

Timestyle profiles - a quantitative study exploring consumer segmentation based on timestyle dimensions

Marketing
Master's thesis
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2012

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Purpose of the study

Timestyles - the unique ways in which people perceive and use time - have a significant impact on various aspects of consumer behaviour. However, research on the topic has been scarce and usually focused on studying one timestyle dimension at a time. The objective of this study is to contribute to the understanding of timestyles by exploring consumer segmentation based on multiple timestyle dimensions. An existing scale is used as a basis to identify the dimensions of timestyles and to study their interaction. Based on these dimensions, individual timestyle profiles will be created and their differences will be investigated in terms of demographics and Internet usage behaviour.

Methodology

The data for the study was collected in 2011 using an online questionnaire. A total of 4227 responses were obtained and the data was representative of both genders and ages between 15 and 64. The data was analysed with quantitative research methods including correlation analysis, principal component analysis, cluster analysis, cross-tabulations, t-test and analysis of variance.

Findings

The findings of the study validate the eight dimensions of the Timestyle Scale and suggest that an additional dimension measuring polychronic time attitude could be added to the scale. Based on these nine dimensions four timestyle profiles were created, representing consumer segments that have different timestyles; analytical schedulers, active achievers, spontaneous dwellers and traditional task-oriented. The timestyle profiles were found to be related to age and initial support was found for their ability to predict Internet usage behaviour related to exploratory Internet use, entertainment use and mobile Internet adoption. The study argues for the importance of studying timestyles as comprehensive constructs and supports the idea that timestyles can provide a meaningful way of segmenting consumers to understand differences in media use and consumer behaviour.

Keywords

Timestyles, time perception, temporal orientation, Internet use, media use, consumer behaviour, quantitative research, consumer segmentation

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1. Introduction

Time is a concept that constantly emerges in consumers' descriptions concerning their behaviour and consumption habits. The manner in which people react to time pressures and how they evaluate and view time in general, depends on their personal *timestyle* (Usunier and Valette-Florence 2007). An individual's personal timestyle can have a significant effect on buying behaviour, product and service choice, leisure activities and media preferences such as Internet usage behaviour (Cotte et al. 2004).

This study will contribute to the understanding of timestyles by exploring consumer segmentation based on timestyle dimensions. The *Psychometric Timestyle Scale* developed by Usunier and Valette-Florence (1994, 2007) will be used as a basis for the study. The research data gathered with an online questionnaire will be analysed with quantitative methods of correlation analysis, principal components analysis, cluster analysis, cross-tabulations, t-test and analysis of variance.

In order to understand the nature of the studied subjects I will first provide an overview on the existing literature concerning timestyles in consumer behaviour. Then, by analysing the research data with quantitative methods, I seek to validate the dimensions of timestyles. Based on these dimensions, I seek to create consumer profiles that could be used as a basis for consumer segmentation in understanding preferences in Internet consumption. I will start, however, by providing a brief introduction to the studied subject and by pointing out the relevance and objectives of the present study.

1.1. Relevance of time in consumer behaviour

The concept of time has been a relevant theme in consumer studies since the late 1960's (see Jacoby et al. 1976 for an early review on time studies). Time is a central aspect in consumer decision making, acquisition and consumption of goods and services (Cotte et al. 2004), and it constitutes an important factor in many marketing theories, such as product life cycle, brand loyalty and innovation adoption (Jacoby 1976, Usunier and Valette-Florence 2007).

The different meanings that people connect to time can be referred to as their individual *timestyles*. Timestyles reflect individual perceptions of what time is and how it should be used (Cotte and Ratneshwar 2001). For instance, some people are obsessed with being on time and following a predesigned schedule, while other people feel little pressure from time limits. Some people tend to plan their time far into the future and sacrifice current pleasures for future well-being, while others enjoy a spontaneous way of life and prefer focusing on the current moment (Cotte et al. 2004).

The tendencies described above obviously have a significant impact on consumer behaviour. Both simple and complex decisions are influenced by timestyles; choosing ready prepared meals over cooking, spending holidays at a beach resort rather than at home performing household chores, reading a newspaper on breakfast table instead of viewing headlines with a smartphone on the commute (Usunier and Valette-Florence 2007, Cotte and Ratneshwar 2001). Therefore, timestyles have an effect on what kind of marketing can engage the consumers most effectively; what kind of attributes consumers appreciate in products and services, what kind of appeals they find most engaging and what sort of media they use and in which occasion.

Shortage of time is one of the most frequently emerging themes in the study of time in consumer behaviour (e.g. Suri and Monroe 2003, Leclerc et al. 1995, Alreck and Settle 2002). Many studies indicate that consumers are increasingly short of time, which has among other things created a stable market for goods and services that aim at saving time for busy consumers. However, a counter phenomenon termed *downshifting* has emerged recently that promotes slowing down the daily routines and concentrating on the simple joys of life (Juniu 2000, Chhetri et al. 2009). These trends describe well the pervasiveness of time in consumer behaviour. Consumers' attitude towards time can reflect their overall lifestyle. In fact, due to the importance of time in consumer behaviour, it has been suggested that the concept of *lifestyle* should be replaced by the concept of *timestyle* (Feldman and Hornik 1981).

Internet use is of special interest in the study of timestyles in consumer behaviour. Even though Internet has taken a central part in the life of today's consumers, the precedents for

the different patterns in its use are still quite ambiguous (Cotte et al. 2006, Lòpez-Bonilla and Lòpez-Bonilla 2009). It has been suggested that timestyles could be used to predict Internet usage patterns (Usunier and Valette-Florence 1994, Elzmeni and Gharbi 2010, Cotte et al. 2006). After all, Internet may be used in order to save time, or in order to spend time, and consumers appear to have quite different preferences relating to the time, place and purpose of Internet consumption (Cotte et al. 2006).

1.2. Relevance of the study

In the previous section it was demonstrated that timestyles are a relevant factor in consumer behaviour. Individual time perceptions can influence decision making, planning, product, service and media preferences and allocation of time to certain activities, which all affect how these people can most effectively be approached by marketers. Therefore I suggest that timestyles could serve as a useful basis for consumer segmentation. In order to investigate this hypothesis, the overall objective of this study is to explore *what kind of consumer profiles can be identified based on timestyles and whether these profiles differ in their actual behaviour.*

Regardless of its significant impact on many areas of marketing, the research on timestyles as a basis for consumer segmentation has been quite rare in the past. Earlier research has mainly concentrated on understanding *the dimensions* of timestyles (Cotte and Ratneshwar 2000). Usually the focus has been on one dimension at a time, for example studying how future versus past orientation affects academic success (Bowles 2008) or how polychronic attitude affects shopping behaviour (Lindquist and Kaufman-Scarborough 2004). However, as it has been widely accepted, the dimensions of timestyles are interdependent and therefore focusing on one dimension at a time can hinder the understanding of the effect that the overall timestyle has on resulting behaviour (Usunier and Valette-Florence 2007, Cotte et al. 2004, Cotte and Ratneshwar 2001, Settle et al. 1978). This study will focus on understanding how timestyles as comprehensive multidimensional constructs have an influence on consumer behaviour.

Even more, there is a lack of comprehensive attempts to merge the effects of the dimensions together to create practical consumer profiles based on timestyles. In their article Usunier

and Valette-Florence (1994) introduced a Psychometric Timestyle Scale to capture the dimensions of timestyles. They suggested that future research should study the scale a) in different cultures, b) as a basis for consumer segmentation by using multigroup analysis such as cluster analysis and c) exploring its nomological validity to understand its ability to predict specific types of consumption behaviour. Their review article published in 2007 reported the results from development and replications over a period of 15 years. The article demonstrates that the Psychometric Timestyle Scale has been validated in multiple cross-cultural contexts and that its nomological validity has been demonstrated in various aspects of consumer behaviour. However, studies utilizing the Timestyle Scale as a basis for consumer segmentation, and especially those using methods of multivariate analysis, remain elusive. This study will aim at filling this void by exploring consumer segmentation based on timestyles with multivariate analysis.

This study will also contribute to the other two research areas that were pointed out by the authors of the scale; testing the scale in different cultures and exploring its predictive validity. The study is conducted in Finland where the scale has not to my knowledge been replicated before and its predictive validity will be explored by studying whether timestyles can predict differences in Internet behaviour.

Although many timestyle studies have pointed out a possible impact of timestyles on Internet use (e.g. Usunier and Valette-Florence 1994, Cotte et al. 2004), research on this topic has been rare and again limited to the effects that individual dimensions have on Internet use. For instance, it has been suggested that people who have an analytic planning style seek for utilitarian benefits from web use, while spontaneous people seek for hedonic experiences (Cotte et al. 2006). It would be beneficial to understand how the different dimensions work together to create certain patterns of Internet use preferences. This study will examine whether the consumer clusters based on timestyles have different preferences for Internet use.

1.3. Research objectives

As mentioned, the purpose of this study is to contribute to the research on timestyles by exploring the timestyle dimensions and using them as a basis for creating consumer profiles that in turn could be used to characterize certain groups of consumers. Instead of describing consumers on how they are oriented on many different timestyle dimensions, I will seek to create comprehensive timestyle profiles. To summarize, the overall research objective of this study is to find out *what kind of consumer profiles can be defined based on individual timestyles and whether these timestyle profiles can predict patterns of Internet use.*

A set of quantitative research methods are used to analyse the research data gathered with an online questionnaire. First, I will explore the dimensions that constitute timestyles. An existing scale, developed by Usunier and Valette-Florence (1994, 2007) will be used as a basis for identifying the timestyle dimensions. Correlation and factor analysis will be performed in order to see whether the same dimensions emerge from the data as in previous research and to investigate the associations between these dimensions. The first research question would thus be: 1) *Can the dimensions of the Timestyle Scale be validated based on the data and how are they associated with each other?*

After the timestyle dimensions have been defined, they will be used as a basis for cluster analysis, where the aim is to create consumer segments based on different timestyles. The second research question could thus be phrased as follows: 2) *What kind of timestyle profiles can be identified by categorizing people based on the identified dimensions?*

Finally, the timestyle profiles will be further explored by investigating their demographic differences as well as behavioural differences related to Internet use. The third and final research question would thus be: 3) *How do the identified timestyle profiles differ in demographics and behaviour related to Internet use?*

This study is exploratory and it does not aim at providing profound explanations or causality between the emergent results. The purpose is rather to describe the findings that emerge from the quantitative data and provide a foundation for future research.

1.4. Outline of the study

In the introduction chapter I have provided a brief look into timestyles and their importance in consumer behaviour and marketing. I have also indicated that there is a gap in existing timestyle literature that requires further investigation; exploring timestyles as a basis for consumer segmentation using multivariate methods of analysis. A possible relationship between timestyles and Internet usage behaviour has also been pointed out in this section. Based on these observations, the objectives and research questions of this study have been defined.

The next three chapters will provide a more detailed introduction to the research of timestyles by reviewing existing literature. *Chapter 2* discusses time in consumer behaviour and the factors that shape the subjective experience of time. In *Chapter 3* the concept of timestyles will be defined and some of the existing timestyle models will be presented. The Psychometric Timestyle Scale used as a basis for this study will be discussed with greater detail. *Chapter 4* discusses the relationship between timestyles and Internet usage behaviour and presents what kinds of associations have been found to exist in previous research. *Chapter 5* summarizes the literature review laying ground for the empirical part of the study.

The research methodology used in this study will be explained in *Chapter 6*. Data collection and methods of quantitative analysis will be discussed, as well as the validity and reliability of the study. In *Chapter 7*, research findings will be reported with initial analysis. Finally, *Chapter 8* includes a more profound discussion of the key results and presents theoretical and managerial implications as well as the limitations of the study and suggestions for future research.

2. Time and consumer

The relevance of studying timestyles as a basis for consumer segmentation was demonstrated in the previous chapter. The next three chapters will provide a basis for understanding the current knowledge of time in consumer behaviour by reviewing existing literature on the subject. This chapter will discuss the *antecedents of timestyles*; the meaning of time for consumers and the factors that shape the subjective experience of time. In order to understand what time actually is and how it is constructed, the first section will provide a brief look into the development of time studies in consumer behaviour.

2.1. Development of time studies in consumer behaviour

Time has been researched in various disciplines. Cultural anthropology has studied time perceptions as collective cultural artefacts that are shared by people living in the same culture (Munn 1992, Bender 2002). In psychology time has been examined in a more individual level, focusing on measurement, perception and adaptation to the cultural patterns (Bond and Feather 1988, Pierro et al. 2010, Dunkel and Weber 2010). In economics, time has been treated as a resource comparable to money that should be used in an optimal manner to maximize productivity and efficiency (Becker 1965, Feldman and Hornik 1981). As demonstrated in the introduction, time is of special concern in marketing, as it is present in all consumer behaviour as both antecedent and consequence of consumption activities. This study focuses on marketing related aspects of time, especially on consumer behaviour on an individual level.

The history of marketing related time studies dates back to the 1960s (see Jacoby et al. 1976). The early researchers such as Becker (1965) and Mincer (1963) noted that time should be accounted for in the cost that consumers face when making a purchase. The perspective was closely linked to theories in economics; time was viewed as a fixed resource comparable to money, and should thus be used in an optimal way. Next, the attention was turned closer to consumer behaviour. Researchers started focusing on time-use patterns and the way in which consumers divided their time between activities such as work, homework and leisure

(Becker 1976, McKechnie 1974, Feldman and Hornik 1981). The manner in which consumers allocated their time was thought to represent their lifestyle and deeper values. Feldman and Hornik (1981) further argued that people make time allocation decisions by optimizing activities based on their needs. In this commodity paradigm time was seen as a purely economic resource that was used in a rationally optimized manner.

The commodity paradigm of time faced criticism as researchers began questioning the view that time was an objective and fixed resource constraining the consumers (Holman and Venkatesan 1980, Settle et al. 1978, Hornik 1984). Instead, it was suggested that time is experienced subjectively by each individual and that it influences behaviour in a more complex manner than previously accounted for (Hornik 1984). Even in the Anglo-American culture where time is constantly measured objectively, the way in which time is actually perceived is subjective (Bergadaà 1990). Commonly used expressions such as ‘time passes quickly’ or ‘time is dragging’ are evidence of subjectivity of time; people reflect on time in relation to the situation and the activities performed by them. Researchers suggested that since time is a subjective experience rather than objective measure, time studies should focus on consumers’ perceptual patterns instead of concrete behaviour such as observable use of time (Hornik 1984, Bergadaà 1990). Research started focusing on individual time orientations and their impact on lifestyles.

Today the paradigm of subjective experience of time is widely accepted (Ancona et al. 2001), but some researchers have argued for a need to study not only subjective perceptions but also concrete patterns of behaviour that were more present in the economic view of time (Cotte and Ratneshwar 2001, Francis-Smythe and Robertson 2012). For example, Cotte and Ratneshwar (2001) argued that while viewing time as an economic and fixed resource cannot capture the perceptual processes behind consumer behaviour, viewing time as a purely subjective experience does not allow predicting patterns of consumer behaviour and decision making. Therefore time in consumer behaviour should be studied as a combination of perceptual processes and resulting behaviour.

Following the views of Cotte and Ratneshwar this study assumes that the best picture of time in consumer behaviour can be obtained by studying both perceptual and behavioural

patterns relating to time. Based on current understanding of the nature of time it is assumed that people experience time subjectively based on their cultural background and personal characteristics (Ancona et al. 2001). However, it is also assumed that these perceptions of time lead to certain type of behaviour that should also be taken into consideration when studying consumers' relationship to time.

Timestyles provide a way of describing these individual views of time by capturing both perceptual patterns and the resulting behaviour (Usunier and Valette-Florence 2007). Before discussing in detail how timestyles are constructed, I will discuss the factors that shape our subjective experience of time and are therefore the antecedents for timestyles.

2.2. The factors that shape the subjective experience of time

The previous section explained that people have different perceptions of what time is and how it should be used. This section examines more closely the factors that are behind these differences. It is commonly accepted that the surrounding culture defines the collective understanding of what time is. In addition, all individuals have their own perception of time and its nature. Furthermore, the different roles played by the consumer may also have an effect on their time view.

2.2.1. Culture

Culture defines the profound way in which we understand time (Kluckhohn and Strodtbeck 1961, Graham 1981, Ko and Gentry 1991, Rojas-Méndez et al. 2002). Especially, culture seems to affect the temporal orientation of people, that is, the way we focus our attention to the past, to the present or into the future. However, it has been presented that culture has a more comprehensive impact as well. In an influential article Graham (1981) identified three cultural time perceptions; Linear-separable time, circular-traditional time and procedural-traditional time.

According to Graham (1981), *Linear-Separable time*, or Anglo-time, refers to a time perception shared by most Americans and Europeans. It portrays time as a line that proceeds from past

to the present and into the future. This view assumes that time can be divided into discrete units and allocated for specific actions (Ancona et al. 2001, Graham 1981). Time is seen as a resource comparable to money and therefore time can also be spent, saved or wasted. The idea is that a person can progress along time (Graham 1981). The correct actions made in the past and in the present can put a person in a better position in the future. This view favours a strong future orientation, because it is assumed that people can prepare themselves for the future by making investments in the present.

For many cultures, the idea that time can be divided and allocated for specific tasks, seems very unnatural (Graham 1981). Unlike the linear-separable time, *the circular-traditional time*, also termed cyclical time model, views time as a circle instead of a line (Graham 1981). The circle portrays periodicity and repetition, as this view assumes that the same events occur repeatedly over time. The circular-traditional time view has been originated in traditional cultures where the activities of people followed the natural cycles of the sun, moon and seasons (Graham 1981). People sharing this perception are not occupied by planning their future, because they believe that the future will be similar to the present (Ancona et al. 2001). They are therefore focused on the present and don't feel the need to plan their actions far ahead. Although this view is mostly linked to Latin-American cultures, it has been argued that people who are poor and less educated may hold this view as they have the feeling that they cannot affect what their future will be like (Graham 1981).

The third time view, termed *procedural-traditional time*, emphasizes the activities performed rather than time as a limiting external factor (Graham 1981). For people adopting the procedural-traditional time view, the passing of time is of less importance than conducting activities in a correct manner. These people focus on following the right procedures rather than following a time schedule. The procedural-traditional view favours a past orientation because traditions and rituals are held in high importance (Usunier and Valette-Florence 1994, Graham 1981). According to Graham (1981) the procedural traditional time is typical of American Indians, some African countries and traditional Asian countries.

Most timestyle models are based on the linear-separable view of time. For example, the idea of dividing people into past, present and future-oriented would not be sensible for cultures

that view time as an ever repeating circle, or the idea of time being an economic resource that can be divided into specific entities might not make sense in cultures where time is seen as a succession of activities or events. Also the Timestyle Scale used in this study is based on the linear-separable view of time. Although the scale has been validated in multiple countries with different cultures (Usunier and Valette-Florence 2007), including for example Vietnam and Hong Kong, there is also evidence that not all dimensions of the scale are free from cultural bias. For instance, a study by Legohérel et al. (2009) found that the dimensions of temporal orientation did not fit well the Chinese culture. In this study, all the respondents are Finnish and are therefore likely to share a linear-separable time view. However, it is important to acknowledge that the results might be different in cultures that share a different view of time.

Along with culture, also individual differences and situational factors are assumed to contribute to the perceptions of time. I will next discuss the individual and situational effects on the subjective experience of time.

2.2.2. Individual differences

As explained in the previous section, culture has an influence on shaping how people perceive the overall concept of time. While most people in the western cultures share an understanding of time as a linear progression from past to the present and into the future, other cultures understand time as an ever repeating circle, or defined as a succession of performed activities (Graham 1981). However, in addition to this fundamental conception of time defined by the culture, people have also individual differences in their view of time within and across cultures (Bergadaà 2007). The individual factors affecting the experience of time have been debated in previous research, concentrating mostly on their impact on temporal orientations, i.e. projections to past, present and future (e.g. Davies and Omer 1996, Fraisse 1984, Bergadaà 1990). I will next briefly discuss the individual factors relating to demographics and personality as antecedents for the subjective experience of time.

