



# Spousal influence in time use – On book reading, highbrow culture attendance and computer use

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## Abstract

Spousal influence on time use has been studied quite intensively in the context of domestic work. Spousal influence means how the properties or behavior of a spouse affect the other spouse's behavior. However, spousal influence studies on time use in leisure time are very rare. This research focuses on just that. The general hypothesis was that the power of spousal influence is dependent on the type of leisure activity in question. Three different types of leisure activities were investigated. They were: book reading, visiting more or less high culture places, or attendance at high culture events, and computer use. Data came from two recent Finnish time use surveys from the years 1999-2000 and 2009-2010. General univariate linear models were used as the method. It was found that spousal influence was very strong in high culture attendance, remarkable in book reading, and non-existent in computer use. It was also evident that a person's age and education increased spousal effect in time devoted to highbrow culture.

**JEL- Codes:** D00, Z1, Z13

**Keywords:** Changes in time use, computer use, highbrow culture, reading, spousal influence

# 1 Introduction

On the basis of observations from everyday life, we know that the leisure time use of spouses is very often similar. However, little research has been done on this issue. What has been studied intensively is the division of domestic work - child care, cooking, cleaning etc. (e.g. Balzan & alii 2014, van Klaveren & al 2013, Oinas 2010, Sullivan 2010), but in time use studies the spousal influence (spousal effect, cohabitant partner effect) on leisure time activities has been investigated only to a very limited extent (however, see e.g. Niemi 2009, Wollscheid 2014). The general result of these studies has been that spousal influence on time use is remarkable. In this article we cannot naturally study time devoted to all the different leisure activities but the focus is on some central cultural activities.

## 2 Theoretical backgrounds

In the US, DiMaggio and Mukhtar (2004) report large declines in attendance rates between 1982 and 2002 for most high-culture activities (as theaters, concerts, museums, art exhibitions, and libraries). According to the authors, this decline is even stronger for younger age groups, which is consistent with Peterson and Rossman's (2008, p. 308) finding that the median age of art attendees has significantly increased for all high-culture activities. Similar observations, although, not so evident, can be made on the basis of Finnish time use studies (Pääkkönen and Hanifi 2011, Toivonen 2014).

A universal decrease in in book reading has also been reported (see e.g. Griswold & al 2005), but in Finland this trend has not been so striking at least no longer between 1999/2000 and 2009/2010 (Pääkkönen and Hanifi 2011).

If the studies on shared time use of couples in leisure activities have been rare, there are other types of studies than time use studies ("how often", "how many times during the last 12 months" etc.), where spouse or partner effect, for instance, on cultural activities has been studied quite extensively. Significant spouse effects have been found with status or education of spouse being the mediating factor of spouse effect. It has been found already in the "classical" studies on cultural capital that the level of education is as such one of the most important variables in consumption of highbrow culture (e.g. Bourdieu 1984, p. 32-34).

For instance, Upright studied attendance at galleries, musical events, classical music events, theater, dance, and opera. He found that men's attendance is more strongly influenced by spousal characteristics than is women's attendance (Upright 2004, p. 129). For men, each increase in the level of a wife's education is associated with "a dramatic and

statistically significant higher level of participation for nearly each type of event” (Upright, p. 140). These results are strongest when both partners attended an event, and the coefficients suggest that a wife’s educational level is as important in this case as is that of the respondent himself. Surprisingly, for every event, excepting opera, these results are clear even when a wife did not attend.

For women, the coefficients suggest that the educational level of the husband is also a strong if not a stronger predictor of participation than the wife’s own educational attainment. The education of the husband appears to have little effect, however, on the odds of his wife attending alone. In any case, among married couples, women characteristically play a disproportionate role in driving households’ arts participation, with husbands being guided by the preferences of wives (Upright, p. 141). Thus, attendance at high culture events is very much a status symbol or status-seeking process.

Also, in another study that included analysis of partnered individuals it has been found, similarly, that among ‘elite’ couples, women tend to take charge of the cultural engagements of their husbands, or husbands tend to be led (“pleasantly and gratefully”) by the tastes and choices of their wives (Warde and Bennett, p. 2008). An interesting observation is, that a more fluid gender style has greater currency among women and men from the professional-executive class (Bennett & al 2009, p. 233). Another study also indicates this type of dynamics. Individuals who are in couple relationships and belong to the working class show disparate profiles of being feminine and masculine (Silva & Le Roux 2011, p. 558).

