In a World Bank study of 1983, Saunders and his associates made a comprehensive review of the available evidence on the role of telecommunications in development. They argue that a telecommunications infrastructure is a catalyst for productive processes and leads to productive economies. This is particularly true in the Third World, since in developing countries commercial and industrial uses of telecommunications far outweigh residential users.

This study reveals that neither the television nor the ACR is adopted and used by the heavy users of the fathers and grandfathers for educational purposes (or the purpose of development). Rather, they are for entertainment purposes and used for that purpose regardless of personal values or roles. In contrast to the case of mass media, I demonstrate that the heavy telephone users of the two generations use the telephone primarily for economic activities. Similarly, the heavy pager users of father generation also report that they are mainly paged for business communications. These findings are significant because they not only show the importance of studying implementation but also provide empirical evidence on the nature of electronic media for the communication policy makers of Third World nations. In other words, when Third World countries come to the West for communication technologies, the findings revealed in this research may give them some references on what they are getting and who are the ones that will be more likely to use the technologies at home. Nevertheless, it is necessary to point out that the experience of media adoption may be more country-specific than First World or Third World-specific in some cases. Either certain ideological commitment or societal norms may have significant impacts on
people’s perceptions of a particular medium (See Rogers 1995). For instance, while the pager is easily diffused among the Chinese youth, the answering machine is rarely seen in urban Chinese families despite the fact that all major electronic stores carry electronic answering devices.

5. Concluding Remarks and Future Research

This research has tried to find out whether there are significant differences among television, audio cassette recorder/player, telephone, and pager as far as their relations to personal values are concerned. In doing so, two generations of residents in Shijiazhuang City were surveyed in the summer of 1996. In this section, I shall first make the concluding remarks. Then, I discuss what may be done for future studies.

Historically, almost all of the innovation characteristics research studies have focused on dichotomous yes/no adoption decisions and ignored the implementation for innovations in spite of the fact that adoption could be an extremely insensitive measure of innovation (see Tornatzky and Klein 1982). This study shows that the earlier adopters do not have the highest degree of commitment to the media. In fact, negative relations are found in some cases. The finding suggests that there is no ground to ignore postadoption as long as one is interested in media characteristics research.

Gatignon and Robertson (1985) observe that there is not a generalized innovator across product categories. This research demonstrates that there is not even a generalized innovator within a product category (media). This finding is significant because it not only rejects the assumption that all innovations are equivalent units in a more specific level (within one product category) but also justifies the need for research, especially on subjective innovation characteristics.

This research shows that the four media have to be classified by both sociological variables and personal values directly or indirectly (i.e. through specific adoption reasons). It is a surprise to find that television is characterized by achievement oriented values for the father generation in Shijiazhuang City. This suggests that television is perceived differently across societies. However, the findings on the telephone are consistent with the Western experience. That is, the telephone is either job or business related and characterized by achievement oriented values as far as the time of telephone adoption and overall use are concerned. But, the finding is more consistent with the father generation than with the grandfather generation. Similarly, while the ACR is characterized by enjoyment oriented values, the pager is more identified by materialism oriented success.
However, the subjective characteristics of media can only be identified under certain conditions. This is because neither all the media have the same degree of subjective characteristics, nor they have the same number of dimensions. The telephone and television showed stronger objective characteristics (entertainment and economic potential) and more subjective dimensions. Thus, sociological variables such as the ability to pay, needs to be introduced in order to account for some of the variations. Above all, generation has a much more significant impact on identifying the characteristics of media. It affects not only the diffusion process but also the nature of media use. For instance, whether an earlier media adopter or heavier media user is achievement oriented or enjoyment oriented depends upon whether he is a father or grandfather.

While the above findings may justify that this study is a major exercise, they also reveal a number of limitations. First, it must be noted that values at the personal level are still not appropriate especially for illustrating the subjective characteristics of the ACR and pager. They seem still too general to vary, especially with the frequency of overall pager or ACR use. Even for the case of television or telephone, it is sometimes difficult to link personal values to adoption and postadoption without going through the specific adoption reasons. Overall, it suggests that it is not safe to use one set of values to predict or explain behaviours across different electronic media. The point is, working with values has to be grounded in empirical observations at least to some degree. This leads to the second limitation.

Whether a set of values is at appropriate level is an empirical question. The question may be better answered by means of qualitative research. In other words, some in-depth interviews should be conducted to elicit the necessary information for constructing the value related items for the questionnaire before the survey. Moreover, it is also necessary to gather some qualitative information after the survey. I often felt restrained when I was interpreting some “surprising findings” because of lack of the necessary information. This student acknowledges that it is not always practical to collect both quantitative and qualitative data for thesis purposes due to financial problems. Nevertheless, it is a frustrating experience when the best one can do is to give a best guess as far as interpreting research results is concerned.

The third limitation has to be the problem of value structure. It seems that sometimes it is inadequate to classify the personal values into a few domains and label them with broad names such as achievement oriented domain or enjoyment oriented domain. For instance, although determination to succeed and an achieving spirit belong to the same achievement oriented domain,
they very much differ in degrees and function on the opposite direction in some cases as far as media adoption and postadoption are concerned. Therefore, it may be necessary to pay attention to the hierarchical structures of values within a domain for more accurate and powerful predications or explanations. This, of course, suggests a new theoretical approach.