Many studies have indicated that *age* affects the temporal orientation of people (e.g. Usunier and Valette-Florence 2007, Guy et al. 1994, Szmigin and Carrigan 2001). As people age, their

future becomes inevitably shorter, while the time and experiences they have had in the past increase. Consequently, as people age, they tend to orient themselves more strongly towards the past (Guy et al. 1994). Younger people, still having most of their life ahead of them, are more likely to be focused on the future. An everyday example of this is a child making plans of what they will become in the future, while older people tend to memorize their past experiences. Also, a study by Szmigin and Carrigan (2001) showed evidence that older people have a more economic view of time than younger people. They suggested that as people grow older they are more actively involved with social and material life and face multiple conflicting demands, thus forcing them to view time in more economic terms.

The role of *gender* in explaining the experience of time has been under a lot of debate (Usunier and Valette-Florence 2007, Ely and Mercurio 2011). Several studies have investigated the differences in time orientation between men and women, but the results have been quite diverse and even contradictory. Some studies have indicated that gender cannot be used to explain differences in time perspectives (Fingerman and Perlmutter 1995, Hornik 1993). On the other hand, some studies have found significant differences between the genders. For example, the studies by Usunier and Valette-Florence (2007) as well as Lessing (1968) indicated that women display stronger past and present orientation, while men are more strongly oriented towards the future. However, contrasting results were discovered by Havlena and Holak (1991), who argued that men in fact display more thought towards the past.

The differences between genders have been explained by suggesting that the higher social orientation and the multiple roles played by women affect their view of time (Manrai and Manrai 1995, Usunier and Valette-Florence 2007). Usunier and Valette-Florence have suggested that due to these multiple roles and demands women tend to avoid strict schedules and have a stronger preference for non-organized time than men. These findings are interesting because they appear to conflict with those related to age, as it was suggested that the multiple roles and demands faced by adults force them to manage their time more economically.

In addition to the demographic variables of age and gender, previous research has pointed out that personal history, social status and life stage may also influence how people perceive time, especially related to the temporal orientations (Cotte and Ratneshwar 2001, Bergadaà 1990). For example, future orientation has been suggested to be linked to higher education and income, while past and present orientation have been linked to lower education and lower social class (Agarwal et al. 1983, Trommsdorff 1983). Also temporal anxiety has been linked to low education (Calabresi and Cohen 1968). A study by Kaufman et al. (1991) investigated the relationship between polychronic attitude and demographic characteristics and found that people with high education and employment status have the most favourable attitude towards polychronic time use.

Other researchers have found relationships between aspects of time orientations and specific *personality traits* (Dunkel and Weber 2010, Calabresi and Cohen 1968). For instance, Calabresi and Cohen (1968) studied personality traits and time attitudes of students and psychiatric hospital patients and found that time anxiety is most common for people who lack self-confidence, are easily frustrated and dependent on old habits, while time submissiveness is more common for people who are comfortable with themselves and their environment. They also pointed out that the line between the concept of personality trait and time perception was ambiguous as the factors were so highly correlated. Time anxiety and submissiveness could in fact be categorized as personality traits. Whereas culture and demographics affect the external view of time; understanding of *what time is* and *how it should be used*, time related personality traits are rather related to *feelings* towards time and reflect how a person adapts to the external concept of time (Usunier and Valette-Florence 2007, Legoherel et al. 2009).

As previous research has pointed out that demographics are related to time perceptions and that people have time related personality traits, it could be assumed that the clusters identified in this study differ from each other in regard to these factors. Next, I will have a brief look into the effect of situation and roles on the subjective experience of time.

2.2.3. Situation and roles

In addition to cultural influence and personal characteristics, the perception of time is also shaped by the immediate surrounding conditions. People experience time in relation to the activities that are being performed (Ancona et al. 2001, Hornik 1984, Allan 1979).

First of all, as Ancona et al. (2001) explain, people perceive the *passage of time* differently depending on what kind of activities they are engaged with. For example, when people are 'busy' or are engaged with activities they personally enjoy, they perceive that time is passing quickly. However, as timestyles describe the *general* attitudes of people towards time (Usunier and Valette-Florence 2007), the perception of the passage of time related to the situation is not a relevant antecedent for timestyle.

Rather, situation is an important antecedent when discussing the *dynamicity* of timestyles. The previous chapter pointed out that age and social status have an influence on timestyles. This indicates that timestyles evolve with the person much like lifestyles or value systems. Although timestyle is a relatively stable characteristic of a person, it is also dynamic; constantly matched to the demands and expectations related to the current situation, other people and the roles played by the consumer (Denton 1994). For instance, in their article Cotte and Ratneshwar (2001) suggested that a person may be highly analytical, economic and monochromic at work, but act spontaneously and polychronically during a vacation.

In addition, Denton (1994) studied timestyles as allocation of time to specific activities emphasizing the dynamic nature of timestyles. He suggested that if one's timestyle is incongruent with his or her personal relationships, he can engage in adaptive tactics that alter the person's timestyle. This way, timestyles depend on the situation and the present needs and wants as well as obligations and opportunities, and are dynamic instead of constant and stable. He proposed that people are constantly trying to match activities, timestyles and relationships.

2.3. Summary

In this chapter I have discussed time in consumer behaviour based on previous research. Previous consumer behaviour literature has defined time as an objective economic resource comparable to money, focusing on how people choose to spend their time, as well as a subjective experience that is always dependent on the person and situation at hand, focusing on feelings and attitudes towards time. This study explores differences in time perceptions based on timestyles, a concept that includes both perceptual and behavioural components.

Factors that influence the different time perceptions, or cause different timestyles, are culture, personal characteristics and situation. Culture defines the broad concept of time for a population. Consumer demographics such as age, gender and social status further define this view of what time is and how it should be used. Furthermore, people have specific personality traits that are related to feelings towards time. Even these individual time views are dependent on the situation at hand and the roles played by the consumer. Although this study focuses on classifying consumers based on their enduring timestyle, it is important to acknowledge the dynamicity of timestyles that stems from the expectations and demands that relate to different roles.

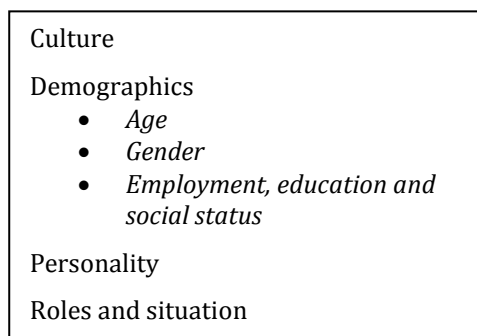


Figure 1: Antecedents of timestyles

Even though people are likely to be unique in their time orientations, it is also possible to find similarities between them that can be used to form consumer groups. Timestyles provide a way to categorize people based on their individual time perceptions. In the next section I will discuss the concept of timestyles and the different models that have been created to define them.

3. Timestyles

The preceding chapter demonstrated that time is a subjectively experienced measurement system that people use to allocate events and activities in a sequence. The perception of time is influenced by the surrounding culture but also by personal characteristics and situation at hand. The combination of these external and internal factors defines the way in which a person perceives, understands and uses time. In other words, it defines an individual's personal *timestyle*. In this chapter the concept of timestyles will be defined and some models that have been claimed to capture their dimensions will be presented. The Psychometric Timestyle Scale that has been chosen as a basis for this study will be discussed in greater detail.

3.1. Defining timestyles

The concept of timestyle has not reached a common definition yet. However, there appears to be certain characteristics that repeat across the proposed definitions. For instance, it is usually agreed that timestyles are *multidimensional* (Cotte and Ratneshwar 2001, Settle et al. 1978, Usunier and Valette-Florence 1994, 2007, Trommsdorff 1983, Feldman and Hornik 1981), *dynamic* (Denton 1994, Cotte and Ratneshwar 2001) and a combination of *subjective perceptions* and *observable behaviour* (Usunier and Valette-Florence 1994, 2007, Cotte and Ratneshwar 2001, Zimbardo and Boyd 1999).

Also in this study, timestyles are understood as multidimensional constructs that reflect how individuals experience and use time. However, this study views timestyles as relatively stable characteristics of people. Although people are likely to adjust their timestyles depending on the surrounding situation and company, in this study it is assumed that people also have a general tendency to perceive and use time in a certain way that is characteristic of them. This view is supported by the studies of Usunier and Valette Florence (2007) and Durrande-Moreau and Usunier (1999).

The concept of timestyles was first introduced by Feldman and Hornik (1981). They argued that as allocation of time is fundamental in acquisition of goods and services, researchers should replace the widely used term *lifestyle* with the more appropriate *timestyle*. They argued that the manner in which a person allocates his or her time to different activities reflects the behavioural type of that person and can reveal the personal priorities and aspirations. They explained that people divide their time and other resources between work, necessities, homework and leisure. The amount of time dedicated to each activity can communicate the personal priorities of the actor. The regularity in these priorities defines the person's timestyle. Their conception presented timestyles as multidimensional constructs that include personal, social and situational aspects.

A number of studies on timestyles followed, introducing different dimensions of time orientation. *Temporal orientation* has been probably the most researched dimension (e.g. Bergadaà 1990, Ko and Gentry 1991, Rojas-Méndez et al. 2002, Heinz-Tangari 2010, Legohérel et al. 2009). Temporal orientation refers to the tendency of focusing on past, present or future, and it is largely determined by the surrounding culture, as indicated in the previous section (e.g. Graham 1981). Past-oriented people value traditions and history and have a tendency of reminiscing the past. Present-oriented people, on the other hand, seek to live in the moment and to maximize their current well-being, while future-oriented people tend to envision their future and base their actions on future goals (Bergadaà 1990, Zimbardo and Boyd 1999).

Another well studied dimension of timestyles has been the *level of activity* (e.g. Kaufman et al. 1991, Bluedorn et al. 1999, Conte et al. 1999). As argued by Kaufman et al. (1991) the level of activity describes a person's orientation towards either monochronic or polychronic time use. Monochronically oriented people prefer focusing on one task at a time while polychronically oriented people prefer performing multiple tasks simultaneously. Monochronic behaviour has been argued to be related to the linear-separable view of time, where time is seen as a scarce economic resource, while polychronic behaviour is common in present-oriented circular-traditional time (Usunier and Valette-Florence 2007, Hall 1983).

Also, several studies have focused on investigating how people plan their daily activities (e.g. Karande and Merchant 2012, Bond and Feather 1988, Calabresi and Cohen 1968). Whereas some people are highly analytic, constantly making plans and scheduling activities, others prefer acting more spontaneously and avoid making strict plans or commitments (Cotte and Ratneshwar 2001).

In addition to temporal orientation, level of activity and planning, a number of other dimensions have been suggested to determine individual timestyles (Settle et al. 1978, Ko and Gentry 1991, Cotte and Ratneshwar 2001, Rojas-Méndez et al. 2002, Calabresi and Cohen 1968, Usunier and Valette-Florence 1994, 2007, Francis-Smythe and Robertson 1999). However, even though it has been generally accepted that timestyles are multidimensional constructs, only a few attempts have been made to create conceptual models that could comprehensively define the dimensions of timestyles. The next section will present three of these comprehensive timestyle models.

3.2. Timestyle models

There have been only a few efforts to comprehensively combine the dimensions of timestyles and to create models that could be used for measuring them. In this section I will introduce three of these models that have had a significant impact on the research of timestyles.

Perhaps the first attempt to capture timestyles comprehensively was made by Alreck in 1976 (see Settle et al. 1978) when he developed the F-A-S-T time orientation test. Alreck used the term *time orientation* which he viewed as one aspect of human personality that has an impact on consumer behaviour. He proposed that time orientations are a sum of four factors; *focus*, relating to the temporal orientation towards the past, present or future, *activity*, referring to tendencies of over or under activeness, *structure*, relating to the degree of planning versus spontaneity, and finally *tenacity*, which refers to whether a person is willing to postpone the rewards of his actions to the future. F-A-S-T test has been validated with a large number of adult subjects. Also, a study by Settle et al. (1978) found that these time orientations translate

into measurable differences in lifestyles and suggested many implications to consumer behaviour.

The F-A-S-T time orientation test laid the groundwork for the model created by Usunier and Valette-Florence (1994, 2007). Building on existing research, they developed a Psychometric Timestyle Scale that recognized four dimensions that had been formerly identified by anthropologists and experimental psychologists; *the linearity and economicity of time*, *temporal orientation* and psychological dimensions including *obedience to time* and *temporal persistence*. According to the Timestyle Scale time is a concept that is partly internal and partly external to an individual (Usunier and Valette-Florence 1994). The scale was able to quantitatively measure timestyles. Later on it has been tested various times and it has proven consistently valid across cultures (See Usunier and Valette-Florence 2007 for a review). Because of its cross-cultural validity and suitability for quantitative measurement, this model of timestyles was also chosen to be used in this study.

It is worth noting that the Psychometric Timestyle Scale is not the most recent model to comprehensively describe timestyles. Another model was introduced by Cotte and Ratneshwar in 2001. In coherence with the Timestyle Scale they suggested timestyles to include a dimension of *temporal orientation* referring to past, present and future orientation, as well as *planning orientation* that refers to being either analytical or spontaneous. However, they argued that timestyles are also described by a dimension of *social orientation*, which indicates the tendencies of preferring to spend time alone or to spend time with others. Also, they identified a dimension of *polychronic orientation*; whether a person concentrates on one thing at a time or simultaneously on many actions, which in the Psychometric Timestyle Scale is expected to be part of the dimension of linearity and economicity of time.

The next section takes a deeper look into the Psychometric Timestyle Scale that is used as a theoretical basis for measuring timestyles in this study.

3.3. The Psychometric Timestyle Scale

The model chosen for this study is the Psychometric Timestyle Scale, developed by Usunier and Valette-Florence in 1994. The Psychometric Timestyle Scale follows time studies in the field of marketing, but emphasizes dimensions described by anthropologists and experimental psychologists (Usunier and Valette-Florence 2007). It explores time as a multidimensional construct that is partly external and partly internal to the individual. It combines an external view of time as it is shaped by the surrounding culture and society, with an internal psychological aspect (Usunier and Valette-Florence 2007).

The scale was initially developed based on 180 items extracted from earlier studies, including e.g. the previously mentioned F-A-S-T model (Usunier and Valette-Florence 1994, 2007). Using methods of quantitative analysis, the number of variables was reduced into 23 and six underlying dimensions were discovered among them. The dimension *preference for economic time* was found to explain the largest percentage (18.9%) of total variance, followed by *time submissiveness* (13.3%), and *temporal orientations towards past* (10.4%) and *future* (9.5%). Economic and non-organized time appeared to have a strong negative correlation, but were divided into distinct dimensions due to high eigenvalues and supporting results from confirmatory factor analysis. Two dimensions relating to a motivational aspect to time were later added to the scale, resulting in a final scale composed of 29 items and four high level dimensions each including two sub-dimensions (Usunier and Valette-Florence 2007).

The Psychometric Timestyle Scale has been chosen as the key theory for this study for multiple reasons. First, the scale has been validated multiple times with large samples and in a number of national contexts, such as France, Germany, Tunisia, China and Vietnam (see Usunier and Valette-Florence 2007 for a review). One key aspect of the Psychometric Timestyle Scale is in fact its international applicability. Thus, there is reason to assume that the model can be relevant in the Finnish context as well. Secondly, the Timestyle Scale allows quantitative measurement of timestyles, providing a clear scale for measurement that has been quantitatively validated. Third, I believe that the Timestyle Scale is the most successful theory to capture all dimensions of timestyles, as it accounts for both external and psychological factors. Most other models, including the more recent one presented by Cotte

and Ratneshwar (2001), focus on the external or behavioural factors and fail to include psychological factors that can be assumed to have an important impact on individual differences.

The Psychometric Timestyle Scale has been shown to be able to predict consumer behaviour relating to values and holiday planning (Valette-Florence et al. 1995), attitude towards waiting times (Durrande-Moreau and Usunier 1999), criteria used for purchase decisions (Dao 2005), attitudes towards mobile communications (Valette-Florence et al. 2001) and website satisfaction (Elmezni and Gharbi 2010). These findings support the idea that also Internet usage behaviour could be predicted by using the scale.

The table 1 below summarizes the dimensions of the original Psychometric Timestyle Scale. Next these dimensions will be discussed in more detail.

<i>External dimensions</i>	Linearity and economicity of time
	Preference for economic time
	Preference for non-organized time
	Temporal orientation
	Past orientation
	Future orientation
<i>Internal/ Psychological dimensions</i>	Obedience to time
	Time submissiveness
	Time anxiety
	Temporal persistence
	Tenacity
Preference for quick return	

Table 1: Dimensions of the Psychometric Timestyle Scale

3.4. Dimensions of timestyles

As noted in the previous section, the Psychometric Timestyle Scale includes both external and internal factors affecting time perceptions. External factors are learned in the socialization process interacting with other people, and they are therefore strongly influenced

by the surrounding culture and society (Usunier and Valette-Florence 2007). Internal or psychological factors, on the other hand, are aspects of human personality and are thus innate. External factors include the dimensions of *linearity and economicity of time* and *temporal orientation*. Both of these dimensions can be further divided into two sub-dimensions.

3.4.1. Linearity and economicity of time

The first dimension of the Timestyle Scale, linearity and economicity of time, reflects the monetary value of time (Usunier and Valette-Florence 2007). It relates to the cultural view of time discussed in the first chapter, and in other research it has been described with concepts of *structured routine* (Feather and Bond 1983, Settle et al. 1978) and *planning orientation* (Cotte and Ratneshwar 2001). The underlying idea is that when time is viewed as a resource comparable to money, the economicity of time is high and people are more attentive to time management (Usunier and Valette-Florence 2007). Linearity and economicity of time can be divided into two sub-dimensions, *preference for economic time* and *preference for non-organized time*.

- *Preference for economic time*: When time is seen as a scarce and valuable resource, people tend to plan their use of time rationally (Usunier and Valette-Florence 1994, Settle et al. 1978, Cotte and Ratneshwar 2001, Bond and Feather 1988). They consider time as something that can be measured and divided into smaller entities and assigned for specific activities. People with a preference for economic time often use time markers such as watches, calendars and schedules to improve the use of time and to avoid time loss (Durrande-Moreau and Usunier 1999). They also tend to act monochronically, engaging in one activity at a time, and have been described as confident, careful, principled and work oriented (Usunier and Valette-Florence 2007).
- *Preference for non-organized time*: In contrast, those people who have a preference for non-organized time view time as a continuous flowing substance that should be approached more spontaneously (Usunier and Valette-Florence 1994, Settle et al. 1978, Cotte and Ratneshwar 2001, Bond and Feather 1988). These people prefer engaging in activities without too much consideration for time limits and schedules. They tend to be reluctant to make plans ahead of time, as they prefer to leave room

for unplanned activities. People with a preference for non-organized time tend to act polychronically, undertaking multiple tasks simultaneously (Usunier and Valette-Florence 2007). They have also been described as insecure, casual, flexible and leisure oriented (Bond and Feather 1988, Calabresi and Cohen 1968).

3.4.2. Temporal orientations

The second dimension focuses on the orientation towards the past, present or future. This temporal orientation has also been suggested to be a product of surrounding culture and society (Usunier and Valette-Florence 2007, Graham 1981, Kluckhohn and Strodtbeck 1961). Although temporal orientation is usually described as having three sub-dimensions of past, present and future, the Timestyle Scale only includes the sub-dimensions of past and future (Usunier and Valette-Florence 2007). However, in quantitative analysis low emphasis on both future and past orientation can be assumed to indicate present orientation, and it is therefore included in the discussion here.

- *Future orientation:* Future-oriented people enjoy spending time envisioning their future and planning future activities (Usunier and Valette-Florence 1994, Bergadaà 1990, Zimbardo and Boyd 1999, Cotte et al. 2004). They tend to be goal oriented and often high achievers (Murrell and Mingrone 1994). They are also rational, making choices based on long-term benefits and weighing their future losses and gains (Strathman et al. 1994). As Karande and Merchant (2012) suggest, the future-oriented consumers are most effectively engaged with rational appeals that emphasise goal achievement. Furthermore, they have been described as motivated, tenacious, pragmatic and secure (Agarwal and Tripathi 1980). In her study Bergadaà (1990) suggested that future-oriented people, due to their inclination to innovation and change, are likely to be early adopters of new innovations and technology and to independently search for new emerging opportunities.
- *Past orientation:* Past-oriented people are prone to nostalgia and comfortable in their set routines (Usunier and Valette-Florence 1994, Holbrook 1993, Cotte et al. 2004). They tend to value traditions and history and reminisce their experiences in the past

(Holbrook 1993). In their research Zimbardo and Boyd (1999) identified two types of past-oriented people. Past-positive people had a positive attitude towards the past and enjoyed reminiscing the past experiences. Past-negative people, on the other hand, were oriented towards the past because they had had a traumatic experience that forced them to constantly look back to. As consumers, past-oriented people are often brand loyal and enjoy products with nostalgia (Havlena and Holak 1991, Zimbardo and Boyd 1999, Karande and Merchant 2012). They have also been described as cautious, insecure and conservative (Settle et al. 1978).

