

# The relationship between self- and other directed motives in letters from the future and mental health

## Bachelor research

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## Summary

This study aims to explore the relationship between self- and other directed motives in letters from the future and mental health, because no empirical studies give evidence for this relationship. To study these relationship persons from different age and demography were invited via snowball and convenience sampling to participate in this study. The sample consists of 447 persons and within this study mixed method design with a cross-sectional character was applied. Further two data collection instruments were used which are MHC-SF questionnaire and a letter from the future. For the analysis of the motives within the letters, the valuation system of Hermans which consists of six types of valuations was used. The valuations refer to the S-motive which is an indicator for self-enhancement and to the O-motives which is an indicator for the striving for the contact to others. It seems that all six types of valuations are identifiable by the letter from the future method. Further the method gives insight in the diversity of motives while imagine a positive future. Most motives are the +S, standing for positive self-enhancement and +O, representing positive contact with others. It seems that people mostly associate positive motives with the future while doing positive futuring. Differences in the diversity of the valuation systems do not mean statistically significant differences on the MHC-SF score. But it seems that the letter from the future is feasible to access the implicit motives of a person. Further research is necessary to investigate the strengths and limitations of the future letter as a screening instrument for mental health or illness in psychological practice.

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## **1. Introduction**

This article deals with motivational orientation in narrative futuring and its relation with positive mental health. This relationship is studied from the perspective of narrative psychology and will be investigated by using the valuation theory. In the beginning of this bachelor thesis, the key terms of narrative futuring, positive mental health and motives in the context of mental health will be explained. Subsequently, the valuation theory and in particular two central concepts of the valuation theory, namely self- and other directed motives are introduced and consequently the research questions will be formulated.

## **2. Definitions, theory and research question**

### **2.1 Narrative Futuring**

Futuring is an important ability of a human being to draft an idea of its personal future. But the process of futuring is a very complex process and influenced by many factors.

Within their article Sools and Mooren (2012) summarise some theories of futuring e.g. theory by Adler or Bandura. Adler stated with his theory of “Leitlinie” that goals in life which were set by an individual are influencing the futuring process and consequently the design of the future image (Adler, 1947). Besides personal goals, also cognitive abilities have an impact on futuring. Following the social cognitive theory of Bandura, the concept of forethought represents the ability to imagine the future. It assumes that the human being is able to predict the consequences of its own behaviour because the person is equipped with cognitive abilities. Consequently the person is able to behave in a suitable way in any particular situation (Bandura, 1986).

Sools and Mooren (2012) introduced a narrative psychological approach to futuring. They believe that a narrative psychological approach to futuring does better meet the requirements of the postmodern time than established theories. Living in the postmodern time means dealing with “increasing speed and complexity of social change” (Sools & Mooren, 2012, p. 2). Sools and Mooren argue that linear futuring as it is described by Adler and Bandura does have no creative character. These traditional theories are unusable if “new perspectives are developed from multiple, uncertain, unknown or unknowable facts, which cannot (and need not) be inferred causally from either a Leitlinie or the present.” (Sools and Mooren, 2012, p. 9). They criticise that it is more than just the ongoing time which impacts a person’s future. Also goals might be changed and will influence the future image.

They developed a method which is a combination of standardised procedures and a person-oriented way to study the relationship between written stories (letters from the future) and well being. With the help of the letters from the future, the future and well-being of each individual become articulated and insight into the individual's narrative story is provided (Sools & Mooren, 2012). Researchers of Twente University made use of the letter from the future method and started the life-story lab to study the relationship between stories and well-being (Sools & Mooren, 2012). This study takes place within the larger study of narrative futuring.

Narrative futuring has its roots in narrative psychology. Within narrative psychology, language and stories are instruments to gain information about a person's identity (Polkinghorne, 1988). While telling a story, people give insight in how they cope with different situations. Gergen and Gergen (1994) used the term "self-narrative" for the autobiographical story of a person which is a construction of self-relevant life events of a person. Several experiences are clustered into an organized whole. Polkinghorne labels this cognitive organizing process narrative. "Narrative is the cognitive process that gives a meaning to temporal events by identifying them as parts of a plot. The narrative structure is used to organize events into various kinds of stories (...) individuals construct private and personal stories linking diverse events of their lives into unified and understandable wholes. These are stories about the self." (Polkinghorne, 1991, p.136). The story does not reflect the objective reality, but the individual's experience. Those stories are not the result of the past, but the attempt of a person to create a coherent story about several experiences in association with the present and with anticipation of the future.

## **2.2 Mental health**

Mental health is a salient term in the title of this research paper. But what is meant by mental health in general and how is mental health defined in this research paper?

To give an idea of the development of positive mental health, an example for the definition of mental health is presented. According to Vrijburg (1970), persons with less mental health are more disposed to develop mental disorder as a consequence out of negative live events or situations than others (Vrijburg, 1970).

Other definitions of mental health are not only focused on the absence of mental disorder as in the Vrijburg example. According to the World Health Organization mental health contains more than just the absence of mental disorder. It is the result of a dynamic interaction between

biological, psychological, socio-economical and institutional determinants. Mental health is not only influenced by individual aspects but also by aspects out of personal control which are responsible for mental health (WHO, Mental Health Report, 2001).

Recent programs to improve mental health are more concerned with improvement of positive constructs of mental health than just focussing on constructs which adulterate mental health (Keyes, 2002).

Keyes (2007) defines these positive constructs of mental health:

1. Subjective well-being,
2. psychological well-being and
3. social well-being.

According to Keyes subjective well-being is live satisfaction as luck and pleasure in a person's life (Diener,1999). Psychological well-being is the capacity to achieve own goals. The last construct of positive mental health is social well-being. Social well-being influences mental health by the perception of the interaction with the environment (Keyes,1998). It is assumed that social well-being is high if a person has high social contribution and is well integrated within the social environment (Lamers et al, 2011).

