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# Happiness, Civil Society Participation and Voluntariness: Analyzing the Case of Neighborhood Associations in Japan

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# Abstract

This article analyzes the relationship between subjective well-being (SWB) and participation in neighborhood associations (NHA) in Japan. While the theoretical and empirical literature suggests a strong positive correlation between participation in NHAs and SWB, recent research on Japan could not validate this result. The present study shows how those diverging results can be explained in light of existing theoretical frameworks such as the selfdetermination theory. Using linear regression models on data from two different studies, we find that participation in NHAs can be positively associated with SWB even in the case of Japan. However, this positive association disappears (1) when the activity is conducted involuntarily and (2) in the case of men when other activities are controlled for. Finally, we find that (3) controlling for subjective loneliness has in some cases detrimental effects on the positive correlation between NHA activities and SWB.

JEL: I31, D64, L31

Keywords:

Neighborhood Associations, Subjective Well-being, Japan, Political Participation, Civil Society

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#### 1. Introduction

In happiness research, and happiness economics in particular, social phenomena and social states of affairs are assessed and evaluated by looking at their underlying correlations with subjective well-being (SWB). SWB is often measured in large-scale representative surveys asking the respondents to evaluate how happy – or satisfied with their lives– they are lately.<sup>1</sup> The results of this kind of research reveal causes and correlates of SWB which can be used to (1) identify social problems<sup>2</sup>, (2) capture and compare the status-quo in terms of SWB with results from the past or different countries (Blanchflower and Oswald 2011), and (3) to generate and evaluate policy measures<sup>3</sup>.

Despite the growing number of publications in the field of happiness research, analyses of the relationship between "happiness" and "civil society" have been relatively scarce. One of the few studies addressing "civil society" as the object of investigation is Wallace and Pichler (2009). A reason for this apparent shortcoming might be that due to its many measureable and immeasurable dimensions, the concept of "civil society" is lacking a clear-cut definition that can be easily applied in empirical analyses. However, a variety of aspects closely related to civil society have been subject to previous research indicating a positive correlation with SWB on an individual level. Particularly, political participation (Pacheco and Lange 2010), participation in the community (Cicognani et al. 2008) and social capital in general (Helliwell and Putnam 2004) show a significant positive correlation with SWB.

Although "[n]eighborhood associations are often regarded as the most genuine form of civil society organizations" (Meyer and Hyde 2004, p. 77S), only a few studies consider the individual membership status of neighborhood associations (NHA) in their happiness estimations. Those studies that take neighborhood associations into account, usually use one dummy variable including all different kinds of associations – not only NHAs, but also sports, music and hobby clubs – for which they report a positive correlation with SWB (Frey and Stutzer 2002, pp. 164– 165). Considering that the activities of NHAs are at least partially political

<sup>&</sup>lt;sup>1</sup> In this article, we use the terms happiness, SWB and life satisfaction without distinction.

<sup>&</sup>lt;sup>2</sup> For example TV over-consumption, Frey et al. (2007).

<sup>&</sup>lt;sup>3</sup> See for example the policy purposes of happiness data considered by Dolan et al. (2011).

(Pekkanen 2006), contribute to the community (Portney and Berry 2001) and can be regarded as the most basic source of social capital (Houwelingen 2012), this result is in line with the empirical findings on the relationship between SWB and different aspects of participation in civil society in general.

However, analyzing the correlates and determinants of happiness in Japan, Tiefenbach and Kohlbacher (2013) find that women are significantly less happy when their household belongs to a neighborhood association. Using the same data in a different model setting, they still find no positive correlation for the relationship between SWB and NHA participation on the individual level, in this case neither for women nor for men (Tiefenbach and Kohlbacher 2014). These results stand in stark contrast to the bulk of SWB related literature on political participation, participation in the community and social capital. They further call the underlying theoretical frameworks – such as the *self-determination theory* and the *broaden-and-build theory* (see 2.1 below) – which can explain how and why active participation in any kind of associations relate to SWB, into question.

Given this apparent contradiction, the aim of this paper is to conduct a more refined analysis of the relationship between participation in neighborhood associations and SWB in Japan. Therefore, this article is based on two studies. *Study one* uses the same data as in Tiefenbach and Kohlbacher (2013; 2014), but extends the analyses by including more detailed variables regarding the NHA membership status and activities. *Study two* makes use of an online sample which was exclusively designed for this project. This not only allows us to put the findings of *study one* into perspective, but it also aims at a sophisticated understanding of the factors that influence the relationship between SWB and NHA activities.

In a nutshell, we find that participation in NHA can be positively associated with SWB even in the case of Japan. However, this positive association disappears (1) when the activity is conducted involuntarily and (2) in the case of men, when the overall level of activity is controlled for. Finally, we find that (3) controlling for subjective loneliness has in some cases detrimental effects on the positive correlation between NHA activities and SWB.

This article is structured as followed. Section 2 reviews the theoretical foundations as well as empirical studies and proposes three explanatory theories derived from the literature which explain why SWB and NHA might not show a

positive correlation. Section 3 and Section 4 describe the data, variables and results of our *studies one* and *two* respectively. Section 5 evaluates the results in light of the theories and literature elucidated in section 2. Finally, section 6 concludes the paper.

# 2. Theoretical foundations and empirical literature

In this section we first briefly introduce two theoretical frameworks that explain why empirical investigations find a positive correlation between participation in civil society and SWB. In a second step, we review literature that gives evidence on how participation in civil society and life satisfaction are correlated by highlighting three aspects: (1) political participation, (2) participation in the community, and (3) social capital. Subsequently, we show how these three perspectives on participation relate to neighborhood associations in Japan. We then, however, present differing survey results on the case of Japanese neighborhood associations and subjective feelings of well-being. We conclude this session by offering three different explanations of why previous research results on Japan contradict most of the theoretical and empirical literature.

# 2.1. Underlying theoretical frameworks

Psychological theory basically offers two approaches that can explain the relationship between SWB and active participation in civil society. The difference between both approaches does not so much concern the sign of the effect – which is assumed to be positive – but rather revolves around the direction of causality: Does participation make people happier, or is it the happy people who become active and participate? While self-determination theory provides support for the former idea, the broaden-and-build theory implies that positive emotions cause people to become more active.