- *Present orientation:* Present-oriented people live for the moment and make choices based on short-term gratifications (Usunier and Valette-Florence 1994, Zimbardo et al. 1997, Bergadaà 1990). As for past orientation, Zimbardo and Boyd (1999) identified two distinct types of present orientation. Present-hedonic orientation is characterized as a person who enjoys living in the moment and focusing on the current thrills of life. These people appreciate the freedom to act spontaneously. On the other hand, present-fatalistic people have a feeling of helplessness towards the future. These people feel like they don't have any control over their lives and are therefore forced to stay focused on the current moment. As consumers, the present-oriented individuals are usually hedonistic and seek high arousal (Karande and Merchant 2012).

As the first dimension of linearity and economicity of time, also the temporal orientation is influenced by the surrounding culture (Graham 1981, Usunier and Valette-Florence 2007). As explained in the previous chapter, modern western countries are future-oriented, while Latin-Americans are characterized by present orientation. Traditional Asian cultures on the other hand are most oriented towards the past. Also demographics and individual history, like education, past experiences and social class have been argued to influence temporal orientation (Agarwal et al. 1983).

It is also important to note that temporal orientation is not exclusive. A future-oriented person may not only be focused on the future, but can also reminisce the past and enjoy the

present moment (Cottle 1976, Cotte et al. 2004, Bergadaà 1990). Temporal orientation simply portrays the tendency to over-emphasize one timeframe over the others. It has been suggested that all humans have to be at least somewhat future-oriented in order to accomplish anything in their lives (Raynor and Entin 1983), while it has also been presented that people can be mostly past-oriented in nature and still perform well in their lives (Cottle 1976).

3.4.3. Psychological dimensions

Whereas the first two dimensions, linearity and economicity of time and temporal orientation, are external, most of all dictated by the surrounding culture and society, the *psychological dimensions* are innate personality traits (Usunier and Valette-Florence 2007). The psychological dimensions explain how people individually cope with time as an external resource, in other words, how individuals adapt themselves to the social expectations related to time. They include two separate dimensions; *obedience to time* and *temporal persistence*, which can be further divided into two sub-dimensions each (Usunier and Valette-Florence 1994).

Obedience to time

Obedience to time refers to affective responses to time and the need to control it (Usunier and Valette-Florence 1994, Calabresi and Cohen 1968). It encompasses the sub-dimensions of *time anxiety* and *time submissiveness*.

- *Time anxiety* refers to a feeling of discomfort towards time. People who are anxious feel like they are not sufficiently in control of time and their future (Usunier and Valette-Florence 1994). They feel that time has little purpose in their lives because they cannot control it. Feeling of anxiety towards time is reflected in behaviour as being passive and waiting for things to happen instead of taking action (Calabresi and Cohen 1968).
- *Time submissiveness*, as opposed to time anxiety, refers to a perception that time is highly useful and should be respected (Usunier and Valette-Florence 1994). These people don't feel a need to be in control of time but rather take time as it comes and

obey timelines and schedules. This is reflected in behaviour as being on time in appointments and meeting schedules (Calabresi and Cohen 1968).

Temporal persistence

The second psychological dimension is related to motivation. It is based on the notion that people vary in their ability to wait for rewards or outcomes of their actions. While some people may not hesitate to engage in activities where rewards are acquired in a long term, others seek to find activities where the gratification is instant (Usunier and Valette-Florence 2007). The sub-dimensions of temporal persistence are *tenacity* and *preference for quick return*.

- *Tenacity* reflects the willingness to undertake activities that may take a long time to finish or where rewards are not rapidly obtained (Usunier and Valette-Florence 2007). As described in the article by Settle et al. (1978), tenacious people are able to delay the gratification while pursuing far distant goals. They always strive to complete the tasks they have started and do not feel comfortable leaving things unfinished. Furthermore, Settle et al. (1978) characterized tenacious people as assertive, structured and future-oriented.
- *Preference for quick return* reflects the opposite of tenacity (Usunier and Valette-Florence 2007). People who hold preference for quick return hesitate to engage in activities where the goals are in distant future. Instead, they prefer to undertake smaller projects, where the gratification is instant. These people have been characterized as flexible, self-centred and past-oriented (Settle et al. 1978).

3.4.4. Level of activity

In the Timestyle Scale it is assumed that the level of activity reflecting polychronic or monochronic time use is directly related to the dimension of linearity and economicity of time (Usunier and Valette-Florence 1994, 2007). In the model the two constructs are presented with one single dimension suggesting that people with a preference for economic time tend to act monochronically, engaging in one activity at a time, while people with a

preference for non-organized time tend to be polychronic in their actions, preferring to undertake many tasks simultaneously.

However, previous studies (Bluedorn et al. 1992, Kaufman et al. 1991) have suggested that people may behave polychronically because they are busy and are trying to satisfy expectations set by multiple roles. Thus, it could also be suggested that people who view time in economic terms may engage in multitasking because they strive to minimize loss of time and therefore perform multiple tasks simultaneously. As discussed in the previous section, polychronicity is in fact often presented as a separate dimension of timestyles (e.g. Cotte and Ratneshwar 2001, Francis-Smythe and Robertson 1999).

As one of the research questions in this study was to explore the different dimensions of timestyles and their connections, it will also be an objective of this study to investigate the relationship between economicity and linearity of time and polychronic time use. Therefore, even though the original Psychometric Timestyle Scale does not include a dimension describing the polychronic time use, it will be briefly described here as a separate dimension, labelled level of activity.

- *The level of activity* refers to the tendency of a person to engage in multiple activities at the same time (Kaufman et al. 1991). *Polychronic* individuals are comfortable combining activities and performing multiple actions at the same time, while *monochronic* individuals prefer concentrating in one thing at a time. Monochronic individuals have been characterized as task-oriented and valuing promptness (Bluedorn et al. 1992). They are likely to have a preference for economic time and to follow a predetermined schedule (Usunier and Valette-Florence 2007). Polychronic people, on the other hand, tend to place more emphasis on involvement and completion of tasks than on following a schedule (Hall 1976). They are suggested to usually have a preference for non-organized time, to be more easily interrupted than monochronic people and to be more relationship oriented (Hall 1976). A study by Kaufman et al. (1991) also indicated that individuals with a positive attitude towards polychronic time use are less likely to report feelings of role overload than those with monochronic attitude.

It is noteworthy, that whereas the other timestyle dimensions include two separate sub-dimensions, the level of activity represents one single dimension. Even though people can be categorized as either polychronic or monochronic, these two are opposite poles of one construct instead of two separate constructs (Kaufman et al. 1991). In practice this means that people cannot be simultaneously polychronic and monochronic, although they may use both strategies depending on the situation at hand.

Kaufman, Lane and Lindquist (1991) have developed a scale for measuring individual attitude towards polychronic time use. Polychronic Attitude Index (PAI) does not measure specific activities, but rather concentrates on general dispositions toward combining activities through multitasking. PAI consists of four statements that the respondents are asked to rate on a Likert scale ranging from 1 (agree) to 5 (disagree). The authors found that people, who score high on polychronic attitude, also tend to behave polychronically. The PAI is therefore a suitable method for understanding both subjective experience and observable behaviour relating to multitasking.

This study uses the PAI to measure the polychronic attitude of the respondents. The four questions constituting the PAI will be added to the set of 29 questions constituting the Timestyle Scale, thus resulting in a scale with 33 questions with 5 higher order dimensions and 9 sub-dimensions (see table 2). The Polychronic Attitude Index has been placed under a higher order dimension labelled *level of activity* based on terminology used in previous research (Kaufman et al. 1991). Also based on previous research (Kaufman et al. 1991, Hall 1983, Usunier and Valette-Florence 2007), the level of activity has been categorized as an external factor. After all, polychronic attitude has been demonstrated to be mostly dictated by the surrounding culture and learned behaviour (Bluedorn et al. 1999).

<i>External dimensions</i>	Linearity and economicity of time
	Preference for economic time
	Preference for non-organized time
	Temporal orientation
	Orientation towards the past
	Orientation towards the future
	Level of activity
Polychronic time attitude	
<i>Internal / Psychological dimensions</i>	Obedience to time
	Time submissiveness
	Time anxiety
	Temporal persistence
	Tenacity
Preference for quick return	

Table 2: Dimensions of the extended Timestyle Scale

3.5. Interaction of the dimensions

The nature and interaction between the timestyle dimensions is a complex matter. However, understanding how the dimensions are associated is important, because as personal traits they work in combination to determine a person's perception of time and the resulting behaviour in everyday life (Cotte, Ratneswahr & Mick 2004). Also, understanding the interactions helps to understand the structure of timestyles. This section will present some findings from previous research concerning the interaction of the timestyle dimensions, which will later be compared to the findings from this study.

As previously noted, the original Timestyle Scale includes four higher level dimensions which all include two independent sub-dimensions. Some researchers (e.g. Settle et al. 1978, Cotte et al. 2001) have, however, presented that some of the sub-dimensions are in fact opposite poles of single dimension, meaning that a strong position in one of the two sub-dimensions indicates a weak position in the other. For instance, in their research Cotte et al. (2001, 2004) have treated the *planning orientation*, which is similar to Timestyle Scale's dimension of *economicity and linearity of time*, as one single dimension with two contrasting poles; analytic and spontaneous.

Previous research has also explored the associations among the higher level dimensions and suggested different constructs among them (e.g. Karande and Merchant 2012, Settle et al. 1978). For instance, as noted earlier, the Timestyle Scale integrates the dimensions of economicity and linearity of time and polychronic attitude, suggesting that people who have a preference for economic time tend to be monochromic (Usunier and Valette-Florence 2007). Furthermore, a study by Karande and Merchant (2012) suggests a correlation between economicity and linearity of time and temporal orientations. Also, as discussed in the previous section, cultural views of time including linear-separable time, circular-traditional time and procedural-traditional time combine the external factors of timestyles, including economicity of time, temporal orientation and level of activity. The linear view of time handles time as an economic resource, where activities are performed monochronically with an orientation towards the future (Graham 1981). Circular-traditional time on the other hand combines non-organized time with polychronicity and present orientation. Finally, procedural-traditional time emphasises non-organized time and past orientation.

Some suggestions have also been made about the possible linkages between the external and internal dimensions. Regarding the obedience to time, submissiveness has been argued to relate to future time orientation, while anxiety has been related to past orientation (Calabresi and Cohen 1968). Regarding the dimension of persistence, tenacity has been linked to economicity of time and future orientation (Settle et al. 1978, Agarwal and Tripathi 1980). For instance, an early study by Settle and colleagues (1978) pointed out that tenacious people are structured and future-oriented.

Another interesting theory combining timestyle dimensions was presented by Prime (see Durrande-Moreau and Usunier 1999). He combined the economic view of time with temporal orientations, and based on in-depth interviews he identified two contrasting types of people. *Quantitative* individuals have a strong preference for economic time, while also displaying strong orientation towards the past and even more on the future. In contrast, *qualitative* individuals do not view time in economic terms and pay little concern to the past or the future. Quantitative people were argued to feel high time pressure. Prime also noted that while quantitative individuals have a strong sense of purpose and usefulness of time, the qualitative people do not. It can thus be argued that there is a link to the dimensions of

obedience to time; quantitative individuals, unlike qualitative ones, tend to be submissive. However, he points out that also quantitative people may behave as they were not submissive to time, because they tend to make tight and carefully planned schedules that may be difficult to obey.

In addition to the interactions described here several studies have more or less explicitly reported other interactions between the timestyle dimensions (e.g. Cotte et al. 2004, Heintz Tangari et al. 2010). Sometimes the dimensions support each other, and sometimes they conflict. For example, a qualitative study by Cotte et al. (2004) demonstrated that different timestyle dimensions may be in conflict with each other pushing and pulling people in different directions. The timestyle constructs are thus quite complex and rather than describing each of them in detail it may be more appropriate to state that the dimensions are in complex interaction with each other. The figure 2 portrays a timestyle profile; a construct of interdependent dimensions whose complex interaction constitutes a person's timestyle.

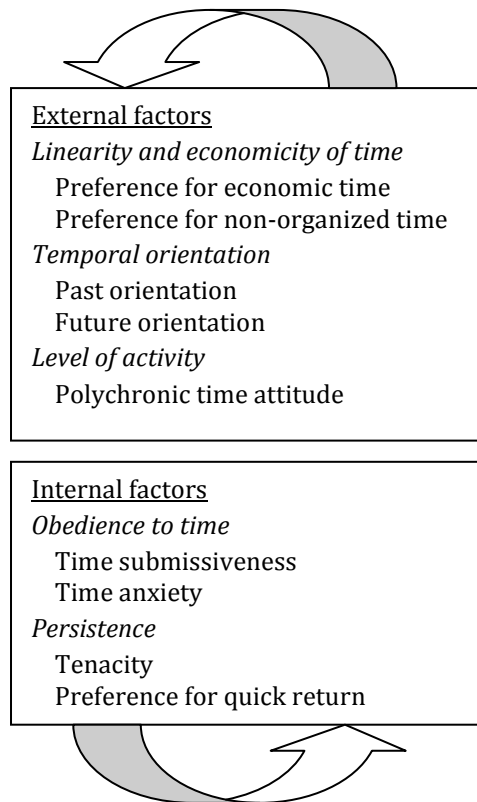


Figure 2: Timestyle profiles

4. Timestyles explaining Internet use

As Internet has become one of the leading media for today's consumers (Chan and Fang 2007), it is important to understand online consumer behaviour. Several disciplines have studied how consumers behave in an online environment, focusing most of all in online purchase behaviour and attitude models such as Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) or Technology Acceptance Model (TAM) (see Saeed et al. 2003 or Cheung et al. 2005). However, it has been argued that more research is needed to understand the individual characteristics that affect the patterns of Internet use (Novak et al. 2000, Lòpez-Bonilla and Lòpez-Bonilla 2009). As Usunier and Valette-Florence noted in their article (1994), timestyles may offer an interesting viewpoint to differences in online consumer behaviour.

In this study, the predictive validity of the consumer segmentation based on timestyles is assessed by comparing the segments in their Internet usage behaviour. This chapter discusses the relationship between timestyles and Internet use and presents what kind of associations can be expected based on previous research.

4.1. Relationship between timestyles and Internet use

Internet usage is of special interest in consumer behaviour relating to timestyles because the motivations to use it and the habits of how it is used can take a number of different forms that are related to time (Cotte et al. 2006). Internet can be used for *saving time* (Comor 2000, Chiang and Dholakia 2006). For example, a person can conveniently search for product or service information and make purchases online without having to spend time wandering around different stores and service providers. In contrast, Internet can also be used for *spending time* (Bryce 2001). People often use Internet as entertainment, playing games, watching videos, chatting with friends or just surfing the Internet for fun. Also, recent developments in technology have allowed a more spontaneous use of Internet as smart phones and tablets allow access to Internet regardless of time and location (Clarke 2001). While the use of mobile Internet is rapidly increasing, there are seemingly large differences

among people in their willingness to adopt this new innovation (Kim and Hwang 2012), which, I think, could be linked to their timestyles.

In their study, Cotte et al. (2006) studied how *time planning* affects Internet usage behaviour, namely exploratory behaviour, entertainment, information search and online shopping. They found that the *benefits* pursued from web use mediate the relationship between planning style and Internet behaviour. While analytical planners tend to seek for utilitarian benefits, spontaneous people are more likely to seek hedonic benefits. They found that seeking hedonic benefits was positively related to exploratory and entertainment usage behaviours, while seeking utilitarian benefits was positively related to information search behaviour. Both planning styles were positively related to online shopping, but for different reasons. Whereas analytical planners engaged in online shopping due to its utility, spontaneous people appreciated the enjoyment related to the shopping experience.

I will next briefly discuss Internet behaviour related to exploratory use, entertainment, information search and online shopping and discuss how they might be expected to relate to timestyles. I will also discuss mobile Internet adoption as it represents an interesting and current subject in the research of timestyles and Internet use, as demonstrated in the first chapter.

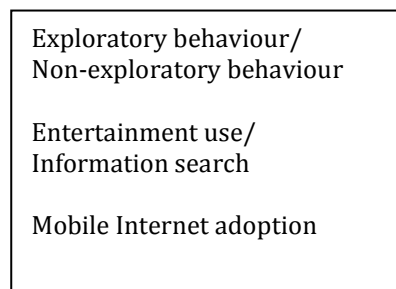


Figure 3: Aspects of Internet usage behavior

4.2. Exploratory behaviour

Exploratory web use refers to the tendency to actively seek for new websites and online experiences and the want to explore unfamiliar content on the web (Novak et al. 2000, Cotte et al. 2006). Exploratory web users often click unfamiliar links that direct them to completely new websites. As consumers they are characterized as curious, variety seeking and risk taking (Raju 1980). Their counterparts, on the other hand, tend to have a set of specific websites that they visit. They go online and routinely visit the few familiar websites and are not easily persuaded to click unfamiliar links (Cotte et al. 2006).

As mentioned before, Cotte et al. (2006) found exploratory behaviour to be linked to seeking hedonic benefits, which was in turn linked to spontaneous planning style. It can thus be assumed that people with a *preference for non-organized time*, will engage in exploratory behaviour online. Because of their spontaneous character, they are more likely to be distracted from their original task and follow unfamiliar links. People with *economic time view*, on the other hand, can be expected to be more concerned about completing their predetermined task and to avoid losing time that is considered a valuable and scarce resource.

Several studies have found a positive relationship between future orientation and behaviours such as variety seeking, interest in new products and innovations, adventure and knowledge (e.g. Usunier and Valette-Florence 1994, Bergad a 1990, Settle et al. 1979). Based on these findings it can be assumed that future-oriented individuals are likely to engage in exploratory behaviour. Past-oriented people, on the other hand, have been described as being content following their familiar routines (Usunier and Valette-Florence 1994) and can thus be expected to be less exploratory.

4.3. Entertainment use and information search

The previous section demonstrated that timestyles are likely to influence the tendency to explore unknown areas of Internet, in other words the *manner* of Internet use. While some people only visit familiar sites and complete predetermined tasks, others enjoy surfing the web without a specific mission. This section discusses the *purpose* of Internet use. Internet,

much like other media, can be used either for finding information or for spending time and getting entertained (Shukla et al. 2011, Cotte et al. 2006).

The use of web for entertainment refers to engaging in hedonic leisure activities online such as playing games, watching videos or chatting with friends (Cotte et al. 2006). Using Internet as entertainment does not require any specific outcomes, it is only intended for personal enjoyment.

The research by Cotte et al. (2006) suggested that much like exploratory Internet use, also entertainment is related to pursuit of hedonic benefits. People with a preference for non-organized time are therefore likely to use the Internet for entertainment. It can also be suggested that people with temporal orientation towards the present moment are likely to use the web as entertainment because of their tendency to maximize current pleasures without being concerned for their implications to the future. As mentioned previously, they have also been described as hedonistic and seeking for high arousal (Karande and Merchant 2012).

The use of web for information search refers to completing a predefined task that aims at certain outcomes (Cotte et al. 2006). The purpose of information search is to find very specific information, such as product details, prices, directions or advice. Cotte et al. also categorized reading news under information search, but I believe that it may also be seen as entertainment, or both.

Information search was found to be related to utilitarian benefits that were mostly sought by analytical planners (Cotte et al. 2006). People with a preference for economic time can thus be expected to use the Internet for information search. Also future-oriented people, as well as monochronic people have been characterized as task-oriented, seeking to perform predetermined tasks (Bluedorn et al. 1992, Murrell and Migrone 1994).