### **2.3 Motives and Goals**

For the illustration of the self of the future, personal motives and goals become relevant. They give insight in what a person wants to achieve. Motives are implicit which means that they exist unconsciously. They are drivers for emerging goals. Goals are explicit which are concrete plans for the future. Within the following paragraphs goals are also named explicit motives.

Different theories for the origination of motives and goals exist. In the article of Karniol and Ross (1996) a summary of different goal taxonomies is given. Within this research paper the focus is on the self- and other directed motives. Consequently an appropriate taxonomy will be explained. Karniol and Ross summarised that Ford and Nichols (1987) devide goals into personal and external goals. Personal goals base on affective goals like happiness and cognitive goals like developing positive self-concepts. In contrast to personal goals, external goals include social relationship goals (promoting well-being of self or others).

Motives are often categorized in implicit and explicit motives. E.g. Schultheiss and Brunstein (1999) give a summary of McClelland's two system approach to motivated behaviour. According to Schultheiss and Brunstein (1999), McClelland (1987) defines an implicit motivational system driven by emotions and an explicit system of motivation based on cognition. The implicit motivational system is shaped by the environment and deals with affectively charged incentives like having impact on others, maintaining positive relationships or doing something better. In summary it does mean that if a person is able to get an incentive from a situation, an idea of rewarding emotion emerges and this is the driver for goal directed behaviour. The explicit motivational system is driven in a conscious, more directed way. The explicit motivational system contains consciously accessible goals and a pool of cognitive strategies to accomplish the goals.

The relationship between goals and the motives is presented in an example. A goal originates in the implicit motivational system. The wish to become a satisfied person is an example of an implicit goal. According to Ford and Nichols this is a personal goal (development of positive self-concept). Within the explicit motivational system, plans are developed for reaching the conscious goal, e.g. becoming a successful engineer, which is a (sub)goal of the individuals' definition of a satisfied person. For the accomplishment of this goal plans are made in a conscious way like doing traineeships or more learning as well as less party. This fictive example assumes that the content of goals and motives is congruent. Research indicates that congruence of goals and motives correlates with well-being, e.g. a study of Brunstein shows that individuals holding goals which do not fit with their own motives experience lower emotional well-being than individuals with motives that are congruent with their goals (Schultheiss and Brunstein, 1999).

One research study by Emmons (1999) indicates that goals of intimacy and reproductiveness correlate positively with well-being. Furthermore goals of force and avoidance are associated with a lower degree of well-being and a higher degree of anxiety. Emmons also found that a conflict between goals is also associated with psychological distress. An example of this sort of conflict is that on the one hand a person wants to found a family and on the other hand the same person wants to improve in job and make career. The aftermath could be depression, neuroticism, psychosomatic afflictions and illness.

While investigating motives and goals mostly explicit methods as questionnaires were used. Explicit methods are methods in which participants are asked to consciously think about their motives. E.g. Emmons (1999) used in his research an explicit method, the 'Striving list' to

investigate personal goals. In his research participants have one week to arrange a list of 15 personal strivings which are objectives that a person typically tries to achieve. The time span of one week connoted that it is impossible to measure those goals implicitly. By implicit methods it is achieved to gain information which might be not gathered by explicit methods like questionnaires because the instruction gives no (clear) insight in what will be measured (Luteijn, 2011). Further Emmons (1999) used in his research the Daily Mood Report to measure psychological well-being. Within the Daily Mood Report, participants have to rate adjectives which describe moods on a scale running from 0 (I feel it not at all) to 6 (I feel it extremely much). The formulation of goals under this condition is a conscious form of goal setting (Emmons, 1999). As a consequence of formulating goals consciously, implicit and unconscious goals can not be investigated.

Schultheiss and Brunstein (1999) are convinced that motives of a person can be better identified when the participant expresses his goals through fictional stories. An often used approach for fictional stories is Murray's (1943) Thematic Apperception Test (TAT) (see Hermans & Hermans, 1995). Hereby the participant gets a collection of pictures and the instruction to form a logical story from his associations from the pictures. By this method insight into the basic story themes of a person is provided. The basic story theme reflects the individual's unconscious needs. The disadvantage of the TAT is that the participant is limited in his creativity because the pictures are given. The Self-confrontation method by Hermans is also an individual but a more creative method than the TAT to investigate personal motives.

Hermans developed a method which is called self-confrontation. The self-confrontation method facilitates a person to give their personal impressions of the past, present or the future in own terms while speaking about it. The participant gives insight into their actual psychological state which can be analysed by the help of the valuation theory which will be introduced in the next chapter. By this approach is identified what are the individual's motives and what has to be reconstructed in order to establish well-being (Hermans & Hermans, 1995).

In summary motives might be investigated in different ways. Motives are implicit constructs. Consequently methods to investigate motives should be also implicit methods to achieve validity of the research. Emmons used an explicit method which lead to results which are not as valid as results of implicit methods. The TAT meets the requirements of an implicit method. Limitation of the TAT is that basic themes and therefore motives are investigated on a collective level. The Self-confrontation method does not influence the response of the

participant as the explicit methods do and it measures on an individual level. A disadvantage of the self-confrontation is that the whole self-confrontation requires a great amount of time (more than one meeting is necessary). Another disadvantage of the self-confrontation is that it is a reactive method, because people perceive problems and come afterwards in treatment.

For the measurement of motives in an implicit and time-saving way, a combination of the valuation theory by Hermans and the letter from the future method is chosen within this study. The letter from the future method does not ask for the implicit motives, but for the imagination of the future in a positive way. The valuation theory contributes a code system to analyse the individual's motives of the goals within the letters.

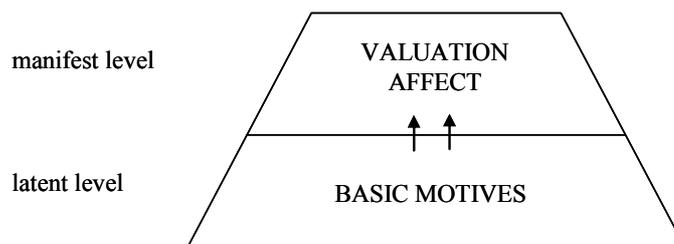
## **2.4 The valuation theory**

As mentioned above, the narrative self is not the objective reality but the individual experience of that reality. According to Hermans the individual experience could be characterized by personal valuations which help to order the experiences into a coherent whole (Hermans, 1989).