#### 2.1.1 Self-determination theory and the concept of procedural utility

Self-determination theory (SDT) is a psychological theory of human motivation and personality based on three underlying assumptions (Deci and Ryan 2000; Deci and Vansteenkiste 2004): (A) human beings are "inherently proactive", that is they can - to some extent - control and act on the external and internal forces they are exposed to. (B) Based on this capacity to act humans have an "inherent tendency" towards growth, development and well-being. However, (C) to what extent this tendency is actually realized in positive outcomes depends on their social environment. Building on this meta-theoretical framework, SDT postulates three innate psychological needs for competence, relatedness and autonomy. Those needs are understood as "universal necessities" that constitute "the nutriments that are required for proactivity, optimal development, and psychological health of all people", regardless of gender, culture and time (Deci and Vansteenkiste 2004, p. 25). The need for competence refers to the desire to *effectively* act on and deal with one's environment. The need for autonomy is closely related to that, since it is concerned with the urge to be a *causal agent*, that is to experience a *sense of* choice when interacting with the environment. Finally, the need for relatedness refers to the propensity to seek and foster interpersonal relationships and to experience a sense of connectedness. However, whether the interaction with the outside world proves to be supportive for an individual – for example in terms of SWB – depends on to what degree all of the three needs are satisfied (Deci and Ryan 2000, p. 229).

In happiness economics Frey et al. (2004) introduce the core elements of SDT within their concept of *procedural utility*. While mainstream economics has exclusively focused on results and outcomes (so called *outcome utility*), Frey et al. show that not only the outcome, but also the process of how results are reached, matters. If a process satisfies the needs of competence, relatedness and autonomy among the participating individuals, then procedural utility – often measured in terms of SWB – can be gained, even if the result of the process does not correspond to one's own goals (Benz 2007).

## 2.1.2 Positive affect and happiness as a factor of activity and success

While SDT implies that people become happier if activities and processes they are involved in satisfy their psychological needs, the causality of happiness can also be understood the other way round: Happiness can activate people and thus becomes a factor for more success in life. Again, psychology offers theoretical explanations. The central idea of the "broaden-and-build theory of positive emotions" (Fredrickson 1998, 2001, 2004) is that "positive emotions appear to broaden peoples' momentary thought-action repertoires and *build* their enduring personal resources" (Fredrickson 2004, p. 1369). Positive emotions in this understanding activate people in a way that makes them expanding their experiences and building up new skills. For example, higher subjective feelings of well-being can affect the question of whether to participate as a political activist or not. The effect is not just a momentary one but has a long lasting outcome: By accumulating positive emotions and by experiencing broadening and building activities, happy people themselves "transform [...] for the better, making them healthier and more socially integrated, knowledgeable, effective and resilient" (Fredrickson 2004, p. 1373). Thus, positive emotions have the potential to positively affect people's growth and development. Lyubomirsky, King and Diener (2005, p. 804) extend this model by stressing that "chronically happy people are in general more successful".

#### 2.2 Literature on participation and happiness

The theoretical approaches on the correlation of happiness and being active have been tested in various studies. We will briefly give an outline on studies that touch on three aspects related to participation in civil society and neighborhood organizations, namely (1) political participation, (2) participation in the community and (3) social capital.

#### 2.2.1 Political participation

The idea how political participation can lead to SWB has been described by Drèze and Sen in the following way: "Participation can also be seen to have intrinsic value for the quality of life. Indeed, being able to do something through political action – for oneself and for others – is one of the elementary freedoms that people have reason to value" (2002, p. 359). Theories on political participation stress that "political participation is likely to yield psychic benefits, increasing the participating individual's sense of efficacy, political knowledge, and feeling of empowerment" (Weitz-Shapiro and Winters 2011, p. 103).

Empirical studies on the relationship between political participation and SWB basically report a positive correlation. Among the studies in support for the SDT, the effects of the *right to participate* and the effects of *actual participation* have to be distinguished. Regarding the former, Frey and Stutzer have disentangled the effects of the opportunity to participate politically from the actual benefits derived by the political outcomes for the case of Switzerland. In a series of papers they show that it is not only the outcome, but also the process – in this case the right to participate – that positively enhances SWB (Frey and Stutzer 2000a; Frey and Stutzer 2000b; Frey and Stutzer 2005; Stutzer and Frey 2006). While Frey and Stutzer focus on the case of Switzerland, Dorn et al. (2007) reproduce their findings using international data from 28 countries.<sup>4</sup>

Apart from studies on the effect of the right to participate, also the effect of actual political participation on SWB has been analyzed in the literature. Using data from the 2006/2007 European Social Survey Pacheco and Lange (2010) show that a strong political engagement positively affects SWB. They establish this *causal* relationship by using vertical trust (in institutions) as an instrument to compensate for endogeneity.

On the other hand studies such as Weitz-Shapiro and Winters (2011) and Flavin and Keane (2012) found supporting evidence for the broaden-and-build theory. Drawing on data from 18 countries in Latin America, Weitz-Shapiro and Winters (2011) show that happier people vote more often. However, political participation does not only consist of voting alone. To participate politically can include a great variety of activities, among them many that require more energy than going to the polls does. Weitz-Shapiro and Winters (2011) emphasize that the level of life

<sup>&</sup>lt;sup>4</sup> However, in another study, Dorn et al. (2008) put the evidence for a correlation between the right to participate and SWB in the Swiss case into perspective by adding culturally determined control variables such as language.

satisfaction presumably effects what form of activity to choose. By using a broader index of political participation for data from the US, Flavin and Keane (2012) find that a higher level of SWB leads to more established patterns of participation, such as voting, but not to more "conflictual" forms of political participation such as protest activities.

#### 2.2.2 Participation in the community

Similar to political participation, participation in the community is considered to have a positive outcome on SWB. Studies on European countries and the US have supported the hypothesis that people who participate in civil society associations are happier on an individual level (Howard and Gilbert 2008; Wallace and Pichler 2009). Wallace and Pichler (2009) have also given evidence for a positive correlation between the participation in society and average SWB on the country level.