4.4. Mobile Internet adoption

Recent developments in technology have made it possible to access Internet conveniently at anytime, anywhere. According to the Official Statistics of Finland (2011) the use of Internet by mobile phone more than tripled between 2009 and 2011. However, a majority of people (71%) have still not adopted the mobile Internet into their daily use. The statistics indicate that even though the number of mobile Internet users has grown rapidly, the majority of people still use the Internet only with their laptops or home computers. Thus, there appears to be a difference in how people value the virtues of mobile Internet.

The use of mobile Internet has been shown to relate to polychronic attitude. A study by Hoft (1996) indicated that polychronically oriented people appreciate mobile Internet because it can easily be combined with other activities and because it allows spontaneous behaviour. Because of this freedom from time and location, mobile Internet can also be expected to be appreciated by those with a preference for non-organized time. On the other hand, as personal experience indicates, mobile Internet is often used to fill in empty time periods, such as waiting in line or travelling in public transportation. Therefore it could be argued, that people who view time as an economic scarce resource would appreciate mobile Internet because of its ability to provide needed information rapidly and maximize the value of used time.

Also, as smart phones and tablets are still relatively new appliances, there is likely to be a difference between the early adopters and the laggards. It has been argued that people with future orientation tend to be innovative and enjoy using new technologies (Bergadaà 1990, Valette-Florence et al. 2001). Based on these observations, it could be assumed that future-oriented people are most likely to be the early adopters of mobile Internet as well.

5. Summary of the literature review

The preceding three chapters have laid foundation for the empirical part of the study by reviewing existing literature on timestyles. In order to understand the antecedents for timestyles, a brief overlook was provided on studies of time in consumer behaviour. A brief history of time studies pointed out that the early view of time as an economic resource constraining consumers has been replaced by the paradigm of subjective experience of time, which assumes that time is a subjectively experienced matter both individually and collectively, and it presents not only constraints but also possibilities for consumers. However, it has also been established that time should be studied as a combination of both subjective processes and behavioural elements. Timestyles provide a method for this kind of research.

Timestyles describe the individual ways of perceiving and using time. Previous research has not reached a consensus on the structure of timestyles, but most researchers agree that they are dynamic and multidimensional constructs where the dimensions are in interaction with each other. Individual dimensions have been researched quite extensively, especially the temporal orientation, planning orientation and polychronic orientation. However, theories comprehensively combining the dimensions remain few. This study is based on the Psychometric Timestyle Scale developed by Usunier and Valette-Florence.

The Psychometric Timestyle Scale is constructed of *external factors* that describe the understanding of what time is and how it should be used and *internal factors* that refer to affective responses to time. Considering the external factors, *economicity and linearity of time* refers to planning and scheduling activities while *temporal orientation* relates to the projections towards the past, present or future. In this study one additional factor has been suggested to be added in the scale as an external factor; the level of activity that refers to the attitude towards multitasking.

The external factors are affected by culture, individual characteristics and situation. Culture defines the broad concept of time for people and it has been presented that there are three different views of time. Although timestyles has been argued to be based on the linear-separable view of time that is inherent in Anglo-American culture, it is worth noting that the concept of time may be profoundly different for other cultures. The external factors are also influenced by individual characteristics such as age, gender, employment and education. Finally, the situation at hand influences timestyles by posing different roles on a person.

While external factors define the understanding of what time is internal factors are related to feelings towards time and adaptation to the external concept of time. *Obedience to time* refers to feelings of comfort or discomfort towards time and the need to control it. *Persistence*, on the other hand, refers to motivation. Internal factors are innate personality traits and are therefore more stable than the external factors.

Together the external and internal factors constitute a person's timestyle. This study will explore consumer segmentation based on these constructs by developing timestyle profiles; descriptions of common types of timestyles. The predictive validity of the timestyle profiles will be investigated by exploring differences in their Internet behaviour.

Previous research has indicated that timestyles may provide an interesting aspect on differences in Internet consumption. Especially exploratory behaviour, information search and entertainment appear to relate to the dimensions of timestyles. Also mobile Internet adoption due to its features of allowing multitasking and spontaneous Internet usage regardless of time and location could possibly be related to timestyles.

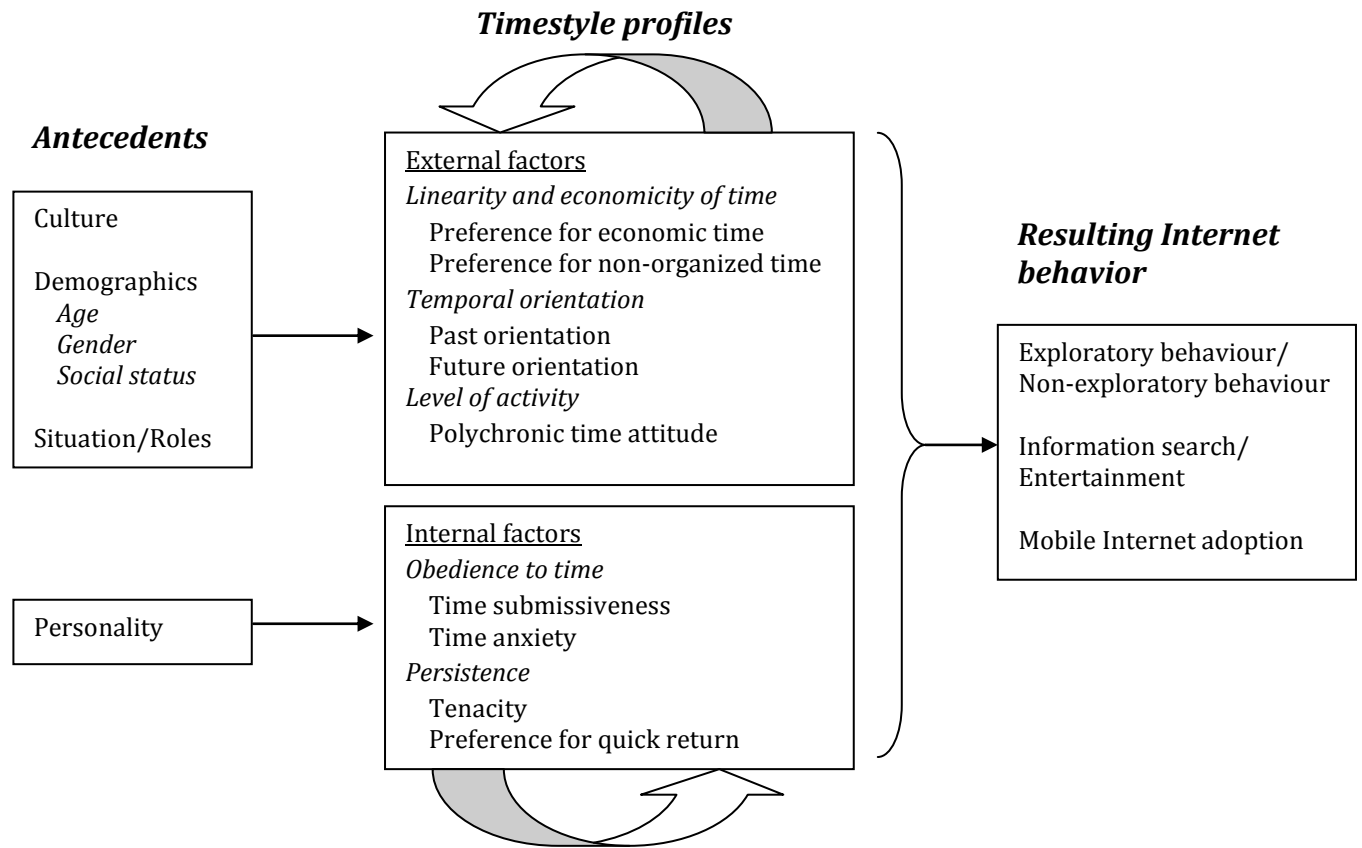


Figure 4: Framework of the study

6. Research design and methodology

The previous chapters reviewed existing literature on timestyles and laid foundation for the empirical part of the study. In this chapter the research design and methodology will be presented. I will first discuss collection of the data, then present the quantitative research methods that are used to analyze the data and finally validity and reliability of the study will be discussed.

This study investigates timestyles based on quantitative research methods. While qualitative research methods are suitable especially for exploratory research based on small samples, quantitative research methods allow a wider number of items to be analyzed and are appropriate for elaborating and extending existing theories (Malhotra and Birks 2007). As this study seeks to test the validity of an existing scale and to explore expected associations based on former research, quantitative research methods are deemed appropriate.

The quantitative research methods used in this study include correlation analysis, factor and cluster analysis, cross tabulations, t-test and analysis of variance. First, correlation analysis is used to investigate the associations between the timestyle dimensions. Next, factor analysis is performed in order to combine the 33 variables from the Timestyle Scale and Polychronic Attitude Index into timestyle dimensions. Then, in order to create consumer profiles based on these dimensions, k-means cluster analysis is performed. The differences between the clusters are finally analysed with cross tabulations, and demographic differences in timestyle dimensions are investigated using t-test and analysis of variance.

6.1. Data collection and description of the data

The data was gathered using a structured online questionnaire. Questionnaire was chosen as the data collection method because it allows a large body of data to be collected from a wide number of respondents in a convenient manner. Also, conducting the questionnaire survey online is convenient for the respondents thus often resulting in a greater response rate.

Finally, it provides the collected information in a format that is easy to process (Malhotra and Birks 2007).

The questionnaire was composed of questions mapping the respondents' demographic characteristics as well as their daily routines and practices of media use. The questionnaire was composed in Finnish, according to the native language of the respondents. In the end of the questionnaire the respondents were asked to rate themselves on the 29 items composing the Psychometric Timestyle Scale by Usunier and Valette-Florence (2007) and on the four items that compose the Polychronic Attitude Index by Kaufman et al. (1991). The reasons for choosing these models as a theoretical base for the study have been explained previously in sections 3.3. and 3.4.4., and the questions composing the scales are presented in the appendices 1 and 2. In the Psychometric Timestyle Scale the respondents are asked to rate themselves on a Likert scale ranging from 1 (agree) to 7 (disagree), while in the PAI the Likert scale ranges from 1 (agree) to 5 (disagree).

The data was collected in the summer of 2011 in two stages. The questionnaire was sent to M3 Research A/S panel of respondents using stratified sampling. In stratified sampling, the sample is chosen so that it is as representative as possible of the sub-groups that are most significant for the purposes of the study (McBurney and White 2007). In this study age, gender and geographic region were used as basis for stratification.

The descriptive statistics are exhibited in table 3. As can be seen from the table, the final gender distribution was very even half (50.5%) of the respondents being male and half (49.5%) being female. The results should thus be free from gender bias. Also, due to the stratified sampling the respondents represent different age groups quite evenly, considering that the questionnaire was targeted to adults between the ages 15-64.

Due to stratified sampling, the response rate of the first stage is unknown. The second stage of the questionnaire was sent to those who had responded to the first stage of the questionnaire. In the second stage the response rate was 52.9%, leading to a final number of respondents of 4772.

<i>Demographic characteristic</i>	<i>Number of respondents (N=4772)</i>	<i>%</i>
<i>Gender</i>		
Male	2409	50.5
Female	2363	49.5
<i>Age</i>		
≤29	1229	25.8
30-39	897	18.8
40-49	945	19.8
50-59	1107	23.2
≥60	594	12.5
<i>Net income €/month</i>		
<1000	1147	24.0
1000-2000	1765	37.0
>2000	1012	21.2
Prefers not to respond	848	17.8
<i>Employment status</i>		
Entrepreneur	254	5.3
Manager	573	12.0
Senior official	607	12.7
Worker	1490	31.2
Student	674	14.1
Pensioner	465	9.7
Unemployed	509	10.7
Other	201	4.2

Table 3: Demographic characteristics of the respondents

6.2. Quantitative research methods

The data collected with the methods described in the previous section were next analysed using a set of quantitative research methods. This section describes these research methods and their purpose and suitability for the study. The findings will be discussed with greater detail in the following chapter. All the calculations conducted in this study were performed using the IBM SPSS statistics software. The methods included correlation analysis, factor analysis, cluster analysis, cross tabulations, t-test and analysis of variance.

6.2.1. Correlation analysis

Correlation analysis was performed in order to investigate the relationships between the different timestyle dimensions. The purpose was to explore whether the eight dimensions included in the Psychometric Timestyle Scale correlate with each other as could be expected based on former studies. In addition, as discussed in the previous chapter, the correlation between the *polychronic attitude* and the dimension of *linearity and economicity of time* will be assessed to determine whether they should be presented with one common or two separate dimensions.

Correlation coefficient (r) is a statistic used for analysing the strength of association between two variables (Malhotra and Birks 2007). It can vary between -1.0 and +1.0. A value close to +1 indicates a high association, either negative or positive, between the variables. This means that the value of one variable can be predicted from the knowledge of another variable. Similarly, a value close to zero indicates low association and low possibility to predict one variable based on the other variable (Malhotra and Birks 2007).

6.2.2. Factor analysis

After investigating the items and dimensions of the Timestyle Scale using correlation analysis, factor analysis using the method of principal components was performed. Before conducting the factor analysis, the reverse scored items were recoded. The purpose of using factor analysis was to test the applicability of the Timestyle Scale; to see whether the 29 items included in the scale would produce the same factors as in previous studies. Also, the four items composing the Polychronic Attitude Index were added into the factor analysis to see if polychronicity would appear as a separate factor. The resulting set of variables thus included 33 items, of which one was removed due to multiple low correlations, reducing the final set of variables into 32 items.

Factor analysis is a class of procedures used for data reduction (Malhotra and Birks 2007). In factor analysis the number of variables is reduced by discovering the underlying structure

between them and using it as the basis for grouping similar variables together. The idea is thus to explain the data with fewer artificial variables with minimal loss of information. Two basic approaches to factor analysis are principal components analysis and common factor analysis (Malhotra and Birks 2007). In principal components analysis the total variance in the data is considered whereas in common factor analysis the factors are estimated only based on the common variance. In this study principal components analysis will be used.

Suitability of the data for factor analysis

Preconditions for factor analysis are that the variables are measured on an interval or ratio scale (Malhotra and Birks 2007) and that there are at least 100 observations in the sample (Gorsuch 1983, Hatcher 1994). Both of these conditions are met in the data of this study. It has also been stated that in order for factor analysis to be reliable, the number of observations should be at least 5 times the number of items (Gorsuch 1983, Hatcher 1994). In this study there were 397 observations suitable for factor analysis. As the number of items in the scale is 33, the number of observations is 12.03 times the number of items, confirming that the reliability is not affected by the sample size.

The suitability of data for factor analysis was assessed with two common methods; the Bartlett’s Test of Sphericity and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO). The data is suitable for factor analysis when the Bartlett’s test is statistically significant at .05 level and the KMO gets a value that is greater than 0.50. (Malhotra and Birks 2007) As demonstrated in table 4, both of these criteria were met with the KMO value being 0.815 and the Bartlett’s test was significant at .000. These findings conclude that the data has an excellent fit for principal components analysis.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,815
Bartlett's Test of Sphericity	Approx. Chi-Square	7458,183
	df	496
	Sig.	,000

Table 4: Suitability of the data for factor analysis

Interpreting the results of factor analysis

Eigenvalue is a statistic that represents the total variance explained by each extracted factor and it is a common method for determining the number of factors (Malhotra and Birks 2007). When eigenvalue is greater than 1, a factor may be retained. As can be seen from table 5, the factor analysis produced nine factors with eigenvalues greater than one. These nine factors explained 75.6 per cent of the total variance of the variables.

Total Variance Explained			
Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
Preference for economic time	5.896	18.426	18.426
Future orientation	4.380	13.688	32.114
Past orientation	2.918	9.120	41.235
Tenacity	2.899	9.059	50.294
Polychronic time attitude	2.093	6.539	56.833
Time submissiveness	1.926	6.018	62.850
Time anxiety	1.639	5.120	67.971
Preference for non-organized time	1.326	4.144	72.115
Preference for quick return	1.101	3.442	75.556

Extraction Method: Principal Component Analysis.

Table 5: Factors and eigenvalues

Key statistics in factor analysis are the *factor loadings* and *communalities* (Malhotra and Birks 2007). Factor loadings represent the correlation between the variables and the factors, therefore indicating how well the single variable describes the factor. Communalities, on the other hand, represent the amount of variance that a variable shares with all the other variables being considered. The table 6 presents the factor loadings that were extracted in the analysis. Varimax rotation was performed on the extracted factors to improve the ease of interpretation. Also, loadings under the value of .30 were suppressed.

Rotated Component Matrix ^a									
	Component								
	1	2	3	4	5	6	7	8	9
I like to plan my daily activities so I know just when to do each thing	.884								
I like to have a definite schedule and stick to it	.880								
I plan my activities so that they fall into a particular pattern during the day	.878								
I enjoy following a schedule	.812								
I spend time thinking about what my future might be like		.914							
I often think about the things I am going to do in the future		.904							
Many of us tend to daydream about the future. It also happens to me		.887							
I spend time thinking about what my future might be like		.876							
When I am by myself, my thoughts often drift back to the past'			.895						
I think quite often about my life as it used to be'			.867						
'I feel nostalgic about the past'			.812						
Sometimes I find myself dwelling on the past'			.731				.314		
When I begin a project, I don't like to stop it until it is finished'				.917					
Once I have started an activity, I persist at it until I've completed it'				.893					
When I am interrupted doing a task, I almost always go back to it as soon as I can'				.852					
When I sit down at my desk, I work on one project at a time (Reverse scored)					.817				
I am comfortable doing several things at the same time					.782				
People should not try to do many things at once (Reverse scored)					.781				
I do not like to juggle several activities at the same time (Reverse scored)					.776				
No matter how hard I try, I am nearly always a little late' (Reverse scored)						.822			
'I am almost never late for work or appointments'						.810			
I would rather come early and wait than be late for an appointment'						.806			
If the only way I can get to an appointment is by rushing, I'd rather be late' (Reverse scored)						.575			
I am bored by my day-to-day activities'							.838		
'I often feel that my life is aimless, with no definite purpose'			.368				.803		
I sometimes feel that the way I fill my time has little use or value'							.801		
'I hate to make any sort of definite plans weeks or months in advance'								.771	
I hate following a schedule'	-.457							.680	
It is more fun to take one thing at a time than to plan my day in advance'	-.418							.678	
I would prefer doing several very small projects than one very large one'									.852
'I would rather try to get two or three things done quickly than spend my time on one big project.'									.752
'I would prefer doing one very large project than several small ones' (Reverse scored)				-.317					.687

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Table 6: Factor loadings

6.2.3. Cluster analysis and cross tabulations

The nine factors that were extracted from the data were saved as variables and used as a basis for cluster analysis. The purpose of conducting cluster analysis was to combine the nine factors that represent the dimensions of timestyles into consumer profiles. As noted before, previous research has mainly concentrated on investigating individual dimensions and their relation to consumer behaviour (Cotte et al. 2004). The purpose of this study, however, is to combine the nine different dimensions into comprehensive *timestyle profiles* that could be used to explain consumer behaviour more realistically. In the end, people behave as they are driven by the combination of their personal traits.

Cluster analysis is a method that categorizes objects based on certain criteria so that the homogeneity within a cluster is maximized, and the homogeneity between the clusters is simultaneously minimized (Malhotra and Birks 2007). This way the result of cluster analysis is a set of groups where the objects within a group are similar but the objects between the groups are different. Like factor analysis, cluster analysis is also a method for data reduction, but whereas factor analysis reduces the number of variables, cluster analysis reduces the number of objects, for example consumers.

The method of *K-means clustering* was chosen because it is convenient to apply even for larger data sets. K-means clustering is a non-hierarchical method where the number of clusters must be predetermined (Malhotra and Birks 2007). The chosen number of clusters is dependent on the researcher's judgement. In this study, solutions from 3 to 7 clusters were explored, and the four-cluster solution was found to be the most suitable one. While the cluster solution with three clusters did not appear to capture all the nuances of timestyles, a higher number of clusters than 4 produced profiles that were highly similar to each other.

Clusters can be interpreted by observing the *factor means* of each cluster. In this study the variables that served as the basis for the cluster analysis were the nine factors extracted in factor analysis. Therefore the clusters were interpreted in how they emphasize different dimensions of the Timestyle Scale.