We can also approach the highbrow culture and spousal influence from the concepts presented by Granovetter (1973) as Lizardo (2006) did. These concepts are *strong ties* and *weak ties* used in the context of social capital. The total number of ties was operationalized in Lizardo’s study as the total number of connections of people with other people with whom they kept in contact at least once a year (Lizardo, p. 788).

After being asked for an estimate of their total number of connections, the respondents were then prompted to name how many of those people are really close friends: “Of these friends and relatives [that are contacted at least once a year], about how many would you say you feel really close to, that is, close enough to discuss personal or important problems with?” (Lizardo, p. 789). These kinds of contacts were operationalized as strong ties.

As cultural taste indicators Lizardo used, among others, such activities as attended a live performance of a nonmusical stage play, watched a live ballet or dance performance, visited an art museum or gallery etc. during the past year (p. 787). It was found that highbrow taste is more likely to be converted into a denser network of strong ties, while popular taste leads to an increasing number of weak ties. This is, according Lizardo, because the highbrow culture taste is more restricted: it has an “assetspecific” nature. This is thus “infused with the classical Kantian aesthetic in which cultural products are seen as a conduit for

intellectual and emotional impressions that reflect “higher” moral and aesthetic values” (Lizardo, p. 799).

Christin (2012) in her study on gender and highbrow cultural participation in the United States also touched on spousal influence and presented a hypothesis according to which if the male spouse has high levels of arts socialization (impacts in childhood and youth) and high educational attainment, the female is more likely to attend arts events than otherwise. However, the hypothesis was not supported by the data. It has also been found that spousal influence is not only remarkable in activities which are more or less status symbols, but also in those that are social by nature such as entertaining visitors (Niemi 2009, p. 304).

Highbrow culture attendance is connected with social status, and perhaps therefore this type of consumption is a visible consumption. But even in a less visible cultural consumption the role of partner status has been found to be substantial. For instance, Kraaykamp & al (2007) found that also in book reading and selection of TV programs, status is an important factor. This is because preferences for certain books and TV programs are regular conversation topics, and their popularity differs between social strata. Indeed, they find positive effects of respondent’s and partner’s status on literary book reading and negative effects of respondent’s status on the amount of time spent watching TV for both men and women (p. 132).

In an additional analysis, Kraaykamp & al investigated the interaction of gender with the partner’s status measures to determine whether partner status effects differ for men and women. For women, partner’s status proved to be significantly more important than for men: hence, women are inclined to read more elitist reading materials when their husbands hold a high-status job (p. 142).

It is not only spouses who have an impact on each other’s behavior, but also children have impacts on their parents’ behavior. For instance, in tourism studies, dealing with tourist destination selection, not only partner effect but also the effect of children has been studied extensively, and it has been found that the influence of children is remarkable in destination selection in tourism (e.g. Kozak and Karadag 2012).

Sullivan’s study on division of domestic work was mentioned above. She found that men with higher levels of education contribute substantially more to childcare than men with lower education (Sullivan 2010, p. 727). Thus, spousal effect was strong among more highly educated men. Therefore, although there are only few time use studies on spousal influence on leisure time use, one might think, by analogy, that, among men, the spousal effect is strong also on time used on leisure activities, if the education of the man is high.

However, education or status of partner is not the only factor which controls the spousal influence. The age of a partner and the shared time of spouses have been observed to increase the similarity in time use, because the likelihood of the length of the marriage also increases (Ruuskanen 2004).

On the basis of the above discussion time devoted to book reading and time devoted to highbrow culture attendance were two of the leisure activities studied here. Both of them have high status value - perhaps highbrow culture attendance higher - and they are social and visible, especially highbrow cultural attendance. However, it is reasonable to suppose that there are also other leisure activities which are neither high status symbols nor are visible and social.