The theory combines three aspects:

- 1) Basic psychological motives
- 2) Affective component
- 3) Valuations

For the description of the relation between the concepts, Hermans introduced the latent and manifest level. Within the latent level are the basic motives. Those motives have a latent influencing character on the affective component and the valuation. The affective component and valuation are part of the manifest level. The manifest level is comparable to the explicit motivational system mentioned above. In figure 1 the influence of the latent basic motives on the manifest valuations and affect is visualised.



*Figure 1. Relation between valuation, affect and basic motives (Hermans & Hermans, 1995)*

Hermans distinguishes two basic motives. On the one hand it is the striving for self-enhancement which is in Hermans's terminology the S-motive and on the other hand the O-motive which is the need for being among others. Hermans uses terms like self-esteem, strength, self-confidence and pride as an indicator for the experience of self-enhancement. The second basic motive, the O motive, is represented by terms which belong to the "experience of contact and union with the other" (Hermans & Hermans 1995, p. 39). He interprets terms like caring, love, tenderness and intimacy as indicators for the O-motive.

"When a person values something, he or she always feels something about it and these feelings basic motives are reflected. For example, when valuation (e.g. "I won that game by hard training") represents a gratification of the S-motive, the person experiences a feeling of strength and pride in connection with the valuation. In a similar way, a valuation (e.g., "I enjoy my son's playing the piano") can function as a gratification of the O-motive. Feelings of tenderness and intimacy experienced in connection with the valuation are indicators of this motive" (Hermans & Hermans, 1995, p. 16-17)

The affect terms are significant indicators for the basic motives. Affect in this context means that valuations are associated with a kind of emotional arousal. This affect terms can be intersected into four groups:

- (1) affect referring to self-enhancement (S)
- (2) affect referring to contact and union with others (O)
- (3) affect referring to positive (pleasant) feelings (P)
- (4) affect referring to negative experiences (N) / feelings

According to Hermans & Hermans (1995), the valuations could be categorised in six types; the different types will be explained in detail in the following paragraphs.

A valuation which refers to a great amount of autonomy and productive coping with the world will be marked as a +S valuation. The + represents the positive affect. People who formulate a valuation of that type have one thing in common; they have the conception to have enough power to handle the particular situation in an autonomous way.

The second type of valuation is also associated with S but with negative affect. A high degree of the S combined with a high degree of N form the –S experience. This category summarizes valuations which reflect the person's need for self-maintenance, self-defence or self-expansion in situations where insurmountable obstacles block the self-enhancement. Valuations of this type often contain frustrations or expressions of hate and anger.

Valuations which have more affect referring to the O-motive than to the S-motive and contain more positive than negative affect are represented by +O. The +O labels a valuation that contains expressions of positive feelings which arise from the fulfilment of the O motive. This fulfilment is attended by a decreasing fulfilment of the S-motive. The decreased self-enhancement could be valued positive because it facilitates the contact and union with something else.

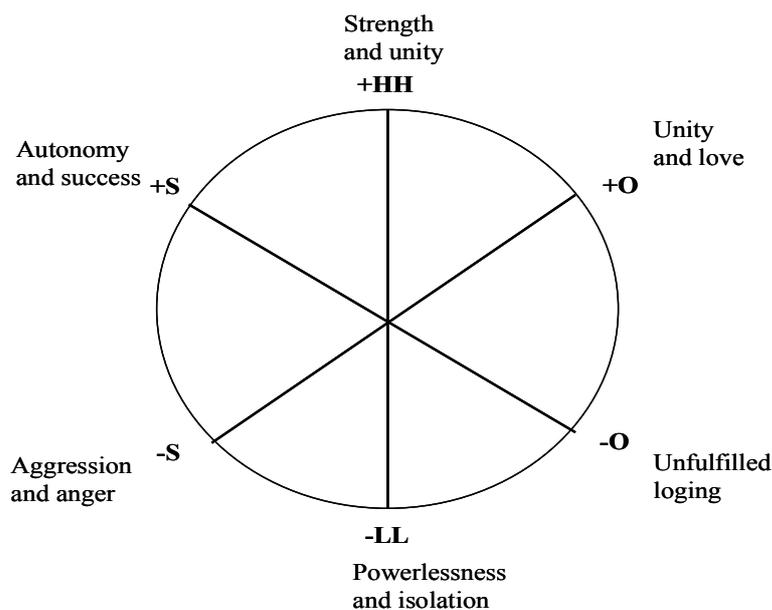
The fourth type of valuation is also characterised by higher share of O-motive than of self-enhancement but with a negative affect. Hermans & Hermans (1995) used the “fugit amor” metaphor to explain this type of valuation. A typical occurrence of fugit amor experience is the broken-off love affair. The fugit amor theme is connected with feelings of loss of a loved person. Following Hermans, the fugit amor valuation could be divided into two components. These are the amor component on the one hand and the fugit component on the other hand. The first is the amor component which refers to a loving orientation to somebody or something. The second component represents the fugit part which is responsible for the negative affect. It is the insuperable obstacle which makes the fulfilment of the O motive impossible.

The next form of valuation is known as the –LL type. This type suggests a low level of self-enhancement affect in combination with a low level of the contact and union affect.

Expressions of anxiety are often related to this category. This anxiety arises from feelings of powerlessness and isolation. “A characteristic feature of intense anxiety is the experience of

being victimised; there is a reduced feeling of strength to master the situation, and there is no feeling that the experience is being shared with another” (Hermans & Hermans, 1995; p. 92).

The last category of valuation is the +HH type. It is typical for this form of valuation that both affects (S and O) are on a high level, this is the basis for high levels of well-being (Hermans & Hermans, 1995). This category often contains valuations that represent positive interaction with meaningful persons.