The identified four clusters were further examined by performing cross-tabulations and chi-square tests. The idea was to examine if the clusters differ in demographics or behaviour related to Internet use. Cross-tabulations represent the *conditional frequency distributions* of two variables (Malhotra and Birks 2007). In other words, cross tabulations reveal how the members of each cluster have responded to specific questions. *Chi-square test*, on the other hand, can be used to test whether the resulting table is a result of randomness or if statistically significant differences between the clusters actually exist (Malhotra and Birks 2007). As this study explores constructs that have not been widely researched before, a significance level of 0.10 is accepted to allow a less restricted cut-off point than the more widely accepted level of 0.05 (Malhotra and Birks 2007). The significance level of 0.10 indicates that there is a 10% probability that no association exists between the two constructs examined. In order to validate the significance of the Chi-square, not more than 20 per cent of the expected frequencies can be less than 5, and the minimum expected count of all frequencies should be greater than 1 (Malhotra and Birks 2007).

6.3.4. T-test and analysis of variance

Finally, in order to investigate whether individual timestyle dimensions are related to demographics, t-test and analysis of variance (ANOVA) were performed. Whereas cross-tabulations were used to find out if demographics are related to *overall timestyle profiles*, t-test and ANOVA were used to explore the relationship between demographics and specific timestyle dimensions.

T-test and ANOVA are methods of testing for differences between groups by comparing their population means (Elliott and Woodward 2007). The two-sample t-test measures the difference between the means of two independent samples, for instance men and women, by looking at the t-statistic, t-distribution and degrees of freedom to determine a probability value that indicates whether the population means are different. One-way analysis of variance is an extension of the two-sample t-test and is used to determine whether there are differences among more than two group means (Elliott and Woodward 2007). It is based on measuring the variance *between* the groups and *within* the groups. If the variance between the

groups is significantly larger than the variance within the groups, it can be concluded that the grouping factor has an effect on the outcome (Malhotra and Birks 2007).

6.3. Validity and reliability of the study

This section briefly discusses the validity and reliability of the study. Validity refers to the extent to which the observed differences in responses reflect true differences in the measured characteristics (Aaker et al. 1998). In other words, whether the selected instrument truly measures what it is supposed to measure. Reliability, on the other hand, refers to the extent to which measures are free from random error and the results are consistent across repetitions (Aaker et al. 1998).

The validity and reliability of the Timestyle Scale has been demonstrated in previous research (see Usunier and Valette-Florence 2007 for a review). The scale has been replicated multiple times by different researchers in different cultural contexts and consistent results have indicated good reliability for the scale. Predictive validity has been demonstrated in studies that have been able to predict differences in consumer behaviour and value systems. Furthermore, the same factors have been found relevant across cultures, demonstrating strong factorial validity for the scale. Also in this study, the same factors were extracted as previously. Only one item did not correlate with the expected factor.

However, as there is still debate over the overall concept of timestyles and the dimensions that should be included, there is no absolute certainty that the Psychometric Timestyle Scale can capture all aspects of timestyles. Content validity, or face validity, refers to the extent that the scale is able to capture the whole studied phenomenon (Aaker et al. 1998). In this study, it was presented that one additional factor could be added to the Psychometric Timestyle Scale to improve its content validity.

Reliability of a scale is good if the results are consistent across time and repetitions (Malhotra and Birks 2007). One way to test reliability of a scale is to test the internal consistency of its items. This can be done by splitting half the items that are assumed to measure the same construct and then correlating the two halves with each other (Aaker et al. 1998). Cronbach's

alpha is a popular measure for testing internal consistency of a scale. It is the average of all possible correlations between the split items. The value can vary from 0 to 1 and values greater than 0.6 are considered acceptable (Malhotra and Birks 2007). In this study all nine factors received a value above 0.6 indicating good internal consistency and reliability. As can be seen from table 7, the highest internal consistency (.937) is in the factor *future orientation* while lowest consistency (.658) is in the factor *preference for quick return*.

In their review article (2007) of studies utilizing the Timestyle Scale Usunier and Valette-Florence presented a table of the Cronbach's alphas identified in former studies. When comparing the table with the Cronbach's alphas obtained in this study, it can be observed that the factors produced in the current study have even higher internal consistency than those produced in former studies.

<i>Dimensions</i>	<i>Sub-dimensions</i>	<i>Cronbach's α Previous studies</i>	<i>Cronbach's α This study</i>
Linearity and economicity of time	F1 'Economic time'	0.83 - 0.88	.924
	F2 'Non-organized time'	0.61 - 0.68	.741
Temporal orientation	F3 'Past orientation'	0.79 - 0.82	.895
	F4 'Future orientation'	0.74 - 0.86	.937
Obedience to time	F5 'Time submissiveness'	0.70 - 0.74	.767
	F6 'Time anxiety'	0.69 - 0.78	.856
Temporal persistence	F7 'Tenacity'	0.70 - 0.80	.883
	F8 'Preference for quick return'	0.61 - 0.82	.658
Level of activity	F9 'Polychronic time attitude'	-	.809

Table 7: Brackets of Cronbach's alphas across studies utilizing the Timestyle Scale

(Source: Usunier and Valette-Florence 2007)

Finally, it is worth noting that the questionnaire design may affect the validity and reliability of the study (Aaker et al. 1998). The questions related to the Timestyle Scale and the Polychronic Attitude Index, were presented last in a relatively long questionnaire which may reduce the attention level of the respondents. Also, the reverse wording in some of the items appears to have perhaps confused some of the respondents as they were in many cases inconsistent with other items measuring the same dimensions.

7. Findings

The previous chapter described the collection of the data and the quantitative research methods used in this study. The present chapter focuses on the actual findings from these analyses. First, the relationships between the dimensions are examined with results from the correlation analysis. Second, the results from factor analysis will be reported and compared to former studies. Third, the findings from cluster analysis will describe the four different timestyle profiles identified and finally these profiles will be investigated further with cross tabulations. Along the cross tabulations, a closer look at the differences between demographic groups in specific timestyle dimensions will be provided with findings from t-test and ANOVA. While this chapter focuses on reporting the findings of the quantitative analyses, a deeper interpretation of the findings is discussed in chapter 8.

7.1. Correlation of the timestyle dimensions

Correlation analysis was performed in order to understand the relationships between the timestyle dimensions. As discussed in the literature review, the correlations between both higher level dimensions as well as sub-dimensions are still quite unclear and previous results have sometimes been inconsistent. The results of the correlation analysis are presented in the appendix 3. I will first briefly discuss some of the findings concentrating on the sub-dimensions *within* each higher level dimension, and then on the sub-dimensions *between* the higher level dimensions.

- **Linearity and economicity of time:** As expected based on previous research (e.g. Cotte et al. 2001), the two sub-dimensions of the linearity and economicity of time seem to be negatively related. This indicates that a strong preference for economic time can predict a low preference for non-organized time. In other words, a person who enjoys planning his or her use of time does not enjoy spontaneity. However, the association is only moderate, indicating that the dimensions are not complete substitutes, or opposite poles of one factor, but rather two separate variables with a moderate negative correlation.

- **Temporal orientation:** The relation between past and future orientation is perhaps surprising. As can be seen from the table in the appendix 3, future and past orientation have a positive correlation, indicating that a strongly future-oriented person is also likely to be past-oriented. Also previous studies have argued that the temporal orientations are not exclusive, but can in fact coexist (Cottle 1976, Cotte et al. 2004, Bergadaà 1990). However, the findings from the correlation analysis here indicate that this coexistence is not just possible, but actually to be expected.
- **Obedience to time:** The association between time submissiveness and anxiety seems to be slightly negative. This suggests that people who feel anxiety towards time and the need to control it are often late for appointments, or respectively, people who feel that time is useful and should be respected seldom find themselves bored and anxious. The finding is consistent with previous studies that have viewed submissiveness and anxiety as separate but negatively connected dimensions (Usunier and Valette-Florence 2007, Calabresi and Cohen 1968).
- **Temporal persistence:** The correlation between the sub-dimensions of tenacity and preference for quick return appears to be inconsistent between the statements. While two of the statements related to the preference for quick return correlate positively with tenacity, one statement correlates negatively. As discussed in the section assessing the validity and reliability of the study, the inconsistency might be related to the reverse wording used in the questionnaire. Former research has usually presented tenacity and preference for quick return as opposites for one another, suggesting that people who can be motivated by distant rewards are tenacious and do not hesitate to take on even large projects, while those who seek immediate rewards are less tenacious and rather undertake small projects (Settle et al. 1978). However, it could also be argued that people who consider it important to finish activities before moving on to the next one, prefer smaller tasks because the probability of getting interrupted is smaller. Also, larger projects are often worked on simultaneously with other projects with less focus on finishing the project.

Besides examining the relationships of the sub-dimensions *within* the higher level dimensions, the objective of the correlation analysis was also to investigate the relationships *between* the higher level dimensions. The results of correlation analysis reveal some interesting associations that mostly seem to support earlier research.

- **Linearity and economicity of time and temporal orientation:** As noted in the literature review, previous research, and especially the studies focusing on cultural differences in time perceptions, has demonstrated a correlation between the dimensions of linearity and economicity of time and temporal orientation (e.g. Graham 1981). Linear-Separable time view connects preference for economic time with future orientation. This connection is also supported by the results from the correlation analysis in this study. The coefficients are consistently significant across questions and indicate a moderate positive correlation between the variables. This relationship seems logical; people who think about the future also enjoy planning and making schedules. Relationship between past orientation and preference for non-organized time is less clear. Past orientation seems to have a slight positive correlation with both economic and non-organized time.
- **Obedience to time and temporal orientation:** Previous research has also linked obedience to time with temporal orientations, suggesting that anxiety and past orientation are correlated as well as time submissiveness and future orientation (e.g. Calabresi and Cohen 1968). The findings from the correlation analysis support the argument that orientation towards the past is associated with time anxiety. The association is consistently positive and varies 0.33 to 0.53 across the questions. However, also future orientation seems to correlate notably more with anxiety than submissiveness, although the association is weaker than between past orientation and anxiety.
- **Persistence and temporal orientation:** Also persistence has been associated with temporal orientation, arguing that future-oriented people are tenacious while past-oriented people tend to prefer quick returns (Settle et al. 1978). As can be observed

from the correlation matrix, this study indicates that tenacity has no statistically significant correlation with future orientation, but quick return is slightly correlated with past orientation.

- **Polychronic attitude and economicity of time:** An interesting finding is also the fact that polychronic attitude does not seem to associate considerably with any other dimension. It is slightly correlated with time submissiveness but the results are not consistent across questions. Especially notable is that, as expected, polychronic time attitude is not statistically related to linearity and economicity of time.

As described in the previous chapter, the Timestyle Scale integrates polychronic time use with the linearity and economicity of time, suggesting that people who have a preference for economic time tend to be monochronic while those who have a preference for non-organized time are most often polychronic (Usunier and Valette-Florence 2007). However, the results of the correlation analysis do not support this integration, but in fact suggest that polychronic attitude is *not* correlated with economicity of time. As mentioned before, polychronicity is represented as its own factor in some of the other models capturing timestyles (e.g. Cotte and Ratneshwar 2001). These observations support using the extended Timestyle Scale that includes polychronicity as the ninth factor, as a base for measuring timestyles in this study.

To summarize the findings from the correlation analysis, the interaction between the dimensions is a complex matter and while some associations found in this study are supported by previous research, some are not. Figure 5 illustrates the correlations between the dimensions based on the correlation analysis in this study. The strongest and most consistent associations in this study were found between:

- Economic and non-organized time, that were negatively associated as expected.
- Future and past orientation that were perhaps surprisingly positively correlated.
- Future orientation and economic time which were positively correlated as expected.

- Anxiety and temporal orientations towards past and future, of which correlation with past orientation was only expected based on previous studies.

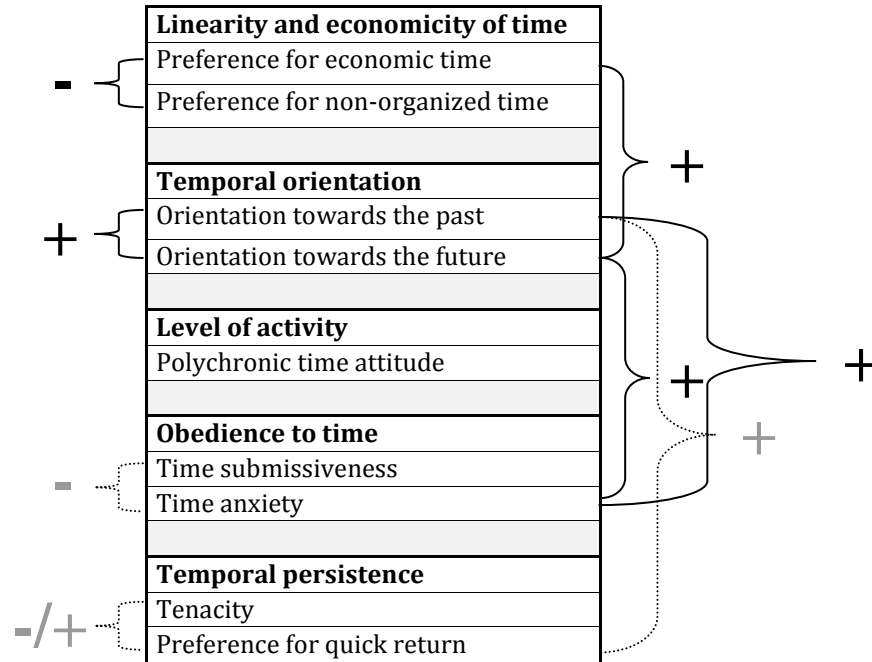


Figure 5: Correlations of the timestyle dimensions

7.2. Timestyle dimensions based on factor analysis

As explained in the previous chapter, principal components analysis was performed to find out the factors that constitute a person’s timestyle. Two existing models were used to create the questionnaire and based on them nine factors were expected to emerge; eight dimensions from the Psychometric Timestyle Scale and one dimension from the Polychronic Attitude Index.

As expected, nine factors were extracted from the principal components analysis. A comparison to the original Psychometric Timestyle Scale (Usunier and Valette-Florence 2007) shows that the same eight sub-dimensions were identified. The factors were therefore named according to the respective dimensions in the original Timestyle Scale. The ninth factor was composed of the variables included in the Polychronic Attitude Index (Kaufman

et al. 1991), and was therefore labelled *polychronic time attitude*. Based on terminology used by Kaufman et al. the higher level category for the polychronic attitude was labelled *Level of activity*. Table 8 lists the final nine factors with the respective variables, factor loadings, communalities and Cronbach's alphas. The characteristics of the factors have been explained in chapter 3.4. as dimensions of the extended Timestyle Scale.

All the variables loaded on the same factors as expected, except for one. In the original Timestyle Scale the variable '*Looking at a typical day in my life, I think that most things I do have some purpose*' was categorized as a variable explaining the dimension of *time anxiety*. However, the factor analysis performed in this study showed no correlation between time anxiety and this variable. Instead, the variable showed negative loading related to the factors of *economic time, future orientation* and *tenacity*. As these three factor loadings were close to equal value and not very strong (ranging from -.323 to -.378) I decided to remove the variable from the analysis.

<i>Factor name and metrics</i>		<i>h²</i>	<i>α</i>	
Linearity and economicity of time	F1 'Preference for economic time'			
	I plan my activities so that they fall into a particular pattern during the day	.887	.808	
	I like to have a definite schedule and stick to it	.885	.845	
	I like to plan my daily activities so I know just when to do each thing	.883	.843	
	I enjoy following a schedule	.810	.785	
	F2 'Preference for non-organized time'			
	I hate to make any sort of definite plans weeks or months in advance	.793	.678	
	I hate following a schedule	.686	.696	
			.741	
	I hate following a schedule	.686	.696	
	It is more fun to take one thing at a time than to plan my day in advance	.679	.671	
Temporal orientation	F3 'Past orientation'			
	When I am by myself, my thoughts often drift back to the past	.893	.856	
	I think quite often about my life as it used to be	.864	.826	.895
	I feel nostalgic about the past	.812	.709	
	Sometimes I find myself dwelling on the past	.741	.706	
	F4 'Future orientation'			
	I think a lot about what my life will be some day	.912	.883	
	I often think about the things I am going to do in the future	.908	.865	.937
	Many of us tend to daydream about the future. It also happens to me	.890	.826	
	I spend time thinking about what my future might be like	.877	.808	
Obedience to time	F5 'Time submissiveness'			
	No matter how hard I try, I am nearly always a little late (-)	.821	.740	
	I am almost never late for work or appointments	.813	.732	.767
	I would rather come early and wait than be late for an appointment	.804	.717	
	If the only way I can get to an appointment is by rushing, I'd rather be late (-)	.584	.493	
	F6 'Time anxiety'			
	I am bored by my day-to-day activities	.840	.781	.856
	I often feel that my life is aimless, with no definite purpose	.815	.827	
	I sometimes feel that the way I fill my time has little use or value	.813	.749	
Temporal persistence	F7 'Tenacity'			
	When I begin a project, I don't like to stop it until it is finished	.918	.858	
	Once I have started an activity, I persist at it until I've completed it	.894	.819	.883
	When I am interrupted doing a task, I almost always go back to it as soon as I can	.854	.768	
	F8 'Preference for quick return'			
	I would prefer doing several very small projects than one very large one	.849	.788	.658
	I would rather try to get two or three things done quickly than spend time on one	.754	.660	
	I would prefer doing one very large project than several small ones (-)	.690	.703	
Level of activity	F9 'Polychronic time attitude'			
	When I sit down at my desk, I work on one project at a time. (-)	.817	.710	
	I am comfortable doing several things at the same time.	.782	.708	.809
	People should not try to do many things at once (-)	.781	.656	
	I do not like to juggle several activities at the same time (-)	.776	.683	

Table 8: Final factor loadings, communalities and Cronbach's alphas

As already assumed based on correlation analysis, polychronic time attitude appeared as a separate factor, unrelated to the factors of preference for economic and non-organized time. Also, supporting the structure explained by Usunier and Valette-Florence (2007) the scale appears to include eight separate dimensions instead of four dimensions with two opposing poles. Although the eight factors can be grouped under four higher order categories, the two factors under each category are not opposite poles, but rather two distinct sub-dimensions. This supports the view that a person who is oriented towards the future, for example, can also show orientation towards the past. However, in the case of linearity and economicity of time the two dimensions seem to have a negative correlation as two variables originally categorized under non-organized time also load with negative values on the factor of economic time (see table 6 in chapter 6). This is consistent with the findings from correlation analysis that found economic and non-organized time to be negatively associated.

The factors that explained the most variance were preference for economic time (18.4%), future orientation (13.7%) and past orientation (9.1%) (see table 5 in chapter 6). The importance of these three dimensions, combined with the finding that past and future orientation, as well as future orientation and economic time view are positively correlated, gives reason to believe that timestyles can be divided into quantitative and qualitative as represented by Prime (see Durrande-Moreau and Usunier 1999). As described in chapter 3.5., a quantitative timestyle is characterized by preference for economic time and strong orientation towards the past and the future.

The factor analysis performed in this study validates the factors of the Timestyle Scale. The same factors were identified with high explanatory power and high internal consistency. Factor analysis also supported the inclusion of the additional factor explaining polychronic attitude into the Timestyle Scale. This analysis has demonstrated that a person's timestyle is a combination of nine different dimensions, where the tendency to make plans and schedules and the propensity to think about the future or the past explain most differences between individuals. Next, the findings from cluster analysis based on these factors will be discussed in order to gain understanding how these dimensions can be combined together to form consumer profiles.

7.3. *Timestyle profiles based on cluster analysis*

As explained in the chapter 6, cluster analysis was performed based on the nine factors identified as dimensions of timestyles in factor analysis. A four-cluster solution was chosen, resulting in four distinct groups of consumers. These four consumer groups represent people with four different timestyle profiles. In this section, these four groups will be examined by describing their different approaches to time, as well as possible differences in demographics and Internet usage behaviour.

Table 9 reports the identified clusters, number of cases in each of them as well as the mean factor scores that are used to interpret the clusters. I will now briefly describe the characteristics of each timestyle profile based on the cluster analysis.