From earlier studies we know that time devoted to computer use has increased dramatically (e.g. Toivonen 2013). In several studies, age and education have been found to be central variables in adopting computer use or, in general, new information and communication techniques (e.g. Näsi 2013). It is, however, very difficult to assume how powerful, if any, the spouse effect is on time devoted to the computer, because there are in abundance studies on impacts of computers and information technologies on family life (e.g. Chesley 2005, Lanigan 2009) but evidently not strictly on spousal influence and computer use. Computer use is not a traditional high status activity, and it is not a social activity in the sense that the persons involved have a physical presence in a situation. Therefore, time devoted to computer use was chosen as the third leisure activity studied here.

### **3 Research questions and hypotheses**

On the basis of the above, the research questions and hypotheses of this study are as follows:

1. What is the influence of the spouse's time use on a person's own time used on a known leisure activity? It can be expected that the effect is different depending on the activity. Thus, it is hypothesized (1) that spousal influence is strongest in activities where the traditional status value (upper class) of the activity is high and visible the activity as in highbrow cultural attendance activities (see above e.g. Upright, Warde & Bennet). It also quite strong in activities where the traditional status value is not so high also in those that are social by nature such as reading (see above Niemi, Kraaykamp & alii). On the contrary, spousal influence is lower in the activities where status value in the traditional sense is lower (technical skill), and/or which are by nature less visible and more individual such as computer use.
2. Previous studies on spousal influence indicate that the influence is mediated by the partner's status, but spousal influence studies on leisure activities have not been based on time use data. Therefore, we ask whether these time use data support findings. However, it is hypothesized (2) that the power of spousal influence is mediated by the partner's status with spousal effect being the more powerful the higher the level of education of the spouse (see above e.g. Sullivan).

3. It was also mentioned above that the age and shared time of the couple are in positive interaction because the likelihood of the length of the marriage increases. Therefore, we also wanted know whether the impact of the partner changes with age also here? It is hypothesized (3) that the spousal effect is more powerful the higher the age of the person in question (see above Ruuskanen). This kind of spousal influence need not to be tied to status and/or visibility.
4. We also wanted to find out about changes in time use on different activities, and to find out whether the partner's time use and/or social status was connected with possible changes between the years of the surveys. For instance, if the interactions between year and spousal time use and between year and education of spouse are positive, this means that spousal influence has increased over time. It is likely that no attention has been paid to these questions in earlier studies.

## **4 Data and variables**

### **4.1 Data**

This study was based on the original data from four Finnish Time Use Surveys covering the population aged 10 and over from the years 1999-2000 and 2009-2010. Respondents were asked to fill in a diary for two days (one weekday, one weekend day) running. They were asked to record, in their own words, their primary activity, and what else they were doing at the same time (secondary activity). Record keeping was on a 10-minute basis (Niemi and Pääkkönen, 2002, p. 11–12; 97–101). In the 1999–2000 survey and in the 2009-2010 survey, there were two phases in sampling. In the first phase, the random sample was drawn from persons living in Finland aged 15 and over. In the second phase, also all other persons, at least 10 years old and belonging to a selected person's household, were included in the final sample. This made it possible to study the time use of couples. Household members recorded their time use on the same two days that had already been decided on beforehand.

The collection was completed over the period between 1st March, 1999 and 12th March, 2000 (Niemi and Pääkkönen, 2002, p. 11). The number of cases (time-use diary days) was 10 500. The data of the 2009-2010 study were collected in the same way as in the study of 1999-2000 between April 23rd, 2009 and April 22nd, 2010. The number of diary days was 7 480 (Pääkkönen and Hanifi, 2011, p. 97).

However, the organization of data into a form that made it possible to compare the time use of both partners simultaneously was rather a complicated task because the data were not originally coded in this way. Moreover, the fact that in many cases household members had recorded their time use only on one day (weekday or week-end) posed problems. This

then created a problem because women had more often than men filled in the diary on two days. Thus, inevitably, the number of women in this sample became a little greater than that of men. In addition, in many cases there was no information on the respondent's background variables, such as education, whereas information on education should be covered. Therefore, only cases with complete background information were accepted. In addition, in the final sample, only couples with children under 18 years were taken into account. This is because it has been planned that in a future article the purpose is to compare spousal influence with parental influence. Thus, the sample here was reduced to 690 (women) or 628 (men) persons.

## **4.2 Dependent variables**

Reading books was one of the studied activities. If the activity had been reading in general, it would have been, for instance, combined with computer use, because on the basis of survey from 2009-2010, newspapers were sometimes read via the computer. Further, it was supposed that reading books is more an individual and high status activity than reading in general.