Like many other survey studies, this research ends with regrets. In retrospect, one of the major factors that have kept me going is that this area has been rarely touched by the academic community despite the fact that the electronic media have significantly altered people's lives in urban China. While this research has tried to be theoretically sensitive by relating abstract personal values to behaviour, some of the findings may be significant to the communication policy makers of Third World countries as far as urban or even national development is concerned.
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Appendix 1.1

To: The Bureau of Education of Chang An District  
From: Huamei College  
Subject: A Social Survey  
Date: June 1996

This is to introduce Comrade _____________ to you to discuss matters on a social survey.

* The purpose of the survey is to gather data for a doctoral thesis.

* The geographic range of the survey is limited to Chang An District, Shijiazhuang city.

* The respondents will be the parents of selected students. However, the survey cannot be successfully conducted without the assistance of students. Some of the students (less than 6 percent of the student population interested) will be asked to bring the questionnaires to their parents. The students will be also asked to bring the questionnaire back to the researcher afterwards.

There is absolutely not any classified information or sensitive and/or personal matter involved in the survey mentioned above. The survey is conducted by Huamei College. Please provide generous assistance.

The Address of Huamei College:

4 Fanxi Road  
Shijiazhuang City

Tel. 667-3876
Appendix 1.2

To: All the Elementary Schools in Chang An District
From: The department of Education, Bureau of Education of Chang An District
Subject: A Social Survey

Date: June 26, 1996

This is to inform you that Mr. B. Yang of Huamei College is going to conduct a social survey through the students of your school. Please provide the necessary assistance when it is necessary.

Please note that the size of the student sample must be smaller than 6 percent. We also understand that only students’ parents are responsible for filling in the questionnaires.

Thank you for your cooperation.

Department of Education
The bureau of Education
Chang An District
Shijiazhuang City
( Seal )
Appendix 1.3

Some Simple Questions on Students’ Family Background

1. Your Name____________________

2. Your Age_____

3. Your Parents Address ( Where you live )________________________

                          ____________________________
                          ____________________________

4. The Name of Your Teacher who Supervises You in School________________

5. The Current Grade You are in _____ ( e.g. Grade 5 )

6. Your Father’s Name ______________________

7. Your Father’s Age _______

8. Your Grandfather’s Name ______________________

9. Please Choose and Fill in the Following Blank to Indicate whether your Grandfather is still Alive ( e.g. [ ]):
   Alive [ ]     Deceased [ ]

10. If your Grandfather is still Alive, Please Write Down his Address:

                          ____________________________ Street
                          ____________________________ County or City
Appendix 1.4

June 1996

Dear Classmate,

Thank you very much for assisting our survey. It is the very first time that a survey of this kind is administered in our Shijiazhuang City. Hence, it is very significant. The purpose of our survey is to further understand and improve our society (e.g. the city, family, and education).

Enclosed please find two copies of the questionnaire. One is for your grandfather. Another is for your father. Please help us distribute the two copies and bring them back on time. Also enclosed are a pen and 5.00 yuan (Chinese currency). The pen is for you to keep as a souvenir. The 5.00 yuan covers the bus tickets that you may need when you deliver the questionnaire to your grandfather.

Each copy of the questionnaire is accompanied by a sharpened pencil. It is for answering the questionnaire. After your father and grandfather finish the questionnaires, you may keep the two pencils.

Again, thank you for your support!

Huamei College

(Seal)
Appendix 1.5

University of Toronto

DEPARTMENT OF SOCIOLOGY
203 College Street
Toronto, Ontario, Canada
M5T 1P9

June 1996

Dear Mr.

After a very strict process of sample selection, we are very glad to tell you that you have been chosen as one of our respondents in Shijiazhuang City. Thank you very much for filling in the questionnaire.

The survey is conducted by the University of Toronto and assisted by Huamei College. The purpose of the survey is to have a better understanding about the occupation, social mobility, and diffusion and implementation of electronic media in urban China. The survey is pure academic in nature. Although surveys like ours have been conducted in Beijing, Shanghai, Tianjin, and Guangzhou, it is being done the very first time in our Shijiazhuang city. Both the community and family will benefit from our survey findings directly or indirectly.

Because this survey is designed strictly in terms of the principle of random sampling, you are irreplaceable. That is, only your answers matter as far as your household is concerned. Indeed, your every answer will directly affect our survey results. However, I'd like to make it clear that there are no right or wrong answers to any of the questions. In other words, only those answers that both voluntary and genuinely reflect your values or situations are important to us.

The questionnaire enclosed consists of three parts. They are occupation, values, and electronic media adoption and post-adoption. This survey deals with neither politics nor sensitive and/or personal matters. The survey results will be reported in a comprehensive manner rather than individual oriented. In order to be absolutely confidential, not only your name will be replaced with codes (numbers) but also your answers to the questions will not be revealed to any individual or organization.

It takes about 25 minutes to finish all the question. We understand that the small gift (pen) we give to your child cannot really compensate for the time you will spend on the questionnaire. It is, however, only a way to express our sincere thanks for your cooperation and support.

We will collect the questionnaire on ________ 1996.

Department of Sociology
University of Toronto &
Huamei College
Appendix 1.6

Dear Mr.

After a very strict process of sample selection, we are very glad to tell you that you have been chosen as one of our respondents in Shijiazhuang City. Thank you very much for filling in the questionnaire.