*Figure 2. Types of Valuations according to Herman & Hermans (1995)*

In Figure 2 the different valuations are summarized as circle. This circle represents the space where a person’s valuation system can be placed. For example a person with more positive valuations will be listed in the upper half of the circle. Additionally a person having access of all three aspects of mental health can be placed on different parts of the circle as the circumstances and consequently the valuation system change. Further a person can predict where he or she will be placed while imagine a particular situation, that is the integration aspect.

In the theory of Hermans, mental health is named psychological health. Psychological health is described as something that depends on a valuation system which enables a person to choose from the collection of valuations. Hermans argues that the ability to use the whole range of valuations, which is associated with a higher degree of psychological health, has three requirements,

- (1) differentiation,
- (2) integration and
- (3) flexibility.

Differentiation describes the person's ability to distinguish between different valuations and their meaning. By the knowledge of the different valuations, a person is enabled to value different situations with different valuations. Hermans calls this multifacedness and presumes that the person has access to the whole variation of valuations.

The second requirement for mental health is the aspect of integration. Integration in this context applies to the circumstance that valuations are part of an organized whole. Integration is a pre-condition for a well-structured story-line in which new experiences can be integrated. A story-line with integration is given when it becomes clear which aspects are of primary and which are of secondary importance to the person. If the story of a person has integration, the person is able to anticipate the valuation and reaction towards a particular situation and consequently to the set importance.

The last aspect is the person's flexibility. A person is flexible when he or she is able to assess different situations with different valuations. If one type of valuation is appearing repeatedly in different situations which normally would demand different valuations, it is called an inflexible system. This inflexible system is dysfunctional. A person who's valuations which frequently reflect Herman's O-motive does probably have problems with situations which require to formulate the own needs and own view (S-motive) A person is flexible when he or she is able to assess different situations with different valuations (Hermans & Hermans, 1995).

## **2.5 Research questions**

The aim within this research paper is to find a way to investigate motives of a person on the latent level in an implicit way and on an individual level which is not as time intensive and more prospective as the self-confrontation method. The literature study was based on the available scientific literature of the University of Twente and from Google Scholar. The existing studies show that there is evidence for the relationship between motives and mental health but it is investigated in an explicit way which seems not to be an ideal analysis method for this kind of analysis.

The letters from the future method was chosen within this study. The goal setting and motivational basis of an individual are asked unconsciously. Therefore the method allows to study of implicit motives. Writing as a creative process is the source of information about the subject's goals on an individual level. Hereby the subjective goals become articulated in the process of writing. The participant is invited to express himself by formulating his thoughts and wishes in the letter. According to Sools and Mooren (2012) there are some arguments which underpin the usage of the approach of the letters from the future to investigate the implicit motives and goals. The letters measure the implicit, unconscious goal setting and contain personal information in the context with values (Sools & Mooren, 2012).

Hermans concluded that a valuation system with different valuations is a prerequisite for higher degrees of mental health, although the different types of valuations need not always be part of the explicit valuation system. Different situation require different valuation systems. Perhaps the letters from the future contain different situations therefore the diversity is high. According to Hermans the diversity should correlate in a positive way with the positive mental health in a positive way (Hermans & Hermans, 1995). Therefore the diversity of the valuation system is seen as a possible predictor for mental health.

With regard on the introduced theories the following research questions are formulated.

- 1. Which motives of the valuation theory can be identified in the letters from the future?*
- 2. How diverse are the motives in the letters from the future?*
- 3. Do letters from the future with a more diverse valuation system score higher on positive mental health than letters with a more homogenous valuation system?*

## 3. Method

### 3.1 Participants and recruitment

The participants for this study were recruited via convenience sampling and snowball sampling. It was also tried to recruit participants via social media as Twitter. A reference to the website of the research project was posted on these social media to call participants attention towards the study. Further, information was sent via the news letter from the University of Twente in which information about the study was given and possible participants were asked for their attendance. The letter from the University included an internet link to the online platform in which the person was able to participate in the study. All information to participate in this study was summarised in an information text and was available for the subjects on the first page of the internet survey (see attachment).

The undergraduate students who attended the subject “clinical psychology” were incentivized by giving them 0,5 bonus credit in case they brought two further participants for the study.

Some requirements have to be fulfilled by the participants; they have to be older than 16 years, they must be able to write and read and they need access to the internet.

The sample consisted of 447 participants from which 65,1% (N=291) were women and 34% (N=152) men. The clusters for the age of the participants in the study indicated that the biggest group of participants belongs to the cluster with an age of 16 to 25 with 58,8% (N=263), the second cluster run from 26 up to 55 years of age with 32,2% (N=144). The last cluster enfolded the age from 56 up to 75 and is represented by 7,8% (N=35).

It is assumed that this sample consisted primarily out of students which were incentivised to participate in the study. With focus on the education level of the participants, it seemed that 83,9% (N= 375) of the participants represented the group with a VMBO, MBO, HAVO, VWO and HBO graduation. In the group of university or post academic degree are 4,2% (N=19) of the participants and the smallest group with 3,1% (N=14) is the group of participants with low or no education. 67,1% of the participants were from the Netherlands (N=300), 29,7% from Germany (N=133) and 3,1% from other countries (N=14).

### 3.2 Design and procedure

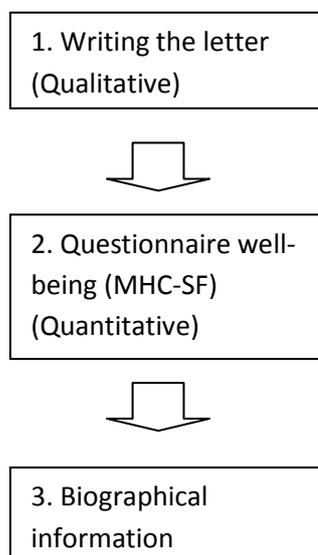
The research design is named a concurrent mixed-method design. A mixed method approach is one in which the researcher collects, analyses, and integrates both, quantitative and qualitative data, either in a single study or in multiple studies in a sustained program of inquiry (Creswell, 2003). In this study quantitative and qualitative data is collected at the same time. It is also a cross-sectional design because the measurement takes place at one moment.