The second of the activities was time used on highbrow culture attendance, i.e. attendance at high culture events or visiting cultural targets (operationalized as movies, theaters, concerts, museums, art exhibitions, and libraries). Thus, operationalization was very similar to the highbrow taste indicator used by Lizardo (see above).

The third of the variables was time devoted to computer use. It was the sum of time devoted to computer hobby and programming, to information searching, to communicating, to playing computer games, and to other computer use. If the computer was used only as a tool, e.g. in reading a book or in television watching, this was counted as book reading. However, in practice, drawing the line is troublesome.

## **4.3 Independent and control variables**

On the basis of the section "Theoretical backgrounds", it is evident that there are two ways to understand spousal influence. The first is to study the time use of both partners. If it is assumed that one partner's time use has an impact on the other partner's time use, then time use of spouse is an independent variable. It can be called *a direct spousal influence*. However, there can be some other types of spousal influence than time use of spouse which have an impact on one's own time use. Firstly, very often the education or status of the spouse has been observed to have a spousal effect on own time use (e.g. Upright or Kraaykamp & al above). Secondly, the own education or status has been observed to have an impact on own time use *via* time use of spouse (e.g. Sullivan above). Both these two types of spousal influence are called here *an indirect spousal influence*. Therefore, also the level of education of spouse was taken into the analyses as an independent variable.

Just the age and education of both partners have been the essential variables in investigating spouse effect on different cultural hobbies, as was seen above (Upright 2004, Kraaykamp & alii 2007, Peterson and Rossman 2008). Therefore, education, and also age, were used here as control variables.

The level of education was measured here using the ISCED classification (International Standard Classification of Education 2011) ([http://en.wikipedia.org/wiki/ISCED#ISCED\\_2011\\_levels\\_of\\_education\\_and\\_comparison\\_with\\_ISCED\\_1997](http://en.wikipedia.org/wiki/ISCED#ISCED_2011_levels_of_education_and_comparison_with_ISCED_1997)). It goes as follows:

3. Level of upper secondary education or lower. Second/final stage of secondary education preparing for tertiary education and/or providing skills relevant to employment, e.g. practical nurse, plumber. (4. Level. Post-secondary non-tertiary education is not relevant in Finland.)

5. Level of short-cycle tertiary education. Short first tertiary programs that are typically practically-based, occupationally-specific and prepare for labor market entry. These programs may also provide a pathway to other tertiary programs, e.g. nurse, pipe installation technician.

6. Level of bachelor or equivalent. Programs designed to provide intermediate academic and/or professional knowledge, skills and competencies leading to a first tertiary degree or equivalent qualification, e.g. Bachelor of Medicine (BM), engineer.

7. Level of tertiary education, master or doctor or equivalent: Largely theoretically based programs intended to provide qualifications for gaining entry into more advanced research programs and professions with higher skills requirement, e.g. licentiate or doctor of medicine.

The amount of disposable time for various activities is limited because only 1 440 minutes are included in one day. Thus, time use on one activity constrains time use on other activities. This point of view has very often been omitted in other types of studies on leisure activities than time use studies. However, an individual can also regulate her/his time use more or less depending on the activity. Perhaps it is most difficult for an individual to decide how much time she/he devotes to paid work. Therefore, time devoted to paid work is here one of the independent variables. *It can be expected that time devoted to paid work has a significant diminishing effect on time used on our dependent variables.*

Because here we analyzed couples, some factors, which are possibly significant in analyzing these leisure activities of an individual, were ignored. For example, factors such as place of residence and family type were omitted because they are naturally identical for both spouses. Income also must be left out because data contained information only on household income. Further, it was impossible to construct any variable of social class, because information about economic activity, socio-economic position or occupation was missing in too many cases.



General univariate linear models (OLS) of the SPSS package were used here as the method of analysis. Attention was paid to coefficients of various control and independent variable terms in equations and to explanation percentages adjusted to the number of terms.