Factor name	Group 1 (n=132)	Group 2 (n=114)	Group 3 (n=108)	Group 4 (n=43)
F1 'Preference for economic time'	0.43	-0.50	0.14	-0.28
F2 'Preference for non-organized time'	-0.68	0.76	0.21	-0.53
F3 'Future orientation'	0.13	-0.09	0.11	-0.43
F4 'Past orientation'	0.33	-0.42	0.06	0.01
F5 'Time submissiveness'	-0.41	-0.49	1.26	-0.62
F6 'Time anxiety'	-0.25	0.15	-0.12	0.62
F7 'Tenacity'	-0.43	-0.35	0.28	1.48
F8 'Preference for quick return'	0.13	-0.22	0.17	-0.21
F9 'Polychronic time attitude'	-0.22	0.15	0.03	0.17

Table 9: Timestyle profiles based on cluster analysis

Profile 1: Analytical schedulers

People who belong to this segment view time in a highly economic manner. They perceive that time is a resource comparable to money that can be divided into measurable units and assigned for specific activities. These people actively plan their time using schedules and agendas. They make plans even far ahead and try to avoid spontaneous changes in their plans. Also in line with their economic view of time, they tend to act monochronically, focusing on one task at a time. People in this profile are both future and past-oriented. They like to plan their future, but also find themselves reminiscing the past from time to time. Despite the active scheduling of activities, profile 1 members are often late from

appointments. However, the negative correlation to anxiety indicates that they are not anxious towards time either. Based on that, it could be argued that these people are not late because they do not care about time lines, but rather because they are busy following their tight schedules. The members of this profile prefer undertaking small projects that can be finished in a short amount of time, yielding fast gratifications. They also may leave things unfinished, perhaps in order to follow their schedules. Based on these observations I have labelled the first timestyle profile as '*Analytical schedulers*'. The analytical schedulers are the largest one of the four groups.

Profile2: Spontaneous dwellers

Members of the second timestyle profile are oriented toward the present. They tend to live in the moment without much concern for the future or the past. They avoid making plans in order to be able to live spontaneously. This present orientation may be linked to their feeling of anxiety towards time. They feel that time has little purpose in their lives which makes them passive in taking control of their life, therefore orienting them to focus on the present moment. As they feel like time has little purpose, they also feel little importance of being in time for appointments. These people often act polychronically, trying to perform multiple activities at the same time, but they often end up leaving things unfinished. They don't seek for fast gratification either. I would assume that these characteristics may imply that they are not particularly goal oriented because of their hedonic present orientation. Based on these observations I have labelled the second timestyle profile as '*spontaneous dwellers*'.

Profile 3: Active achievers

The members of the third timestyle profile are best described by their orientation towards achievements. These people actively seek new challenges and want to fill their time with interesting activities. They are both economic and spontaneous in their time management. They enjoy making schedules and planning activities ahead of time, but they also enjoy acting spontaneously and leaving room for unexpected activities. People in this profile are future-oriented, often envisioning what their future will be like, but occasionally they spend time thinking about the past as well. The economic orientation and strong temporal orientation shows that much like the analytical schedulers, although not as strongly, also achievers hold an economic view of time. This indicates that they are analytic about time and view it as a

scarce resource that should be used in an optimal way. However, unlike the analytical schedulers, these people are slightly polychronic in their actions. Perhaps because they are trying to achieve as much as possible in a given time frame, while the analytical schedulers are more concerned of following the predetermined schedule. These people are also very submissive to time. They believe that time is an external concept that should be respected. This translates to such behaviour as being on time and respecting appointments and deadlines. Members of this profile are also quite tenacious, always striving to finish what they have started. However, they tend to prefer projects that allow quick return, perhaps because they perceive achievement and accomplishments as important. Based on this description, I labelled the third profile as *'active achievers'*.

Profile 4: Traditional task-oriented

People in this timestyle profile are traditional and more oriented to the task they are performing than to time itself. These people don't plan or schedule their activities but they do not feel a need to act spontaneously either. In their temporal orientation they are slightly oriented towards the past. This indicates that they are likely to be more traditional and prone to nostalgia than the other groups. The task-oriented people show strong anxiety towards time and they are often late for appointments. They are highly tenacious, and they strive to complete things that they have started. Also, they don't hesitate to take on projects where returns are gained in a longer time period. In fact, it appears that these people pay strong focus on the tasks and activities they are performing, even at the expense of being late from appointments. As they feel that time has little value for them, they don't feel the need to interrupt what they are doing just to make a deadline or move on to other chores. Their uneconomic view of time is also reflected in their level of activity, as they often engage in multiple activities at the same time. The final timestyle profile was labelled *'traditional task-oriented'*. This fourth timestyle group is notably smaller than the other three groups.

As mentioned in the previous section, the factor analysis showed support for dividing timestyles into quantitative and qualitative ones. The cluster analysis also seems to support this view. The active achievers, and especially the analytical schedulers, view time quantitatively. They demonstrate a strong preference for economic time and strong orientation towards both past and the future. In contrast, the spontaneous dwellers view

time qualitatively; they prefer non-organized time and focus on the present moment instead of the future or the past. Also the traditional task-oriented view time more qualitatively than quantitatively. According to Durrande-Moreau and Usunier (1999), people who have a quantitative timestyle perceive more time pressure than those who have a qualitative timestyle. It can thus be expected that the analytical schedulers and the active achievers are more concerned of the passage of time and the manner in which they are using it.

7.4. Demographics of the timestyle profiles

This section will explore the demographics of the timestyle clusters in order to understand the type of people that characterize each cluster. I will examine the clusters based on gender, age, income and employment status, as these factors have been suggested to influence time perceptions in previous research. Furthermore, to provide additional insight into the relationship between demographics and timestyles, I will briefly look at the demographic differences on a level of single dimensions.

7.4.1. Gender

Table 10 displays the frequencies of gender distribution across the timestyle clusters. The chi-square value of 0.185 surpasses the level of significance at 0.10, indicating that timestyle profiles and gender are not statistically related. However, it can be noted that the cluster of *traditional task-oriented* seems to have the smallest proportion of male respondents, while the proportion is largest in the cluster of *active achievers*.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
Gender Male	50	48	52	13	163
	40,0%	42,5%	49,1%	30,2%	42,1%
Female	75	65	54	30	224
	60,0%	57,5%	50,9%	69,8%	57,9%
Total	125	113	106	43	387
	100,0%	100,0%	100,0%	100,0%	100,0%

(p=.185, 0 cells (,0%) have expected count less than 5. The minimum expected count is 18,11)

Table 10: Timestyle clusters and gender

This finding that timestyles appear not to be gender related is interesting due to the inconsistency and debate over the results concerning timestyles and gender (see Ely and Mercurio 2011). Some researchers have found no correlation between the two (Fingerman and Perlmutter 1995), while others have reported significant differences especially relating to temporal orientations (Usunier and Valette-Florence 2007). However, former studies have usually concentrated on one dimension at a time while this study examines the timestyle as a combination of the dimensions. It could be suggested that while there might be gender related differences when looking at specific dimensions, the overall timestyle appears not to be gender related based on this study.

In order to investigate further the gender related differences in timestyles, a t-test was performed to measure how men and women emphasize the different dimensions. As can be observed from the table in the appendix 4, there are statistical differences at five per cent level especially in the dimensions of time submissiveness and polychronic time attitude. Both of these dimensions appear to be more prominent for female respondents. Women appear to be more submissive, emphasizing the importance of being on time and respecting schedules. They also appear to have a more favourable attitude towards multitasking, while men prefer concentrating on one task at a time.

Meanwhile, the temporal orientations towards the past and the future are not related to gender according to this study. Only the statement “*Many of us tend to daydream about the future. It also happens to me*” received statistically different scores from men and women. Perhaps the focus on future is equal for men and women, but the tendency to daydream is more characteristic of women. Previous research has often focused especially on the temporal orientations of the genders (e.g. Lessing 1968, Havlena and Holak 1991), but this study suggests that other dimensions might provide a more relevant focus of study.

7.4.2. Age

Table 11 displays the age distribution of the clusters. Here, the chi-square is statistically significant (.000) indicating that timestyle and age are statistically dependent.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
Age group ≤29	13 10,6%	30 26,3%	33 30,8%	5 11,4%	81 20,9%
30-39	25 20,3%	22 19,3%	23 21,5%	11 25,0%	81 20,9%
40-49	41 33,3%	20 17,5%	14 13,1%	9 20,5%	84 21,6%
50-59	38 30,9%	28 24,6%	25 23,4%	7 15,9%	98 25,3%
≥60	6 4,9%	14 12,3%	12 11,2%	12 27,3%	44 11,3%
Total	123 100,0%	114 100,0%	107 100,0%	44 100,0%	388 100,0%

(p=.000, 1 cells (5,0%) have expected count less than 5. The minimum expected count is 4,99)

Table 11: Timestyle clusters and age

Timestyle clusters	Mean	N	Std. Deviation
1: Analytical schedulers	1967,87	125	10,778
2: Spontaneous dwellers	1969,78	114	14,070
3: Active achievers	1972,06	106	13,925
4: Traditional task-oriented	1966,25	43	13,415
Total	1969,39	387	13,079

Table 12: Timestyle clusters and birth year statistics

- *Analytical schedulers*: In this cluster the age groups of 40-49 and 50-59 are emphasized, while the proportions of those under 30 and those over 60 are smaller than in other clusters. As can be noticed in the table 12, the standard deviation for birth year is smaller than for other groups. The analytical schedulers tend to be more uniform and middle-aged than other timestyle groups.
- *Spontaneous dwellers*: This cluster has the most even distribution across the age groups. All the age groups are well presented in this cluster, while there appears to be a slight over emphasis (26.3%) on the youngest age group when compared to the overall sample (20.9%).
- *Active achievers*: The active achievers are relatively young compared to other groups. More than half (52.3%) of them are under 40 years of age.
- *Traditional task-oriented*: this group has considerably higher percentage (27.3%) of people who have turned 60 than the other groups.

When looking at the age-related differences between the clusters, there seems to be a pattern that supports the results of former studies suggesting that age is related to one dimension of timestyle in particular; the temporal orientation. As mentioned in the literature review, it has been suggested that older people tend to be more oriented towards the past while younger people, who still have most of their life ahead of them, tend to be more future-oriented (Guy et al. 1994, Usunier and Valette-Florence 2007). The active achievers who are on average the youngest group, are future-oriented, while traditional task-oriented, the group with highest mean age, are past-oriented. The analytical schedulers, who could be described as characteristically middle-aged, are oriented towards both the future and the past.

An analysis of variance investigating the differences between the age groups with more detail supports this finding, but emphasizes the role of future orientation. As can be observed from table in the appendix 5, future orientation appears to decline consistently with age, while the pattern in past orientation is more obscure. Also time anxiety and tenacity appear to be age related. The table in the appendix 5 demonstrates that as people grow older, they become less anxious towards time, while tenacity is most characteristic of middle-aged consumers.

7.4.3. Income

The table 13 reports the distribution of net income in each cluster. Net income is the amount of income after reducing the amount of taxes. The chi-square measure of $p=.459$ indicates that timestyles are not related to income. However, it can be observed that the spontaneous dwellers have the highest percentage in the lowest income group and the lowest percentage in the highest income group. This could be interpreted as a sign that the dwellers have the lowest net income of the groups. Perhaps their lack of tenacity and focus on the present moment and maximizing the current pleasures discourages them from striving to achieve a higher level of income, or perhaps they appreciate more qualitative aspects of life.

		Timestyle clusters				Total
		Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
Net income €/month	<1000	26 20,8%	32 28,3%	22 20,8%	7 16,3%	87 22,5%
	1000- 2000	50 40,0%	45 39,8%	40 37,7%	16 37,2%	151 39,0%
	>2000	31 24,8%	16 14,2%	23 21,7%	9 20,9%	79 20,4%
	Prefers not to respond	18 14,4%	20 17,7%	21 19,8%	11 25,6%	70 18,1%
Total		387 100,0%	125 100,0%	113 100,0%	106 100,0%	388 100,0%

(p=.459, 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,78)

Table 13: Timestyle clusters and income

The ANOVA table reported in appendix 6 shows that three timestyle dimensions are especially related to income; past orientation, time anxiety and preference for quick return. People with lowest net income appear to be consistently more past-oriented, anxious and prefer fast gratification more than the other groups. Perhaps this is related to differences in achievement orientation; people who are strongly achievement oriented are perhaps less likely to focus their attention towards past, to feel that time has no purpose or to be motivated with instant rewards. As noted in the literature review, past orientation and anxiety have been previously found to relate to low education (Agarwal et al. 1983, Calabresi and Cohen 1968).

7.4.4. Employment status

The table 14 reports the employment status of the respondents in each cluster. The chi-square $p=.296$ indicates that the clusters don't differ significantly in this area. However, some interesting observations can still be pointed out from the table. First of all, according to the observed percentages, the cluster of spontaneous dwellers scores highest in all categories outside the working life. This group has the highest proportion of students, pensioners and unemployed. Perhaps the freedom and less structured everyday life related to these employment status categories allow the kind of non-organized, spontaneous and hedonic lifestyle that is characteristic of the dwellers. Meanwhile, those whose life is more commonly structured around the traditional nine-to-five working days, such as the traditional task-oriented and the analytical schedulers, have a more task-accomplishment oriented timestyle.

	Timestyle clusters				Total	
	Analytical schedulers	Spontaneous Dwellers	Active achievers	Traditional task-oriented		
Employment status	Entrepreneur	4 3,2%	7 6,1%	6 5,7%	3 7,0%	20 5,1%
	Manager	21 16,7%	9 7,9%	15 14,2%	3 7,0%	48 12,3%
	Senior official	23 18,3%	20 17,5%	19 17,9%	12 27,9%	74 19,0%
	Worker	43 34,1%	26 22,8%	33 31,1%	14 32,6%	116 29,8%
	Student	9 7,1%	16 14,0%	13 12,3%	3 7,0%	41 10,5%
	Pensioner	9 7,1%	13 11,4%	8 7,5%	3 7,0%	33 8,5%
	Unemployed	13 10,3%	19 16,7%	10 9,4%	2 4,7%	44 11,3%
	Other	4 3,2%	4 3,5%	2 1,9%	3 7,0%	13 3,3%
	Total	126 100,0%	114 100,0%	106 100,0%	43 100,0%	389 100,0%

(p=.296, 8 cells (25,0%) have expected count less than 5. The minimum expected count is 1,44)

Table 14: Timestyle clusters and employment status

The ANOVA table in the appendix 7 demonstrates that there appear to be differences between the employment groups in several dimensions of timestyles. First of all, the three dimensions that were found to be related to net income were also found to relate to employment status. Students, pensioners and unemployed appear to be more past-oriented, anxious and have a preference for quick return than those who are working as managers, senior officials, workers or entrepreneurs. Meanwhile, future orientation seems to be most common for students and least for pensioners, which supports the finding that future orientation is age-related. In addition, there appears to be a difference between the employment groups in polychronic time attitude. Pensioners and unemployed appear to have a more monochronic attitude than the other groups. This might be due to the fact that

pensioners and unemployed have typically less competing roles and demands that need to be satisfied, than those who are involved in working life. Also a study by Kaufman et al. (1991) found that people who work more than 40 hours per week have a more favourable attitude towards multitasking than those who work less.

This section has examined the timestyle clusters by investigating whether the clusters are different regarding the demographics of gender, age, income and employment status. The results indicate that the timestyle profiles are statistically related to age. Other demographics do not have a statistical relationship with the timestyle profiles, even though certain demographic differences were found to exist on the level of individual dimensions. Next, I will investigate whether the timestyle profiles differ in their patterns of Internet usage behaviour.

7.5. Timestyle profiles and Internet usage behaviour

This section will focus on investigating whether the timestyle profiles identified can explain differences in Internet usage behaviour. Aspects of Internet behaviour considered in this study include the amount of time spent in the Internet, exploratory behaviour, entertainment and information search and mobile Internet adoption. Some initial discussion will be included in presenting the findings, but the implications and reasons for the results will be discussed in further detail in chapter 8.

7.5.1. Daily amount of time spent in the Internet.

As the table 15 shows, there are no easily interpretable differences between the clusters in the daily amount of time spent in the Internet. The chi-square is also considerably above the threshold value ($p=.530$), suggesting no relation between timestyle and daily Internet usage time.

	Timestyle clusters				Total	
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented		
Daily Internet use (min/day)	≤30	10 8,0%	13 11,4%	14 13,2%	5 11,9%	42 10,9%
	31-60	35 28,0%	20 17,5%	17 16,0%	11 26,2%	83 21,4%
	61-120	33 26,4%	33 28,9%	31 29,2%	13 31,0%	110 28,4%
	121-240	31 24,8%	30 26,3%	23 21,7%	6 14,3%	90 23,3%
	≥241	16 12,8%	18 15,8%	21 19,8%	7 16,7%	62 16,0%
Total	387 100,0%	125 100,0%	114 100,0%	106 100,0%	387 100,0%	

($p=.530$, 1 cells (5,0%) have expected count less than 5. The minimum expected count is 4,56)

Table 15: Timestyle clusters and Internet usage time

Some more interesting results are obtained when asked how the clusters *perceive* their daily amount of time spent using the Internet. As demonstrated in table 16, almost a third (32,4%) of the active achievers report spending too much time in the Internet, while a significantly smaller proportion (18,4%) of the economic schedulers feel that way. Although table 15 shows that the active achievers are most likely to use the Internet more than four hours a day, the differences are marginal, and it cannot be concluded that they actually spent most time in the Internet. Therefore it could be hypothesized that they are most concerned of the time they ‘lose’ when using the Internet because of their need to maximize experiences and achievements.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
I spend too much time in the Internet($p=.078$)	23 18,4%	34 30,1%	34 32,4%	12 27,9%	103 26,7%

Table 16: Timestyle clusters and subjective experience of Internet usage time

7.5.2. Exploratory Internet use

As explained in the literature review, exploratory Internet use refers to the tendency to surf the Internet without a specific goal (Cotte et al. 2006). Exploratory Internet user is easily distracted; they follow links that direct them to new sites and curiously seek new Internet environments. Their counterparts, the non-exploratory Internet users tend to have a set of specific websites that they visit, are not easily distracted and rarely click unfamiliar links.

The respondents were provided with a set of statements describing certain aspects of Internet use, and were asked to reply whether the statement describes behaviour that is typical of them. The questions were not presented for the respondents in this order, and were not categorized as presented in this study report. Table 17 below reports the responses from the statements concerning exploratory behaviour.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
I constantly search for new interesting websites (p=.779)	23 18,5%	24 21,1%	25 23,8%	8 18,6%	80 20,7%
I usually visit the same familiar websites (p=.034)	102 82,3%	96 84,2%	82 78,1%	42 97,7%	322 83,4%
I spend my time surfing the Internet (p=.007)	45 36,3%	50 43,9%	62 59,0%	19 44,2%	176 45,6%

Note that the frequencies and percentages describe respondents of each cluster who have indicated that 'The statement describes my way of using the Internet'. The statements are not substitutes for each other.

Table 17: Timestyle clusters and exploratory Internet use

As can be seen from table 17, there seem to be differences between the clusters in their exploratory Internet usage behaviour. Although the first statement *'I constantly search for new interesting websites'* does not yield statistically significant results (p=.779), the other two statements show significant differences among the clusters (p=.034, p=.007). The active achievers report spending time surfing the Internet more frequently (59%) than the other groups. Respectively, the smallest percentage (78.1%) of them reports usually just visiting the same familiar websites. Although not significantly, the pattern is also observable in the first

statement; the achievers are most active (23.8%) in searching for new websites. These observations indicate that the active achievers appear to be the most exploratory in their Internet behaviour.

The traditional task-oriented, on the other hand, appear to be less variety seeking in their Internet use. Nearly all of them (97.7%) report usually visiting the same familiar websites. However, they report spending time surfing the Internet slightly more commonly (44.2%) than the analytical schedulers (36.3%) and the spontaneous dwellers (43.9%). Their Internet behaviour can thus be described as spending time exploring their favourite websites. The analytical schedulers are least interested in spending time surfing the Internet, which seems logical given that they tend to plan their use of time carefully.

7.5.3. Entertainment and information search

Focusing the attention from the *manner* of Internet use to the *purpose* of Internet use, I will now examine whether the clusters differ in their tendency to use the Internet for entertainment or information search. As discussed in the literature review, it has been suggested that especially the dimension of linearity and economicity of time is related to the tendency of a person to use the Internet mainly for searching specific information, or for entertaining oneself without a specific goal or outcome (Cotte et al. 2006).