In the first step, qualitative data about the positive future imagination of a person is gathered by writing the future letter.

The quantitative data is gathered from the MHC-SF. After the participants have finished their letters from the future, they are asked to fill in the MHC-SF questionnaire which is an instrument to measure the mental health.

Within the last part of the survey, the subjects were asked to complete some questions about the background information. Those questions are about, age, gender, lever of education and country of origin.

The following graphic summarises the design of the study.



*Figure 3. The relevant steps of the letters from the future project (Sools & Mooren, 2012)*

### 3.3 Instruments

For this study, a structured internet survey developed by researchers of the University of Twente is used. This survey is available via the link [www.levensverhalenlab.nl](http://www.levensverhalenlab.nl) at which the participants take part in the research project. Via that website they are also provided with the necessary instructions for their participation as well as for the study itself.

Benefits of an internet survey are for example that many people can take part in the study at one time. The costs of internet surveys are not high as in paper-pencil studies and the participants are more motivated to participate when they are able to perform in that study from home (Hirth & Rauthmann, 2011).

The first part of the survey consists of writing the letter from the future. Participants get the instruction to write a letter which is written from the future to someone in the present. Within the construction the participants are invited to write the letter from the perspective of a positive future outcome. The time horizon which is actually the point of time from which the letter is written might be chosen by the participant. Also the addressee, who could be either the participant itself or another recipient in the present, is up to participant's choice. The letter has some minimal requirements. The participant has to give information regarding the timing and the location from his writing perspective in the future. The letter may not exceed a length of 400 words and has to be personally addressed. Further, it has to end with a personal farewell. After finishing the letter, a possibility to print a personal version of the letter is given.

Fulfilling the Mental Health Continuum-short form (MHC-SF) is the second step in the survey. This questionnaire was developed by Keyes (2002) to explicitly measure the positive spectrum of mental health. It consists of fourteen items whereas three items represent the person's emotional well-being, six items measure the psychological well-being and five items give the value of the social well-being (Keyes, 2007). While passing the questionnaire the respondents are asked to give the quantity of feelings which are associated with the three kinds of well-being (emotional, psychological and social) in the last month. Therefore a Likert-scale which is an instrument to measure the personal attitude towards the asked items was used. The quantity of feelings were rated on a scale from 1 representing that the feeling never appeared up to 6 representing that the feeling appeared daily.

The scores of all 14 items of the MHC-SF are summed up and the numerical mean is computed by dividing the total score through the total number of items. The assumption is that the higher the score on the MHC-SF, the higher the positive mental health. As mentioned above, the MHC-SF distinguishes between emotional (3 items), psychological (6 items) and social well-being (5 items). The scores of the subscales are computed in the same way as for the scores for positive mental health were determined. The only difference is that only appropriate items were selected for the subscores.

The MHC-SF provides reliable results and seems to be a valid instrument to measure positive mental health within the Netherlands (Lamers et al., 2011).

The components of mental health (emotional, psychological and social well-being) have a good convergent validity. The reliability of the subscales was indicated on basis of Cronbachs alpha which is commonly used as an estimate of reliability within tests for a sample of examinees. For the sample representing the Netherlands an alpha of .74 for social well-being and .83 for emotional as well as for psychological well-being was found. The result indicates a reliability of .89 for the total score of positive mental health (Cronbach's alpha) in the representative sample of the population of the Netherlands (Lamers, 2011). Within this study a Cronbachs alpha of .73 for social well-being, .79 for psychological well-being and a .80 for emotional well-being was found for the sample. The alpha for the total score of the MHC-SF is .87. Therefore the reliability coefficients are also high within this sample.

### **3.4 Analysis**

The collected data is analysed in three steps. The steps are as following:

- 1) Analysis of the content of the letters from the future (research question 1)
- 2) Analysis of the diversity of the letters from the future (research question 2)
- 3) Analysis of the relation between the motives in the letters from the future and positive mental health. (research question 3)

To inquire research question 1, the letters from the future get imported into Atlas.ti, a data-analyse software for qualitative data analysis. In Atlas.ti the codes derived from valuation theory by Hermans get connected to the letters from the future. Each sentence of the letters are treated as one unit of analysis and gets one code. But exceptions are made for those sentences which have a general character, e.g. "the weather will be fine". Those sentences get no coding. For calculating the frequencies of the different valuations, the Coding manager in

Atlas.ti is used. The detailed description of the meaning of the different codes was given in the section of the valuation theory. Examples of the codes in the letters from the future are shown in the following.

*Table 1. Examples of the codes*

Valuation	Definition	Example
+S	valuation which refers to positive self-enhancement	<p>“Ik ben nu bijna 80 jaar en gelukkig nog steeds gezond van geest, lijf en leden”</p> <p>„Je hebt ervoor gezorgd dat er in de regio van Twente mensen flink hebben gereduceerd in het roken en zo een betere kwaliteit van leven hebben“</p>
-S	valuation in which the affect of self-enhancement is negative	“Er was een innerlijk onrust die me begeleidde“
+O	valuation representing a positive contact with others	<p>„De liefde die ik ervaar, en jij dus ook zou ervaren, van de mensen om mij heen”</p> <p>“Het opstarten was lastig maar door de Godsleiding hebben we het gehaald“</p>
-O	valuation representing a negative contact with others	<p>“nu is het pas een jaar geleden sinds de ruzie met Pim, er zijn nog enkele dingen die ik jouw wil vertellen“</p> <p>„Ik was nooit blij met de manier waarop we ruzie hadden”</p>
+HH	valuation with a positive combination of high self-enhancement and positive contact with others	<p>“Geloof in je eigen kunnen en blijf genieten van het leven en van alle lieve mensen om je heen”</p> <p>“Jou baan, jou familie en jou verdere levensomstandigheden vervullen je helemaal”</p>
-LL	valuation with a negative combination of low self-enhancement and negative contact with others	“Je hebt er veel problemen gekregen met jouw leven, jouw studie en ook met jouw ouders“