## **5 Results**

The time use figures in this sample are not, of course, exactly the same as in the total time use samples of time use studies, because here only couples were included in the study. However, the figures were consistent with figures from the total sample: time devoted to high culture attendance has decreased from 1999-2000 to 2009-2010 (Table 1), and time devoted to computer use has strongly increased, but time devoted to book reading has slightly increased on the basis of this sample, from 10 minutes to 11 minutes. In the original sample, it remained unchanged (12 minutes). In any case, the universal decrease in book reading has not been strikingly evident in Finland as mentioned above. Females devoted more time to book reading than males, as well as to high culture, but on the contrary, males devoted more time to computer use and paid work. These findings were all consistent with figures from the total sample.

Three models were constructed to explain each time use category (Tables 2, 3, and 4). Because the models were constructed separately for females and males (a and b models), then in reality, the final number of models was six in each time use category. The models (1a and 1b) were basic models consisting only of four control variables: year, age, time devoted to paid work, and level of education, without any spousal influence variables.

### **5.1 Reading books**

In respect to reading books (Table 2), in the female basic model (1a), statistically significant coefficients were time devoted to paid work (negative) and education (positive). Thus, the directions of significant coefficients were as expected: the more time spent on paid work the less time spent reading books, and the higher the level of education the more time devoted to book reading. However, the explanation percentage was low: only 3.4 per cent of variance. This last mentioned phenomenon is usual when trying to explain some time use category, because the variation in the time use of people is large as can be seen in Table 1. In the male basic model (1a), also own level of education was significant, as well as time devoted to paid work. The explanation percentage in the male model was even lower (1.7 %) than in the female model.

**Table 1**  
**List of variables and their descriptive statistics**

|   | <b>n</b> | <b>Min</b> | <b>Max</b> | <b>Mean</b> | <b>Std. Dev.</b> | <b>Participation rate</b> |
|---|----------|------------|------------|-------------|------------------|---------------------------|
| Time devoted to book reading, females                         | 690      | 0          | 290        | 13          | 37               | 19                        |
| Time devoted to book reading, males                           | 628      | 0          | 280        | 7           | 26               | 11                        |
| Time devoted to high culture attendance, females <sup>1</sup> | 690      | 0          | 230        | 3           | 18               | 5                         |
| Time devoted to high culture attendance, males                | 628      | 0          | 230        | 2           | 17               | 3                         |
| Time devoted to computer use, females                         | 690      | 0          | 280        | 7           | 21               | 17                        |
| Time devoted to computer use, males                           | 628      | 0          | 330        | 13          | 36               | 21                        |
| Time devoted to paid work, females                            | 690      | 0          | 1050       | 190         | 240              | 44                        |
| Time devoted to paid work, males                              | 628      | 0          | 1410       | 246         | 281              | 53                        |
| Time devoted to book reading, 1999-00                         | 802      | 0          | 290        | 10          | 28               | 13                        |
| Time devoted to book reading, 2009-10                         | 516      | 0          | 285        | 11          | 28               | 11                        |
| Time devoted to high culture attendance, 1999-00              | 802      | 0          | 235        | 3           | 18               | 4                         |
| Time devoted to high culture attendance, 2009-10              | 516      | 0          | 225        | 2           | 16               | 3                         |
| Time devoted to computer use, 1999-00                         | 802      | 0          | 250        | 3           | 16               | 6                         |
| Time devoted to computer use, 2009-10                         | 516      | 0          | 430        | 18          | 43               | 38                        |
| Age, females  | 690      | 25         | 69         | 43          | 6                |                           |
| Age, males  | 628      | 29         | 68         | 46          | 6                |                           |

<sup>1</sup>Time devoted to movies, theaters, concerts, museums, art exhibitions, and libraries.  
Source: Time Use Surveys 1999-2000 and 2009-2010, Statistics Finland, own calculations.

In the models (2a) and (2b), the variables, partner's educational level and partner's time devoted to reading were added to models (1a) and (1b). In both female and male models (2a and 2b), partner's time devoted to reading was highly significant. In addition, paid work and one's own level of education also remained as significant variables, and the explanation percentages were clearly higher than in the earlier models (1a and 1b): they were now 5.1 per cent and 2.8 per cent, respectively. Also the impact of age was significant in the male model: younger males devoted less time to reading than older ones.