The table 18 reports how the members in each cluster have responded to questions concerning certain activities related to *information search* online. As can be seen from the chi-square values in the table, these activities related to information search are not statistically related to timestyles without one exception. The only statement that is significant at the 10% level is using contact information services or directories. However, this statement is probably the most information search specific; while searching for product information or recipes can be entertaining to some people, searching for contact information is quite unlikely to be found as entertainment.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
Read news (p=.160)	108 86,4%	104 91,2%	96 91,4%	42 97,7%	350 90,4%
Use contact information services or directories (p=.077)	55 44,4%	50 43,9%	46 43,8%	28 65,1%	179 46,4%
Search for information about products or services (p=.464)	91 73,4%	83 72,8%	75 71,4%	36 83,7%	285 73,8%
Search for recipes (p=.271)	63 50,4%	50 44,2%	42 40,0%	24 54,5%	179 46,3%

Table 18: Timestyle clusters and information search

The table shows that the cluster *traditional task-oriented* is more active (65.1%) in using the Internet for finding contact information than the other clusters. Even though the results are not significant and cannot be generalized, it also seems that the traditional task-oriented are most active in using the Internet for information search. They score the highest percentages in all questions. This is perhaps surprising considering the earlier studies that have indicated a relation between economic time orientation and information search (Cotte et al. 2006). As the cluster analysis indicated, the traditional task-oriented do not have a preference for economic time. Keeping in mind that the results are not significant, it can be observed from the table that a second largest proportion of positive responses in most cases is in the cluster of *analytical schedulers*. They, on the other hand, show strong preference for economic time.

Table 19 presents how the clusters have responded to questions related to activities that are more likely to be entertainment-related. Watching videos, listening to music services and playing games online all show differences between the clusters on 10% level of significance.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
Watched Internet television (p=.148)	69 55,2%	73 64,0%	66 62,9%	20 46,5%	228 58,9%
Watched videos (e.g. You Tube.) (p=.087)	72 58,1%	83 73,5%	70 66,7%	30 69,8%	255 66,2%
Listened to music services (e.g. Spotify) (p=.054)	23 18,5%	29 25,4%	35 33,3%	8 18,6%	95 24,6%
Played games (p=.009)	44 35,2%	60 53,1%	38 36,2%	13 30,2%	155 40,2%

Table 19: Timestyle clusters and entertainment use

The spontaneous dwellers are the most active group in watching online television and videos (64%) as well as participating in online gaming (53.1%). Especially online gaming seems to be in the interest of the spontaneous dwellers much more than the other groups. The finding that the spontaneous dwellers are the most active users of Internet as entertainment supports findings from existing research that relate present orientation and preference for non-organized time to entertainment use (Cotte et al. 2006). Being present-oriented and valuing non-organized time, they do not feel the pressure to fill their time with purposeful and goal oriented activities, but rather seek to engage in activities that are pleasurable at the moment. Watching online television, videos and gaming are all highly engaging activities, as they usually require a person's full attention. Listening to music services, on the other hand, can be performed as a secondary activity. *The active achievers* are in fact the most active group in listening to music services (33.3%) which may be supported by their tendency to multitask.

Overall, it appears that the spontaneous dwellers and active achievers are more hedonic in their Internet behaviour than the analytical schedulers and the traditional task-oriented. The fact that there were no statistically significant differences between the clusters in information search behaviour could be due to the fact that most people today use Internet as their main source for information. The need to find information is likely to be common for all timestyles. However, using the Internet for entertainment can better explain individual

preferences in time use. While some people only use the Internet for finding the information they need, others also find value in surfing the Internet with no specific outcomes in mind, just looking to get entertained.

7.5.4. Mobile Internet adoption

As mentioned previously, using mobile Internet is becoming increasingly common in Finland (Official Statistics of Finland 2011). While tablet devices are still quite rare, smart phones are already quite commonly used for exploring the Internet.

The table 20 demonstrates the commonness of mobile Internet use in each cluster. The result is significant at the 10% level. The *active achievers* appear to be the most active mobile Internet users. Half of them (50.5%) report using the Internet with their mobile phones. This could be assumed to relate to their orientation towards the future and achievement seeking character. As the smart phones are still a relatively new innovation and still in the diffusion stage of their life cycle, there might be reason to assume that the mobile Internet users are early adopters of technology innovations or at least belong to the early majority. As earlier research has demonstrated (e.g. Bergad a 1990), future-oriented people, such as the achievers, are often early adopters of technology innovations. Also, considering their timestyle profile as a whole, they seek to fill their time with activities and to achieve as much as possible in the amount of time available to them. Therefore mobile Internet could be useful to them as it allows surfing the web in empty time periods, such as waiting in lines or travelling in public transportation.

	Timestyle clusters				Total
	Analytical schedulers	Spontaneous dwellers	Active achievers	Traditional task-oriented	
I use the Internet with my mobile phone (p=.062)	44 35,2%	39 34,5%	52 50,5%	17 39,5%	152 39,6%

Table 20: Timestyle clusters and use of mobile Internet

8. Discussion and conclusions

This study was motivated by the lack of research in exploring timestyles as comprehensive constructs explaining consumer behaviour. The purpose of this study was to contribute to the understanding of timestyles by exploring the *dimensions* of timestyles and combining them into comprehensive *timestyle profiles* that could be used as a basis for consumer segmentation. The research questions that the study set out to answer were:

- 1) *Can the dimensions of the Timestyle Scale be validated based on the data and how are they associated with each other?*
- 2) *What kind of timestyle profiles can be identified by categorizing people based on the identified dimensions?*
- 3) *How do the identified timestyle profiles differ in demographics and behaviour related to Internet use?*

This chapter will seek to summarize the study and to answer the research questions by discussing the key findings in the light of previous research.

8.1. Summarizing the research

The first part of the study reviewed existing literature on the subject of time in consumer behaviour. It was concluded that time is a construct that is experienced subjectively and that this experience is influenced by the surrounding culture, situation as well as an individual's demographic and psychological characteristics.

Timestyles are dynamic and multidimensional constructs that depict these individual perceptions of time taking also into account the resulting behaviour. Although researchers have found quite similar dimensions to describe timestyles, there is no commonly accepted model to define their construct. This study was based on the Psychometric Timestyle Scale presented by Usunier and Valette-Florence (2007) that acknowledges both external and internal dimensions of timestyles. A possible relationship between timestyles and Internet use was presented, suggesting that consumers with different timestyles might have different manners and purposes of Internet use.

After literature review the research methods utilized in this study were introduced. The data for the empirical part of the study was collected using an online survey. Methods of quantitative analysis were applied to analyse the received data, including correlation analysis, factor analysis, cluster analysis, cross tabulations, t-test and ANOVA. The key results from the quantitative analysis will be discussed next in order to answer the three research questions.

8.2. Key results of the study

In this section I will seek to answer the three research questions by discussing the key findings of the study in the light of previous research.

Research question 1: *Can the dimensions of the Timestyle Scale be validated based on the data and how are they associated with each other?*

In this study nine separate sub-dimensions were identified to constitute a person's timestyle. These dimensions are *preference for economic and non-organized time*, *past and future orientation*, *time submissiveness* and *anxiety, tenacity and preference for quick return*, and finally *polychronic attitude*. The solution followed the structure of the Psychometric Timestyle Scale developed by Usunier and Valette-Florence (2007) but included one extra dimension to account for polychronic time attitude.

Correlation analysis revealed the complex structure between the timestyle dimensions. When examining the relationships of the sub-dimensions within the higher level dimensions it was found that the sub-dimensions were negatively correlated with each other in all cases but one. Future and past orientation revealed to have a positive association, indicating that a person who is future-oriented, for instance, is also more likely to think about the past than a person who is oriented towards the present. Whereas previous research has acknowledged that temporal orientations may coexist (Cotte et al. 2004, Bergadaà 1990), this study further indicates that their coexistence is actually to be expected.

Also in line with previous studies, economic and non-organized time had the strongest negative correlation with each other. While some researchers have decided to combine them together as opposite poles of one dimension (Cotte et al. 2001), the findings in this study indicate that the correlation is not strong enough to make this kind of conclusion. Also, supporting the findings from previous studies (Graham 1981, Calabresi and Cohen 1968), a positive relationship was found between economic time and future orientation, as well as past orientation and anxiety. However, the previous findings associating for instance past orientation and non-organized time (Graham 1981), submissiveness and future orientation (Calabresi and Cohen 1968) and tenacity and future orientation (Agarwal and Tripathi 1980) were not supported.

Based on earlier research it was suggested that the Timestyle Scale could be extended by treating polychronic attitude as a separate dimension instead of integrating it with economicity and linearity of time (Kaufman et al 1991, Cotte and Ratneshwar 2001). Correlation analysis supported the inclusion of an additional dimension to the Timestyle Scale, as polychronic attitude did not correlate with economic time as expected. Based on these results as well as previous studies demonstrating the importance of polychronic time use, the original Timestyle Scale was extended by adding polychronic time attitude as a third external factor.

The principal components analysis confirmed this nine factor structure and indicated that most variance can be explained with the dimensions of *economic time* and the *temporal orientations*. The findings were similar in the initial development of the Timestyle Scale (1994), with the exception that time submissiveness did not explain as much variance in this study.

The importance of the dimensions of economicity and linearity of time and temporal orientations, as well as the finding that future orientation and past orientation are positively correlated with each other, support the theory of dividing timestyles into *quantitative and qualitative profiles*. People with quantitative timestyle profile, as opposite to those with qualitative profile, have a preference for economic time and display strong temporal orientation towards both the future and the past (Durrande-Moreau and Usunier 1999). This

finding is of special interest because research on the theory of quantitative and qualitative timestyles has been very limited.

Research question 2: *What kind of timestyle profiles can be identified by categorizing people based on the identified dimensions?*

In order to explore consumer segmentation based on the timestyle dimensions, cluster analysis was performed and four different timestyle profiles were identified. They are described below as a summary of the findings from cluster analysis and cross-tabulations together with a more qualitative interpretation.

- **Analytical schedulers** view time quantitatively; they enjoy planning ahead and divide their time into measurable units that are assigned for specific activities. They concentrate on one task at a time and strive to maintain their schedule, but often fall behind leaving things unfinished. Keeping up with time can be a source of stress for them, as they perceive high time pressure due to their quantitative view of time. The analytical schedulers could be described as middle-aged and working typical office hours. As Internet users they tend to be quite rational as well. They don't spend time merely surfing the Internet and they rarely report spending too much time on the Internet. Casually interpreted, a typical analytical scheduler could be a working parent driven by multiple roles that demand active scheduling and economic thinking while leaving little space for spontaneity and non-organized time.
- **Spontaneous dwellers**, on the other hand, have a qualitative time view. They prefer spontaneity and concentrate on current pleasures. The spontaneous dwellers feel that time cannot be controlled and has therefore little purpose for them, which makes them pay little concern for schedules or time limits. This group of people does not seem to be characterized by any certain age group or gender, but it appears to be related to lower income and employment status outside the working life, i.e. students, pensioners and unemployed. Thus, it could be suggested that a typical spontaneous dweller is at a point of life where days have little structure and are characterized by a

negotiation between the feeling of freedom and an anxiety to take control of the time passing by. The spontaneous dwellers are active in seeking hedonic benefits from web use. They often use the Internet as entertainment without a specific mission.

- **Active achievers** seek to maximize the experiences and achievements acquired within a time period. They could be characterized with a 'life is short' mentality which stems from their quantitative view of time and achievement orientation. They have high expectations for themselves and fill their time with different activities. The active achievers like to plan their use of time but also leave room for spontaneity. They strive to avoid leaving things unfinished but are still always on time. They could thus be characterized as the 'good citizens' of time management. This group has an above average percentage of men and young people. As Internet users they are the most experimental, actively seeking new websites and eagerly adopting new technologies, such as mobile Internet.
- **Traditional task-oriented** are more concerned of performing activities in a correct manner and using the right procedures, than respecting timetables. They are highly tenacious, striving to complete the undertaken tasks without much concern for time passing by. A typical member of this group is female and often older generation. As Internet users the task-oriented appear to be more interested in information search than entertainment. Being past-oriented they are likely to follow familiar routines and stick to their habits, which is also apparent in their Internet behaviour. Although they enjoy surfing the web, they mostly visit websites that are familiar to them.

The results of cluster analysis give reason to believe that timestyles provide a useful basis for consumer segmentation. It also shows the importance of viewing timestyles as coherent multidimensional constructs. Even though there are many findings that support earlier studies that have focused on single dimensions, there are also many examples that demonstrate that single dimensions cannot straightforwardly predict behaviour or reasons behind them. For example, even though spontaneous dwellers and active achievers both appreciate non-organized time and leaving room for spontaneous activities, examining their

overall timestyle profiles reveals that the reasons for this are quite different. While the spontaneous dwellers prefer non-organized time because they hold little purpose for time and planning ahead, the active achievers prefer non-organized time because it might allow undertaking spontaneous activities that would turn into memorable experiences. This example portrays how timestyle profiles as combinations of the dimensions may provide a more realistic understanding of consumers and their values and lifestyles.

An interesting resemblance can be observed between the identified timestyle profiles and the three cultural time perspectives discussed in the literature review. The *linear-separable time*, characterized by strongly economic view of time, future orientation, and monochronic behaviour (Graham 1981) appears to describe the clusters of *analytical schedulers*, and to some extent *achievement oriented*. Both of these clusters view time as an economic resource that should be used optimally. While the analytical schedulers seek to follow the routines organized as tight schedules, the active achievers seek to maximize the experiences and achievements in a given time period. The second cultural time perspective, *circular-traditional time* seems to represent the cluster of *spontaneous dwellers*. Both are described by present orientation, preference for non-organized time, anxiety, polychronic time use and a feeling that time has little purpose and cannot be controlled. Finally, the *traditional task-oriented* cluster appears to resemble the third cultural time perspective, *procedural-traditional time*. This view of time is characterized by an emphasis on completing a task by following the correct procedures rather than paying attention to timelines. Time is defined as a succession of activities rather than objective clock time. These findings are interesting, considering that all the respondents have the same cultural background. Perhaps it could be suggested that these three cultural time perspectives are universal, all present in different cultures, but that the emphasis is on one of them depending on the culture. In this study, majority of the respondents belong to the clusters that view time in economic terms as in the linear view of time that is characteristic of the Finnish culture.

3) *How do the identified timestyle profiles differ based on demographics and behaviour related to Internet use?*

The findings from cross-tabulations indicated that the timestyle profiles are statistically associated with age. This view is consistent with previous studies that have presented that as

people mature their timestyles evolve as well (Usunier and Valette-Florence 2007, Szmigin and Garrigan 2001). Especially, previous research has demonstrated a relationship between temporal orientations and age, suggesting that young age is related to future orientation while a mature age is related to past orientation. The findings of this study supported this view; the 'youngest' cluster, active achievers, was most oriented towards the future, while the 'oldest' cluster, traditional task-oriented, was the most past-oriented of the clusters. Analysis of variance further demonstrated that age is especially related future orientation, which appears to decline with age, whereas the relationship between past orientation and age is more obscure.

On the other hand, other demographics such as gender, income or employment status did not have statistical relationship with the clusters. However, their association with individual timestyle dimensions was examined, and some interesting results were found. First of all, gender was found to be related to time submissiveness and polychronic attitude, which both were more emphasized by women. However, gender was not related to temporal orientation which has been the focus of most gender-related timestyle studies (Usunier and Valette-Florence 2007, Lessing 1968, Havlena and Holak 1991). Meanwhile, low income level and employment status outside working life were found to be related to past orientation, anxiety and preference for quick return, as could be expected based on previous studies (Agarwal et al. 1983, Calabresi and Cohen 1968). Also, in line with the study by Kaufman et al. (1991), employment was also found to be related to polychronic time attitude, suggesting that pensioners and unemployed have a less favourable attitude towards multitasking than other employment groups.

The timestyle profiles showed initial support for being able to predict certain types of Internet usage behaviour. Exploratory behaviour, referring to the tendency to explore unfamiliar websites, was found to be most common for the cluster of active achievers, while the traditional task-oriented appeared to prefer browsing websites that were familiar to them. This appears to be consistent with the characterization of the profiles; while the active achievers are curious and actively seek new experiences, the traditional task-oriented are more comfortable with familiar routines. The findings related to exploratory internet use were in line with those proposed by Cotte et al. (2006) who suggested that exploratory

internet use is related to a spontaneous personality. The clusters that appreciated spontaneity were found to be more exploratory than the other clusters.

Regarding the purpose of internet usage behaviour, the results from the study by Cotte et al. (2006) showed that analytical planning style predicts the tendency to seek utilitarian benefits and to engage in information search, while preference for spontaneity predicts the pursuit of hedonic benefits resulting in entertainment use. These findings are not fully supported by this study. In line with the study of Cotte et al. entertainment use was most common for those with spontaneous timestyle, i.e. the spontaneous dwellers. However, information search was most important for traditional task-oriented who do not have an analytical time planning style. It could be suggested that their past orientation together with their tendency to concentrate on the task at hand discourages them from trying new features of Internet such as Internet television or online gaming.

Also, it was concluded that the power of timestyle profiles in predicting purposes of internet use is stronger in entertainment use than information search. This might be due to the fact that the need to find information is likely to be common to all people, unlike the willingness to use the Internet for entertainment. Finally, mobile Internet was found to be most widely adopted by the future-oriented active achievers, as could be expected based on previous studies that have characterized future oriented people as early adopters of technology innovations (Bergadaà 1990).

The differences found between the clusters in their Internet behaviour give initial support for the validity of the extended Timestyle Scale in creating consumer segments and predicting behaviour based on them. This indicates that the segmentation created in this study might provide interesting implications for marketing executives. These implications will be discussed in the next section.

8.3. Implications

Chapter 7 presented the findings of this study, which were further discussed in the section 8.2. comparing them to previous research and the research questions of this study. This

section will extend the discussion by suggesting theoretical and managerial implications of the findings.

8.3.1. Theoretical implications

This study has contributed to the understanding of timestyles by extending the research on existing models. The applicability of the Psychometric Timestyle Scale has been validated in the Finnish context. The same factors were extracted in principal components analysis based on the data gathered from Finnish respondents. However one of the variables did not load on the expected factor, which might either indicate a cultural difference or merely an unsuccessful translation.

Based on previous research one alteration was suggested to the Psychometric Timestyle Scale. Research on polychronic time use has indicated that polychronicity is not always directly linked to preference for non-organized time as is expected in the original Timestyle Scale. In fact, many researchers have treated these two constructs as separate timestyle dimensions. Therefore it was hypothesized that the Timestyle Scale could be extended with an additional dimension depicting the polychronic attitude. Correlation analysis and principal component analysis supported the idea of using the extended Timestyle Scale as no statistical correlation was found between the dimensions.

This study also contributed to the research on the Timestyle Scale by exploring its applicability to consumer segmentation. The results showed that the Timestyle Scale may provide a useful basis for grouping consumers in a meaningful way to predict specific types of consumer behaviour.

Finally, the findings of this study support the research conducted by Prime (see Durrande-Moreau and Usunier 1999) that divided timestyles into quantitative and qualitative profiles. The dimensions of economic time and temporal orientations towards past and future were found to explain most variance in timestyles and they seemed to correlate with each other. Also, two of the clusters appeared to be more susceptible to time pressure caused by quantitative time view than the other two.

8.3.2. Managerial implications

Understanding of timestyles as comprehensive consumer profiles can provide implications for many areas of marketing. As explained in the introduction, the manner in which consumers perceive and use time has implications for decision making, product and service choice, media use and many other areas of consumer behaviour. This section discusses the managerial implications of the study.

First of all, in advertising and branding it is crucial to understand what kind of appeals and product attributes engage different audiences most efficiently. Timestyles appear to have a strong influence in these preferences. While the analytical schedulers would probably appreciate appeals and attributes of convenience and saving time, the spontaneous dwellers might be more enticed by appeals of hedonistic pleasures. Or, while the active achievers might be engaged with appeals to future gains, the traditional task-oriented might be better engaged with nostalgic appeals.