Cicognani et al. (2008) show that the effect of community participation on social well-being is mediated by the sense of and identification with community, but that in some countries also a direct effect of community participation on social well-being can be observed. In a similar vein, Farrell, Aubry and Coulombe (2004) show that the sense of community mediates the relationship between neighborhood stability and residents well-being. Dimensions of the sense of community include membership, influence, integration and fulfillment of needs as well as a shared emotional connection (McMillan and Chavis 1986) and perceived characteristics such as similarities and interdependence with others and the feeling of belonging (Sarason 1974, p. 174).

The positive connection between sense of community and life satisfaction is further highlighted by studies such as Davidson and Cotter (1991), McCarthy et al. (1990), Pretty et al. (1996) and Prezza et al. (2001). The positive outcome of community participation on SWB has also been analyzed for certain population groups such as senior citizens (Graney 1975). Apart from effects on SWB, Wandersman and Florin (2000) refer to numerous studies and point out that participation in neighborhood communities not only affects the social environment and the quality of interpersonal exchange within the community, but also has an impact on individual perceptions of the self, such as increasing "confidence and efficacy". Finally, some studies also report a reverse causal relationship: Grillo et al. (2010), for example, find that satisfaction with the community leads to a higher community participation.

#### 2.2.3 Social capital

Closely connected to community participation is the discussion about social capital and its correlation with SWB. Due to its numerous definitions, empirical studies typically use a variety of proxy variables to gauge the level of social capital. Measuring social capital in terms of generalized trust, perceived corruption and civic participation, Bjørnskov (2003) finds a positive correlation with SWB on the country (macro) level. On the individual (micro) level, Leung et al. (2011), for example, examine the correlation of SWB and different aspects of Coleman's (1988) definition of social capital consisting of: (a) trust and obligations, (b) information channels and (c) norms and sanctions. They find significant relationships between all these aspects of social capital and happiness. Similarly, they report a positive correlation between happiness and feelings of a sense of belonging to a community. Finally, they conclude their study by pointing out that "trust" - which can be considered as a basic measure for social capital - "is an essential element of life satisfaction" (Leung et al. 2011, p. 452). While Leung et al. draw on data from Canada's 2003 General Social Survey, Portela et al. (2013) take a similar approach, using data from the European Social Survey 2008. Differentiating between several dimensions of social capital (trust, norms and networks) as well as various measures for SWB, they find that in "particular, social networks, social trust and institutional trust are the components that show a higher correlation with subjective wellbeing" (Portela et al. 2013, p. 506).

Finally, since local community organizations, such as NHAs, generate social capital in all of the above mentioned domains, they are considered to enhance "individual and social well-being" (Reisch, Guyet 2007, p. 166). Confirming evidence is provided by Miller and Buys (2008). In a case study of an Australian community they show that community activities as well as feelings of trust and safety are positively related to life satisfaction and happiness.

#### 2.3 Neighborhood associations in Japan

Neighborhood associations and neighborhoods in general are considered to be the "wellspring of social capital" (Portney and Berry 2001, p. 71) and this view also applies to the case of Japanese NHAs (Houwelingen 2012; Kanaya 2008; Tsujinaka and Pekkanen 2008; Nishide 2009). In Japan, NHAs are a particular and widespread form of civil society organizations at the community level. Around 300,000 NHAs exist throughout the country, each consisting of about 100 to 300 households (Pekkanen 2006, p. 87). As most households in the community tend to be a member of the local NHA, the number of members is estimated to be very high, but signs for declining interest can be identified among younger generations, too (Houwelingen 2012; Pekkanen 2006; Kanaya 2008; Haddad 2011). For an exact definition of NHA we draw on Pekkanen (2006):

Neighborhood associations are voluntary groups whose membership is drawn from a small, geographically delimited, and exclusive residential area (a neighborhood) and whose activities are multiple and are centered on that same area (Pekkanen 2006, p. 87).

The decision to join the local NHA or not is *formally* a voluntary one, but it cannot be denied that "many Japanese participate in NHAs [...] because they feel that to do otherwise would affect their reputation with neighbors" (Pekkanen 2006, p. 91). The reason why NHAs are still considered to be "voluntary" associations is that non-participation is constrained by social compulsion, but not by coercion (Pekkanen 2006). Social compulsion, however, is a common constraint of many other associations, not only in Japan, but also in Western countries.

Although the activities of NHAs vary pretty much depending on the association and its member structure, basically two types of activities can be distinguished, and both can be related to the generation of social capital: (1) Political participation and administrative cooperation and (2) participation in the community. We briefly review both types of activities below and highlight how they relate to the production of social capital.

#### Political participation and administrative cooperation

Although not all NHAs, and within them not all of their members, can be considered to participate politically, NHAs actually advocate local policies by petitioning the local government and by contacting members of the local assembly (Tsujinaka et al. 2009). They also participate in election campaigns of local assembly candidates, which is one reason why they are considered to be a valuable tool for politicians to reach people and to build up supporting networks (Pekkanen 2006, pp. 97–98). What kind of political activities are pursued depends strongly on the political opportunity structure and on the respective trust relations with the political decision makers (Tsujinaka et al. 2009, p. 187).

Apart from those activities which are directly related to the political process<sup>5</sup>, NHAs also cooperate with the local government for example by disseminating information, surveys, personnel recommendations and disaster schemes (Thränhardt 1990; Mori 2002; Tsujinaka et al. 2009). Although NHAs are compensated for these administrative activities by payments of the local government, they still have to be regarded as independent civil society organizations (Pekkanen 2006; Houwelingen 2012). However, the activities of NHAs are by far not limited to political-administrative issues.

#### Participation in the community

Apart from political and administrative activities, NHA engage in a large variety of community activities which are of equal importance (Yasui 1985). The different activities in the neighborhood range from organizing local shrine festivals and sports events to cleaning local parks, building and maintaining a community center as well as crime and fire prevention activities and frequent disaster drills. Apart from that, NHAs can also be considered as a local key institution providing support for various groups like children, the elderly as well as the socially deprived (Thränhardt 1990; Tsujinaka et al. 2009; Pekkanen 2006).

