



Anthrozoös

A multidisciplinary journal of the interactions of people and animals

ISSN: 0892-7936 (Print) 1753-0377 (Online) Journal homepage: <https://www.tandfonline.com/loi/rfan20>

The Beginning, the End, and All the Happiness in Between: Pet Owners' Wellbeing from Pet Acquisition to Death

Tihana Brkljačić, Ines Sučić, Lana Lučić, Renata Glavak Tkalić & Ljiljana Kaliterna Lipovčan

To cite this article: Tihana Brkljačić, Ines Sučić, Lana Lučić, Renata Glavak Tkalić & Ljiljana Kaliterna Lipovčan (2020) The Beginning, the End, and All the Happiness in Between: Pet Owners' Wellbeing from Pet Acquisition to Death, *Anthrozoös*, 33:1, 71-87, DOI: [10.1080/08927936.2020.1694313](https://doi.org/10.1080/08927936.2020.1694313)

To link to this article: <https://doi.org/10.1080/08927936.2020.1694313>



Published online: 17 Jan 2020.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

The Beginning, the End, and All the Happiness in Between: Pet Owners' Wellbeing from Pet Acquisition to Death

Tihana Brkljačić, Ines Sučić, Lana Lučić, Renata Glavak Tkalić, and Ljiljana Kaliterna Lipovčan
Institute of Social Sciences Ivo Pilar, Zagreb, Croatia

Address for correspondence:
Tihana Brkljačić,
Institute of Social Sciences
Ivo Pilar, Marulićev trg 19,
10000 Zagreb, Croatia.
E-mail:
Tihana.Brkljacic@pilar.hr

ABSTRACT The aim of this study was to provide deeper insight into the relationship between pet-related life events and the subjective wellbeing of pet owners, as well as to analyze definitions of happiness that included reference to pets. This research was conducted online as a part of the Croatian Longitudinal Study on Wellbeing (CRO-WELL). For the purposes of this study, the following variables were selected: overall happiness, life satisfaction, subjective ratings of health, and the occurrence and parameters (positivity, negativity, importance, anticipation) of two pet-related life events: acquiring a pet and the death of a pet during the previous year. Additionally, of a pool of lay people's definitions of happiness ($n = 4,059$), those containing a reference to pets ($n = 89$) were analyzed. The total sample consisted of 5,034 participants, of whom 658 acquired a pet in the past year, 272 experienced the death of a pet, and an additional 221 experienced both events. Participants who experienced the death of a pet during the previous year were significantly less happy and satisfied compared with those who did not obtain a pet and did not experience the death of a pet in the previous year. Overall happiness was weakly positively correlated with positive evaluations of obtaining a pet and the importance of obtaining a pet. The anticipation of the death of a pet was positively related to positive evaluations of the death of the animal, suggesting an adaptation process took place before the death. Participants who attributed less importance to an event were more likely to experience positive events (obtaining a pet) as less positive and negative events (death of a pet) as less negative. Participants who anticipated an event evaluated it as more positive and less negative. Out of 4,059 participants who provided definitions of happiness, 89 (2.2%) of them included pets in these definitions. Over half of them referred to the pet as the most important member of the family or was equal to other family members, while in the remaining definitions pets were only a part/fragment of a broader definition of happiness. Participants referred mostly to dogs or used the generic word

“pet,” while cats, the only animal named beside dogs, were mentioned in only a few cases. Greeting the owner was the most frequently mentioned activity, while the joy of a pet and unconditional love were the most frequently mentioned emotions.

Keywords: happiness, human–animal interaction, pet, pet loss, life events, subjective wellbeing

Wellbeing and Life Events



Research on subjective wellbeing (SWB) has grown rapidly during the past 30 years. One of the most intriguing and still unresolved issues is the relationship between major life events and SWB. In contrast to the daily events that slowly and constantly shape one's life (e.g., going to a party, buying clothes, having a headache), life events are acute transitions. Transitions are defined as a “discontinuity in a person's life space of which he is aware and which requires new behavioral responses” (Hopson & Adams, 1977, p. 24).

While we know from personal experience that even small events, like taking a walk or having a cup of coffee, may increase momentary happiness, the impact of life events on long-term happiness is still unknown. Indeed, according to the set-point-theory, even major life events have only a minor and short-term impact on SWB. Supporters of this Hedonic treadmill theory (Brickman & Campbell, 1971) argue that SWB is mostly determined by genetics and personality traits, such as low neuroticism and inner locus of control (Headey, 2008), and that people tend to return to their initial level of SWB soon after a life event. This theory has been supported by a number of researchers. For example, Wildeman, Turney, and Schnittker (2014) found that ex-prisoners return to their initial SWB level soon after they are released from prison. Lucas, Clark, Georgellis, and Diener (2003) tested set-point-theory by studying changes in SWB after several life events, including marriage, divorce, the birth of a child, and the loss of a job. They found that people adapted and returned to their SWB baseline level after most of these events, although negative events had a greater impact on SWB than positive events. However, although adaptation occurred on average, supporting Hedonic treadmill theory, detailed analysis showed that this process was often slow and partial, and even non-existent in some individuals.

Frederic and Loewenstein (1999) define hedonic adaptation as adaptation to stimuli that are affectively relevant (p. 302). According to this theory people judge events (stimuli) in a view of previous experience so that the affective intensity of a constant stimulus reduces with time. Continuous hedonic reactions (such as stress) would be destructive for organisms, so hedonic adaptation protects us from wasting energy and helps us redirect motivation toward new relevant stimuli. However, it seems that humans are not quite aware of this process of adaptation, so while we can quite accurately estimate whether a future event will evoke positive or negative emotional reaction (or both), we tend to overestimate the enduring impact future events will have on wellbeing (e.g., Gilbert, Driver-Linn, & Wilson, 2002). According to Wilson and Gilbert (2005), when forecasting the impact of a specific event, people focus on this particular event and tend to ignore other events, thus making the event more important. However, once the event happens, they trigger a sequence of four processes: attention, reaction, explanation, and adaptation. People adapt by making sense of events, so adaptation is quicker for easily explained events.