The second question is about the diversity of the valuation systems in the letters from the future. For the analysis of this question, the information of the number of valuations per letter got imported to SPSS, a software programme to perform statistical analysis. Afterwards the frequency of the different valuation systems is investigated by doing a frequency analysis via SPSS. For the analysis of the diversity, clusters of low, medium and high diverse are build. This clustering is done by two clustering criteria

- 1) theory based criteria: A valuation system with only one valuation is considered low diverse because the range of diversity runs from one to six whereas six represents the highest diversity. A medium diverse valuation system requires two valuations. And a valuation system with at least three valuations is considered high diverse.
- 2) empirical statistical criteria: The groups of valuation systems differ in their size and therefore a comparison with regard to the last research question will be unrepresentative because the mean of a group of 75 persons can not be compared with one person. The group of low diversity is represented by a valuation system with only one valuation. For the analysis of the frequency of the clusters, the same analysis as in the case of the separated valuation systems is done.

For the investigation of the last research question, different statistical analyses are performed. For an overview of the MHC-SF scores of the different groups of diversity, the numerical means of the scores are presented in tables. The means are summarised with regard to groups of the valuation systems with one up to six valuations and in groups of the clustering. The analysis of means is done by SPSS with selected cases. Further the Analysis of variance (ANOVA) is chosen to determining the existence of differences between several population means.

## 4. Results

In this chapter, the results of the analysis with regard to the research question will be presented.

### *1. Which motives of the valuation theory can be identified in the letters from the future?*

The following table shows which motives can be found in the letters from the future and how they are distributed.

*Table 2. Frequencies of the different valuations*

Valuations	+S	-S	+O	-O	+HH	-LL	total
Percentage	42,3	6,8	38,3	3,4	8,8	0,5	100,0
(N)	(1201)	(193)	(1087)	(96)	(251)	(14)	(2842)

The most notable result is that all six types of valuations are available in this sample. The most applied valuation is the +S valuation with a percentage of 42,3%. The second group is the +O valuation with a percentage of 38,3%. It is remarkable that the third highest group is the +HH with only 8,8%. There is a very small portion of negative valuations. The -S valuation is the most frequent valuation of the negative ones which has a share of 6,8%, whereas 3,4% of valuations are -O valuations and 0,5% are -LL valuations.

In summary, the positive valuations (89,3%) are more present than the negative valuations (10,7%).

2. *How diverse are the motives in the letters from the future?*

*Table 3. Distribution of diversity in the letters from the future*

Diversity	1	2	3	4	5	6	total
Percentages	16,8	43,4	27,7	10,5	1,3	0,2	100,0
(N)	(75)	(194)	(124)	(47)	(6)	(1)	(447)

Table 3 shows the distribution of diversity in the letters from the future. Only 0,2% from the 447 letters contain a valuation system which includes all 6 types of valuation. The valuation systems with two (43, 4%) or three (27,8%) valuations are most occurring in the sample.

Table 4 represents the distribution of the valuation systems according to the clustering as mentioned in the section of analysis. With regard to the upper table the medium diversity has got the biggest proportion (43,3%). The lowest one is the low diversity (16,8%). Clustering the valuation systems with three or more valuation systems produce the proportion of 39,8 % in the group of high diversity.

*Table 4. Distribution of diversity in the letters from the future according to clustering*

Diversity	low	medium	high	total
(number of Valuations)	(1)	(2)	(3 />3)	
Percentages	16,8	43,4	39,8	100,0
(N)	(75)	(194)	(178)	(447)

3. Do people with a more diverse valuation system (including negative valuations) score higher on positive mental health than people with a more homogenous valuation system?

To answer this question the frequencies of valuations are summarized with regard of the score on the MHC-SF.

*Table 5. Means and standard deviance of positive mental health for the different diverse groups and results of ANOVA of diversity and constructs of mental health*

Diversity (N)	Score on the MHC-SF			
	Positive mental health	Social well-being	Emotional well-being	Psychological well-being
1 (75)	4,4 (0,8)	4,0 (0,9)	4,7 (0,9)	4,6 (0,8)
2 (194)	4,2 (0,7)	3,7 (0,9)	4,5 (0,9)	4,5 (0,8)
3 (124)	4,2 (0,8)	3,7 (1,0)	4,5 (1,0)	4,5 (0,9)
4 (47)	4,2 (0,7)	3,7 (0,8)	4,4 (1,0)	4,5 (0,8)
5 (6)	4,0 (0,6)	3,3 (0,9)	4,5 (0,6)	4,3 (0,6)
6 (1)	4,7	4,0	5,0	5,2
ANOVA				
F (alpha)	1,1 (0,3)	1,4 (0,2)	0,9 (0,7)	0,7 (0,9)

Table 5 summarises the means on the MHC-SF of the different diverse valuation systems in the letters from the future. The means of the valuation systems with two, three and four valuations are nearly the same in the total score of positive mental health as well as in the subscales. It is notable that the valuation system containing 6 types of valuation score higher on all health categories with exception of the social well-being. But the valuation system with six valuations is represented in only one case.

It is remarkable that all differences between the scores on the MHC-SF of the different diverse valuation systems will disappear in consideration of the standard deviance.

The results of the comparison adumbrate that no significant difference between means of different diverse groups and the score on mental health exist. The statistical test of ANOVA is chosen to evaluate this indication. Table 5 also summarises the relevant values of the

ANOVA. In all cases the diversity of the valuations and mental health do not share a significant proportion of variance. An evidence for no significant difference of the means is the F value. Using an alpha of 0.05 the table for critical values for F-distribution leaves the F (.05; 24, 422) = 1,52 (Moore & McCabe, 2007). F-values higher than the critical value are indicators for a statistically significant difference between the means. Additionally the p-value is always > 0,05. Consequently there is no statistically significant difference between the means of different diverse groups on the constructs of positive mental health found within this sample.

