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Determinants behind the happiness of residents in the Helsinki metropolitan area

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This study examines the determinants behind the perceived happiness of residents in the five cities of the Helsinki metropolitan area. A set of variables based on Maslow's hierarchy was chosen in order to explain the subjective perception of happiness. Maslow's hierarchy as a theoretical framework worked relatively well. A great deal of the results were in line with expectations and there are structures that clearly distinguish the cities from each other. Some of these structures seem to be connected to stereotypes concerning the examined cities and actually affect happiness in a way that is contrary to these stereotypes. It can even be said that something that is taken for granted, does not actually affect happiness; but despite this, people consider these issues very important.

Keywords: Helsinki metropolitan area, happiness, Maslow

Introduction

The Helsinki metropolitan area, situated on the Southern cost of Finland, is the major urban concentration centre in the country. One fifth of the Finnish population live within the borders of four administrative cities. The city of Helsinki is the capital of Finland and the centre of the metropolitan area.

In 2008, The Centre of Excellence on Social Welfare in the Helsinki Metropolitan Area conducted a survey that was aimed at collecting sufficient data in order to examine subjective welfare in the area (SOCCA, 2008; also Turunen & Zetterman, 2009). In this study, this data set is utilized to examine socio-demographic and subjective dimensions behind perceived happiness. The subject is relevant and topical given the development that has occurred in the metropolitan area over the past years. Sub-areas have started to segregate and the importance of administrative borders in this process is anything but clear. Even though the four administrative cities – Helsinki, Vantaa, Espoo and Kauniainen – form a somewhat uniform economic area, they nonetheless differ from each other. This study maintains that borders also exist when examining the subjective issue such as happiness.

Subjective variables are based on Maslow's (1954) hierarchy of needs. From several alternatives it was finally considered offering the best theoretical framework. Subjective explanants were based on respondents' perceptions of different issues related to personal welfare. Instead of trying to find the best model, the aim of this study was to examine how, if at all, cities differ from each other.

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Firstly, the theoretical framework is presented. After this, the research questions are discussed together with some descriptive information about the Helsinki metropolitan area. The method and results are presented next and finally, the results are concluded with some suggestions for future studies.

Theoretical background and framework

It has been said that happiness cannot be measured (Scitovsky, 1992, 134) because a sense of happiness has to do with dynamic elements such as an individual's situation at any given time, as well as an individual's state of mind. These two elements and the relationship between them differ according to each case. However, considering the situation at the time, being happy means being satisfied with having a good measure of what one regards as important in life in general (Griffin, 2007). Thus the mechanisms behind happiness are most likely to be found by concentrating on social capital, social relationships and the like (e.g. Beath & FitzRoy, 2007).

One commonly used way of estimating happiness is to examine subjective perceptions. By asking how people rate their happiness, results should indicate how they feel. Although it cannot be said that someone who has chosen '8' in the happiness-scale of 0–10 is more happy than someone with '7' on the same scale, it can be said that in general, happier people tend to choose higher scores than unhappy people (see Headey et al., 2004). It is important to bear in mind that people's situations vary significantly. However, it can be assumed that by using large data sets these "errors" will not affect the overall results.

What kind of determinants contribute to perceived happiness is a more complicated question, but one well worth exploring (see Norrish & Vella-Brodrick, 2008). Having Griffin's (2007) "definition" as a background, the question in hand is now what people actually regard as important in

life. This question has interested academics since ancient times and will probably continue to do so. Important things in life naturally depend on the person and social environment and therefore finding common guidelines that could be followed and tested empirically is difficult. This is also the case with Maslow's (1954) seminal hierarchy. The original linear pyramid is obviously culture-related (Yang, 2003), and it can be considered a model without much theoretical importance in the contemporary world (Kenrick et al., 2010). However, without bearing any empirical relevance, the model would not have been transformed into numerous updates (ibid).

In this study, the aim of using Maslow's hierarchy was not to test it empirically, nor was the aim to evaluate his model. Similarly, empirically examining the assumed linearity of the motives was beyond the model's scope. Instead, the model was adopted here in order to find the variables that best represent the multiple dimensions and structures of happiness. Maslow's hierarchy of needs offered a theoretical framework that was applicable in the context of the data set and was thus also reliable from the viewpoint of the research questions.

Even though Maslow's hierarchy, particularly its ladder-like structure, can and has been widely criticized, it can be assumed that in rich societies, such as in Finland, subjective welfare consists of determinants of all the ladders of Maslow's model. In addition to physiological needs and needs connected to love and safety, senses of esteem and challenges as well as self-achievement must also be, at least to some extent, met (cf. Sirgy & Wu, 2009). In this study, it is assumed that all the ladders are important regardless of assumed linearity.

The controversial effect of one's economical status on happiness is well-known and verified by numerous studies. Since Veblen's (2002[1899]) study on the status-seeking "Leisure Class" and Easterlin's (1974) seminal paper on income and happiness, just to mention a couple, numerous studies have shown that national income or measured personal income are not as clearly related to subjective well-being as they are *ad hoc* (cf. Becchetti & Rossetti, 2009). Rising in rank on the income scale might improve the "chances" of being happy, probably due to increasing alternatives comparative to peers, but a rise in income, when incomes in general are rising, does not affect happiness (Scitovsky, 1992, 135).