The survey is conducted by Huamei College. The purpose of the survey is to have a better understanding about the occupation, social mobility, and diffusion and implementation of electronic media in urban China. The survey is pure academic in nature. Although surveys like ours have been conducted in Beijing, Shanghai, Tianjin, and Guangzhou, it is being done the very first time in our Shijiazhuang city. Both the community and family and vocational education will benefit from our survey findings directly or indirectly.

Because this survey is designed strictly in terms of the principle of random sampling, you are irreplaceable. That is, only your answers matter as far as your household is concerned. Indeed, your every answer will directly affect our survey results. However, I’d like to make it clear that there are no right or wrong answers to any of the questions. In other words, only those answers that both voluntary and genuinely reflect your values or situations are important to us.

The questionnaire enclosed consists of three parts. They are occupation, values, and electronic media adoption and post-adoption. This survey deals with neither politics nor sensitive and personal matters. The survey results will be reported in a comprehensive manner rather than individual oriented. In order to be absolutely confidential, not only your name will be replaced with codes (numbers) but also your answers to the questions will not be revealed to any individual or organization.

It takes about 25 minutes to finish all the questions. We understand that the small gift (pen) we give to your child cannot really compensate for the time you will spend on the questionnaire. It is, however, only a way to express our sincere thanks for your cooperation and support.

We will collect the questionnaire on June 1996.

Huamei College
(Seal)

Corresponding Address:

B. Yang
Yuhua Road
Hebei Normal University
Shijiazhuang City 050013
QUESTIONNAIRE ON OCCUPATION AND DIFFUSION AND IMPLEMENTATION OF ELECTRONIC MEDIA IN SHIJIAZHUANG CITY

Mr.__________ was selected as a respondent through a very strict process of random sampling. Hence, answers to the questions must not be from any other member in the family. Only Mr.__________'s answers are valid. While Mr.__________ may verify some specific numbers with his family members when he is answering questions such as family income or the season and year when he bought his first TV Set, he has to answer all the other questions alone. We'd like to let Mr.__________ know that please don't hesitate to contact us if he experiences any difficulty when he is answering the question (e.g. eye sight problems, etc.). We will be very glad to assist him. It may be ok to let a family member to read the questions for him. Nevertheless, any answer to the question must be his.

(1). If he experiences any difficulty when he is filling the questionnaire, please page 3818333-1440;

(2). If it is inconvenient for him to make telephone calls, we will assist him to answer any question left when we collect the questionnaire from him;

(3). It would be appreciated if you use the pencil enclosed to fill in the questionnaire.

(Please start from the first question of the first page)
Appendix 1.8
Questionnaire

Question 1 to 8 are the questions about yourself. Please fill in the blanks by making a mark _____.

1. Sex:
   (1) [ ] Male  (2) [ ] Female

2. Place of your birth:
   (1) [ ] City or Town  (2) [ ] Rural

3. Place of Your father's birth:
   (1) [ ] City or Town  (2) [ ] Rural

4. Marital status
   [ ] Never married
   [ ] Married
   [ ] Divorced
   [ ] Married again after death of spouse

5. Education:
   [ ] Illiterate or semiliterate
   [ ] 4-year elementary school
   [ ] 6-year elementary school
   [ ] Junior high school
   [ ] High school (including vocational school or technical school)
   [ ] University
   [ ] Graduate school

6. The following are titles of some of the occupations. Please mark [ ] your current occupation (If you are unemployed or retired, please indicate your last job).

   [ ] High-ranking officials in the Party, government, & Army
   [ ] middle-ranking officials (Department Head, etc.)
   [ ] Low-ranking officials
   [ ] Entering level officials

   [ ] Senior managerial cadres in collective or state owned companies or firms in all industries (e.g. CEO)
   [ ] Senior managerial cadres in foreign owned (including joined ventures) firms or companies
   [ ] Owners of a larger private firm or company (more than 100 employees)
   [ ] Senior managerial cadres in large private firms or companies
   [ ] Middle-ranking managerial cadres in collective or state owned firms or companies
   [ ] Middle-ranking managerial cadres in foreign (including joined ventures) owned companies or firms
   [ ] Owners of middle sized private firms or companies (More than 50 but less than 100 employees)
   [ ] Entering level managerial cadres in private firms or companies
[ ] Entering level managerial cadres in collective or state owned firms or companies

[ ] Entering level managerial position in foreign (including joint ventures) owned firms or companies

[ ] Owners of small businesses (less than 50 employees)

[ ] Entering level staff (including trainees) in state or collective owned firms or companies

[ ] Entering level staff or trainees in foreign (including joint ventures) owned companies or firms

[ ] Entering level staff or trainees in private companies or firms

[ ] Self-employed (Taxi drivers, owners of grocery stores, etc.)

[ ] Professors or associate professors

[ ] Lecturers or teaching assistants in universities

[ ] Senior teachers in elementary or middle schools

[ ] Middle school teachers

[ ] Elementary school teachers

[ ] Senior professionals (Senior Engineers, senior editors, etc.)

[ ] Professionals (Engineers, reporters, etc.)

[ ] Junior professionals (technicians, nurses, etc.)

[ ] News-readers in broadcasting industry

[ ] Clerks (e.g. typists, or drawing workers, etc.)