However, the indirect spousal effect, the educational level of the partner, in time devoted to reading was a significant factor in neither the female nor the male model. Therefore our hypothesis (1) was not totally supported by the data in the case of book reading, because education of spouse had no influence (indirect spousal influence). This observation was contrary to the result of Kraaykamp & alii (2007) on the basis of Dutch data, because in their study the partner's education was also significant.

In models (3) four interaction terms were added to former terms. The interaction term between age and book reading of spouse reveals whether the spouse effect changes when people get older (hypothesis 3). If the sign is positive it means that the impact of spouse's book reading on one's own book reading is stronger when people are older than when they are younger. Interaction between education and spouse's book reading reveals whether the spouse effect is stronger among more educated people than among less educated people.

Because the data were from two periods, we looked at whether there were some changes between the surveys in the impacts of independent spousal effect variables. Was the impact of the spouse's education on reading stronger in the earlier period than in the later one (interaction between year and spouse's education)? Was the impact of the spouse's book reading on one's own reading stronger in the earlier period than in the later one (interaction between year and spouse's book reading)?

In the case of the female model (3a) it seems that all other terms lose their significance except time devoted to paid work. However, interaction terms added somewhat to the explanation percentage, from 5.1 per cent (model 2a) to 6.3 per cent, although none of the interaction terms was in itself significant. Perhaps because of multicollinearity between independent variables, the sign of direct effect of partner's reading shifted. The adjusted explanation percentage of male model (3b) with interaction terms decreased from 2.8 % (model 2b) to 2.4 %. Time used on paid work remained significant at the 0.05 level as did age, but there was no other significant effect. Here again, the sign of direct effect of partner's reading shifted. Therefore, the results of models (3) remain a little open to interpretation. Then, the interaction terms were not significant and hypotheses (2 and 3) were not supported by the data in the case of reading books.

**Table 2**  
**Univariate linear model – B-coefficients of covariates on time devoted to book reading of spouses**

| Model                            | (1a)<br>Female | (1b)<br>Male | (2a)<br>Female | (2b)<br>Male | (3a)<br>Female | (3b)<br>Male |
|----------------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
| Intercept                        | -303.90        | 361.15       | -457.57        | 348.54       | 655.17         | 1248.55      |
| Year                             | .15            | -.17         | .22            | -.16         | -.33           | -.61         |
| Age                              | .30            | -.31*        | .35            | -.33*        | .31            | -.30*        |
| Paid work                        | -.02***        | -.01**       | -.02***        | -.01*        | -.02***        | -.01*        |
| Level of education               | 3.00**         | 1.40*        | 2.32*          | 1.45*        | 1.60           | 1.33         |
| Level of educ. spouse            |                |              | 1.23           | -.54         | -197.00        | -172.33      |
| Book reading of spouse           |                |              | .17**          | .08**        | -49.50         | -9.09        |
| Age*book reading of spouse       |                |              |                |              | .01            | -.00         |
| Year*level of educ. spouse       |                |              |                |              | .10            | .09          |
| Year*book reading of spouse      |                |              |                |              | .02            | .01          |
| Education*book reading of spouse |                |              |                |              | .07            | .01          |
| Adjusted 100 R <sup>2</sup>      | 3.4            | 1.7          | 5.1            | 2.8          | 6.3            | 2.4          |

\* = significant at 0.05 level, \*\* = significant at 0.01 level, \*\*\* = significant at 0.001 level.  
Source: Time Use Surveys 1999-2000 and 2009-2010, Statistics Finland, own calculations.

## **5.2 Highbrow culture**

In respect of highbrow culture attendance models (Table 3), the explanation percentages of the basic models (1a) and (1b) were very low. Coefficients were statistically insignificant except for the time devoted to paid work in the case of males, although the signs of coefficients were as expected: time devoted to these activities has decreased over the years, the old devoted more time than the young, and the highly educated devoted more time than the less educated. The significance of the negative sign of paid work among males was quite natural because, on the average, they devote more time to paid work than females, as mentioned above. When attendance of spouse was added to independent variables, the explanation percentages rose strongly (models (2a) and (2b)): they were as high as 43.9 per cent and 44.0 per cent, respectively. For instance, coefficient of attendance of spouse was in the case of the female model .74, which means that if the partner devoted 10 minutes per day to high culture attendance we can forecast that the wife herself devotes 7.3 minutes per day to high culture attendance. The importance of spousal influence reflects the fact that no other term in the models was as significant as this direct spousal influence. Thus, the hypothesis (1) was partly strongly supported by data but not in respect of spousal education.