*Table 6. Means and standard deviation of the clustered groups on the MHC-SF, and the subscale scores and results of ANOVA of clustered diversity and constructs of mental health*

Diversity (N)	Score on the MHC-SF			
	Positive mental health	Social well-being	Emotional well-being	Psychological well-being
low (75)	4,4 (0,8)	4,0 (0,9)	4,7 (0,9)	4,6 (0,8)
medium (194)	4,2 (0,7)	3,7 (0,9)	4,5 (0,9)	4,5 (0,8)
high (178)	4,2 (0,8)	3,7 (1,4)	4,5 (1,0)	4,5 (0,9)
ANOVA				
F (alpha)	1,2 (0,1)	1,4 (0,2)	1,0 (0,4)	0,7 (0,8)

As mentioned above the diversity is clustered in groups of low, medium and high diversity. Table 6 summarises the means and standard deviation of the three groups as well as the results of the ANOVA analysis of the means on the MHC-SF of the different diverse valuation systems.

In a nutshell no significant relation between the diversity of the valuation systems within the letters from the future and positive mental health measured by the MHC-SF exist within this sample. There is also an ANOVA test used to analyze the difference between the means of mental health of different diverse valuation systems.

As in the case of all groups of diversity the ANOVA analysis of the clustered groups does not leave a statistically significant difference among the population means. Since the statistic is lower than the critical value, the null hypothesis of equal population means is not rejected.

## 5. Discussion and outlook

Within this chapter the results will be interpreted. It will be discussed how the results match the assumptions of the valuation theory and if the letter from the future is an appropriate method to analyse implicit motives. Further general conclusion will derive and advise for follow-up studies will be given.

### *1. Which motives of the valuation theory can be identified in the letters from the future?*

For the investigation of this question, the code system by Hermans was used. The code system consists out of 6 different types of valuations. A detailed description is given in the previous section for the analysis method.

As described in the results, the most applied valuation is the +S valuation and the second most applied one is the +O valuation. These sorts are associated with a high degree of power and autonomy as well as intimacy (Hermans & Hermans, 1995). This finding is congruent with the content of the letters. While reading the letters, it becomes obvious that achievement goals, family and friendship are the most available ones. Letters are concerned with finishing the study (+S), a good start in work-life (+S), a successful career (+S) or with founding a family (+O) sometimes in combination with buying or building a house (+O) as well as marriage (O+). In summary the most letters deal with a happy life. In the beginning of the survey the participant gets the instruction to imagine a positive moment in the future. It seems that while doing futuring via writing a letter from the future, the future is associated with positive feeling for most of the participants. They are focused on achievement goals and on topics like family or friendship. That is a sign that the goal of the method is achieved and the instruction fulfil the requirements to imagine a positive future.

The letters from the future ask for the implicit goal setting in an individual context. According to Sools and Mooren the letters “provide a way to creatively and concretely explore the consequences of future possibilities, and gain a lived understanding of which values we hold dear” (Sools & Mooren, 2012, p. 20).

Research of narrative futuring is interested in the role of the stories in the future. If the letter provides influence on the real future, it should be a positive one because most valuations are positive. For evidence of this assumption further research is necessary.

## *2. How diverse are the motives in the letters from the future?*

According to Hermans the flexibility of a valuation system is a predictor of psychological health. Flexibility implies that one person has access to all valuations of the theory in all possible situations but it does not mean that the person makes use of all the accessible valuations at the same time (Hermans & Hermans, 1995).

As shown in the chapter for the results, the most frequent valuation system is the one with two valuations. Only one letter contains all six types of valuation. Consequently the majority of the sample is able to apply a selective valuation system in a particular situation in which the future should be imagined. This result shows that the assumption for flexibility according to Hermans Valuation theory is fulfilled within this sample.

But within this study is shown that there is less diversity of the valuation systems for the given task to write the letter from the future. As mentioned above most letters contain two valuations. According to Hermans this is an indicator of low diversity. But as the instruction for the letter from the future asks the participant to imagine a positive future, the participant is influenced in his choice of valuations. The valuation system does contain out of three positive and out of three negative valuations. Therefore the identification of two positive valuations within the letter of the future gives a sign for high positive diversity.

For the ability to measure diversity it is required to analyse the motives of an individual in different situations (Hermans & Hermans, 1995). By changing the instructions for writing the letter from the future, the scope of applied valuation systems as well as the diversity might also change. E.g. in case the task is to write the letter while thinking of the saddest moment in life, other motives defining the valuation system could be identified. The collection of the motives forms the valuation system. Consequently, the method of writing the letter from the future is not an appropriate instrument to determine the person's whole valuation system. But by the help of the letters from the future, the situational valuation system is well identified.

In this research paper the letters from the future are analysed sentence by sentence whereby a valuation is given to the meaning of each sentence. In contrast to this analysis, Hermans used a more detailed approach in his self-confrontation method to analyse what is said by the participant. In his research each sentence got different quantitative weights. One for the S- and one for the O-motive as well as one for the positive and one for negative affect (Hermans & Hermans, 1995). An advantage of giving multiple valuations to one sentence is that a more diverse image of the valuation system is provided, e.g. if one sentence contains a +S valuation

and another +O valuation the sum out of those is a +HH valuation. As mentioned in the upper section a combination of three positive valuations is the highest positive diversity. Consequently a lot of information towards the analysis of Hermans might get lost by analysing sentence by sentence and therefore a sufficient meaningful conclusion about the diversity of the valuation system can not be made.

*3. Do letters from the future with a more diverse valuation system score higher on positive mental health than letters with a more homogenous valuation system?*

Both extremes, a valuation system with only one valuation as well as a system containing six valuations seems to score similar on constructs of positive mental health, whereas the systems with two, three and four valuations score a little lower. This finding is not representative, because the group with a valuation system of six valuation types is represented by only one letter. For a more robust result, further research in which samples are matched has to be performed. This matching should allow a comparison between valuation systems containing one valuation and valuation systems containing all six valuations.