Implications for Internet advertising are particularly noteworthy. The exploratory behaviour of the active achievers and spontaneous dwellers suggest that they might be a quite suitable audience for banner or pop-up advertisements, because they don't hesitate following unfamiliar links to new websites. The economic schedulers and traditional task-oriented, on the other hand, are unlikely to click unfamiliar links. Considering also their focus on information search, they might be most effectively approached by search engine optimization.

The findings of the study might even be applied to media preferences in general. The consumer segments are likely to differ in their preferences concerning media type, content and context of use. For example, it could be assumed that the traditional task-oriented consumers, who often follow the same daily routines and concentrate on tasks rather than the passage of time, would perhaps enjoy reading the newspaper every morning in a breakfast table, while the active achievers, who seek to fill their time with activities and are comfortable with technology, might catch the news on their mobile phone in the commute.

Meanwhile, the analytical schedulers, who tend to plan their time use optimally and be less exploratory, could be expected to watch carefully selected programs from the television, while the exploratory spontaneous dwellers could be expected to surf the channels for something entertaining.

Furthermore, the implications of the study findings can also be applied to other marketing areas such as store design and servicescapes. Considering a visit to a shopping mall, the consumer segments are likely to appreciate quite different attributes. The analytical schedulers might appreciate a quick and convenient shopping trip and the ability to run many errands at one stop, while the active achievers might enjoy an experiential shopping experience. Stores could be designed to please the consumer segments with different timestyles by allowing both fast and convenient visits, as well as exploratory and entertaining experiences. Also, one aspect of servicescapes that could benefit from understanding of timestyles is *waiting*. Consumer segments with different timestyles are likely to respond differently to waiting in line or waiting for service. The analytical schedulers and the active achievers who view time quantitatively would probably get more frustrated having to spend time waiting, than the spontaneous dwellers and traditional task-oriented who view time qualitatively. The analytical schedulers and the active achievers might for instance appreciate a chance to access the Internet or to take a waiting number and run some errands while waiting, because their timestyles are related to higher perception of time pressure.

8.4. Limitations and suggestions for future research

Timestyles, and especially consumer segmentation based on timestyles, is a topic that holds a lot of potential for future research. As explained in the previous sections, this study has demonstrated that timestyles may provide a useful basis for consumer segmentation, but more extensive research is needed to understand the nature of the timestyle profiles.

This study presented an extended version of the Psychometric Timestyle Scale that included one additional dimension for polychronic time attitude. Further research is needed to confirm that polychronicity is independent from the economicity and linearity of time.

Also, studies using the Psychometric Timestyle Scale as a basis for segmentation are virtually non-existent. In order to find out whether the profiles found can be generalized, replications of the cluster analysis with different samples are needed. Also, cluster solutions with a higher number of clusters could be explored to understand the profiles in greater detail.

Furthermore, cluster analysis always leaves room for subjective interpretation of the results and also in this study the description of the consumer profiles was partly based on subjective judgement of the researcher. This provides an interesting point for future research – the clusters should be studied further focusing on their behaviour and value systems in order to gain better understanding of their nature. Qualitative interviews might provide interesting insight into the timestyle profiles that cannot be obtained from the quantitative data.

Finally, the predictive capabilities of the clusters could be studied in various marketing areas. Considering Internet behaviour, the questions posed in this study were quite overarching. More specific questions, or perhaps observation, could provide better understanding of differences in Internet behaviour between the clusters. In addition, the behavioural differences between the clusters in other media use and preferences, purchase behaviour, decision making processes, or perhaps innovation adoption present quite interesting avenues for future research on timestyles.

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Appendices

Appendix 1: Dimensions and items of the Timestyle Scale

1. Linearity and economicity of time

* sub-dimension **Economic time**

- ‘I plan my activities so that they fall into a particular pattern during the day’ (ET1)
- ‘I like to have a definite schedule and stick to it’ (ET2)
- ‘I like to plan my daily activities so I know just when to do each thing’ (ET3)
- ‘I enjoy following a schedule’ (ET4)

* sub-dimension: **Non-organized time**

- ‘I hate following a schedule’ (NT1)
- ‘It is more fun to take one thing at a time than to plan my day in advance’ (NT2)
- ‘I hate to make any sort of definite plans weeks or months in advance’ (NT3)

2. Temporal orientations

* sub-dimension: **Orientation towards the past**

- ‘I feel nostalgic about the past’ (PO1)
- ‘When I am by myself, my thoughts often drift back to the past’ (PO2)
- ‘I think quite often about my life as it used to be’ (PO3)
- ‘Sometimes I find myself dwelling on the past’ (PO4)

* sub-dimension: **Orientation towards the future**

- ‘I spend time thinking about what my future might be like’ (FO1)
- ‘I think a lot about what my life will be some day’ (FO2)
- ‘Many of us tend to daydream about the future. It also happens to me’ (FO3)
- ‘I often think about the things I am going to do in the future’ (FO4)

3. Obedience to time

* sub-dimension: **Time submissiveness**

- ‘No matter how hard I try, I am nearly always a little late’ (RS) (TS1)
- ‘I am almost never late for work or appointments’ (TS2)
- ‘If the only way I can get to an appointment is by rushing, I’d rather be late’ (RS)(TS3)
- ‘I would rather come early and wait than be late for an appointment’ (TS4)

* sub-dimension: **Time anxiety (perceived usefulness of time)**

- ‘Looking at a typical day in my life, I think that most things I do have some purpose’ (RS)
- ‘I sometimes feel that the way I fill my time has little use or value’ (TA1)
- ‘I am bored by my day-to-day activities’ (TA2)
- ‘I often feel that my life is aimless, with no definite purpose’ (TA3)

4. Temporal persistence

* sub-dimension: **Tenacity**

- ‘Once I have started an activity, I persist at it until I’ve completed it’ (TE1)
- ‘When I begin a project, I don’t like to stop it until it is finished’ (TE2)
- ‘When I am interrupted doing a task, I almost always go back to it as soon as I can’ (TE3)

* sub-dimension **Preference for quick return**

- ‘I would prefer doing several very small projects than one very large one’ (QR1)
- ‘I would prefer doing one very large project than several small ones’ (RS)(QR2)
- ‘I would rather try to get two or three things done quickly than spend my time on one big project.’ (QR3)

(RS)=Reverse scored

Appendix 2: Statements in the Polychronic Attitude Index (PAI)

- ‘I do not like to juggle several activities at the same time.’ (Reverse scored) (PT1)
- ‘People should not try to do many things at once.’ (Reverse scored) (PT2)
- ‘When I sit down at my desk, I work on one project at a time.’ (Reverse scored) (PT3)
- ‘I am comfortable doing several things at the same time.’ (PT4)

Appendix 4: Gender-related differences in timestyles – T-test

		<i>Men</i>		<i>Women</i>		<i>Sig.</i>
		<i>Mean</i>	<i>s.d.</i>	<i>Mean</i>	<i>s.d.</i>	
Preference for economic time	ET1	3,56	1,559	3,56	1,683	,968
	ET2	3,80	1,544	3,71	1,631	,578
	ET3	4,09	1,636	4,09	1,724	,980
	ET4	4,39	1,708	4,05	1,740	,061
Preference for non-organized time	NT1	3,88	1,942	4,12	1,860	,207
	NT2	3,61	1,580	3,66	1,547	,716
	NT3	3,67	1,847	4,10	1,866	,025**
Past orientation	PO1	3,84	1,770	4,04	1,849	,303
	PO2	4,15	1,720	4,21	1,784	,743
	PO3	4,11	1,746	4,30	1,773	,297
	PO4	3,97	1,723	4,05	1,777	,662
Future orientation	FO1	3,69	1,554	3,48	1,512	,181
	FO2	3,73	1,596	3,62	1,555	,510
	FO3	3,61	1,598	3,17	1,491	,005**
	FO4	3,72	1,609	3,52	1,505	,211
Time submissiveness	TS1 (RS)	5,09	1,730	5,46	1,782	,037**
	TS2	2,75	1,801	2,35	1,816	,034**
	TS3 (RS)	5,03	1,689	5,43	1,668	,022**
	TS4	2,35	1,465	2,18	1,620	,279
Time anxiety	TA1	3,79	1,595	3,95	1,556	,308
	TA2	4,17	1,513	4,22	1,556	,745
	TA3	4,31	1,721	4,58	1,874	,151
Tenacity	TE1	2,95	1,326	3,11	1,467	,290
	TE2	2,90	1,364	3,21	1,404	,027**
	TE3	3,13	1,400	3,24	1,405	,439
Preference for quick return	QR1	3,62	1,451	3,41	1,341	,136
	QR2(RS)	4,00	1,527	4,41	1,351	,005**
	QR3	3,69	1,357	3,63	1,286	,659
Polychronic time attitude	PT1 (RS)	2,74	1,019	3,26	1,118	,000**
	PT2 (RS)	2,81	1,046	3,19	1,072	,001**
	PT3 (RS)	2,55	,916	3,20	1,012	,000**
	PT4	2,79	1,016	2,24	1,081	,000**

First eight dimensions were measured on a seven-point Likert scale, ranging from 1 (agree) to 7 (disagree). Last dimension was measured on a five-point Likert scale, ranging from 1 (agree) to 5 (disagree).

** Significant at 5% level

(RS)= reverse scored, values have not been recoded before calculations

Appendix 5: Age-related differences in timestyles - One-way ANOVA

		Total (N=387)	≤29 (N=82)	30-39 (N=81)	40-49 (N=84)	50-59 (N=97)	≥60 (N=43)	F	Sig.
Preference for economic time	ET1	3,56	3.50	3.42	3.52	3.81	3.43	,828	,508
	ET2	3,75	3.63	3.62	3.72	4.02	3.65	1,008	,403
	ET3	4,09	3.89	4.04	4.18	4.19	4.18	,467	,760
	ET4	4,19	3.81	4.15	4.23	4.46	4.33	1,647	,162
Preference for non-organized time	NT1	4,02	4.36	4.38	3.71	3.67	4.10	2,890	,022**
	NT2	3,64	3.85	3.77	3.37	3.54	3.73	1,266	,283
	NT3	3,92	4.13	4.11	3.73	3.63	4.17	1,493	,203
Past orientation	PO1	3,95	3.74	4.06	4.03	3.84	4.26	,783	,537
	PO2	4,18	3.79	4.46	4.44	4.06	4.16	2,158	,073
	PO3	4,22	3.69	4.60	4.36	4.20	4.25	2,969	,020**
	PO4	4,02	3.52	4.15	4.15	4.13	4.19	2,101	,080
Future orientation	FO1	3,57	3.09	3.49	3.54	3.84	4.06	4,055	,003**
	FO2	3,67	2.98	3.54	3.72	4.07	4.23	7,515	,000**
	FO3	3,36	2.94	3.17	3.33	3.60	3.99	4,354	,002**
	FO4	3,60	3.21	3.43	3.55	3.95	3.99	3,566	,007**
Time submissiveness	TS1 (RS)	5,31	4.96	5.34	5.67	5.16	5.52	2,023	,091
	TS2	2,52	2.83	2.55	2.15	2.50	2.63	1,499	,147
	TS3 (RS)	5,26	4.81	5.71	5.45	5.22	5.02	3,488	,003**
	TS4	2,25	2.60	2.26	1.95	2.32	2.03	2,130	,076
Time anxiety	TA1	3,88	3.63	3.78	3.97	3.94	4.25	1,309	,266
	TA2	4,20	3.79	4.03	4.21	4.38	4.87	4,234	,002**
	TA3	4,47	3.79	4.28	4.64	4.67	5.31	6,152	,000**
Tenacity	TE1	3,04	3.45	3.17	2.70	2.80	3.24	4,196	,002**
	TE2	3,08	3.53	3.16	2.62	2.90	3.39	5,678	,000**
	TE3	3,19	3.60	3.26	2.85	3.03	3.34	3,529	,008**
Preference for quick return	QR1	3,50	3.60	3.58	3.56	3.46	3.11	1,092	,360
	QR2(RS)	4,24	4.37	4.13	3.98	4.20	4.77	2,493	,043**
	QR3	3,65	3.70	3.79	3.78	3.40	3.63	1,308	,267
Polychronic time attitude	PT1 (RS)	3,04	3.05	3.26	3.02	2.98	2.80	1,374	,242
	PT2 (RS)	3,03	3.05	3.16	2.92	3.02	2.96	,565	,689
	PT3 (RS)	2,93	2.91	2.98	2.88	2.92	2.99	,147	,964
	PT4	2,47	2.62	2.48	2.49	2.39	2.31	,724	,576

First eight dimensions were measured on a seven-point Likert scale, ranging from 1 (agree) to 7 (disagree). Last dimension was measured on a five-point Likert scale, ranging from 1 (agree) to 5 (disagree).

** Significant at 5% level

(RS)= reverse scored, values have not been recoded before calculations

Appendix 6: Income-related differences in timestyles – One-way ANOVA

		Total (N=387)	<1000€/m (N=87)	1000- 2000€/m (N=150)	>2000€/m (N=80)	Prefers not to respond (N=71)	F	Sig.
Preference for economic time	ET1	3,56	3,53	3,62	3,55	3,47	,130	,942
	ET2	3,75	3,83	3,74	3,79	3,62	,234	,872
	ET3	4,09	3,95	4,23	4,07	4,00	,607	,611
	ET4	4,19	4,06	4,34	4,27	3,95	1,048	,371
Preference for non-organized time	NT1	4,02	4,01	3,95	3,93	4,30	,629	,597
	NT2	3,64	3,60	3,54	3,77	3,76	,542	,654
	NT3	3,92	3,78	4,03	4,02	3,73	,659	,578
Past orientation	PO1	3,95	3,36	4,21	4,29	3,75	5,536	,001**
	PO2	4,18	3,55	4,49	4,71	3,72	9,873	,000**
	PO3	4,22	3,51	4,39	4,77	4,09	8,418	,000**
	PO4	4,02	3,20	4,30	4,56	3,79	11,322	,000**
Future orientation	FO1	3,57	3,29	3,74	3,41	3,72	2,083	,102
	FO2	3,67	3,27	3,82	3,65	3,86	2,742	,043**
	FO3	3,36	3,07	3,46	3,36	3,48	1,328	,276
	FO4	3,60	3,46	3,68	3,47	3,76	,799	,447
Time submissiveness	TS1 (RS)	5,31	5,38	5,28	5,26	5,33	,090	,965
	TS2	2,52	2,72	2,46	2,30	2,64	,903	,440
	TS3 (RS)	5,26	4,94	5,49	5,36	5,07	2,389	,068
	TS4	2,25	2,26	2,14	2,35	2,36	,463	,708
Time anxiety	TA1	3,88	3,22	4,00	4,31	3,96	7,881	,000**
	TA2	4,20	3,77	4,32	4,41	4,24	3,182	,024**
	TA3	4,47	3,64	4,70	4,86	4,54	8,721	,000**
Tenacity	TE1	3,04	3,01	3,06	2,79	3,32	1,769	,153
	TE2	3,08	2,97	3,13	2,84	3,37	2,090	,101
	TE3	3,19	3,00	3,32	3,16	3,19	,987	,399
Preference for quick return	QR1	3,50	3,14	3,50	3,75	3,64	3,056	,028**
	QR2(RS)	4,24	4,40	4,36	3,78	4,30	3,530	,015**
	QR3	3,65	3,25	3,77	3,70	3,82	3,591	,014**
Polychronic time attitude	PT1 (RS)	3,04	2,94	3,14	2,93	3,10	,951	,416
	PT2 (RS)	3,03	2,83	3,12	3,16	2,91	2,041	,108
	PT4	2,93	2,61	2,48	2,33	2,43	2,554	,341

First eight dimensions were measured on a seven-point Likert scale, ranging from 1 (agree) to 7 (disagree).
Last dimension was measured on a five-point Likert scale, ranging from 1 (agree) to 5 (disagree).

** Significant at 5% level

(RS)= reverse scored, values have not been recoded before calculations

Appendix 7: Employment-related differences in timestyles – One-way ANOVA

		Total (N=387)	Entrepreneur (N=19)	Manager (N=48)	Senior official (N=74)	Worker (N=116)	Student (N=41)	Pensioner (N=33)	Unemployed (N=43)	Other (N=13)	F	Sig.
Preference for economic time	ET1	3,56	3,27	3,47	3,53	3,65	3,27	4,01	3,48	3,66	,729	,647
	ET2	3,75	3,60	3,64	3,58	3,83	3,58	4,30	3,74	3,77	,852	,545
	ET3	4,09	3,42	4,06	4,04	4,28	3,73	4,70	3,93	4,00	1,608	,131
	ET4	4,19	3,97	4,03	4,03	4,49	3,46	5,25	3,93	3,90	3,861	,000**
Preference for non-organized time	NT1	4,02	4,30	4,15	4,03	3,72	4,75	3,44	4,21	4,32	1,966	,059
	NT2	3,64	4,10	3,87	3,73	3,40	4,11	3,01	3,61	3,93	2,202	,033**
	NT3	3,92	4,34	4,56	3,99	3,54	4,26	3,69	3,78	3,84	1,967	,059
Past orientation	PO1	3,95	3,91	4,59	4,02	4,06	3,87	3,55	3,23	4,05	2,177	,036**
	PO2	4,18	4,29	4,88	4,38	4,35	3,75	3,19	3,54	4,82	4,569	,000**
	PO3	4,22	4,59	4,79	4,36	4,60	3,43	3,16	3,56	4,61	5,995	,000**
	PO4	4,02	4,57	4,72	4,15	4,27	3,08	3,11	3,67	4,03	5,340	,000**
Future orientation	FO1	3,57	2,91	3,47	3,49	3,83	3,19	4,00	3,38	3,72	1,900	,082
	FO2	3,67	3,04	3,64	3,63	3,99	2,92	4,17	3,41	3,95	3,308	,002**
	FO3	3,36	3,04	3,22	3,26	3,60	2,77	4,06	3,22	3,18	2,543	,031**
	FO4	3,60	2,90	3,39	3,44	3,88	3,27	4,35	3,52	3,30	2,874	,015**
Time submissiveness	TS1 (RS)	5,31	5,09	5,15	5,42	5,37	5,10	5,34	5,27	5,70	,331	,940
	TS2	2,52	2,52	2,39	2,32	2,53	2,84	2,74	2,65	1,97	,619	,622
	TS3 (RS)	5,26	5,28	5,86	5,40	5,34	4,88	4,84	4,66	5,86	2,662	,012**
	TS4	2,25	2,68	2,31	2,02	2,29	2,54	2,09	2,28	1,79	,880	,522
Time anxiety	TA1	3,88	4,93	4,23	3,86	4,06	3,50	3,47	3,40	3,47	3,248	,002**
	TA2	4,20	4,86	4,20	4,23	4,47	3,71	3,98	3,83	3,99	2,125	,040**
	TA3	4,47	5,51	4,64	4,68	4,77	3,65	4,25	3,81	3,72	4,218	,000**
Tenacity	TE1	3,04	2,84	2,93	3,12	3,17	3,22	2,58	2,83	3,54	1,253	,273
	TE2	3,08	2,91	2,91	3,21	3,16	3,17	2,83	2,95	3,31	,570	,821
	TE3	3,19	2,87	3,41	3,41	3,17	3,47	2,87	2,79	3,10	1,593	,136
Preference for quick return	QR1	3,50	4,16	3,57	3,52	3,53	3,50	2,84	3,45	3,59	1,747	,097
	QR2(RS)	4,24	3,35	3,88	4,11	4,45	4,44	4,98	3,86	4,43	3,872	,006**
	QR3	3,65	4,23	3,46	3,53	3,89	3,79	3,55	3,26	3,20	2,215	,032**
Polychronic time attitude	PT1 (RS)	3,04	3,14	3,32	3,20	3,03	3,16	2,62	2,68	2,97	2,132	,040**
	PT2 (RS)	3,03	3,49	3,26	3,11	3,03	3,27	2,71	2,46	2,95	3,473	,001**
	PT3 (RS)	2,93	2,86	3,28	3,19	2,96	3,01	2,53	2,44	2,45	4,294	,000**
	PT4	2,47	2,37	2,14	2,28	2,54	2,57	2,71	2,66	2,60	1,543	,131

First eight dimensions were measured on a seven-point Likert scale, ranging from 1 (agree) to 7 (disagree).

Last dimension was measured on a five-point Likert scale, ranging from 1 (agree) to 5 (disagree).

** Significant at 5% level

(RS)= reverse scored, values have not been recorded before calculations