[ ] Guards, caretakers, janitors, and cafeteria workers in institutions

[ ] Waiters or attendants working in guest houses which receive foreign guests

[ ] Hotel waiters and attendants

[ ] Cooks

[ ] Salespersons in stores, shopping malls, and grocery stores

[ ] Barbers

[ ] Cleaners and garbage collectors

[ ] Purchasers

[ ] Ticket agents

[ ] Train attendants

[ ] Housemaids

[ ] Housewives

[ ] Mail Carriers

[ ] Workers

[ ] Drivers (including train drivers)

[ ] Athletes

[ ] Actors

[ ] Police officers

[ ] Others________________________(Specify)

7. Please indicate the title of your first job:

__________________________ (e.g. a worker)

8. Here are some aspects of a job. Please circle the number to indicate whether each aspect is exactly (5), somewhat (4), not at all (3) somewhat the opposite (2), or exactly the opposite (1) like the aspect of your job.

(1) Supervising other people  5  4  3  2  1
(2) Good pay
(3) Pleasant people to work with
(4) Not too much pressure
(5) Good job security
(6) Good chances for promotion
(7) A job respected by people in general
(8) Good hours
(9) An opportunity to use initiative
(10) A useful job for society
(11) Generous holidays
(12) Meeting people
(13) A job in which you feel you can achieve something
(14) A responsible job
(15) A job that is interesting
(16) A job that meets one's abilities
(17) A job that permits you to be creative and original
(18) A job that provides you with a chance to earn a good deal of money
(19) A job that leaves you relatively free from supervision
(20) A job that gives you a chance to exercise leadership
(21) A job that gives you authority

Q.9 to 15 concern television. If you do not have television at your home, please GO to Q.16 on page 256. Otherwise, please continue by answering Q.9.

9. Please indicate the year when you got your **FIRST TELEVISION SET**. (Choose one and fill in the blank. e.g. 197[2]; Fall [ ])

   I. 196[ ]
   ii. 197[ ]
   iii. 198[ ]
   iv. 199[ ]
   i. Spring [ ]
   ii. Summer[ ]
   iii. Fall [ ]
   iv. Winter [ ]

10. Please check who paid for your **FIRST** television set.

   [ ] Yourself
   [ ] Your foreign business trip allowance
   [ ] Government or Others
   [ ] Overseas relatives
   [ ] A gift from your fellow Chinese in China

11. If you paid for the set, please check how much the set cost you at that time (Please indicate the cost in terms of family income). Otherwise, go to Q.12.

   [ ] Less than one month's your FAMILY income
12. Here are some reasons that people have given for why they bought their FIRST television sets. Please circle the number to indicate whether each reason is exactly (5), a lot (4), somewhat (3), not much (2), or not at all (1) like your own reason for getting television.

I got my first TV set because

a. Government or Company paid for it 5 4 3 2 1
b. Relatives paid for it 5 4 3 2 1
c. I wanted to learn foreign languages
   or other skills offered on TV 5 4 3 2 1
d. It was important for my children to
   learn foreign languages or other
   skills offered on TV 5 4 3 2 1
e. It was fashionable 5 4 3 2 1
f. It was informative 5 4 3 2 1
g. It was entertaining 5 4 3 2 1
h. It was a symbol of status 5 4 3 2 1
i. My family wanted to get one 5 4 3 2 1
j. It was novel at that time 5 4 3 2 1
k. Most of my friends already had one 5 4 3 2 1
l. Most of my relatives already had one 5 4 3 2 1
m. High profile people had one 5 4 3 2 1

13. How often do you watch television?

(CIRCLE ONE)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every day</td>
<td>1</td>
</tr>
<tr>
<td>5 or 6 times a week</td>
<td>2</td>
</tr>
<tr>
<td>3 or 4 times a week</td>
<td>3</td>
</tr>
<tr>
<td>1 or 2 times a week</td>
<td>4</td>
</tr>
<tr>
<td>Once or twice a month</td>
<td>5</td>
</tr>
<tr>
<td>Few times a year</td>
<td>6</td>
</tr>
<tr>
<td>Once a year</td>
<td>7</td>
</tr>
<tr>
<td>Never</td>
<td>8</td>
</tr>
<tr>
<td>Don't know</td>
<td>99</td>
</tr>
</tbody>
</table>
14. In the space provided below, please indicate those times during a typical week when you watch television.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 A.M. TO 8 A.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8 A.M. TO 9 A.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9 A.M. TO 10 A.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10 A.M. TO 11 A.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>11 A.M. TO 12 Noon</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>12 Noon TO 1 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1 P.M. TO 2 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2 P.M. TO 3 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3 P.M. TO 4 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4 P.M. TO 5 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5 P.M. TO 6 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>6 P.M. TO 7 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7 P.M. TO 8 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>8 P.M. TO 9 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9 P.M. TO 10 P.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>10 P.M. TO Midnight</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Midnight TO 1 A.M.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1 A.M. and later</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

15. Here are the same TV program categories. Please circle the number to indicate how often you watch each of them: whenever it is on (5), often (4), sometimes (3), rarely (2), or never (1).

I watch

- a. TV dramas 5 4 3 2 1
- b. News 5 4 3 2 1
- c. Nature 5 4 3 2 1
- d. Cultural & Arts 5 4 3 2 1
- e. Children 5 4 3 2 1
- f. Game shows 5 4 3 2 1
- g. Sports 5 4 3 2 1
- h. Operas 5 4 3 2 1
- i. Movies 5 4 3 2 1
- j. Educational 5 4 3 2 1
- k. Classical music concerts 5 4 3 2 1
- l. Popular music and songs 5 4 3 2 1
- m. Popular music and song concert 5 4 3 2 1
- n. Others __________________ (specify) 5 4 3 2 1

Q.16 to Q.21 concern Audio Tape Recorder. If you do not have any audio tape recorder at your home, please GO to Q.22 on page 258. Otherwise, please continue by answering Q.16.