By adopting the Bourdiean (1984) approach, income has its effects in raising one's *aspiration levels*. More wealthy people simply compare themselves to people that are more wealthy and so on, and therefore people with stronger financial aspirations may actually report lower life satisfaction than those with weaker aspirations (see Nickerson et al., 2007). The circle is never-ending and thus for those reporting to be economically above a certain level, the perception of happiness will not necessarily improve (cf. Kahneman et al., 2006). However, financial situations create boundary conditions and therefore have links to, for example, consumption alternatives, and thus to economic dimensions including, one's education and certainly must be taken into account (cf. Kouvo & Räsänen, 2005).

Other socio-demographic determinants are also connected to one's subjective welfare, even though the mechanisms behind the linkages are not as straightforward as in the case of income or education. For example, married people are often reported to be happier than those who are not married (cf. Stutzer & Frey, 2005) and women happier than men (e.g. Stevenson & Wolfers, 2009).

Research questions and background information about the Helsinki metropolitan area

Accepting that socio-demographic determinants affect subjective welfare raises new questions about what else can be found behind perceived happiness that is, more than anything, a very abstract and personal notion. Subjective determinants must therefore be evaluated in order to examine these structures. The aim of this study is to examine the determinants behind perceived happiness by utilizing the recent welfare survey of the Helsinki metropolitan area conducted in 2008 (SOCCA, 2008). In addition to socio-economic background variables, a set of variables based on Maslow's hierarchy is used. These variables are based on subjective perceptions and examine the different dimensions behind happiness. Some of these are more important than others – depending on the person and social environment, and it is assumed here that the location where people live, administrative "city" in this study, might represent one essential social dimension.

The aim of the study is not to find the best possible model to explain perceived happiness. Instead, by using the wide pattern of subjective measures the differences between the four cities belonging to Helsinki metropolitan area are examined. The study aims to answer to question about what kind of determinants affect happiness in the cities of Helsinki metropolitan area. Since cities differ structurally from each other, it is thought that at least some differences will be found.

From a historical point of view, Helsinki, Vantaa, Espoo and Kauniainen – the four cities of the metropolitan area – are different. Alternatively, the Helsinki metropolitan area can be considered one fairly large city. An aerial view reveals one proper centre, a few sub-centres and numerous residential suburbs. The neighbourhoods within the borders of each city differ socio-culturally from each other (Päivänen et al., 2006). Each and every city contains both affluent and deprived areas. On a very general level, however, the Helsinki metropolitan area can be broadly divided into two main areas. Eastern and north-eastern neighbourhoods – situated within the borders of Helsinki and Vantaa – contain the suburbs where the percentage of people with immigrant background has substantially risen during the past ten years or so. In the other areas, particularly in the north-western and western parts of the metropolitan area, the number of immigrants is still relatively low. (Vilkama, 2011.)

In northern and eastern areas, rent and the cost of the apartments are generally lower, and the most deprived areas can be found there. Development leading to segregation, however, does not follow administrative borders. Very afflu-

ent areas can be found in eastern Helsinki and the other way around. (Päivänen et al., 2006) However, the socio-cultural differences between the areas inevitably have connections to perceived happiness.

Despite this somewhat clear structure, all of the administrative cities mentioned above, also have their own distinct characteristics. A few important quantitative measures are presented here in order to explain the differences between the cities. Unless otherwise stated, all the statistical information has been published by the City of Helsinki (City of Helsinki Urban Facts, 2012). The data analyses concerning the SOCCA's survey data (SOCCA, 2008) were conducted by the author.

Helsinki is the capital of Finland and also the centre of the whole region. With its almost 600 000 inhabitants, it consists of over half of the population of the metropolitan area and more than a tenth of the population of Finland. Approximately 20 per cent of the population of Finland lives within the metropolitan area, whilst, the Helsinki region is home to one fourth of the Finnish population.

Economic and cultural activities are largely concentrated in central Helsinki with the exception of a few areas in Espoo and Vantaa. Downtown Helsinki is the only truly urban area in the mentioned cities and thus it can be assumed that availability of services in the cultural sector, as well as numerous spare time activities would be issues that contribute to happiness amongst people who live in Helsinki; and particularly amongst those, who have purposefully chosen to live there. According to the recent welfare survey (SOCCA, 2008), the data behind this paper, 60.8 per cent of respondents from Helsinki stated that an urban lifestyle increases their willingness to live in the area. Respectively, in Espoo the percentage was 44.4 per cent, in Vantaa 42.5 per cent and in Kauniainen 50.4 per cent. Differences were highly significant according to the χ^2-test.