Through the above mentioned activities NHA members form networks within and outside the organization which can be characterized by a high level of

<sup>&</sup>lt;sup>5</sup> Mori (2002) even characterizes activities such as petitioning the local government and the relations with local assemblymen during election campaigning as cooperation with the administration (*gyōsei kyōryoku*).

generalized trust and mutual benefit (Pekkanen 2006; Taniguchi and Marshall 2014; Tsujinaka and Pekkanen 2008). All these characteristics have been related to social capital (Putnam 2000). However, not only NHA members, but also the social environment benefits by this "generation of social capital" which is one reason why NHAs are being actively promoted by local governments (Pekkanen 2006).

### 2.4 SWB and NHAs in Japan

While the different strands of theoretical and empirical literature reviewed above suggest a positive correlation between NHA participation and SWB, two recent studies on Japan show conflicting results. Using data from National Survey on Lifestyle Preferences (NSLP) 2011 in Japan, Tiefenbach and Kohlbacher (2013) show that women report significantly lower levels of happiness when their household belongs to a NHA. Apart from standard socio-demographics, they also control for the subjective loneliness of the respondents. This might actually influence the results in a way that makes comparisons to other studies, which do not use subjective loneliness is not part of the control variables, Tiefenbach and Kohlbacher (2014) show for the same data that personal participation in NHAs does not show a positive correlation with happiness, neither for women nor for men. Taken together, the results suggest that NHA membership and participation are not correlated with SWB in the case of Japan.

# 2.5 Explanatory theories and hypotheses

There are basically two explanations why the previous studies mentioned above have not found a positive correlation between SWB and NHA in Japan. First, it is possible that the data used in previous studies contains artifacts or is in some other way biased towards a non-positive correlation between SWB and NHAs. Secondly, it is possible that previous studies have been subject to either *over-determination* (too many variables controlled for) or *omitted variables*. Based on the literature reviewed above we construct three explanatory theories (T1, T2, T3) centered around three variables that can theoretically explain why no positive correlation between SWB and NHA activities was found in the previous studies on Japan.

# Explanatory theory one (T1): Loneliness

Given that NHAs in Japan mainly focus on community related activities such as the organization of festivals, it is likely that most of them do not foster any "skills" or "competences" of the average participant. Neither is it likely that they help the average member to become more "autonomous" or to make more "autonomous decisions". This would reduce the sources of procedural utility associated with NHAs solely to the promotion of interpersonal relationships. If, however, a measure of subjective loneliness is controlled for in the happiness analysis of NHA membership – like it is the case in Tiefenbach and Kohlbacher (2013) – then the "positive" effects of NHA on happiness are already filtered out by such a control variable. This would leave only the "negative" or "neutral" aspects of NHA membership to be reflected in the regression coefficient. Based on this theory (T1) we formulate the following hypothesis:

H1: Including subjective loneliness in the control variables yields non-positive coefficients for NHA membership or participation.

# Explanatory theory two (T2): The level of overall activity

If a high level of happiness or positive affect is correlated with a higher level of activity in general, then rather the latter, and not the NHA participation in particular, will show a positive correlation with happiness. Based on this theory (T2) we formulate the following hypothesis:

H2: When including a measure for the overall level of activity in the controls, the correlation between happiness and NHA participation will disappear.

# Explanatory theory three (T3): Involuntariness

Given the rather semi-voluntary nature of NHAs in Japan, it can be assumed that only a part of the members join NHA activities voluntarily, while other members feel obligated to join and therefore participate rather involuntarily. If, as selfdetermination theory predicts, autonomy is related to higher levels of well-being, the lack of it has to be associated with comparably lower levels of SWB. Based on this theory (T3) we formulate the following hypothesis:

H3: Differentiating between voluntary and involuntary NHA participation will reveal lower levels of SWB for the latter.

It is important to note that the explanatory theories described above (T1, T2, T3) are not mutually exclusive. The following analyses should provide evidence rendering some of the theories above more plausible than others. However, based on our empirical models we cannot test the theories directly. What we do test are the hypotheses derived from them. Rejecting or confirming the hypotheses gives us some first evidence regarding the plausibility of the underlying explanatory theories (T1, T2, T3). This will not only give us a better understanding of the observed phenomenon, it will also point us to a direction where further research is needed.

# 3. Study one

To verify the results of Tiefenbach and Kohlbacher (2013; 2014) *study one* uses the same data from the National Survey of Lifestyle Preferences (NSLP) 2011. We further extend the analysis by including *loneliness* and *involuntariness* as variables to test our hypotheses H1 and H3. However, due to a lacking measure of the overall level of activity, the data does not allow us to test H2 in *study one*. The following sub-sections describe our data, method and results.

#### 3.1 Data

#### 3.1.1 The survey

Since 2010 the Cabinet Office of the Government of Japan has put the focus of one of its major annual surveys, the NSLP, on happiness and its correlates. *Study one* is based on 2011 data of the NSLP. Apart from questions regarding individual

happiness, the survey's second focus is on so called "new public commons", that is, activities in NGOs and community-based associations. In a two-stage randomized stratified procedure 5000 Japanese men and women between the age of 15 and 80 years have been selected to participate in the survey. An independent market research agency (*Shin Joho Center, Inc.*) was commissioned to deliver and collect the questionnaires from the respondents. The questionnaire items are explained in person to the participants after which they had a few days to complete the survey. The data collection took place between March 3 and March 29 in 2011. In total 3578 completed questionnaires have been collected which equals a response rate of 71.6%.

Since the process of the data collection was interrupted by the triple disaster of March 11, 2011 (Mimura et al. 2011), chances are that the results have been biased. However, Tiefenbach and Kohlbacher (2014) have shown that although the predisaster and post-disaster group are unbalanced regarding the observable control variables, there was no statistically significant effect on the average happiness level before and after March 11. However, to avoid biasing the results with respondents who have been directly affected by the disaster, Tiefenbach and Kohlbacher (2014) excluded the main three disaster areas (Miyagi, Fukushima and Iwate) from their analysis. Following their approach we drop all observations from those three prefectures from our dataset.

#### **3.1.2** Variables of interest

We measure SWB by using the self-evaluated happiness level of the respondents. The survey item reads: "How happy are you currently?", and the respondents can indicate their personal happiness level on a scale ranging from 0 to 10.