SWB is associated with various factors: good health and high-quality social relationships play major roles (Diener & Seligman, 2002). Pet-keeping is one of the activities which could promote both health and social interaction. Accordingly, one reason why people might benefit from owning

pets is that the animals might provide an important source of social support, which in turn improves their psychological and physiological health (McConnell, Brown, Shoda, Stayton, & Martin, 2011). Indeed, research shows that people find interactions with companion animals to be as important as interactions with another human being stating that activity and companionship are the most frequent reasons why they keep pets (Staats, Wallace, & Anderson, 2008). Thus pets, like people, could increase owners' wellbeing (McConnell et al., 2011). Additionally, pets can contribute to their owner's health through stress-reduction or daily walking (Headey & Grabka, 2011). Unfortunately, owners must face the fact that their pets will not live as long as they will. Eventually, pet owners will experience the loss or death of a pet, which will probably trigger a grief reaction. These reactions can be very strong and if social and community support is absent and prolonged bereavement occurs, the death of pet could have very strong negative effect on the owner's SWB (Podrazik, Shackford, Becker, & Heckert, 2000).

This study analyzed two pet-related life events: obtaining a pet and the death of a pet. It is posited that these two events are the most crucial in a normal pet-human relationship, as they represent the beginning (usually positive) and the end (usually negative) of the pet-owner relationship. The intent was to provide deeper insight into these events by assessing owners' evaluation and anticipation of the events and the importance they placed on them. Contrasting these events may provide useful theoretical, methodological, and practical guidance for dealing with corresponding positive and negative life events.

SWB of Pet Owners

Pet ownership is a widespread cultural phenomenon that exists in most societies. Over recent decades, companion animals have become increasingly important in the lives of Americans (Grier, 2006). Over two-thirds of US households have at least one pet (Springer, 2018), the most common of which are dogs (48%) and cats (38%). Mayseless (2016) argues that pet owners regard their pets as their friends (95%) and/or family members (87%). GFK market research (www.askgfk.hr) reports that 61% of households in Croatia have a pet. The most popular pets in Croatia are dogs (41%) and cats (29%).

A great deal of research has reported on the psychological benefits related to pet ownership. For example, El-Alayli, Lystad, Webb, Hollingsworth, and Ciolli (2006) found that pet owners report higher self-esteem, more positive moods, more ambition, greater life satisfaction, and lower levels of loneliness. Bao and Schreer (2016) found that pet owners were more satisfied with their lives than non-pet owners, although the groups did not differ regarding SWB, emotion regulation, need satisfaction, or personality traits. Pets are also found to be an important source of social support (McConnell et al., 2011), comfort, and companionship (Knight & Edwards, 2008). Additionally, epidemiologists have connected pet ownership with better health and SWB (e.g., Barba, 1995; Headey & Grabka, 2011). Friedmann, Katcher, Lynch, and Thomas (1980) found higher heart attack survival rates among pet owners. Also, interacting with dogs has been shown to increase levels of serotonin, lower blood pressure, and reduce the risk of cardiovascular disease (Allen, 2003). Pet owners have also been shown to visit their doctors less often than non-owners (Knight & Edwards, 2008).

However, several studies have reported mixed evidence, indicating both positive and negative impacts of pet ownership. Gilbey, McNicholas, and Collis (2007) studied loneliness in people who were looking for a pet. After six months, they compared those who obtained a pet with those who did not and found no difference in happiness or loneliness. More strikingly, Miltiades and Shearer (2011) found that older adults who were highly attached to their dogs

were more depressed than those who were less attached. It seems that the relationship between pet ownership and SWB has not yet been completely explored.

While it is generally acknowledged that pet owners mostly like their pets (e.g., Greenebaum, 2004; Mariti et al., 2013) and believe that they have a positive impact on their SWB (e.g., Bushman, 2014), it is not clear whether having a pet actually improves one's SWB and, if it does, under which circumstances. Researchers exploring the effects of pets on owners' SWB usually clearly declare their mission to potential respondents; thus, it is possible that this biases the responses given. The advantage of the current study is that the focus was not on pets, as pet-related life events were only part of a long, comprehensive questionnaire on many different life events. Also, those who included pets in their definitions of happiness were not by any means encouraged to do so; it was an open-ended question asking for a personal definition of happiness.

The aim of this research was to provide deeper insight into the relationship between humans and their companion animals. The specific aims were:

- 1) To analyze the events "obtaining a pet" and "death of a pet" in terms of positivity, negativity, anticipation, and importance, and the relationship between the occurrence of these events and SWB.
- 2) To analyze the content of lay definitions of happiness which included pets.

Methods

The data for this study were collected as a part of the first year of the Croatian Longitudinal Study on Wellbeing (CRO-WELL), which took place during 2017 and 2018. The research was conducted via an on-line application, which consisted of a comprehensive battery of questionnaires related to SWB and life events. The project was approved by the Ethical Committee of the Ivo Pilar Institute of Social sciences (No: 11-73/14-2061).

Procedure

Participants were able to access the study using the link provided at the research web site (www.sreca.hr). Anonymity was ensured through a system of tokens provided to every participant before starting the survey. At the beginning of the survey, participants were informed that participation was voluntary, that they could quit at any point without explanation, and that the data would be used for scientific purposes only. As soon as they confirmed they understood these conditions and that they were at least 18 years old, participants were redirected to the questionnaire.

Instruments

For the purpose of the current study, the following variables were analyzed: 1) general life satisfaction; 2) overall happiness; 3) subjective health; 4) the occurrence, positivity, negativity, anticipation, and importance of two events: a) obtaining a pet and b) the death of a pet during the past year; 5) definitions of happiness which referred to pets; and 6) demographics (age and gender). The two pet-related events were selected from the list of 69 life-events surveyed in CRO-WELL project.

- 1) A single item was used to measure global cognitive judgment of satisfaction with one's life (general life satisfaction), taken from the European Social Survey wellbeing module (Huppert et al., 2009): "All things considered, how satisfied are you with your life as a whole?" Participants answered using an 11-point scale which ranged from 0 "not satisfied at all" to 10 "extremely satisfied."