Structurally, Espoo, the second largest city in Finland and home to 245 000 residents, differs fundamentally from Helsinki. It is a city with no clear centre; instead there are a few regional centres and numerous residential suburbs. During the past decade a large amount of apartment houses have been built, but nonetheless, 44 per cent of the residents live in small detached houses or row houses (City of Espoo, 2011). Even so, according to the welfare survey, the people of Espoo are less fond of the urban lifestyle than people of Helsinki (however, almost half of them are), they seem to be fairly content with the closeness of services. When this is estimated by using the scale 4 to 10, the scale commonly used in Finnish schools, respondents from Espoo scored a mean of 8.28 the mean of Helsinki being 8.36, Vantaa 8.08 and Kauniainen 8.53. (SOCCA, 2008.)

From the viewpoint of urban lifestyle, closeness of services might be linked with a nearby coffee house and small corner stores, whilst in suburban towns such as in the regional centres of Espoo, it might mean closeness to shopping centres or malls easily reachable by car. In Espoo, 82.2 per cent of the households have at least one car. This is significantly more than in Helsinki where 62.4 per cent of residents have a car. In Espoo, 26.8 per cent of the households have two or more cars – in Helsinki 12.7 per cent. (SOCCA, 2008.) Even though owning a car hardly has straightforward linkages to happiness, these figures clarify differences between the cities.

Kauniainen is a small town within the borders of Espoo with only 8 600 residents. Even though the city seems like a small garden-like suburb of Espoo, statistically it differs significantly from the other cities of the metropolitan area. The education level of residents is high and people are relatively wealthy; 39.4 per cent of the respondents' households earn more than 5000 euro per month after taxes. By comparison, in surrounding Espoo the mean gross income is less than 3 000 euro per month. Percentages in Espoo, Helsinki and Vantaa are 16.5 per cent, 12.5 per cent and 19.7 per cent, respectively. (City of Helsinki, 2012.) In Kauniainen, 88.7 per cent of households own at least one car, 47.5 per cent two or more (SOCCA, 2008).

The city of Vantaa is another such case. It has one evident advantage: the Helsinki-Vantaa airport and other extensive logistics services. In addition to this, the Ring road III that runs through the city is lined with numerous office premises. About 200 000 people live in Vantaa, primarily in a few local centres and in residential suburbs. In a way, the airport divides the city in two parts, the western part growing northwards from Espoo, while the eastern part melts into eastern suburbs of Helsinki. Vantaa has good connections to Helsinki and cheaper apartments compared to the other cities in the metropolitan area. Thus, Vantaa is a strong competitor among other suburban cities amongst people who want to move to the metropolitan area, but not to more expensive Helsinki, as well as amongst those wanting to move away from the central city. A personal automobile seems to be a necessity in suburban cities such as Espoo; according to the welfare survey, 82.4 per cent of the households have at least one car (SOCCA, 2008).

Unexpectedly or not, there are also differences in how residents in different cities rank their happiness. In the welfare survey (SOCCA, 2008), respondents were asked to estimate their perceived happiness on a scale of 0 to 10. In general, people seem to be quite happy, an overall mean being as high as 8.2. However, respondents from Kauniainen scored a mean of 8,45, which was the highest amongst all respondents. In Espoo the mean was 8.29, in Helsinki 8.13 and in Vantaa 8.23. Now it would be easy to say that more affluent people are happier against the above explained idea of fluctuating aspiration levels that was explained earlier.

Nevertheless, another determinant that can have an effect on happiness is education, which might explain, at least to some extent, the differences between the cities. According to the data sets, there are remarkable differences between education levels between the cities. The level of education was highest in Kauniainen where over half of the respondents over 24 years had a higher university degree and about 60 per cent had a degree of at least lower high education level. In Helsinki the proportions were 31.8 per cent and 42.1 per cent, in Espoo 31.4 per cent and 41.4 per cent and in Vantaa 17.4 per cent and 28.6 per cent, respectively. In official statistics (City of Helsinki Urban Facts, 2012; see also Turunen &

Zetterman, 2009) the figures differ slightly from these observations derived from the data sets. Respondents with higher education are overrepresented in data (ibid). One reason behind this can be that people with lower education have not been as inclined to fill out the questionnaire.

Methods

Data

There is understandably a lack of ideal data to be used in examining happiness and, even more so, when trying to examine dynamic changes in aspiration levels and consequently dynamic changes in perceived happiness. The ideal data set would be selected from a cross-national panel containing information of actualized consumption, as well as subjective measures together with valid register data (see Headey et al., 2004). In most cases there is no information about some of these important dimensions.

The data used here is an extensive postal survey conducted by The Centre of Excellence on Social Welfare in the Helsinki Metropolitan Area (SOCCA, 2008; see also Turunen & Zetterman, 2009). The aim of the survey was to gather data in order to examine subjective welfare in the Helsinki metropolitan area. The size of the random sample was 9 500; in Helsinki the sample size was 4 000, both in Espoo and in Vantaa 2 500 and in Kauniainen 500. The actualized sample size was 3 940. The response rate varied from 49 per cent in Kauniainen to 39 per cent in Vantaa. (See Turunen & Zetterman, 2009 for further and more detailed information of the data.) In the case of further analyses excluding the overall models containing all the cities, the respondents from the city of Kauniainen were omitted, because of too small of a sample size.