To reconfirm and extend the findings of previous studies, we rely on several different predictor variables which we apply in various model settings. First, we include a dummy variable *NHA household membership* indicating whether the household is registered to a NHA. Next, we include a dummy variable which measures the voluntariness of the household membership. One survey question asks respondents to name up to three reasons, why their household belongs to a neighborhood association. The dummy variable *involuntary member* takes a value

of "1" for all respondents who name one or more of the following reasons: because (1) "it's an obligation", (2) "it's a rule at the condominium where I live", (3) "I was persuaded", (4) "other people around me participate too". Further, we also include a dummy variable indicating *personal participation in NHAs*. The variable takes the value "1" for all respondents that either (a) "participate regularly" or that (b) "participated in the past". We further split this variable up by differentiating between *regular NHA participation* and *experienced NHAs participation*. Apart from variables regarding the NHA membership status we also include an index of subjective loneliness. The respondents are asked to indicate their feelings of loneliness in four different life domains (family, region, workplace and school) on a scale ranging from 1(=not lonely at all) to 5(=very lonely).<sup>6</sup> By calculating the average of the four areas of loneliness we constructed an *overall loneliness index*.

Finally, we include several common control variables, such as household income, age, age-squared, gender, family status (cohabitation with one's spouse as a proxy for marriage; children number and a dummy for children under the age of 6 years), homeownership, employment relationship<sup>7</sup>, and the prefecture of the respondent.

<sup>&</sup>lt;sup>6</sup> We recoded the original scale which ranged from 1(=very lonely) to 5(=not lonely at all).

<sup>&</sup>lt;sup>7</sup> The following employment relationships are compared to the reference group of regular employees: managing position; civil servant; directorial board (company); non-private organization (incl. directorial board); entrepreneur; temporary employee; housewife; student; without work.

# 3.1.3. Descriptives

Table 1 shows the summary statistics of the NSLP 2011 sample described above.

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent variable					
Happiness	3430	6.47	2.02	0	10
Independent variables					
Household is NHA member	3434	0.73	0.44	0	1
Household is NHA member involuntarily	3438	0.45	0.50	0	1
Household is NHA member voluntarily	3438	0.28	0.45	0	1
Personal NHA participation	3578	0.31	0.46	0	1
Personal regular NHA participation	3438	0.12	0.32	0	1
Personal experienced NHA participation	3438	0.19	0.39	0	1
Overall loneliness index	3365	2.14	0.86	1	5
Control variables					
Women	3438	0.51	0.50	0	1
Age	3438	48.56	17.08	15	79
Household income	3026	494.65	302.62	50	1200
Homeownership	3428	0.78	0.42	0	1
Family relations					
Married	3224	0.70	0.46	0	1
Number of children	3385	1.41	1.12	0	9
Children under the age of 6 years dummy	3385	0.16	0.49	0	3
Employment relations					
Managerial Position	3429	0.06	0.23	0	1
Civil servant	3429	0.04	0.19	0	1
Board of directors (company)	3429	0.02	0.15	0	1
Working in a non-private organization	3/20	0.01	0 1 2	0	1
(incl. board of directors)	5425	0.01	0.12	0	T
Entrepreneur	3429	0.11	0.31	0	1
Temporary employee	3429	0.17	0.38	0	1
Housewife	3429	0.14	0.34	0	1
Student	3429	0.08	0.27	0	1
Without work	3429	0.16	0.36	0	1

Table 1: Summary Statistics of the NSLP 2011

(excluded are the disaster affected prefectures Miyagi, Fukushima and Iwate)

## 3.2 Analysis

The following sections describe the applied statistical methods and their results.

# 3.2.1 Method

Following the standard procedure in happiness economics, we apply several OLS multivariate regression models to the NSLP 2011 data. We estimate the happiness levels of the respondents by entering the variables described above into the right hand side of the following equation:

(1) 
$$H_i = \alpha + \gamma' X_i + \varepsilon_i$$

where H indicates the reported happiness level of respondent *I*;  $X_i$  denotes the variables as specified above (3.1.2); and  $\gamma'$  is a vector representing their coefficients. Finally,  $\alpha$  and  $\varepsilon$  denote the intercept and the error term, respectively. We run each of our models on the whole sample (a) as well as separately for women (b) and men (c). As a robustness check we further used the same variables in ordered probit models, but significant differences were not found (results are provided upon request).

# 3.2.2 Results

Table 2 shows the results for NHA membership on the household level. Apart from the above mentioned control variables, models 1a-1c only include a dummy variable indicating the NHA membership status of the household. While the household membership coefficient has a negative coefficient in all models (1a-1c), it turns out to be substantial in size (-0.233 points on the scale ranging from 0 to10) and statistically significant (at the 10% level) only in the case of women (1b). To test to what extent controlling for loneliness has an influence on the relationship between NHAs membership and happiness, we include the overall loneliness index in models 2a-2c. Including loneliness in the controls has a negative effect on the

	model1a	model1b	model1c	model2a	model2b	model2c	model3a	model3b	model3c
Sample	Total	Women	Men	Total	Women	Men	Total	Women	Men
Model	OLS								
Variables	happiness								
Household is NHA	-0.152	-0.233+	-0.092	-0.258**	-0.371**	-0.178			
member	(0.093)	(0.136)	(0.130)	(0.086)	(0.126)	(0.121)			
Overall loneliness index				-0.774***	-0.859***	-0.687***			
				(0.046)	(0.062)	(0.067)			
Household is NHA							-0.229*	-0.338*	-0.150
member involuntarily							(0.097)	(0.142)	(0.136)
Household is NHA							-0.015	-0.042	0.017
member voluntarily							(0.107)	(0.153)	(0.151)
Controls	yes								
Observations	2,799	1,416	1,383	2,748	1,390	1,358	2,800	1,417	1,383
Adj. R-squared	0.134	0.107	0.147	0.235	0.234	0.226	0.135	0.110	0.148
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

 Table 2: Regression results for NHA membership on the household level (study one)

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10

correlation between NHAs household membership and happiness. Not only are the negative coefficients bigger in size compared to models 1a-1c, further, NHA household membership is now statistically significant at the 1% level in the total sample (-0.285 points in model 2a) as well as for women (-0.371 points in model 2b). Only for men (-0.178 points in model 2c) a statistically significant negative correlation between happiness and NHA household membership cannot be found. Finally, we differentiate in models 3a-3c between involuntary and voluntary NHA household membership. Compared to respondents whose households does not belongs to a NHA, respondents whose household is a voluntary member of a NHA do not report higher levels of happiness. Looking at respondents whose household is a 'involuntary NHA member' reveals that they report statistically significant lower levels of happiness (-0.229 in model 3a and -0.338 in model 3b). However, this is not the case for the male subsample (3c). Here the negative correlation with involuntary NHA membership and happiness does not turn out to be significant.