- 2) A single item (Huppert et al., 2009) was used to measure the affective component of subjective SWB (happiness): “In general, how happy do you usually feel?” Participants answered using an 11-point scale which ranged from 0 “not happy at all” to 10 “extremely happy.”
- 3) A single item was used to measure subjective health: “How would you rate your health?” Participants answered using a 5-point scale which ranged from 1 “very bad” to 5 “very good.”
- 4) The following questions were used to measure the occurrence and parameters of pet-related life events: a) Did you experience this event during the previous year: acquire a pet? b) Did you experience this event during the previous year: the death of a pet? If the participant answered “yes,” he/she was additionally asked a) how positive was this event for you? b) how negative was this event for you? c) how important was this event for you? d) to what extent could you anticipate this event? Participants rated their answers on an 11-point scale which ranged from 0 “not at all” to 10 “totally or fully.”
- 5) To explore lay definitions of happiness, respondents were asked to define the following in their own words: “What is happiness for you?” Providing a definition of happiness was optional, but it was encouraged by a contest with prizes for creative definitions. Definitions of happiness containing pets were selected from a total pool of 4,059 definitions of happiness obtained during the first year of research.

Participants

In the quantitative part of the study, the sample consisted of 5,034 participants. Participants were on average 35.1 years old ($SD = 12.07$) and the majority of them were women ($n = 3,831$; 76.1%). The focus of this study was on participants ($n = 1,151$) who experienced one or both of the studied life events: a) obtained a pet $n = 658$ (13.1%), b) death of a pet $n = 272$ (5.4%), c) obtained a pet, and death of a pet $n = 221$ (4.4%). Those groups of participant differed significantly regarding age ($F_{(3,5030)} = 5.43, p = 0.001$), and a post-hoc Scheffe test revealed a significant difference between participants who obtained a pet during the previous year ($M_{age} = 34.1$) and those who did not ($M_{age} = 35.5$), with those acquiring a pet being on average 1.5 years younger. There was no significant difference between groups regarding gender ($\chi^2_{(3)} = 8.13, p = 0.043$). The qualitative part of the study included only those participants who spontaneously included a pet in their definitions of happiness ($n = 89$).

Data Analysis

Descriptive statistics were computed for all studied variables and were additionally tested for normality of distribution (Kolmogorov-Smirnov test), skewness, and kurtosis (Table 1). To test differences in SWB indices and health between four groups of participants (obtained a pet; death of a pet; obtained a pet and death of a pet; and control group [none of the events]) it was decided to use ANOVA which compares all means together as the starting point. MANOVA was not used owing to a high positive correlation between two dependent variables: life satisfaction and happiness ($r_{(6,032)} = 0.81; p < 0.001$). However, since it was assumed that obtaining a pet and/or losing a pet may relate to SWB indices, we were interested to find out 1) if the control group (no pet-related events) differed from other three group; 2) if there were differences in SWB indices between those who only obtained a pet from those who either experienced only the death of a pet or both events; and 3) if those who experienced only the

Table 1. Descriptive statistics of the studied variables.

	<i>n</i>	Min–Max	<i>M</i> (<i>SD</i>)	Skewness	Kurtosis	K-S Z
Life Satisfaction	5,034	0–10	7.0 (2.02)	–1.02	1.20	13.3
Overall Happiness	5,034	0–10	6.88 (2.11)	–0.84	0.54	12.2
Subjective Health	5,034	1–5	4.12 (0.82)	–0.83	0.66	17.8
<i>Obtaining a Pet</i>						
Positivity	879	0–10	8.72 (2.03)	–2.11	5.07	9.2
Negativity	879	0–10	1.01 (1.99)	2.47	6.18	11.2
Importance	879	0–10	7.76 (2.54)	–1.06	0.46	6.3
Anticipation	879	0–10	4.28 (3.55)	0.23	–1.30	4.3
<i>Death of a Pet</i>						
Positivity	493	0–10	0.45 (1.52)	4.27	20.10	10.9
Negativity	493	0–10	8.48 (2.48)	–1.98	3.50	6.8
Importance	493	0–10	7.53 (2.81)	–1.14	0.60	4.5
Anticipation	493	0–10	2.79 (3.49)	0.88	–0.71	6.1

n = number of participants; K-S Z = Kolmogorov-Smirnov z-values.

death of a pet differed from those who experienced both events. To test these specific hypotheses as opposed to the general ANOVA (null vs. alternative hypotheses) we tested contrast effects (Field, 2013; Seltman, 2018). It was decided to use polynomial quadratic contrast which looks for trends in the data—more specifically, for a change in the direction of the trend,—as we were not sure if there would be proportionate change in the values of the SWB across ordered categories (linear trend). Choosing the “quadratic” contrast option in SPSS enables to test for linear as well as quadratic trends in the data. The violation of homogeneity of variance was observed in two variables: life satisfaction (Levene_(3,5030) = 3.43; $p = 0.016$) and happiness (Levene_(3,5030) = 3.04; $p = 0.028$), so the Welch test, which does not assume equal variances, was used. Also, since kurtosis and skewness for some event parameters were outside the $-2/+2$ interval (Table 1) (George & Mallery, 2010), we used non-parametric statistics (Spearman correlations) to analyze associations among event parameters and wellbeing indices (Table 5). All analyses were performed using SPSS, Version 22.0 (Armonk, NY, USA).

To analyze the definitions of happiness which included pets, descriptive content analysis was used to facilitate contextual meaning in text through the development of emergent themes (Bryman, 2001). The first part of the analysis was done by two researchers who developed a coding system and who were familiar with the purpose of the study. Coding itself was done by two coders who were just instructed to code definitions using codes provided. The inter-coder reliability was high, ranging from 85 to 92%.

Results

In the total sample of 5,034 participants, measures of SWB indicated above theoretical average values (on a 0–10 scale, theoretical average or neutral point is 5) and a negatively skewed distribution, similar to previous research in Croatia (e.g., Bejaković & Kaliterna Lipovčan, 2007). In terms of the used measures, reported levels of life satisfaction and overall happiness were high and approached close to the maximum of the scale, especially if looking at the dominant values (Table 1).

From the 5,034 participants, 879 (17%) acquired a pet during the previous year, while 493 (10%) reported that their pet died in the same period. It was unclear from the assessed data whether both events were related to the same pet or two different animals; however, the latter is probably more likely (since people often acquire a new pet soon after the death of an old pet, while pets, especially dogs and cats, rarely die within a year after they are adopted).