The data contains a wide range of questions about subjective welfare, as well as the most common socio-demographic background variables such as age, gender and education. Unfortunately, it is not possible to examine dynamic aspects. The sample is also slightly skewed in light of some background variables. In addition to people with high education, women and respondents of the oldest age-group are overrepresented in the data. In spite of these problems, the actualized sample size (n=3 940) is sufficient, and as this skewness is recognized, any problems regarding reliability are tolerable.

Indicators

In total, 12 variables out of the extensive pattern of welfare questions were chosen to represent the subjective dimensions. In doing so, it was possible to examine how physiological and psychological dimensions, to refer to earlier mentioned coarse division, are connected to happiness. The importance of economic aspects on the other hand, is easily approachable by utilizing the socio-demographic variables presented in almost every survey.

After considering the methodological issues and examining the effects of the socio-demographic control variables, 12 subjective welfare variables, assumedly, representing different dimensions of happiness were eventually chosen. These were all taken from the question pattern examining how content respondents were with the listed issues. The scale was from 4 to 10 and the question was: "How content do you think you are with the following issues in your current phase of life?"

Beginning from the bottom of the Maslow's hierarchy, namely from *physiological needs*, one variable, "sex" (sex life) was considered appropriate and was thus chosen. The questions concerning working situation ("job") and "health" represent here the next ladder; *safety needs*. Of the needs in the next ladder, *love and belonging*, two more variables were added into the analysis. These were "family" (relationships with the family) and "friends" (relationships with friends). The fourth ladder, esteem, was linked with two variables namely "love" (feeling loved) and "respect" (receiving respect from others). The last and the highest ladder, *self-actualization*, was the most extensive pattern. Finally, five variables were chosen: "everyday life" (getting satisfaction from everyday life issues), "income and consumption" (income and possibilities to consume), "nature" (enjoying the nature), "culture" (possibilities to attend to cultural hobbies) and "entertainment" (opportunities for entertainment and leisure).

Method

The significances of the determinants behind perceived happiness were tested with linear regression models by using SPSS 17.0 software. Even though the answers concerning overall happiness were measured in ordinal scale from 0 to 10, the variable was interpreted as a continuous variable (cf. Stutzer & Frey, 2005). The problems linked with analyzing the subjective survey data were well recognized (see Bertrand & Mullainathan, 2001). Bertrand and Mullainathan (2001) suggest, based on their empirical tests that subjective variables increase information when used as explanatory tools, however, explaining subjective measures should essentially, not be done due to measurement errors.

In this study, the subjective variable is explained by subjective variables combined with control variables. Despite the obvious risks concerning reliability, this was done because explaining happiness inevitably needs subjective explanatory determinants and in existing literature this seems to be accepted practice (e.g. Melin et al., 2003). According to Bertrand and Mullainathan (2001), measurement errors in explained subjective variables are often correlated with individual characteristics and this causes severe biases. In this study it is assumed that this bias affects perceived happiness both negatively and positively, depending on the given variable, and depending of course on the person and social environment. Thus it is assumed that on the scale of the whole data the overall effects would not be too severe. However, the problem must be taken into account when interpreting the effects of the models. The effects show the direction of the regression. The size of the effect should always be interpreted with care.

Results

First, a model with only socio-demographic control variables was tested. Dichotomous variables indicating partnership status, gender, high education and employment status (employed/unemployed) and continuous variables of age and income were included in the model. Employment status and age were not significant and thus a separate model with the rest of the variables was run (Table 1). Income (household income after taxes) was added into the analysis as a continuous variable, even though it was already categorized in the questionnaire. The variable was classified with nine categories of equal size. Even though using categorized variables as continuous is perhaps not the most sophisticated manner of conducting analyses, including the variable was considered more beneficial than completely abandoning it.

There were some differences between the cities and with the exception of the variable of high education in Helsinki and Vantaa; the control variables were significant in all the cities. The coefficient of determination (R^2) varied from .05 in Vantaa to .111 in Espoo. Thus, it seems that structural determinants in light of these four variables have the largest effects in Espoo; the variables explained 11.1 per cent of the variance, which is a remarkable proportion given the nature of the explained variable, happiness. In all the cities income level seems to have the strongest connection to the variable explained. On average, higher income levels lead to .2 point higher happiness.

According to the models, respondents in relationships considered themselves happier than others. When gender was concerned, females were generally happier than males although the difference was smaller than in the cases of incomes or partnership. Education was only significant in Espoo and in an overall model containing all the cities. Education and income are naturally correlated (Pearson correlation .316 in the case of these data) and this must be taken into account when results are interpreted. Models without income were also conducted (not presented here) and taking income out of the analysis makes the education variable significant in all the cities, whilst relationship status turns out to be the strongest explanant. Thus, one reason behind the significance of high education is that it tends to yield to higher incomes.