After analyzing NHA membership on a household level, we now look at the results for personal participation in NHAs reported in Table 3. Models 4a-4c show that compared to respondents who have never participated in NHA activities respondents who have participated in NHA in the past do not report significantly different happiness levels. However, respondents who participate in NHA activities regularly report a significantly higher level of happiness compared to people who have never participated (4a). Looking at the split-up between women and men, we see that this correlation only holds for the latter (4c). In model 5a-5c we again add the overall loneliness index to the predictor variables. Similarly to the results of model 2a-2c on the household level, we observe that controlling for loneliness has detrimental effects on the correlation between NHA participation and happiness. The positive correlation of 0.257 points reported in model 4a drops to 0.015 and loses its statistical significance (model 5a). For women the coefficient even turns negative (-0.262) statistically significant at the 10% level (model 5b). For men that coefficient drops half in size from 0.477 to 0.244 and also the level of statistical significance changes from 1% to 10% in model 5c. In a last step, we combine household membership and personal NHA participation in models 6a-6c. Apart from the single variables we also include an interaction term combining respondents who personally participate or have participated in NHA activities and

	model4a	model4b	model4c	model5a	model5b	model5c	model6a	model6b	model6c
Sample	Total	Women	Men	Total	Women	Men	Total	Women	Men
Model	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Variables	happiness	happiness	happiness	happiness	happiness	happiness	happiness	happiness	happiness
Personal regular NHA	0.257*	0.045	0.447**	0.015	-0.262+	0.244+			
participation	(0.106)	(0.149)	(0.155)	(0.101)	(0.141)	(0.148)			
Personal experienced NHA	0.030	-0.094	0.156	-0.019	-0.170	0.130			
participation	(0.090)	(0.127)	(0.132)	(0.085)	(0.115)	(0.130)			
Overall lenglingss index	, ,	ι <i>γ</i>	ζ γ	0 766***	0 961***	0 675***			
				(0.047)	-0.801	-0.075			
Household is NHA member				(0.017)	(0.003)	(0.007)	-0.167	-0.246+	-0.119
involuntarily							(0.103)	(0.150)	(0.144)
, , , , , , , , , , , , , , , , , , ,							0.120	0.105	0.120
Household is NHA member							-0.126	-0.105	-0.136
voluntarily							(0.115)	(0.166)	(0.160)
Personal NHA							0.331**	0.174	0.474**
participation							(0.114)	(0.159)	(0.164)
Interaction:									
Pers. NHA participation X							-0 382*	-0 372+	-0 369+
Household is NHA member							(0.154)	(0.214)	(0.223)
involuntarily							(01201)	(0)	(0.220)
Controls	ves	Ves	ves	ves	Ves	ves	ves	Ves	Ves
	,	,	, co	,	, 00	,	,	,	,
Observations	2,800	1,417	1,383	2,749	1,391	1,358	2,800	1,417	1,383
Adj. R-squared	0.134	0.105	0.152	0.232	0.230	0.226	0.137	0.111	0.152
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

 Table 3: Regression results for personal NHA participation (study one)

Robust standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10

whose household is an involuntary NHA member. Looking at the total sample in model 6a, two interesting results can be found. First, personal participation in NHA activities is statistically significantly correlated with happiness by 0.331 points. This positive correlation is more or less canceled-out by the negative correlation of -0.382 points reported by people who personally participate in NHA activities, but whose household is an involuntary NHA member. In other words, the voluntariness of the participation and the act of participation itself are of equal size. Looking at the split-up between women and men, we find that personal NHA participation only shows a positive correlation for men (0.474 points in model 6c) but not for women (0.174 points, but not significant). Nevertheless, the negative correlation of the interaction term can be found in similar size for both women (-0.372 points in model 6b) and men (-0.369 points in model 6c). This indicates that involuntary participation is rather a problem for women, since they only experience disutility from involuntary participation, but they do not receive the benefits associated with personal engagement in NHAs.

# 3.2.3 Short summary of study one

Based on the findings of *study one* we come to the following preliminary conclusions. While NHA household membership is negatively correlated with happiness in the case of women, personal NHA participation shows a positive correlation for men. Independent of whether looking at NHA membership at the household or at the personal level, we find that (1) controlling for subjective loneliness has detrimental effects on the relationship between NHA membership and happiness. Further, (2) differentiating between voluntary and involuntary NHA membership reveals that the latter is negatively correlated with happiness.

# 4. Study two

To confirm the findings of *study one* and to further take the effects of the general activity level into account, we conducted *study two* using an online sample of 1660 Japanese respondents.

# 4.1 Data

# 4.1.1 The sample

In September 2013 the German Institute for Japanese Studies (DIJ) conducted an internet survey through *Macromill*, which is with over 1 million panel registrants one of the leading online research companies in Japan. From the population of the *Macromill* panel

registrants 20,000 were randomly chosen in the screening process and an e-mail questionnaire was sent to them on September 26, 2013. The survey was closed after the sample size of 1660 respondents was reached on September 27, 2013. The sampling frame was designed to compare an equal amount of respondents participating and not participating in NHAs, equally distributed across gender and age. Accordingly, the sample is composed of 830 men and 830 women equally distributed in the age groups of 20-29 years, 30-39 years, 40-49 years, 50-59 years and 60-69 years (332 respondents in each age group respectively). Further, half of the respondents are actively engaged in NHAs (participating at least once a year), while the other half of the respondents are not taking part in NHA activities (including passive members who are registered, but not actively participating).