16. Please indicate the year when you got your FIRST Audio Tape Recorder/Player. (Choose one and fill in the blank, e.g. 197[2]; Fall [ ] )
17. Please indicate who paid for your **FIRST** Audio Tape Recorder.

- [ ] Yourself
- [ ] Your overseas business trip allowance
- [ ] Government or Company
- [ ] Overseas relatives
- [ ] A gift from your fellow Chinese in China

18. If you paid for the cassette, please indicate how much it cost you at that time. Otherwise, go to Q. 19.

- [ ] Less than one month's your **FAMILY** income
- [ ] One month's
- [ ] Two months'
- [ ] Three months'
- [ ] Four months'
- [ ] Five months'
- [ ] Six months'
- [ ] Seven months'
- [ ] Eight months'
- [ ] Nine months'
- [ ] Ten months'
- [ ] Eleven months'
- [ ] Twelve months'
- [ ] More than a year's

19. Here are some reasons that people have given for why they bought their **FIRST** audio tape recorder. Please circle the number to indicate whether each reason is exactly (5), a lot (4), somewhat (3), not much (2), or not at all (1) like your own reason for getting an audio tape recorder.

*I got my first audio tape recorder because*

- a. Government/Company paid for it 5 4 3 2 1
- b. Relatives paid for it 5 4 3 2 1
- c. I wanted to learn foreign languages 5 4 3 2 1
- d. It was important for my children to learn foreign languages 5 4 3 2 1
- e. It was fashionable 5 4 3 2 1
- f. It was informative 5 4 3 2 1
- g. It was entertaining 5 4 3 2 1
- h. It was a symbol of status 5 4 3 2 1
- i. My family wanted to have one 5 4 3 2 1
- j. It was novel at that time 5 4 3 2 1
- k. Most of my friends already had one 5 4 3 2 1
- l. Most of my relatives already had one 5 4 3 2 1
- m. High profile people had one 5 4 3 2 1
20. Please circle the number to indicate how often and for what purposes you used your first audio tape recorder: very often (5), often (4), sometimes (3), rarely (2), or never (1).

   a. Listen to/record opera   5  4  3  2  1
   b. Listen to/record news or special reports  5  4  3  2  1
   c. Listen to/record foreign languages   5  4  3  2  1
   d. Listen to/record academic lectures of open univ.  5  4  3  2  1
   e. Listening to/record music  5  4  3  2  1
   f. Learning to/record sports  5  4  3  2  1
   g. Learning other things  5  4  3  2  1

21. How often did you use your audio tape recorder during the year when you got it?

   (CIRCLE ONE)

   daily  1
   3 or 5 times a week  2
   1 or 2 times a week  3
   Few times a month  4
   Rarely  5
   Never  6
   Don't know  99

Q.22 to Q.32 concern telephones. If you do not have the telephone at your home, please GO to Q.33 on page 261. Otherwise, please continue by answering Q.22.

23. Please indicate the year when you got your first telephone installed. (Choose one and fill in the blank. e.g. 197[2]; Fall [    ])

   I. 196[   ]  I. Spring [    ]
   ii. 197[   ]  ii. Summer [    ]
   iii. 198[  ]  iii. Fall [    ]
   iv. 199[   ]  iv. Winter [    ]

23. Please indicate who paid for your first telephone installation.

   [    ] Yourself
   [    ] Government/Company
   [    ] Others___________ (Specify)

24. If you paid for the installation, please indicate how much it cost you at that time (Please calculate the cost in terms of family income). Otherwise, go to Q25.

   [    ] Less than one month's your FAMILY income
   [    ] One month's
   [    ] Two months'
   [    ] Three months'
25. Here are some reasons that people have given for why they install telephones in their houses or apartments. Please circle the number to indicate whether each reason is exactly (5), a lot (4), somewhat (3), not much (2), or not at all (1) like your own reason for getting the telephone.

*I got the telephone because*

- a. Others paid for it (e.g. your company, government, etc.)
- b. It was necessary for my work
- c. It was necessary for my business
- d. It was fashionable
- e. It was a symbol of success
- f. My family wanted the telephone
- g. It was novel
- h. It would make daily life more convenient
- i. It would allow me to keep contact with my friends or relatives easier
- j. It would allow me to keep contact with my relatives
- k. It would allow me to keep contact with my family members who do not live with me
- l. Most of my friends already had one
- m. Most of my relatives already had one
- n. High profile people had telephone

26. Please indicate who pays the monthly telephone fee.

- [ ] your company or government
- [ ] yourself

27. How often do you make or receive long distance calls from your home?

(CIRCLE ONE)

---

Every day 1
5 or 6 times a week 2
3 or 4 times a week 3
1 or 2 times a week 4
28. How often do you make and receive calls when you are at home?