Even though the chosen control variables seem to be important and thus cannot be left outside of the model, it can be assumed that there are latent structures at play in the background. Only a small percentage of the variance can be explained by structural variables. The question at hand is; what factors constitute these latent structures?

It is possible to approach the problem by thinking about why these particular determinants presented in Table 1 are connected to happiness. The cases of education and income are probably the easiest ones to interpret. As mentioned above, education and income are to some extent correlated and both of these increase alternatives, for example in the field on consumption. However, as discussed in the beginning the relationship between income and happiness is complicated. Amongst lower income classes, increasing incomes improve subjective welfare, but after reaching a certain level, other issues become more dominate. In the case of this welfare survey, category-wise means of perceived happiness increases steadily becoming the third most important category. The change is largest between categories 1 001–2 000 Euros per month and 2 001–3 000 Euros per month.

The case of relationship status is interesting. In the literature it has been widely reported that marriage goes hand-in-hand with happiness. Married persons generally report higher subjective well-being and the effect is similar regardless of gender. Married people benefit in many ways from a supporting and lasting relationship. They, for example, suffer less from loneliness, are provided with self-esteem, and also benefit economically from the status. (Stutzer & Frey, 2005, also for the literature concerning the subject.) Married and cohabited respondents were joined in this study even though in existing literature, these groups are often separated (cf. ibid). In Finland many cohabit years before getting married and some never marry. In the context of the data used here 48.9 per cent of the respondents were married and 15.6 per cent cohabited. The combined variable also proved to be a better explanant than the variable containing only married respondents.

Gender has been used as a controlling variable in numerous studies. In these discussions it is often noted that men generally report lower levels of happiness than women (e.g. Stevenson & Wolfers, 2009). Recently, however, "declining female happiness" has been widely discussed (ibid). In the context of this study and the data sets used here, however, it is difficult to find explanations as to why female respondents seem to consider themselves happier than males.

In general, it is notable that structural background variables tend to explain subjective happiness regardless of the fact that the effect sizes are relatively small. Although the models presented in Table 1 did not contain subjective variables, which assumedly are more closely connected to similarly subjective happiness, the connections are notable and thus structural determinants should be taken into account when examining happiness.

Happiness in the light of extended models

After adding the subjective variables, almost all the control variables turned out to be insignificant (see the first model in Table 2). Only one variable was significant – the one indicating the partnership status of the respondents at .05 level of significance.

In the cases where variables were close to significance ($p<.10$) "ns" is in parentheses followed by a sign indicating the direction of the possible correlation. In the overall model the continuous income variable was almost as significant and affected happiness positively. This variable was obviously controlled by the subjective "income and consumption" variable. In the model conducted without the subjective income variable (not presented here), the control variable was naturally highly significant. Compared to the first analysis presented in Table 1, control variables lost their importance simply because the subjective happiness variable is more than

Table 1
Perceived happiness / linear regression models with only control variables.

	All		**Espoo**		**Helsinki**		**Vantaa**	
	β	*Sig*	*β*	*Sig*	*β*	*Sig*	*β*	*Sig*
Partnered	.114	***	.120	**	.094	**	.142	***
Female	.089	***	.122	***	.088	**	.079	*
High education	.036	*	.088	**	ns		ns	
Income (cont.)	.201	***	.211	***	.237	***	.114	**
R²	.084		.111		.091		.05	
DW	2.039		1.948		2.071		1.974	
N	3391		894		1438		848	

the sum of everything linked to other subjective variables. However, the strength of these linkages was not known beforehand.

The initial OLS-regression including all the variables and all the respondents is presented in the Table 2 in the first column. This aggregate model explains over 50 per cent of the variance of happiness, which is a remarkable result when compared to 8.4 per cent (Table 1) of the model that included only control variables. However, it is clear that subjective determinants are to some extent, correlated with each other, and in a way happiness can be considered as being structured by smaller issues such as being content with the different domains of life. Thus in the case of this study, the size of the coefficient of determination (R^2) should be interpreted with care, or alternatively should not be interpreted at all. Instead, considering the structures between the variables and differences between the models is here more important.

The two lowest dimensions of Maslow's hierarchy represented here with three variables (sex, job, health) were highly significant in the aggregate model. Higher perceived satisfaction with sexual life, work situation and health seem to be positively connected to happiness which is an expected result. The effect of a respondent's employment situation was the lowest and variable "sex" the highest.

The results concerning the two following dimensions, namely love and belonging and esteem were partly unexpected. The variable indicating satisfaction with relationships with the family was highly significant and had a relatively high effect, .164. The other variable from the love and belonging dimension, relationships with friends, was, on the other hand, not significant. This was a very interesting result. It could have been postulated that being content with an individual's relationship with friends would be positively connected to perceived happiness. Now, however, it seems that these two dimensions of perceived welfare are somehow separate from each other. The explanation remains unclear, but it might be possible that the issues around friends represent more superficial factors and is, in a way, a more concrete dimension of welfare that remains separate from the somewhat abstract and more comprehensive happiness.