# 4.1.2 Variables of interest

We are basically interested in the same variables as in *study one*. For happiness we use the same question, "How happy are you currently?", measured on the same 0-10 scale in our online survey. Regarding NHA participation the respondents report how often they participate in NHA activities. Respondents who are actively participating at least once a year are considered as 'personally participating in NHA activities'. We then further differentiate between involuntary and voluntary participation on the individual level. The respondents are asked "In case you could freely decide your rate of participation, would you participate at the same rate as now?". Respondents answering "No, I would participate less", and "No, I wouldn't participate at all" are considered to be participating involuntarily. All other respondents are treated as participating voluntarily. Regarding loneliness we ask the respondents, "How lonely do you feel in your daily life" and they can indicate their level of loneliness on a 1-5 scale with "5" meaning "I feel very lonely". Finally, the respondents are not only asked how often they participate in activities of NHA, but we also ask for activities in other associations, a variable which couldn't be controlled for in study one.<sup>8</sup> Based on this information we then construct an overall activity index ranging from 0 to 52, indicating how many times a year the respondents join some activity.

As control variables we include: household income, age, age-squared, gender, family status (being married; children number and a dummy for children under the age of 6 years), employment relationship<sup>9</sup>, and the prefecture of the respondent.

<sup>&</sup>lt;sup>8</sup> Regarding other associations respondents were asked whether and if how often they participate in: "political associations", "trade associations", "social service groups", "citizens' movement and consumer groups", "religious groups", "sport groups and clubs", "hobby groups or clubs", "consumer co-operative (co-op)", and "other groups".

<sup>&</sup>lt;sup>9</sup> The following employment relationships are compared to the reference group of regular employees: managing position; civil servant; directorial board (company); non-private organization (incl. directorial board); entrepreneur; temporary employee; housewife; student; without work and unemployed.

# 4.1.3 Descriptives

Table 4 shows the summary statistics of the DIJ online sample described above.

Table 4: Summary	Statistics	of the	DIJ online	sample	2013

			Std.		
Variable	Obs	Mean	Dev.	Min	Max
Dependent variable					
Happiness	1660	6.17	2.14	0	10
Independent variables					
Personal NHA participation	1660	0.50	0.50	0	1
Personal NHA participation involuntarily	1660	0.28	0.45	0	1
Personal NHA participation voluntarily	1660	0.22	0.41	0	1
Activity Index	1660	11.96	17.80	0	52
Loneliness	1660	2.74	1.09	1	5
Control variables					
Women	1660	0.50	0.50	0	1
Age	1660	44.45	13.76	20	69
Household income	1351	531.13	310.29	50	1200
Family relations					
Married	1660	0.66	0.47	0	1
Number of children	1660	1.24	1.19	0	9
Children under the age of 6 years dummy	1660	0.16	0.37	0	1
Employment relations					
Managerial Position	1660	0.06	0.23	0	1
Civil servant	1660	0.03	0.16	0	1
Board of directors (company)	1660	0.02	0.14	0	1
Working in a non-private organization (incl.	1660	0.02	0 1 2	0	1
board of directors)	1000	0.02	0.12	0	T
Entrepreneur	1660	0.07	0.26	0	1
Temporary employee	1660	0.14	0.34	0	1
Housewife	1660	0.25	0.43	0	1
Student	1660	0.05	0.22	0	1
Other	1660	0.02	0.12	0	1
Without work	1660	0.07	0.26	0	1
Unemployed	1660	0.04	0.19	0	1

#### 4.2 Analysis

The following sections describe the applied statistical methods and their results.

#### 4.2.1 Method

We follow our analytical strategy introduced under 3.2.1. Again, we run each of our OLS models on the whole sample (a) as well as separately for women (b) and men (c). As a robustness check we further used the same variables in ordered probit models, but significant differences were not found (results are provided upon request).

#### 4.2.2 Results

Table 5 shows the results for personal NHA participation in general, without differentiating between voluntary and involuntary participation. In accordance with study 1, model 7a shows that personal NHA participation is positively correlated with happiness by about 0.3 points. However, when splitting the sample up between women (7b) and men (7c) we find that this positive correlation is only significant for the former. In a next step we introduce subjective loneliness as a control variable in models 8a-8c, but apart from slight changes in the coefficients no significant difference can be observed. Finally, an overall index of activity is included in the controls of models 9a-9c. While the coefficients for personal NHA participation drop in size and lose their statistical significance, the overall activity index is found to be significantly correlated with happiness in all models (9a-9c). Looking at the gender differences we find that the positive correlation is stronger in the case of men, indicating that the general level of activity is more important to men than to women.

After analyzing personal NHA participation in general, we now differentiate between voluntary and involuntary NHA participation. The results are reported in Table 6. Models 10a-10c show the coefficients for people who voluntary or involuntary participate in NHA activities compared to people who do not participate. While the coefficients for involuntary participation are rather small (<0.09) and not significant, voluntary participation shows a strong and significant positive correlation with happiness for the total sample (0.563 in model 10a). Looking at the split-up between men and women, we find that this strong correlation holds especially for women (0.8 points in model 10b), while it is smaller in size and statistically significant only at the 10% level for men (0.35 points in model 10c). In models 11a-11c we now include subjective loneliness in the controls. This results in smaller coefficients for voluntary NHA participation by around 0.1 points compared to the results of models 10a-c. The correlation between happiness and voluntary NHA participation still remains significant for the total sample and for women,

	model7a	model7b	model7c	model8a	model8b	model8c	model9a	model9b	model9c
Sample	Total	Women	Men	Total	Women	Men	Total	Women	Men
Model	OLS								
Variables	happiness								
Personal NHA participation	0.297*	0.355*	0.147	0.275**	0.309*	0.190	0.186	0.271	-0.007
	(0.116)	(0.173)	(0.169)	(0.101)	(0.156)	(0.144)	(0.118)	(0.178)	(0.172)
Loneliness				-0.930***	-0.843***	-0.995***			
				(0.052)	(0.078)	(0.074)			
Overall activity index							0.011***	0.008+	0.016***
							(0.003)	(0.005)	(0.005)
Controls	yes								
Observations	1,351	644	707	1,351	644	707	1,351	644	707
Adj. R-squared	0.134	0.080	0.157	0.337	0.264	0.374	0.141	0.083	0.170
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

 Table 5: Regression results of personal NHA participation (study two)