Participants evaluated the positivity and negativity of each event. Most participants (92.5%) evaluated obtaining a pet as more positive than negative; 4.7% said it was equally positive and negative; and 2.8% said it was more negative than positive. Most participants (92.7%) evaluated the death of a pet as more negative than positive; 5.1% said it was equally positive and negative; and 2.2% said it was more positive than negative. One of the possible reasons why some participants evaluated the death of a pet as a more positive than negative event could be that the animal was very old or/and in pain.

Obtaining a pet was rated as a positive event ($M = 8.72$) and negative appraisals of pet acquisition were quite low ($M = 1.01$). Participants rated this event as quite important ($M = 7.76$) and, surprisingly, rather unexpected ($M = 4.28$). The death of a pet was regarded as a negative event ($M = 8.48$), with very low scores on positivity scale ($M = 0.45$). This event was also of high importance to participants ($M = 7.53$), and it was generally unexpected ($M = 2.79$).

Differences in SWB

Participants were divided into four groups based on the occurrence of the two studied life events: a) acquired a pet; b) experienced pet's death; c) experienced both events; d) experienced none of the events (control group). Differences in the SWB indices of general life satisfaction, overall happiness, and subjective health evaluation were tested between those groups of participants (Tables 2 to 4). Since the violation of homogeneity of variance was observed for the variables life satisfaction and happiness, Welch's F -test was used (Table 3). Because the observed significance values of the F -tests were less than 0.02 we can assume that in general there was a significant effect of owning/losing a pet on SWB indices and subjective health (Table 4). F ratios for the quadratic trends were significant, so the pattern of means were curvilinear (Table 3). Contrast t -tests revealed (Table 4) that the control group had higher levels of SWB and subjective health compared with those who experienced either one (acquired a pet/death of a pet) or both events (obtained pet and pet died); 2) those who acquired a pet reported higher levels of SWB and health compared with those whose pet died and those who experienced both events; 3) no significant differences in SWB and health ratings was found between participants whose pet died and those who experienced both events. Based on these results and the descriptive values (Table 2), we can conclude that those who

Table 2. Descriptive values in subjective wellbeing and subjective health among participants who experienced different pet-related life events during the previous year.

	<i>n</i>	Life Satisfaction		Overall Happiness		Health	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Obtained a Pet	658	7.04	1.91	6.92	2.10	4.11	0.79
Death of a Pet	272	6.65	2.12	6.54	2.21	3.99	0.83
Obtained a Pet and Experienced Death of a Pet	221	6.66	2.08	6.61	2.26	3.99	0.88
Control Group (no pet-related events)	3,883	7.03	2.02	6.91	2.09	4.14	0.82

Table 3. Homogeneity of variance (Levene's Test) and test of differences in subjective wellbeing and subjective health between groups of participants who experienced different pet-related life events during the previous year.

	Levene's Test	df2, df2	p	Welch's F	df2, df2	p	Quadratic Term F	df1, df2	p
Life Satisfaction	3.43	3, 5030	0.016	4.90	3, 578.01	0.002	14.57	1, 5030	< 0.001
Overall Happiness	3.04	3, 5030	0.028	3.56	3, 574.57	0.014	10.48	1, 5030	0.001
Health	1.79	3, 5030	0.148	4.78*	3, 5030	0.002	10.50	1, 5030	0.001

*For Health, we used the *F*-test as the test of homogeneity of variance (Levene statistic = 1.79) was non-significant ($p > 0.05$).

Table 4. Contrast effects.

	Contrast*	Contrast Value	t	df	p
Life Satisfaction	1	-0.75	-3.30	925.044	0.001
	2	0.78	3.22	971.654	0.001
	3	-0.01	-0.07	473.837	0.943
Overall Happiness	1	-0.67	-2.77	906.717	0.006
	2	0.69	2.65	980.748	0.008
	3	-0.067	-0.330	466.954	0.742
Health	1	-0.33	-3.61	5030	< 0.001
	2	0.24	2.41	5030	0.016
	3	-0.06	-0.08	5030	0.939

*1 = comparison of obtained a pet, pet's death, obtained a pet and pet's death vs. control group; 2 = comparison of obtained a pet vs. pet's death and obtained a pet and pet's death; 3 = comparison of pet's death vs. obtained a pet and pet's death.

lost their pet reported lower life satisfaction, lower happiness, and lower health than the control group, while there were no differences in SWB indices and health between the control group and those who acquired a pet.

Event Evaluations (Positivity, Negativity, Importance, Anticipation)

Correlation analysis was conducted on three sub-samples presented in Table 6: 1) all participants who obtained a pet ($n = 879$); 2) all participants who experienced the death of a pet ($n = 493$); 3) participants who experienced both events ($n = 221$). The first two subsamples partially overlapped to generate the third subsample.

Evaluations (positivity, negativity, anticipation) of the experienced events (pet acquired/ pet died) were unrelated to the life satisfaction (Table 5). There was a weak positive association between importance of obtaining a pet and life satisfaction. Estimated positivity of obtaining a pet, and the importance of obtaining a pet were weakly positively related to overall happiness. Negativity of obtaining a pet showed a weak but significant negative association with overall happiness (Table 5). It should be noted that none of the correlation coefficients exceeded 0.08 and that they were significant only because of the large sample sizes.

Positive and Negative Evaluations of an Event

Estimated positivity and negativity of the same event was only moderately negatively associated for both events (-0.53 for acquiring a pet; -0.43 for death of a pet). This suggests that

Table 5. Correlations between subjective wellbeing indices and assessments of the positivity, negativity, importance, and anticipation of two events: obtaining a pet and the death of a pet in the previous year.