The dimension of esteem also contained two variables and similarly as above, only the other one of these turned out to be significant explanant. "Feeling yourself as loved" seems to be very important to respondents when connected to happiness. The variable was highly significant with the effect of .177. "Receiving respect from others", instead, was not connected to happiness according to the model.

Variables from the self-actualization pattern were significant ($p<.05$) with the exception of the insignificant "culture" variable indicating satisfaction with opportunities to take part in cultural hobbies. With the effect of .281 "getting satisfaction from everyday life issues" was the most important explanant of all the chosen variables. The subjective income variable combined with "nature" and "entertainment" variables were also significant, but with clearly smaller effect.

Differences between the cities in Helsinki metropolitan area

After conducting the aggregate model, separate models for the cities of Espoo, Helsinki and Vantaa were run (see Table 2). All of the variables used in the first model were also used in the separate models. Five variables turned out to be significant in all the cities. These were "sex", "job", "health", "love" and "everyday life." Some differences between the cities, particularly when it comes to the effects, were found.

The variable indicating partnership status was surprisingly not as significant as might have been assumed beforehand. In fact, it was not significant ($p<.05$) in any of the models, but close to significance ($p<.10$) in Espoo and in Vantaa. The only control variable that was significant in some of the cities was the continuous income variable in Helsinki. Higher household income seems to positively affect happiness. However, the link was only clear in Helsinki and was thus not totally controlled by subjective measure. This is probably due to higher living costs in the capital. In other cities, these two variables seem to be more clearly linked together.

Sex. By interpreting the effects, satisfaction with sexual life – the variable "sex" – had the most effect in Vantaa, Helsinki being a very close second. In Espoo the effect was somewhat smaller but still .081. As the variable was sig-

Table 2
Perceived happiness / extended models.

	All		**Espoo**		**Helsinki**		**Vantaa**	
	β	*Sig*	*β*	*Sig*	*β*	*Sig*	*β*	*Sig*
Partnership	.039	*	(ns)/+		ns		(ns)/+	
Female	ns		ns		ns		ns	
High education	ns		ns		ns		ns	
Income (cont.)	(ns)/+		ns		.063	*	ns	
Sex	.103	***	.081	*	.102	***	.126	**
Job	.063	***	.081	*	.122	***	-.074	*
Health	.091	***	.123	***	.058	*	.129	***
Family	.164	***	ns		.219	***	.168	***
Friends	ns		(ns)/+		(ns)/+		ns	
Love	.177	***	.277	***	.130	***	.253	***
Respect	ns		ns		ns		-.112	*
Everyday life	.281	***	.232	***	.294	***	.317	***
Income and cons.	.071	***	.146	***	.065	*	ns	
Nature	.036	*	ns		.061	*	ns	
Culture	ns		-.114	*	ns		(ns)/+	
Entertainment	.056	*	.124	**	ns		ns	
R²	.507		.508		.532		.528	
DW	2.043		2.094		1.970		2.155	
N	2315		606		1030		540	

nificant in all the metropolitan cities and effect differences quite small, there is no need to try and interpret the differences in effects in detail. The variable "sex" was the most significant in Helsinki (p<.001) and together with the controlling and insignificant partnership variable, this could indicate the perceived importance of sexual life amongst single residents, and especially so amongst relatively happy respondents. It is quite possible that singles in Helsinki – 31.3 per cent of the respondents lived alone comparing to 19.4 per cent in Espoo and 16.7 in Vantaa – are primarily represented amongst younger respondents. Satisfaction with sex life is strongly connected with age; age alone explains 10 per cent of the variable indicating the importance of sexual satisfaction (β =-.316***). The proportion of families with more than two persons is respectively greater in Espoo and Vantaa.

Job. Job situation indicated by the variable "job" had the biggest effect in Helsinki. Being content with job situation was also positively connected to happiness in Espoo, although the level of significance was lower than in Helsinki. Helsinki is the most expensive place to live in Finland and because of this, the observation of job- situation being an especially important determinant behind happiness in Helsinki was somewhat expected. In Vantaa, however, the direction of the significant regression was opposite. The size of the effect, -.074 is not remarkably high, but nonetheless something that should be noted. According to the analysis, being content with the job situation would thus diminish overall happiness which sounds awkward and is very difficult to explain. The result might be connected to work-based stress, but verifying this was beyond the scope of this study.

Health. Satisfaction with one's health had the smallest effect in Helsinki. In addition to this, the variable was clearly more significant in Espoo and Vantaa. Age structures between the cities were quite similar, so this cannot be the reason for these differences. Most likely the interrelations of the explanatory variables are behind this. Some variables affect differently in different cities. On the other hand, the result may be somehow connected to urban lifestyle, for example, and measuring this was not possible using the current data set.

Love. The variable "love" was highly significant in all the cities, but there were remarkable differences between the effects. The effect was lowest in Helsinki (.130) and highest in Espoo (.277) Vantaa being very close (.253). It is difficult to find an explanation for this observation. It cannot be said that feeling oneself as loved has weaker links to happiness in Helsinki despite the differences in effect size. It could be easily reasoned that the higher amount of singles in Helsinki has something to do with the observation; "feeling yourself loved" might be a more important determinant behind happiness amongst respondents with families. However, this was tested and actually, the variable "love" had a greater effect in the case of singles both in Helsinki, as well as in all the cities included in this survey. The difference is probably due to some other variables that control and diminish the effect. There are variables that were significant in Helsinki, but not in Espoo such as income and nature.