In interaction models (3a and 3b) explanation percentages are even higher in comparison with models (2); the adjusted explanation percentages rose in the female model from 43.9 per cent to 51.1 per cent, and in the male model from 44.0 per cent to 54.5 per cent.

Models (3a and 3b) revealed that our hypothesis (2) according to which spousal effect on time devoted to highbrow culture attendance is stronger the higher the education of the spouse was supported by the data. Coefficients were .23 and .16. Thus, the observation made by Sullivan in the context of domestic work and Kraaykamp & alii in the context of reading holds true here in the context of highbrow culture. Models (3a and 3b) also revealed that as age increases, also the spouse effect increases, i.e. as people age they behave in an even more similar way to their partners. This means that also hypothesis (3) was supported by the data, and also indirect spousal influence was strong.

In the case of females, the interaction between education of spouse and year was negative. It means that spousal influence by education has diminished. Similarly in the case of females, interaction between attendance of spouse and year was significant, but positive. Thus, females have become more dependent on their cohabitant partner's attendance. An interpretation could be that spousal education has lost its status influence over time because of educational inflation, but behavioural spousal influence has become more important over time. In the case of males, there has been no significant change over years. Thus, the answer to the research question (4) is that there were only minor changes, and only in the case of females.

**Table 3**  
**Univariate linear model – B-coefficients on time devoted to highbrow culture attendance of spouses**

| Model                          | (1a)   | (1b)   | (2a)    | (2b)   | (3a)      | (3b)   |
|--------------------------------|--------|--------|---------|--------|-----------|--------|
|                                | Female | Male   | Female  | Male   | Female    | Male   |
| Intercept                      | 297.63 | 411.68 | -.78.20 | 297.45 | -1281.23* | 260.74 |
| Year                           | -.15   | -.21   | .04     | -.15   | .64*      | -.26   |
| Age                            | -.08   | -.01   | -.10    | .03    | -.17*     | -.07   |
| Paid work                      | -.01   | -.01*  | -.00    | -.00   | -.00      | -.00   |
| Level of education             | .69    | .50    | .33     | .19    | .05       | -63.56 |
| Level of educ. spouse          |        |        | -.02    | .03    | 304.61*   | -.10   |
| Attendance of spouse           |        |        | .74***  | .59*** | -43.64**  | 21.45  |
| Age*attendance of spouse       |        |        |         |        | .03***    | .08*** |
| Year*level of educ. spouse     |        |        |         |        | -.15*     | .03    |
| Year*attendance of spouse      |        |        |         |        | .02*      | -.01   |
| Education*attendance of spouse |        |        |         |        | .23***    | .16*** |
| Adjusted 100 R <sup>2</sup>    | 0.2    | 0.8    | 43.9    | 44.0   | 51.1      | 54.5   |

\*=significant at 0.05 level, \*\*=significant at 0.01 level, \*\*\*=significant at 0.001 level.  
 Source: Time Use Surveys 1999-2000 and 2009-2010, Statistics Finland, own calculations.

**Table 4**  
**Univariate linear model – B-coefficients of covariates on time devoted to computer use of spouses**

| Model                            | (1a)<br>Female | (1b)<br>Male | (2a)<br>Female | (2b)<br>Male | (3a)<br>Female | (3b)<br>Male |
|----------------------------------|----------------|--------------|----------------|--------------|----------------|--------------|
| Intercept                        | -3074.31***    | -3817.40***  | -3131.71***    | -3819.78***  | -2957.78**     | -5398.02*    |
| Year                             | 1.54***        | 1.91***      | 1.57***        | 1.91***      | 1.48**         | 2.70**       |
| Age                              | -.04           | -.02         | -.09           | -.03         | -.04           | .08          |
| Paid work                        | -.01           | -.02***      | -.01           | -.02***      | -.01           | -.02***      |
| Level of education               | .12            | 1.27         | .35            | 1.13         | .17            | 1.09         |
| Level of educ. spouse            |                |              | -.14           | .49          | -39.58         | 399.09       |
| Computer use of spouse           |                |              | -.00           | -.01         | -.37           | -34.56       |
| Age*computer use of spouse       |                |              |                |              | -.03           | -.02         |
| Year*level of educ. spouse       |                |              |                |              | .00            | -.02         |
| Year*computer use of spouse      |                |              |                |              | .02            | -.20         |
| Education*computer use of spouse |                |              |                |              | .01            | -.01         |
| Adjusted 100 R <sup>2</sup>      | 13.1           | 8.8          | 13.0           | 8.6          | 12.6           | 8.5          |