(CIRCLE ONE)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 6 times a day</td>
<td>1</td>
</tr>
<tr>
<td>5 or 6 times a day</td>
<td>2</td>
</tr>
<tr>
<td>3 or 4 times a day</td>
<td>3</td>
</tr>
<tr>
<td>1 or 2 times a day</td>
<td>4</td>
</tr>
<tr>
<td>Once or twice a week</td>
<td>5</td>
</tr>
<tr>
<td>Few times a month</td>
<td>6</td>
</tr>
<tr>
<td>Rarely</td>
<td>7</td>
</tr>
<tr>
<td>Never</td>
<td>8</td>
</tr>
<tr>
<td>Don't know</td>
<td>99</td>
</tr>
</tbody>
</table>

29. Please circle the number to indicate who and how often you call from your home: very often (5), often (4), sometimes (3), rarely (2), or never (1).

<table>
<thead>
<tr>
<th>Group</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Members</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Relatives</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Friends</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Colleagues</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Business Partners</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Clients</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Others</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>

30. Please circle the number to indicate how often you receive calls from different people when you are at your home: most often (5), often (4), sometimes (3), rarely (2), or never (1).

<table>
<thead>
<tr>
<th>Group</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Members</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Relatives</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Friends</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Colleagues</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Business Partners</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Clients</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Others</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>

31. Please circle the number to indicate what you are most likely to use the telephone to: most often (5), often (4), sometimes (3), rarely (2), or never (1).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss business matters</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Make appointment</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Chat</td>
<td>5 4 3 2 1</td>
</tr>
<tr>
<td>Provide emotional support</td>
<td>5 4 3 2 1</td>
</tr>
</tbody>
</table>
32. How much time do you spend on telephone conversation on a typical week day? Please choose and mark [ ].

- [ ] less than 5 minutes
- [ ] 5-9
- [ ] 10-14
- [ ] 15-19
- [ ] 20-29
- [ ] more than half hour

Q.33-Q38 concern pagers. If you do not have a pager, please GO to Q.39 on page 262. Otherwise, please continue by answering Q.33.

33. Please indicate the season and year when you got your first pager. (Choose one and fill in the blank. e.g. 198[2]; Fall [ ]).

- I. 198[ ]
- ii. 199[ ]
- I. Spring [ ]
- ii. Summer [ ]
- iii. Fall [ ]
- iv. Winter [ ]

34. Please indicate who paid for your first pager installation.

- [ ] Yourself
- [ ] Government or your company
- [ ] Others__________

35. If you paid for the installation, please indicate how much it cost you at that time (Please calculate the cost in terms of family income). Otherwise, go to Q.45.

- [ ] Less than month’s your FAMILY income
- [ ] One month’s
- [ ] Two months’
- [ ] Three months’
- [ ] Four months’
- [ ] Five months’
- [ ] Six months’
- [ ] More than six months’

36. Here are some reasons that people have given for why they install pagers. Please circle the number to indicate whether each reason is exactly (5), a lot (4), somewhat (3), not much (2), not at all (1) like your own reason for getting pager.

- I get the pager because
  - a. Others paid for it 5 4 3 2 1
  - b. It was necessary to my work 5 4 3 2 1
  - c. It was necessary for my business 5 4 3 2 1
d. It was fashionable  
5  4  3  2  1  
e. It was a symbol of success  
5  4  3  2  1  
f. My family wanted me to have a pager  
5  4  3  2  1  
g. It was novel  
5  4  3  2  1  
h. It would make daily life more convenient  
5  4  3  2  1  
i. It would allow me to keep contact with my friends  
5  4  3  2  1  
j. It would allow me to keep contact with my relatives  
5  4  3  2  1  
k. It would allow me to keep contact with my family members  
5  4  3  2  1  
l. Most of my friends already had one  
5  4  3  2  1  
m. Most of my relatives already had one  
4  3  2  1  
n. High profile people had one  
5  4  3  2  1  

37. How often do you get paged?  
(CIRCLE ONE)  

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 6 times a day</td>
<td>1</td>
</tr>
<tr>
<td>5 or 6 times a day</td>
<td>2</td>
</tr>
<tr>
<td>3 or 4 times a day</td>
<td>3</td>
</tr>
<tr>
<td>1 or 2 times a day</td>
<td>4</td>
</tr>
<tr>
<td>Once or twice a week</td>
<td>5</td>
</tr>
<tr>
<td>Few times a month</td>
<td>6</td>
</tr>
<tr>
<td>Rarely</td>
<td>7</td>
</tr>
<tr>
<td>Never</td>
<td>8</td>
</tr>
<tr>
<td>Don't know</td>
<td>99</td>
</tr>
</tbody>
</table>

38. Please circle the number to indicate how often and who page you: very often (5), often (4), sometimes (3), rarely (2), never (1).  

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Family Members</td>
<td>5</td>
</tr>
<tr>
<td>b. Relatives</td>
<td>5</td>
</tr>
<tr>
<td>c. Friends</td>
<td>5</td>
</tr>
<tr>
<td>d. Colleagues</td>
<td>5</td>
</tr>
<tr>
<td>e. Classmates</td>
<td>5</td>
</tr>
<tr>
<td>f. Business Partners</td>
<td>5</td>
</tr>
<tr>
<td>g. Clients</td>
<td>5</td>
</tr>
<tr>
<td>h. Others</td>
<td>5</td>
</tr>
</tbody>
</table>

39. We very much want to know how you rank the following electronic media in terms of their importance in your daily work and life. Please mark the most important as “1”; follow the sequence, mark the least important as “11”.

- [ ] Video tape recorder
- [ ] Cellular phone
- [ ] Television
- [ ] Stereo system
From Q. 40 to Q.46, we deal with our social values. All the questions in this part are interesting. There are no right or wrong answers for these questions. Rather, we regard your standpoint of view as the most valuable and important. Again, we want to ensure you that your answers to the questions will be kept strictly confidential because our survey is purely academic.