	Life Satisfaction	Overall Happiness	Positive - Op	Negative - Op	Importance - Op	Anticipation - Op	Positive - Dp	Negative - Dp	Importance - Dp	Anticipation - Dp
Life Satisfaction	—									
Overall Happiness	0.810** n = 5,034	—								
Positive - Op	0.023 n = 879	0.078** n = 879	—							
Negative - Op	-0.037 n = 879	-0.075* n = 879	-0.525** n = 879	—						
Importance - Op	0.068* n = 879	0.077* n = 879	0.644** n = 879	-0.357** n = 879	—					
Anticipation - Op	-0.019 n = 879	-0.014 n = 879	0.101** n = 879	-0.043 n = 879	0.150** n = 879	—				
Positive - Dp	-0.024 n = 493	0.001 n = 493	-0.263** n = 221	0.463** n = 221	-0.103 n = 221	0.055 n = 221	—			
Negative - Dp	-0.086 n = 493	-0.041 n = 493	0.443** n = 221	-0.258** n = 221	0.419** n = 221	0.031 n = 221	-0.430** n = 493	—		
Importance - Dp	-0.039 n = 493	-0.035 n = 493	0.322** n = 221	-0.178** n = 221	0.489** n = 221	-0.009 n = 221	-0.193** n = 493	0.586** n = 493	—	
Anticipation - Dp	0.027 n = 493	0.011 n = 493	-0.183** n = 221	0.230** n = 221	-0.122 n = 221	0.203** n = 221	0.246** n = 493	-0.201** n = 493	-0.137** n = 493	—

Op = obtained a pet; Dp = death of a pet. * $p < 0.05$, ** $p < 0.01$; Cells shaded in grey = correlations between parameters of obtaining a pet and death of a pet calculated on the subset of participants who experienced both events.

Table 6. Frequencies of specific themes in definitions of happiness which referred to pets ($n = 89$).

<i>Type of Pet</i>				
Dog	Cat	Dog & Cat	Unspecified	
56	7	2	24	
<i>Importance of the Pet in the Definition</i>				
Central	Part of family	Detail		
23	32	34		
<i>Expressed Emotion Related to a Pet</i>				
Serenity	Pet's Joy	Love	Care for Pet	None
6	21	7	6	49
<i>Activity Related to a Pet</i>				
Walk or Play	Greeting	Petting	None	
8	16	5	60	

high positivity is not an indicator of the low negativity of the same event per se. The positivity and negativity of the same event should be measured as independent dimensions (Table 5).

Importance and Anticipation of an Event

The importance of an event was significantly associated with both the positivity and negativity of the event. The importance of obtaining a pet was positively associated with positive evaluations and negatively associated with negative evaluations. However, the death of a pet showed the opposite pattern, with importance positively associated with negative evaluations and negatively with positive evaluations (Table 5). Therefore, it is possible that the importance associated with a positive event amplifies its positive evaluation and weakens its negative evaluation, while the importance associated with a negative event amplifies its negative evaluation and weakens its positive evaluation. Consequently, non-standard evaluations of an event (i.e., positive evaluations of a negative event or negative evaluations of a positive event) were associated with lesser importance.

The anticipation of obtaining a pet was positively associated with positive evaluations and the importance of obtaining a pet. The anticipation of the death of a pet was positively associated with positive evaluations and negatively with both negative evaluations and the importance of the death of a pet (Table 5). To summarize, participants who anticipated an event were more likely to evaluate it more positively, regardless of whether the event was generally positive or negative.

Association Between Parameters of the Two Events

In the group of participants who experienced both events ($n = 221$), the examined associations between the parameters of the two events strongly suggest that negative appraisals of the death of a pet are related to positive appraisals of obtaining a pet, and vice versa (Table 5). Since the life expectancy of dogs and cats (which are by far the most common pets in Croatia) is usually over 10 years, and since very old animals are rarely adopted, we presume that only in rare cases the same pet was in question, but rather that the death of a pet preceded obtaining a new pet. Assuming that the death of a pet preceded obtaining a new one for most participants, it appears that those who felt most negatively about the loss of their pet were most eager to obtain a new one. Alternatively, if the same pet was in question,

participants who were very enthusiastic about acquiring a pet in the first place were also greatly distressed when the pet died.

Definitions of Happiness Involving Pets

Of all the participants who provided definitions of happiness ($n = 4,059$), 89 included pets (2.1%). Definitions containing animals as a part of the environment (e.g., butterflies, bees, birds) or metaphors (e.g., happiness is living like a cat) were not analyzed. All definitions were read twice by two researchers: first briefly to obtain a general impression (Tesch, 1990) and then more comprehensively to get ideas of the main points or ideas. Then exact words (e.g., greeting) or phrases (e.g., waving tail) were highlighted which captured key concepts and were given codes. The codes were then sorted into meaningful categories (Coffey & Atkinson, 1996) that were grouped into themes.

Themes with corresponding categories were as follows: type of pet (dog, cat, unspecified), the importance of the pet in the definition (the pet is the main part of a definition, pets as family members, pets as details), emotions related to a pet (serenity, happiness or joy of a pet, love, caring for a pet) and type of activity (walking or playing, the pet greeting the owner, petting).

In their definitions of happiness, 56/89 of participants named dogs specifically, while 24/89 used the generic word “pet” or metaphorical phrases (e.g., “my furball”); 7/89 referred explicitly to cats. Two participants mentioned both a cat and a dog. No other type of pet was mentioned in the definitions.

For 23/89 participants, pets were a central source of happiness (e.g., “For me, happiness is when I come home and my five Chihuahuas greet me. There is no greater happiness than the sincere love of a dog”; or simply “My dog”). An additional 32/89 participants mentioned a pet as a part of the family (e.g., “To be at home with all my dearest, my wife, children, and dogs, and to enjoy drinking coffee after breakfast in the peace and beauty of our backyard”). The rest of the participants mentioned pets as a detail in their definitions (e.g., “Free time for family, friends, pets, trips, physical activity, staying in shape, reading, cooking, helping others”).

In their definitions, 40/89 participants included emotions. The most common emotion (21/89) was the happiness or joy of a pet (e.g., “my furry friend happily wagging its tail when I enter the room”). The other emotions were love (7/89), usually unconditional, received from the pet (e.g., “the love that I receive from my pets (unconditional)”); serenity or relaxation (6/89) experienced in a pet’s company (e.g., “The warm embrace of my boyfriend on the sofa after an awful workday, while my two cats purr at my feet and Arcade Fire is playing”); and care for a pet (e.g., “Feeding an animal. Giving a home to an abandoned animal”).

In their definitions, 29/89 participants included a pet-related activity. Of all 89 definitions comprising pets, 16 were related to dogs greeting their owners (e.g., “For me, happiness is when I come home and see my dog running joyfully toward me”). Some participants (8/89) mentioned walking or playing with a pet as a source of happiness (e.g., “For me, happiness means walking and playing with my dog”), while the others (5/89) found happiness in petting or physical contact with an animal (e.g., “Happiness is a house full of good people you love, a cat in your lap, a book in your hand, a glass of wine, Chopin in the background, laughter and a slice of cheesecake :)”).