Everyday life. Receiving satisfaction from everyday activities was very important in all the cities. In the case of Helsinki and Vantaa, the effect of the variable was higher than all other variables. In Espoo, the highest effect could be found from the variable "love". Thus, in general, people who report higher satisfaction with everyday life issues seem to be happier when considering subjective perceptions.

The rest of the subjective variables. By interpreting the models in the light of the other six variables, more differences between the cities were found and these differences turned out to be quite interesting and to some extent surprising.

Espoo having been profiled in discussions as a family city was the only city where the variable "family" was not significant. In Helsinki and Vantaa the significance was clear and effect sizes remarkable. Similarly surprising results were observed when the variables of nature, culture and entertainment were examined. Nature was significant only in Helsinki, which is the most urban area in the whole country. Alternatively, culture and entertainment, both usually linked with urban lifestyle, were not significant in Helsinki. These two items, however, were significant in Espoo although in the case of the variable "culture" the direction was negative. Being content with one's possibilities of attending to cultural happenings would thus affect happiness negatively. Again, this negative result is difficult to explain. It might be possible that the result somehow reflects dissatisfaction with one´s life in Espoo – or other way around, willingness to live in a place where "culture" is easier to reach.

Instead, the logic behind the controversial results concerning common stereotypes could be possibly explained by the stereotypes themselves. "Family" is probably not connected to happiness in Espoo because it is, in a way, taken for granted. There are more important determinants that overpower the effect of family. The same explanation could be stated when thinking of the variable "nature" in suburban cities Espoo and Vantaa. And again "culture" and "entertainment" in Helsinki; it can be assumed that citizens of Helsinki take these issues for granted and thus linkages to happiness remain absent.

The above mentioned, somewhat controversial results are all logically similar. Thus, the aforementioned explanation can be considered worthy of deeper analysis. This hypothesis, however, cannot be verified by examining the differences between the levels of how content people actually are. Culture, as well as entertainment, mean different things to different people and there are obviously differences between the cities both on the demand side and on the supply side as well. Although the smallest city in the Helsinki region, Kauniainen, was not examined separately in this study, it must be mentioned that citizens of this tiny city were clearly the most content with culture and entertainment – and the city essentially lacks the supply of these outlets, especially when compared to the surrounding cities. This example explains the cultural and social differences relatively well. In the case of variable "culture" the mean in Kauniainen was 8.39 whilst in Helsinki 8.2, Espoo 8.11 and Vantaa 7.9. When it comes to "entertainment" results were similar although differences were somewhat smaller.

These numbers cannot be compared without problems. The supply of cultural services varies remarkably between the cities and people from all the cities use the services found from Helsinki and *vice versa*. Even though concentration of cultural services, for example, in Helsinki and especially in the centre is very strong, people in Kauniainen were more content. The reason behind this must simply be the different preferences and demand structures. By exaggerating the reality and playing with the stereotypes it could be said that someone in Kauniainen or in Espoo can be content with the possibilities to attend to cultural services when she/he can visit opera once in two months. A Helsinki-based respondent might, instead, not be happy with urban culture, despite corner shops and coffee houses that by measure, overlap the other parts of Finland; because when compared to some other cities abroad the supply might seem insufficient.

In addition to these evident structural differences, some additional reasons can also be found from personal resources that can be allocated to culture. This can particularly be the case in Helsinki where both the continuous "income" variable and the subjective "income and consumption" variable were significant. Thus, in the case of Helsinki these two variables represent two different dimensions of material welfare. A higher wage does not necessarily mean that one should be content with their situation. When comparing the models, the subjective "income and consumption" variable was the most significant in Espoo with the remarkable effect .146. This somewhat strengthens the stereotypical image of Espoo as a home base for well-to-do middle class residents. In the case of Helsinki this can be another part of the story, but another dimension must be the higher costs of living. In Vantaa the variable was not significant.

Similarly, as in the case of the aggregate model, the variable indicating relationship with friends was insignificant in all the cities although close to significance in Espoo and in Helsinki. The variable "friends" was, however, kept in the models because the aim of this study was not to find the best model, but to find structures and on the other hand to find possible differences between the cities. The variable "respect" represents another interesting case. It was significant only in Vantaa, but the result was again a negative correlation. The regression analysis concerning Vantaa produced two negative terms (in the case of Espoo there was one) and these both were difficult to explain. In the similar cases this kind of result could be due to severe outliers, but this is not the case here, and in addition to this, the size of the data set is sufficient. It could have been possible to leave the variables "respect" and "culture" out of the analysis. These two were the ones that produced negative significant terms. However, including these two variables was considered important from theoretical point of view. It could have been thought that, also from the background of Maslow, that feeling respected and cultural issues would be positively connected to happiness.