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10

	model10a	model10b	model10c	model11a	model11b	model11c	model12a	model12b	model12c
Sample	Total	Women	Men	Total	Women	Men	Total	Women	Men
Model	OLS								
Variables	happiness								
Personal NHA participation	0.076	0.089	-0.067	0.136	0.092	0.126	-0.005	0.045	-0.207
involuntarily	(0.139)	(0.198)	(0.214)	(0.122)	(0.177)	(0.187)	(0.140)	(0.200)	(0.216)
Personal NHA participation	0.563***	0.795***	0.349+	0.442***	0.669**	0.250	0.436**	0.702**	0.186
voluntarily	(0.135)	(0.218)	(0.189)	(0.120)	(0.205)	(0.157)	(0.139)	(0.228)	(0.191)
Loneliness				-0.922***	-0.834***	-0.990***			
				(0.052)	(0.078)	(0.074)			
Overall activity index							0.010**	0.006	0.015***
							(0.003)	(0.005)	(0.005)
Controls	yes								
Observations	1.351	644	707	1.351	644	707	1.351	644	707
Adi. R-squared	0.140	0.092	0.160	0.339	0.272	0.374	0.146	0.093	0.173
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

 Table 6: Regression results of voluntary and involuntary NHA participation (study two)

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.10

but disappears completely in the case of men. Including an overall activity index instead of loneliness in the controls in models 12a-12c yields similar results. Compared to the models 10a-c the coefficients for voluntary NHA participation drop by around 0.1 points and the statistical significance of the coefficient for the male sub-samples disappears. It is interesting to note that the overall activity index shows a positive and significant correlation with the total sample, but when the sub-samples of women and men are analyzed separately this correlation holds only for men. This result suggests once more that the overall activity level is more important for men than for women.

# 4.2.3 Short summary of study 2

Summing up the findings of *study two* we come to the following conclusions. When looking at the general level of NHA participation we find a positive correlation with happiness, but only for women. This correlation disappears, when the level of overall activities is controlled for. Analyzing voluntary and involuntary NHA participation separately shows that voluntary NHA participation is positively correlated with happiness, especially for women, but also for men. Even when controlling for loneliness or the level of overall activities this positive correlation remains strong and significant for the total sample and for women, but disappears in the case of men. Finally, compared to women, men show a strong and significant correlation between the level of overall activity and happiness.

#### 5. Discussion

A straight-forward comparison of the results of *study one* and *study two* might lead to the conclusion that the correlation between NHAs and SWB is everything but clear. This suggests that the non-positive findings reported in previous studies are likely to be caused by mere artifacts in the NSLP 2011 data: While NHA membership on the household level is negatively associated with SWB, the very same survey shows that personal participation in NHA activities is positively correlated with happiness. Further, while *study one* shows that women report a smaller or even negative correlation compared to men, *study two* shows basically the opposite result: the correlation between happiness and NHA is larger for women than for men.

However, apart from these apparent discrepancies, the results of both studies shed light on the explanatory theories (T1, T2, T3) introduced in section 2.4 above as well as on the hypotheses derived from them (H1, H2, H3). *Study one* mainly confirms H1, that including subjective loneliness in the control variables leads to non-positive coefficients for NHA membership or participation. Yet, these results are not confirmed by *study two*. Here loneliness only has an effect on the voluntary NHA participation of the male sub-sample.

Regarding the hypothesis that controlling for the overall level of activity renders the correlation between happiness and NHA participation insignificant (H2) only the results of study two are available for interpretation. H2 could be confirmed for the first part of study *two*, where we did not distinguish between voluntary and involuntary NHA participation. However, when voluntary and involuntary NHA participation were analyzed separately H2 could only be confirmed for the male subsample. Finally, both studies confirmed H3, that differentiating between voluntary and involuntary NHA participation reveals lower levels of SWB for the latter. Study one showed that involuntary NHA membership on the household level is associated with lower levels of well-being compared to non-members. This negative correlation was not found for voluntary NHA membership. On the personal level study one showed that NHA participation is positively correlated with happiness, but that this positive correlation is matched by a negative correlation of the same size when the participation is conducted involuntarily. In sum, this leaves involuntarily participating respondents at the same lower well-being level like non-participants. Similarly, study two showed that voluntary NHA participation on the individual level is positively correlated with happiness, while involuntary participants share the same level of well-being like nonparticipants. A further finding of both studies was that involuntary participation has a higher impact on women than on men. This suggests that involuntary participation is especially a problem for women.

Although the underlying explanatory theories (T1, T2, T3) cannot be tested directly by confirming or rejecting the related hypotheses (H1, H2, H3), the discussion still renders some of the theories more plausible than others. The reason for this is that, in most cases causality presumes correlation. Our analyses cast doubt on T1 and T2, since we cannot find robust correlations for loneliness and the overall level of activity. However, the hypothesis derived from T3 could be confirmed for both studies, despite the fact that (1) different samples were used, and that (2) both studies yielded very diverging overall results. This indicates that the voluntariness of the participation is a key variable to understand the effects of NHA membership and activities. While the results of previous studies (Tiefenbach and Kohlbacher 2013, 2014) seem to contradict the underlying theoretical framework (SDT and broaden-and-build theory), our study dissolves this contradiction by adding more control variables which we derived from both underlying theories. Finally, our results suggest that further research on associational activities should differentiate between voluntary, semi-voluntary and compulsory activities.

Table 7: An overview of the tested hypotheses

	Study one	Study two
H1 Loneliness	Δ	×
H2 Overall activities	n.a.	Δ
H3 Voluntariness	0	0

NB:  $\circ$  = confirmed;  $\Delta$  = partly confirmed; ×= not confirmed; n.a. = not available

## 6. Conclusion

The starting point of this research project was the apparent discrepancy between the theoretical and empirical literature which suggested a strong positive correlation between NHA and SWB, and recent research findings on Japan which could not validate this result. The present study shows how those diverging results can be explained in light of existing theoretical frameworks such as the self-determination theory. Using linear regression models on data from two different studies, we found that participation in NHAs can be positively associated with SWB even in the case of Japan. However, this positive association disappeared (1) when the activity is conducted involuntarily and (2) in the case of men when other activities were controlled for. Finally, we find that (3) controlling for subjective loneliness has in some cases detrimental effects on the positive correlation between NHA activities and SWB. The results of our study suggest that further research is needed to clearly identify the different effects of voluntary, semi-voluntary and compulsory activities.

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