Discussion

The first part of the study analyzed pet owners’ experiences of two important events in the human–pet relationship: acquiring a pet and the death of a pet. Our results showed that most

owners evaluate acquiring a pet as an important, positive event, and the death of a pet as an important negative event. Anticipation of both events was rather low, although it was higher for obtaining a pet than for the death of a pet. The relatively low anticipation of obtaining a pet suggests that it may be a spontaneous decision for some people and that family members do not always discuss acquiring a pet before obtaining one. Low anticipation of the death of a pet suggests either that many pets die suddenly (e.g., accidental death) or that owners are unable to recognize signs of serious illness.

We did not find any difference in the SWB indices between those who obtained a pet during the previous year and those who did not, although positive evaluations of obtaining a pet and the importance of obtaining a pet were significantly, albeit very weakly, associated with overall happiness. These results are in line with Wilson and Gilbert's (2005) findings that people overestimate the impact of an event on SWB when they focus on that event. So, in our case, people rated acquiring a pet as very positive (when they are explicitly asked about it), but the impact of this event was not obvious in SWB ratings.

On the other hand, in comparison with all the others, respondents who had experienced their pet's death were significantly less happy and satisfied with their life; they also reported lower evaluations of their health. These results are in line with Lucas et al. (2003) who found that the adaptation process is slower for negative events. However, in the current research, none of the evaluations of pets' death (positivity, negativity, importance, anticipation) were associated with SWB indices.

Therefore, it seems that the two studied events are associated with SWB in a different manner: while those who evaluated an experienced positive event as more positive, more important, and less negative were happier, the SWB of those who experienced a negative event is related to the event per se, and not to appraisals of the event. These results are in line with Headey and Grabka (2011), who suggested that giving up on a pet had fairly immediate health costs, while about 5 years' time was needed to derive health benefits from acquiring a pet. Headey and Gabka (2011) explain that pets can contribute to their owner's health by providing social support and daily exercise resulting in stress-reduction and improved immune system, but they found a reduction in doctor visits only in long-term pet ownership, indicating that it takes time to experience positive health changes from pet ownership.

One of the most influential ideas in the theory of happiness in recent years is related to the habitual level or set point of subjective SWB (e.g., Diener, Lucas, & Scollon, 2006; Lucas et al., 2003). If a life event is anticipated, anticipation could increase or decrease SWB even before the actual occurrence of the life event (Lucas et al., 2003), while adaptation may occur sooner or even immediately after the event. In line with this hypothesis, participants in the current research who anticipated the death of a pet attributed more positive and less negative evaluations to it, which displays a certain level of adaptation to an otherwise negative life event. However, those who anticipated (and probably planned) acquiring a pet evaluated this event more positively, so the process of adaptation was not visible in this case.

The same life event may be of a different level of importance, positivity, or negativity for different people. Similarly, the same event may be anticipated by someone but completely unexpected for someone else. For life events that may vary in importance and positivity/negativity to different people, such as obtaining a pet, it is especially useful to monitor these parameters while assessing the occurrence of an event. SWB related to a pet adoption could simultaneously be influenced by the fact that participants are faced with both the excitement of a new member of the family as well as with the pitfalls of pet ownership. So, analyzing positive and negative

evaluations of pet adoption separately was necessary. Negative evaluations of obtaining a pet were rather low (1.01 ± 1.99), but those who evaluated acquiring a pet more negatively reported lower levels of overall happiness.

One additional benefit of the current research, that can be easily overlooked, is the fact that this research was not predominantly about pets. CRO-WELL was a broader project measuring wellbeing of all residents, not just those who acquired/lost a pet in a previous year. Approaching participants because they have a desirable characteristic might lead to distortion in the responses, causing participants to respond from a specific point of view. In other words, when answering pet-related questionnaires, owners may tend to give answers that would favor the benefits of having pets. For instance, Wells (2009) found that although pet owners claimed many pet-related benefits their scores on standardized measures did not correspond with these reports.

Aside from the aforementioned advantages, this research has some shortcomings that must be mentioned. This research focused on life events that happened during the previous year and therefore it was not assessed if a respondent already had a pet. Therefore, conclusions could not be drawn regarding pet ownership and SWB; they were only about acquiring a new pet/death of a pet and SWB. Furthermore, participants were not asked about what kind of pet they own, and it is possible that different kinds of animals (e.g., dogs, cats, hamsters, fish) may provide different effects. In this study we identified participants who acquired a pet during the previous year, whose pet died during the previous year, and those who experienced both events. To the best of our knowledge previous research focused only on one of these events. So, while considering both events provides us with more information it also resulted in an overlapping third subsample, which made interpretation more difficult. The greatest weakness of the current study is that in participants who experienced both events during the previous year it was impossible to determine which event happened first or if they were related to the same pet. This limitation puts serious constraints on the drawing of conclusions. Future research should assess the exact time or season in which the event took place.

Many other life events may also be interconnected like “obtaining a pet” and “death of a pet”; for example, “getting a job” and “losing a job,” “getting married” and “getting divorced.” In such cases, if a negative event occurs after a positive one (e.g., a respondent gets a job and is subsequently fired a few months later), this may camouflage the possible effect of the positive event on one’s SWB. On the other hand, if a negative event is followed by a corresponding positive event (e.g., a respondent loses a job but gets a new one a few months later), the effects of the negative event may be reduced or reversed. Also, it may be that other life events are the driving force for SWB and that obtaining or losing a pet has only a negligible effect. Having such a large data set we were tempted to perform a more complex data analysis to test if there is an effect of the evaluation of obtaining/losing pet on SWB after controlling for the evaluation of other life events (positivity/negativity of getting married, divorced, having a child, etc). However, owing to the data characteristics (e.g., asymmetric distribution of evaluations of obtaining/losing pet, and practically non-existent association between evaluations of obtaining/losing pet and SWB indices) our analysis was restricted.