Second, it could be concluded that there is no difference in positive mental health among groups of low, medium or high diversity in the valuation system. By the clustering the groups of valuation systems became better comparable, because the size of groups became comparable. With regard to the result no information got lost, because the numerical means for positive mental health of the different diverse valuation systems were pretty close to each other.

The comparison of the numerical means showed that all participants score significantly higher on the MHC-SF than the norm in the Netherlands (Lamers et al., 2011). They score also significant above the standard deviation (Lamers et al., 2011). On the one hand a reason for this result is the design. Before the participants fill in the MHC-SF, they wrote the letter from the future (with positive instruction). The overall high score on the MHC-SF can be influenced by the positive writing process. Participants are in a positive state and therefore the results on the MHC-SF are also influenced. On the other hand it is possible that individuals scoring above the norm of the MHC-SF write a particular type of the letters from the future due to their individual circumstances. Therefore the score on the MHC-SF is independent of the design.

As mentioned in the section for the methods, previous research focused on implicit motives and goals did never use implicit methods which are comparable to the letter from the future method. Therefore the results of this research are pilot results. Results from previous explicit research indicate that goals of intimacy and reproductiveness correlate in a positive way with psychological well-being (Emmons, 1999). Within this implicit research it is found that motives of self-enhancement and the need for contact with others is made accessible by letters from the future. Therefore it could be concluded that the method seems to be appropriate to measure implicit motives.

Nevertheless the research method could be improved in some ways and therefore the following advice for follow up studies could be useful.

1. The method of the letter from the future should be adjusted. For investigation of the valuation system of a person another indirect method should be added to the letter from the future method. E.g. the participants could be instructed to remember the most beautiful moment in life, the saddest moment in life and a turning point in life (Bohlmeijer, 2007). By this adjustment a higher diversity of the valuation system could be achieved and the relation between the diversity of motives within the letters from the future and positive mental health will be investigable.
2. Another adjustment refers to the valuation system. The system by Hermans contains six types of valuation concerning the positive valuation (+S, +O, +HH) as well as the negative valuations (-S, -O, -LL). For the study of the relationships between motives and mental health it should be better to analyse positive and negative valuations separately. By the separate analyses of positive and negative valuations, the relationship either between a high positive diverse valuation system and well-being as well as the relationship between high negative diverse valuation system and well-being could be investigated.
3. Further a problem of implicit methods is the interpretative scoring (Luteijn et al., 2011). There are no clear instructions how to score the letters from the future by the help of the valuation system. To minimise the subjectivity and to raise the reliability, investigators should be trained in applying the valuation system. For achieving inter-rater reliability, more than one researcher has to analyse the data under the same conditions. Therefore the influence of the subjectivity of the researcher can be identified.

4. For achieving test-retest reliability it is necessary to perform the same investigation of writing the letter from the future and fill in the MHC-SF on different settings.

In summary this study shows that diversity as defined within this research seems not to be an appropriate construct to predict positive mental-health. But with some adjustments as described above, valid conclusions for the relationship might be derived. The most important adjustment is the change in the definition of diversity. Instead of a common analysis of positive and negative valuations they should be analysed separately. This study also shows that the letter from the future is an appropriate tool to get insight into the implicit motives of the individual. The letter from the future can serve as a screening instrument within the psychological field, because the content of the letters can be an indicator for the mental state of an individual. The letter from the future might be a preventive instrument which examines psychological problems before they become serious. Within the postmodern time which is characterised by a rapid change in life and stressors for the individual, this screening can prevent serious mental illness. Further research must be performed to analyse how results from different samples for mental healthy people and samples for people with mental illness differ. A possible outcome might be that people who are predisposed to develop depressions, anxiety disorders or other mental illness mainly use negative valuations while writing the letter from the future regardless of the positive instruction. The outcome of the screening might deliver recommendations for additive psychological tests or interventions.

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## 7. Attachement

### 7.1 Information text

Geachte heer/mevrouw,

Ga mee naar de toekomst en doe mee met een onderzoek naar toekomstverbeelding van de Universiteit Twente! Stel u voor dat u in de tijd kon reizen en een brief na kon laten die door uzelf of andere mensen van nu gelezen kan worden. In de brief geeft u een positieve boodschap en brengt u hoop vanuit een betere toekomst aan uzelf of aan anderen in de huidige tijd. Ook als u geen 'schrijver' bent, kunt u meedoen, er zijn geen speciale schrijftalenten vereist. U kunt volledig anoniem blijven of ervoor kiezen dat uw brief met uw naam op de website komt. Klik op [invoegen URL] om deel te nemen. Wij danken u vriendelijk voor de medewerking!

Met vriendelijke groet,

Marieke Latka  
Maria Leussink  
Anneke Sools  
Sipke Stuiver  
Niek Zuidhof

**Wed, Dec 07, 2011 -- *bonusopdracht***

Betreft bonusopdracht:

let op:

- zorg ervoor de opdracht door jou en degene die je gevraagd hebt serieus wordt ingevuld
- zorg ervoor dat het deel via de website tot het einde doorlopen wordt (er wordt dan gevraagd of je het wilt printen). Ook door de mensen die je gevraagd hebt mee te doen. Printen kun je voor de zekerheid doen en laten doen, zodat je bewijs hebt dat je meegedaan hebt. Check even bij de mensen die jij gevraagd hebt, of ze tot het printverzoek doorgedaan zijn. Pas dan wordt het bestand onder jouw studentnummer weggeschreven. (het blijkt nu dat er mensen zijn die delen gedaan hebben van de opdracht, maar nog niet tot het einde zijn doorgedaan. Het is prima om het in delen te doen, maar zorg wel dat het uiteindelijk tot het einde doorlopen is (tot aan het scherm met de vraag of je wilt printen). Dan weet je zeker dat de opdracht onder jouw studentnummer is opgeslagen.
- zorg ervoor dat je via blackboard het reflectieverslag inlevert.