Q.40 to Q41 concern Competitiveness and Status.

40. Please indicate how much you agree with the following statements (5=strongly agree; 4=agree; 3=neutral; 2=disagree; 1=strongly disagree)

It is ok to take advantage of a few people in order to get ahead
If the odds are against you, it's impossible to come out on top
If you want to succeed, you can't be too squeamish about the means you use
Achieving greater success than my peers is important to me
My achievements are highly regarded by others
I often do things at which I feel confident and relaxed than things which is challenging and difficult
I often attempt tasks that I am not sure I can do
than tasks I know I can do

41. Please indicate how often you do or experience the following (5=always; 4=usually; 3=sometimes; 2=rarely; 1=never)

It annoys me when other people perform better than I do
I want others to look up to me because of my accomplishments
I have higher devotion to work than most people I know
I want my accomplishments to be recognized by others
I enjoy having authority over other people
I like to give orders and get things going
I do less interesting or less enjoyable work in order to get ahead
I keep quiet about something I think it is wrong
in order to achieve certain goals 5 4 3 2 1

Q.42 to Q.43 deal with Materialism. People treat on material things differently in their lives. We really want to know what is your standpoint of view.

42. Please indicate how often you do or experience the following (5=always; 4=usually; 3=sometimes; 2=rarely; 1=never)

When friends have things I cannot afford, it bothers me 5 4 3 2 1
I am bothered when I see people who buy anything they want 5 4 3 2 1
I buy things that I don't need or want to impress people because they are the right things to have at the time 5 4 3 2 1
I argue with my wife about money 5 4 3 2 1
I think about what I might do to earn a great deal of money 5 4 3 2 1
I put less emphasis on material things than most people I know 5 4 3 2 1
I like a lot of luxury in my life 5 4 3 2 1
To me, my work is just a way of making money 5 4 3 2 1
If I had enough money, I would not work 5 4 3 2 1

43. Please indicate how much you agree with the following statements (5=strongly agree; 4=agree; 3=neutral; 2=disagree; 1=strongly disagree)

The best way to evaluate a person is his ability to make money 5 4 3 2 1
I would be willing to work for a salary that was below average if the job was pleasant 5 4 3 2 1
I firmly believe that money can solve all my problems 5 4 3 2 1
I feel that money is the only thing that I can really count on 5 4 3 2 1
I don't place much emphasis on the amount of material objects people own as a sign of success 5 4 3 2 1
The things I own say a lot about how well I am doing in life 5 4 3 2 1
The most important achievement in life is wealth 5 4 3 2 1
The things I own aren't all that important to me 5 4 3 2 1

Q.44 and Q.45 concern Enjoyment Values. Please start with Q.44.

44. Please indicate how much you agree with the following statements (5=strongly agree; 4=agree;
3=neutral; 2=disagree; 1=strongly disagree)

It is better to spend your money on things you can enjoy now, rather than save it for the future
You can't take anything to go with you when you die, so it is important to indulge yourself in pleasure promptly
Life would be more meaningful if we had more leisure time
Success means having ample time to pursue leisure activities
The less hours one spends on working and the more leisure time available the better
Unless one has a lot of money, one cannot have a really happy life
One should live for today and let tomorrow take care of itself
I am the kind of person who doesn't let his plans for the future keep me from enjoying the present
A comfortable life is my life goal
Beijing frugal always pays off in the end

45. Please indicate how often you do or experience the following (5=always; 4=usually; 3=sometimes; 2=rarely; 1=never)

I am proud of my ability to save money
Buying things gives me a lot of pleasure
I like to try new and different things
I buy only the things I need
I say "I can't afford it" whether I can or not

Q.46 deals with Restrictive-Conformity Domain. Please indicate how much you agree with the following statements (5=strongly agree; 4=agree; 3=neutral; 2=disagree; 1=strongly disagree)

In this complicated world, the only way to know what to do is to rely on leaders and experts
Any good leader should be strict with people under him in order to gain their respect
Parents are never wrong
The World is too uncertain to plan ahead
There is little one can do to alter his fate in life
Obedience and respect for authority are the most important virtues children should learn
Following the main stream in a calm and controlled manners is the best way to cope in life. The one who wants to be different from others gets hurt first. The most desirable life is a simple and peaceful one. Human desires have to be controlled. I hate to be different from others. To get along with people one must put on an act.

Q.47 and Q.48 deal with the different aspects of family. Please indicate what was your experience when you grew up by answering the two questions.

47. The following are some aspects of the father-son relations mentioned by some people. Please indicate how often did the following aspects of your relationship with your father appear when you grew up (5=always; 4=usually; 3=sometimes; 2=rarely; 1=never).

1). My father insulted me when he was angry with me.
2). My father helped me with my school work and problem.
3). My father and I discussed things that were important to me.
4). My father and I shared laughs.
5). My father was very clear about what I should do or should not.

48. The following family life was experienced by some people. Please indicate how much you agree with the following statements regarding your family life when you grew up (5=strongly agree; 4=agree; 3=neutral; 2=disagree; 1=strongly disagree).