Finally, one may also question the validity of one-item scales, since various instruments have been developed to measure subjective wellbeing, including multi-item measures to assess global constructs (e.g., Life satisfaction; Diener et al., 1985) and various aspects of wellbeing (e.g., SPANE: assessing experienced emotions, Diener et al., 2010). Although CRO-WELL research administered various measures of wellbeing, in this study we focused on

single-item measures because we believed they would provide the best insight into the concept as a whole (i.e., happiness, life satisfaction). Cummins (1995), one of the leading authorities in wellbeing research, argues that “if researchers are interested only in an overall life satisfaction score, there seems little benefit in asking respondents multiple questions; it seems that a single question can yield reliable and valid data” (p. 196). Additionally, much research shows high correlations between one-item measures and multi-item scales (e.g., Abdel-Khalek, 2006, Argyle, Martin, & Lu, 1995; Burisch, 1997; Diener, Emmons, Larsen, & Griffin, 1985). In our own research, correlations between other wellbeing measures (i.e., SPANE, Flourishing scale) and our one-item measures of happiness and wellbeing were similar to those in found in previous research, ranging from 0.62 to 0.70.

In the second part of the study, a qualitative analysis of definitions of happiness which included reference to pets was performed. First, it is important to stress that very few participants spontaneously included a pet in their happiness definitions ($n = 89$). The content analysis revealed that pet owners often consider their pets as family members or friends, which is in line with Stallones, Marx, Garrity, and Johnson (1988), who found that 95% of senior pet owners regard their pets as friends. The participants in this research mentioned greeting, walking, playing with, petting, and taking care of their pets as sources of happiness. Similarly, Herzog (2011) argues that “when asked what they specifically get from their relationships with pets, people typically mention companionship, having a play partner, and the need to love and care for another creature” (p. 236).

Owners mainly derived happiness from positive emotions experienced by their pet (e.g., the joy of their pet). For instance, owners reported that happiness was seeing their pet happy or receiving unconditional love from it. Masson (2002) argues that both dogs and cats have a rich and varied emotional life. If so, it is logical to assume that pet owners are aware of it.

Conclusions and Recommendations

This study contributes to our understanding of the human–pet bond by shifting the focus from the effect of ownership per se to the effect of two major pet-related events. Additionally, by analyzing definitions of happiness which refer to pets, the distinct circumstances of the owner–pet relationship that are essential to pet owners' happiness are presented.

One practical implication of this research is related to low anticipation of the death of a pet. While it is simply impossible to predict in some cases, it is probable that this low anticipation rate suggests that some owners ignored their pet's condition (i.e., signs of illness) or disregarded advice related to their safety (e.g., nutrition, outdoor hazards).

On the other hand, since those who anticipated acquiring a pet were more likely to evaluate the event more positively, it seems that the acquiring a pet would be evaluated more positively if it is a conscious decision and not an impulsive act.

Only a small subset of participants mentioned pets when describing happiness, suggesting that even pet owners have other, more important sources of happiness. However, among those who mentioned pets in their definitions, the main pet-related sources of happiness were seeing their pets happy, especially if the owners themselves were the cause of this happiness (e.g., a pet's joy when it greets its owner). Knowing that a pet's emotions are more important for the owner's happiness than other characteristics of pet–owner relationship, further research should invest effort into analyzing animal emotions and human interpretations of the non-verbal cues of pets (such as Morris, Doe, & Godsell, 2008) to strengthen the owner–pet bond and enhance SWB.

Acknowledgement

This work was fully supported by Croatian Science Foundation under the project “Croatian longitudinal study on wellbeing” (IP-2014-09-4398).

Conflicts of Interest

The authors declare no potential conflicts of interest.

References

- Abdel-Khalek, A. M. (2006). Measuring happiness with a single-item scale. *Social Behavior and Personality, 34*(2), 139–150. <https://doi.org/10.2224/sbp.2006.34.2.139>
- Allen, K. (2003). Are pets a healthy pleasure? The influence of pets on blood pressure. *Current Directions in Psychological Science, 12*(6), 236–239. <http://dx.doi.org/10.1037/a0016812>
- Argyle, M., Martin, M., & Lu, L. (1995). Testing for stress and happiness: The role of social and cognitive factors. In C. D. Spielberger & I. G. Sarason (Eds.), *Stress and emotion* (pp. 173–187). Washington, DC: Taylor & Francis.
- Bao, K. J., & Schreer, G. (2016). Pets and happiness: Examining the association between pet ownership and wellbeing. *Anthrozoös, 29*(2), 283–296. <https://doi.org/10.1080/08927936.2016.1152721>
- Barba, B. E. (1995). A critical review of research on human/companion animal relationships: 1988 through 1993. *Anthrozoös, 8*(1), 9–20.
- Bejaković, P., & Kaliterna Lipovčan, Lj. (2007). *Quality of life in Croatia: Key findings from national research*. Dublin: European Foundation for the Improvement of Living and Working Conditions.
- Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation level theory: A symposium* (pp. 287–302). New York, NY: Academic Press.
- Bryman, A. (2001). *Social research methods*. New York, NY: Oxford University Press.
- Burisch, M. (1997). Test length and validity revisited. *European Journal of Personality, 11*(4), 303–315.
- Bushman, B. A. (2014). Dogs: Can they help promote human health? *ACSM's Health & Fitness Journal, 18*(1), 5–8.
- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: Complementary research strategies*. Thousand Oaks, CA: Sage.
- Cummins, R. A. (1995). On the trail of the gold standard for subjective well-being. *Social Indicators Research, 35*(2), 179–200.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71–75.
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist, 61*(4), 305–314. <https://doi.org/10.1037/0003-066X.61.4.305>
- Diener, E., & Seligman, M. E. (2002). Very happy people. *Psychological Science, 13*(1), 81–84. <https://doi.org/10.1111/1467-9280.00415>
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research, 97*(2), 143–156.
- El-Alayli, A., Lystad, A. L., Webb, S. R., Hollingsworth, S. L., & Ciolli, J. L. (2006). Reigning cats and dogs: A pet-enhancement bias and its link to pet attachment, pet-self similarity, self-enhancement, and well-being. *Basic and Applied Social Psychology, 28*(2), 131–143. http://dx.doi.org/10.1207/s15324834basps2802_3
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics and sex, drugs, and rock 'n' roll* (4th ed.). Los Angeles, CA: Sage.
- Frederick, S., & Loewenstein, G. (1999). Hedonic adaptation. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 302–329). New York, NY: Russell Sage Foundation.
- Friedmann, E., Katcher, A. H., Lynch, J. J., & Thomas, S. A. (1980). Animal companions and one-year survival of patients after discharge from a coronary care unit. *Public Health Reports, 95*(4), 307–312.
- George, D., & Mallery, P. (2010). *SPSS for Windows step by step: A simple guide and reference 17.0 Update* (10th ed.). Boston, MA: Pearson.