\* = significant at 0.05 level, \*\* = significant at 0.01 level, \*\*\* = significant at 0.001 level.  
Source: Time Use Surveys 1999-2000 and 2009-2010, Statistics Finland, own calculations.

Interaction models were confused by multicollinearity. In all interaction terms, direct spousal effect was positive, but in female model (3a) the main, direct, effect of attendance of spouse, the sign was negative. It seems as if the more time the spouse devotes time to highbrow culture the less a person in question does, and it is unbelievable.

### 5.3 Computer use

In respect of models on time devoted to computer use, the picture differs from the picture of previous models. In all models from (1) to (3), year was the statistically significant control variable. Among males, paid work also had a significant negative effect because of males' assumed longer hours in paid work than females. The term time devoted to computer use of the spouse and interaction terms had no significant effect on one's own computer use. On the contrary, adjusted explanation percentages from basic models (1) decrease systematically to models (3).

It was rather surprising that only the significance of year of survey was so strong, but not spousal influence and interaction terms. It could be thought that, in the beginning, computer use is independent of the partner's computer use but that over the years, spouses learn computer use from each other (interaction between age and computer use of partner). In hypothesis (1) it was assumed that in the activities where status value is lower and which are not so visible, spousal influence is also *lower* than in visible high status activities. This was not supported in the sense that there was *no* spousal influence. Not even hypothesis (3) according to which spousal effect is more powerful among older people than younger people was supported.

### 5.4 Conclusions and discussion

In this study the main purpose was to study the spouse effect in time use on some leisure activities. The result was that the direct spouse effect – spousal time use - in studied leisure time activities was as a whole remarkable in book reading and highbrow culture but not in computer use. These results were as expected. Instead, the indirect spouse effect – spousal education and spousal time use via own education – were not significant, and this result was different in comparison with earlier studies. The indirect spouse effect was significant only in the interaction of the direct spouse effect. We did not also find any remarkable changes in spousal effect over time.

However, strictly speaking, we cannot know whether the reason for the similar time use of both partners is due to the spouse effect. This means that if both partners devote much time, for instance, to attending concerts, it may be so because attending concerts has been one of the selection criteria of the spouse! Lizardo (2006) argues strongly for this alternative, which appears already in the title of her article *How cultural Tastes Shape Personal Networks*. However, her arguments cannot be finally persuasive, because she only used cross-sectional data.



However, although this study, strictly speaking, did not reveal the partner's influence on a person's time use, partner influence can be concluded on the basis of interaction between age and time use of the partner. Older couples use their time more similarly than younger ones.

In addition, it must be remembered that although the results proved strong spouse effect especially in the time devoted to high culture attendance, they do not tell us anything about the direction of the influence. This means that we do not know the effect of one spouse on the other spouse.

However, the results of this study do not reveal whether spouses devote time to the studied activities together. On the basis of the basic data of this study it would have been possible to approach this issue, because we also asked whether the respondent was alone or together with somebody when the activity was carried out. However, time use diaries were incompletely filled in this respect. However, it is reasonable to assume that in these cases couples do attend together because the time use of couples was recorded mainly on the same days. Also, on the basis of the study of Upright, it is much more usual to go together to a gallery, musical, classical concert, theater, dance or opera than to go alone (p. 133).

A problem in time use data is that when it tries to cover all human activities it is superficial in individual areas. For instance, we know only the time devoted to book reading, but we do not know if people read fiction or non-fiction, and we do not even know if they read popular or literary books.

In this study, only spouse effect on time use has been studied. In the following paper the purpose will be to broaden the view and to take also children into account. What is the impact of parents on the time use of their children? All in all, this study gives some new perspectives to the sociability of time use but, simultaneously, opened us new questions about the topic.

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