Discussion and conclusions

In the light of the results, Maslow's hierarchy as a theoretical framework worked relatively well. Cities differed from each other and there was significant variance between the variables despite the fact that when explaining subjective dimensions, multicollinearity was evidently a problem. However, being a subjective and somewhat abstract notion, happiness is linked with determinants that are also correlated in real life. Thus examining structures behind happiness using survey data inevitably requires using inter-correlated variables. This is the reason why the results are only cursory.

It would have been possible to adopt other theoretical frameworks instead of Maslow's hierarchy. For example, Allardt's (1976) theoretical "having, loving, being" categorization could have provided an appropriate basis for empirical analysis. However, Maslow's hierarchy offered a wider, and in a way, more solid theoretical foundation. It also better suited the data sets. In addition to Allardt, variables could have also been chosen by using the seven domains presented by Cummins (1996; see also Samman, 2007; Lelkes, 2006; Rojas, 2006). These domains can be traced to dimensions such as material well-being, health, productivity, security, intimacy, community and emotional well-being. With the exception of productivity and emotional well-being, these can all be derived from the data and are thus used in this paper.

When subjective variables were added to the analysis, practically all structural socio-economical variables lost their significance. One variable, however, remained significant, the continuous income variable in Helsinki. Despite controlling subjective dimensions, higher incomes positively affect happiness in Helsinki. This must be due to higher living costs in the capital. In general, the diminishing effect of the structural variables, after adding the subjective ones, was not a surprise. Similarly expected was the observation of getting satisfaction from everyday life issues as well as the question of feeling yourself as loved being linked with happiness. These two were important in all the cities represented in the data.

However, even thought the most of the results concerning the subjective variables can be taken for granted, there were some observations that cannot be easily explained. As so often is the case, the most interesting results were these less obvious ones.

Examining the latent structures in social sciences is extremely difficult. Latent structures are socially determined and affect differently depending on the case. Thus, interpreting statistical links should only be seen as means for finding some large scale differences, or on the other hand, some weak signals. The variable "sex" is a good example. Satisfaction with sex life is surely important, but what causes the differences between the cities? Of all the cities, the variable was the most significant in Helsinki. At the same time Helsinki was the only city where the variable "partnership" was clearly insignificant. So, explanations must be sought after from the less obvious dimensions. Instead of investigating happiness in this field from the viewpoint of couples, we should probably look at the singles. In Helsinki about third of the residents lived alone, which was clearly more than in Espoo and Vantaa. While on the other hand, age alone explains a great deal of the variance of the variable "sex", and as it is well known, a great deal of single residents are young.

Latent structures also affect the observation concerning the variable "health," which had the smallest effect and significance in Helsinki. As age structures did not explain this, there must be some latent phenomena that cause the difference. As to what kind of latent factors we are talking about remains unknown. As for the variable "love," although the effect in Helsinki was remarkably lower than in other cities, it cannot be said that feeling oneself as loved has weaker links to happiness in Helsinki. Of course statistical measures tell something about reality, they don't explain it. If we want to know the reasons behind these kinds of results, we should look at the variables that were significant in Helsinki, but not in Espoo and Vantaa. Statistically speaking, these variables such as "income" or "nature" (see Table 2) control the effect of "love" and make it seem weaker.

Some of the observed results were rather confusing. In some cities a few variables were negatively connected to perceived happiness. These were "job situation" and "respect" in Vantaa and "culture" in Espoo. Thus, higher grades in these would negatively affect overall happiness in the given cities. It is impossible to find an explanation by using these data only, but for example the case of the variable "culture" can somehow reflect dissatisfaction with one´s life in Espoo – or other way around, willingness to live in a place where "culture" is easier to reach. This hypothesis can be connected to the other two variables, "job situation" and "respect", as well. Some people in these cities might have some unrecognizable desire for change. It is also possible that negative sides of working, such as stress, might affect happiness negatively.

Somewhat hidden structures can also be found when interpreting results that happen to challenge common stereotypes. Espoo is stereotypically a city where families with children move to from Helsinki. Strangely, however, Espoo was the only place where the variable "family" did not affect happiness. Again, the variable "nature" was only significant in Helsinki; not in the less urban cities of Espoo and Vantaa. And once again, the variables "culture" and "entertainment" were not significant in Helsinki, which is place with the greatest supply of these both.

Although, at least at first, these results seem atypical, beyond the surface the results are actually quite logical. It can therefore be assumed that stereotypes themselves explain the results, and if this is true, the structures of happiness can be seen from a totally new perspective. Something that is somehow taken for granted, does not affect happiness, nonetheless people still consider these issues very important. In forthcoming studies about subjective happiness the idea of a "contrary effect" should be acknowledged and examined further.

In future studies on the subject in the Helsinki metropolitan area, rethinking the geographical dimensions could also be one alternative. The division based on administrative cities is not necessarily the best one, as, technically, the Helsinki metropolitan area is one relatively large city where

city structures differ from area to area and these differences do not follow administrative borders.

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