- Gilbert, D. T., Driver-Linn, E., & Wilson, T. D. (2002). The trouble with Vronsky: Impact bias in the forecasting of future affective states. In L. Feldman-Barrett & P. Salovey (Eds.), *The wisdom of feeling* (pp. 114–143). New York, NY: Guilford.
- Gilbey, A., McNicholas, J., & Collis, G. M. (2007). A longitudinal test of the belief that companion animal ownership can help reduce loneliness. *Anthrozoös*, 20(4), 345–353. <https://doi.org/10.2752/089279307X245473>
- Greenebaum, J. (2004). It's a dog's life: Elevating status from pet to “fur baby” at yappy hour. *Society & Animals*, 12(2), 117–134. <https://doi.org/10.1163/1568530041446544>
- Grier, K. C. (2006). *Pets in America: A history*. Chapel Hill, NC: University of North Carolina Press.
- Headey, B. (2008). Life goals matter to happiness: A revision of set-point theory. *Social Indicators Research*, 86(2), 213–231. <https://doi.org/10.1007/s11205-007-9138-y>
- Headey, B., & Grabka, M. (2011). Health correlates of pet ownership from national surveys. In P. McCardle, S. McCune, J. A. Griffin, & V. Maholmes (Eds.), *How animals affect us: Examining the influences of human–animal interaction on child development and human health* (pp. 153–162). Washington, DC: American Psychological Association.
- Herzog, H. (2011). The impact of pets on human health and psychological well-being: Fact, fiction, or hypothesis? *Current Directions in Psychological Science*, 20(4), 236–239. <https://doi.org/10.1177/09637214111415220>
- Hopson, B., & Adams, J. (1977). Towards an understanding of transition: Defining some boundaries of transition dynamics. In J. Adams, J. Hayes, & B. Hopson (Eds.), *Transition. Understanding and managing personal change* (pp. 3–25). London: Martin Robertson.
- Huppert, F. A., Marks, N., Clark, A., Siegrist, J., Stutzer, A., Vittersø, J., & Wahrendorf, M. (2009). Measuring well-being across Europe: Description of the ESS Well-being Module and preliminary findings. *Social Indicators Research*, 91(3), 301–315. <https://doi.org/10.1007/s11205-008-9346-0>
- Knight, S., & Edwards, V. (2008). In the company of wolves: The physical, social, and psychological benefits of dog ownership. *Journal of Aging and Health*, 20(4), 437–455. <https://doi.org/10.1177/0898264308315875>
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, 84(3), 527–539. <https://psycnet.apa.org/doi/10.1037/0022-3514.84.3.527>
- Mariti, C., Ricci, E., Carlone, B., Moore, J. L., Sighieri, C., & Gazzano, A. (2013). Dog attachment to man: A comparison between pet and working dogs. *Journal of Veterinary Behavior*, 8(3), 135–145. <https://doi.org/10.1016/j.jveb.2012.05.006>
- Masson, J. M. (2002). *The nine emotional lives of cats*. New York, NY: Ballantine Books.
- Mayseless, O. (2016). *The caring motivation: An integrated theory*. New York, NY: Oxford University Press.
- McConnell, A. R., Brown, C. M., Shoda, T. M., Stayton, L. E., & Martin, C. E. (2011). Friends with benefits: On the positive consequences of pet ownership. *Journal of Personality and Social Psychology*, 101(6), 1239–1252. <https://doi.org/10.1037/a0024506>
- Miltiades, H., & Shearer, J. (2011). Attachment to pet dogs and depression in rural older adults. *Anthrozoös*, 24(2), 147–154. <https://doi.org/10.2752/175303711X12998632257585>
- Morris, P. H., Doe, C., & Godsell, E. (2008). Secondary emotions in non-primate species? Behavioural reports and subjective claims by animal owners. *Cognition and Emotion*, 22(1), 3–20. <https://psycnet.apa.org/doi/10.1080/02699930701273716>
- Podrazik, D., Shackford, S., Becker, L., & Heckert, T. (2000). The death of a pet: Implications for loss and bereavement across the lifespan. *Journal of Personal & Interpersonal Loss*, 5(4), 361–395. <https://doi.org/10.1080/10811440008407852>
- Seltman, H. (2018). *Experimental design and analysis*. Retrieved from <http://www.stat.cmu.edu/~hseltman/309/Book/Book.pdf>
- Springer, J. (2018). *The 2017–2018 APPA National Pet Owners Survey debut: Trusted data for smart business decisions*. Retrieved from http://americanpetproducts.org/Uploads/MemServices/GPE2017_NPOS_Seminar.pdf
- Staats, S., Wallace, H., & Anderson, T. (2008). Reasons for companion animal guardianship (pet ownership) from two populations. *Society & Animals*, 16(3), 279–291. <https://doi.org/10.1163/156853008X323411>
- Stallones, L., Marx, M., Garrity, T. F., & Johnson, T. P. (1988). Attachment to companion animals among older pet owners. *Anthrozoös*, 2(2), 118–124.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. Bristol, PA: Falmer.

- Wells, D. L. (2009). Associations between pet ownership and self-reported health status in people suffering from chronic fatigue syndrome. *Journal of Alternative and Complementary Medicine*, 15(4), 407–413. <https://doi.org/10.1089/acm.2008.0496>
- Wildeman, C., Turney, K., & Schnittker, J. (2014). The hedonic consequences of punishment revisited. *Journal of Criminal Law & Criminology*, 104(1), 133–164.
- Wilson, T. D., & Gilbert, D. T. (2005) Affective forecasting: Knowing what to want. *Current Directions in Psychological Science*, 14(3), 131–134. <https://psycnet.apa.org/doi/10.1111/j.0963-7214.2005.00355.x>