1). My father never allowed me to talk back to him.
2). My father liked to talk to me.
3). My parents were always angry with each other.
4). When we discuss things, my parents consider my point of view.
5). My father shared his personal feelings and experiences with me.
6). My parents really talked to each other.
7). My father always gave me advice who I should be friends with.
8). My parents were warm and affectionate toward each other.
9). My father were very strict on who my friends should be.
10). My parents were always
fighting with each other 5 4 3 2 1

49. Please write down how many siblings do you have

________________________

50. Please circle a number to indicate the family size when you were sixteen years old

1 2 3 4 5 6 7 8 9 10 12 or more

51. Please indicate how many years have you lived with your parents and grandparents parents:

[ ] Always
[ ] 60 years or less
[ ] 50 or less
[ ] 40 or less
[ ] 30 or less
[ ] 20 or less
[ ] 10 or less
[ ] 5 or less
[ ] Never

52. What is your father's official class

[ ] Landlord
[ ] Warlord
[ ] Bureaucrat
[ ] Bankrupted Landlord

[ ] Capitalist
[ ] Capitalist of Handcraft Industry
[ ] Capitalist of Commerce
[ ] Enlightened Gentry

[ ] Rich Peasant
[ ] Upper-middle Peasant
[ ] Middle Peasant
[ ] Lower-Middle Peasant
[ ] Poor peasant
[ ] Farm labour

[ ] Intellectual

---

1The Chinese government classified the people mainly based some economic indicators such as quantity of land owned. The official classification (stratification) was effective until the late 1970s (see Li 1993, Pp.60-65).

2It refers to individual landlords and rich peasants with democratic leanings who, influenced by the Chinese Communist Party and its policy of unity, favoured resistance against Japan, supported democracy and reduction of land rent and loan interest during the War of Resistance Against Japan, and in the War of Liberation, opposed the Chiang Kai-shek rule and approved of the land reform.
53. Please identify what is your current monthly salary and your family annual income.

Your MONTHLY income (including your monthly bonus and all other monthly income)

____________________Yuan

Your FAMILY annual income (including the end-year bonus and all other income during the year)

____________________Yuan

54. Your Age ________?

Question number 55 is about the prestige of work and occupation. People do view an occupation differently because there are many different occupations. However, only your appraising is the most important to our survey research. Please compare the following occupations and rank them.

55. There are 5 sets of occupations. Each set consists 10 occupations. Please rank them from the most prestigious = 1 to least prestigious = 10 within each set. Please do it one by one until the last set.

Set 1. Please rank them from 1 to 10:

[ ] Middle-ranking official
[ ] A senior teacher of elementary or high school
[ ] Purchaser
[ ] Teacher, elementary school
[ ] Entering level staff in private business or firm
[ ] Middle-ranking managerial cadres in collective or state owned enterprise such as manager or CEO of a manufacture
[ ] Cleaner and garbage collectors
[ ] Senior managerial cadres in collective or state owned enterprise such as general managers
[ ] Entering level staff in collective or state owned enterprise
[ ] Barber

Set 2. Same ranking procedures as described above, please ranking the occupations of this set from 1 to 10.

[ ] Cook
[ ] An owner of small business or manufacture (less than 50 employees)
[ ] Entering level managerial cadres in private business or firm
[ ] Hotel waiter or attendant
[ ] Professor or associate professors
[ ] Senior managerial cadres in private business or firm
[ ] Teacher, elementary school
[ ] A news reader in broadcasting industry
[ ] Teacher, middle school
[ ] Worker

Set 3. Same procedures, please ranking from 1 to 10.

[ ] Entering level managerial cadres in foreign owned (or joint ventures) firm
[ ] Drivers (including train drivers)
[ ] Police officer
[ ] Train attendants
[ ] Self-employed (e.g. Taxi drivers, owners of grocery stores, etc.)
[ ] Housemaid
[ ] Various service positions in institutions (e.g. guard, cafeteria workers, etc.)
[ ] Teacher, elementary school
[ ] Waiter or attendant working in a guest house which receives foreign guests
[ ] Lecturers or teaching assistant in universities

Set 4. Same as what you have done above, rank the 10 occupations from 1 to 10 (the most prestigious as 1, the least prestigious as 10).

[ ] Middle-ranking managerial cadres foreign owned or joint venture enterprise
[ ] Teacher, elementary school
[ ] Entering level managerial cadres in state or collective owned enterprise
[ ] Athletes
[ ] Sales people in stores, malls, grocery stores, etc.
[ ] Junior professionals (technician, nurses, assistant engineers)
[ ] Clerk (e.g. Typist, drawing workers, etc.)
[ ] Senior professionals (e.g. Senior engineers, researchers, senior editors, etc.)
[ ] Actor
[ ] Owners of middle sized private enterprise (more than 50 but less than 100 employees)

Set 5. This is the last set of occupations. Please continue

[ ] Senior-ranking official in government, military, or party
[ ] Senior managerial cadres in foreign owned (or joined ventures) enterprise
[ ] Ticket agents
[ ] Entering level staff in foreign owned (or joined ventures) firm
[ ] Entering level official in government, military, or party
[ ] Owners of large private business or firm (more than 100 employees)
[ ] Low-ranking official in government, military, or party
[ ] Professionals (engineer, assistant researchers, editors, reporters, etc.)
[ ] Teacher, elementary school
[ ] Mail carriers

*** THAT IS ALL THE QUESTION. THANK YOU FOR YOUR COOPERATION ***
### Appendix 2.1

#### Father

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### Appendix 2.2

#### Grandfather

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