

LETTERS ON EVOLUTIONARY BEHAVIORAL SCIENCE

Relationship Status Moderates Men's Conspicuous Consumption of Smartphones

Christine Hennighausen^{1,*}, Frank Schwab¹

¹Department of Media Psychology, Institute for Human-Computer-Media, University of Wuerzburg, Oswald-Kuelpe-Weg 82, 97074 Wuerzburg, Germany

*Author for correspondence (christine.hennighausen@uni-wuerzburg.de)

By applying the handicap principle, researchers have investigated men's conspicuous purchases of highstatus products as part of sexual signaling systems. Studies have suggested that, as part of short-term mating strategies, men are particularly willing to engage in conspicuous consumption to attract mates. Yet, this research has neglected to examine how relationship status influences conspicuous consumption. In our web-based study involving 352 participants (229 women), men tending towards short-term mating reported greater purchase intentions for a highstatus smartphone only when single or in uncommitted relationships, while no association surfaced between mating strategy and conspicuous consumption among men in committed relationships. Results also revealed that, independent of mating strategy and income, single men and men in uncommitted relationships were more willing to purchase a lowstatus smartphone. Relationship status did not affect women's conspicuous consumption. With these findings, we argue that relationship status significantly moderates men's conspicuous consumption, as well as discuss purchases of low-status products as possible signals of men's interest in long-term mating.

Keywords

relationship status, conspicuous consumption, mating strategies, handicap principle, smartphones, mobile devices

Introduction

Spending large financial resources on luxuries to demonstrate wealth and enhance one's social status, referred to as *conspicuous consumption* (Veblen, 1899), has been examined as a sexual signal in humans (e.g., Griskevicius et al., 2007; Miller, 2009; Sundie et al., 2011). As precious resources are "wasted" on expensive luxuries and cannot be allocated elsewhere, conspicuous spending can be considered a handicap (Zahavi, 1975), and may thus honestly indicate an individual's underlying desirable

traits. While women primarily display conspicuous consumption amidst same-sex competition (Hudders, De Backer, Fisher, & Vyncke, 2014; Wang & Griskevicius, 2014), men are more willing to spend money in mateattraction contexts (Griskevicius et al., 2007; Sundie et al., 2011). Previous studies have primarily examined how mating cues and mating strategies affect spending behavior (e.g., Janssens et al., 2011; Sundie et al., 2011; Van den Bergh, Dewitte, & Warlop, 2008), suggesting that men's conspicuous consumption might particularly communicate an interest in short-term mating (Sundie et al., 2011). However, relationship status is a previously neglected factor that may affect men's conspicuous spending. Research shows that being in a committed relationship decreases attention to alternative mates to maintain the current long-term relationship (Maner, Rouby, & Gonzaga, 2008). Furthermore, being in a committed relationship lowers testosterone levels (Gettler, McDade, Feranil, & Kuzawa, 2011), which are, in turn, positively related to men's motivation to display mating effort (Archer, 2006). Being single or in an uncommitted relationship might thus increase men's display of conspicuous consumption to attract a mate. In line with that, a study by Janssens et al. (2011) revealed that compared with men in committed relationships, single men were more likely to notice status products in a visual perception task, indicating that being uncommitted in combination with mating cues not only enhances men's attention for mates, but also men's attention for means to attract a mate.

Based on the outlined findings, we proposed that men following a short-term mating strategy would engage in conspicuous consumption only when single or in uncommitted relationships. As women do not conspicuously consume to attract a mate (Hudders et al., 2014; Wang & Griskevicius, 2014), we did not expect to find an effect of relationship status on female conspicuous consumption. Similar to former studies that have used personal electronics (e.g., Janssens et al., 2011; Sundie et al., 2011) to measure conspicuous consumption, we selected smartphones as products, since mobile devices are conspicuous and easily perceivable (Gierl & Huettl, 2010). Moreover, past research has demonstrated that mobile telephones are associated with status and used for status signaling and mate attraction (Lycett & Dunbar, 2000; Van Kempen, 2003).

Methods

Participants and procedure

Data was collected online from 352 German-speaking participants during June 2013 (229 women; $M_{age} = 21.9$, $SD_{age} = 2.8$, age range: 16-34 years, 93.8% undergraduate students). Participants were recruited via university classes, university mailing lists, advertisements, and social networking sites. After collecting demographic information, participants were presented photographs

of two smartphones and indicated for each of them their purchase intentions. Participants took part in the study in exchange for partial course credit or for participation in a drawing of vouchers. The measures of the current study were embedded in another study.

Measures

(i) Purchase Intentions

Current purchase intentions for smartphones were measured with the item "How likely would you purchase this smartphone?" (visual analogue scales: 1 = not at all likely to 100 = very likely). The smartphones included a high-status smartphone (Apple iPhone 5; retail price range: 615 - 798 EUR1) and a low-status smartphone (Samsung Galaxy Ace 2; retail price range: 129 - 179 EUR1). An independent sample of 106 participants (64 women, $M_{age} = 21.8$ years, $SD_{age} = 2.3$) pre-rated both smartphones on Likert-type scales (1 = not at all to 7 =very much), and dependent t-tests revealed that the highstatus smartphone was perceived as ranking higher on status ($M_{iPhone5} = 5.50$ vs. $M_{Ace2} = 2.61$, t(105) = 13.22, p < .001, d = 1.28) and conspicuousness ($M_{iPhone5} = 6.10$ vs. $M_{Ace2} = 2.61$, t(105) = 18.68, p < .001, d = 1.81). There were no significant sex differences in the pre-ratings ($ps \ge .08$).

(ii) Mating Strategy

We assessed mating strategy with the Behavior facet of the Revised Sociosexual Orientation Inventory (SOI-R; Penke & Asendorpf, 2008). The Behavior facet measures past sexual behavior with three items: "With how many different partners have you had sex within the past 12 months?", "With how many different partners have you had sexual intercourse on *one and only one* occasion?", and "With how many different partners have you had sexual intercourse without having an interest in a long-term committed relationship with this person?". Answers are given on Likert-type scales (1 = zero to 5 = eight or more), with higher scores indicating a tendency towards casual, uncommitted sexual relationships (i.e., the tendency towards short-term mating). Cronbach's alphas were .83 for men and .80 for women.

(iii) Relationship Status

Relationship status was assessed using the categories single, uncommitted relationship (e.g., affair, one-night-

stand), committed relationship, and married. Since only few participants reported to be in an uncommitted relationship (n = 20) or to be married (n = 6), we combined single and uncommitted relationship into the category uncommitted relationship (n = 103 women, n = 65 men) and committed relationship and married into the category committed relationship (n = 126 women, n = 58 men).

(iv) Control Variables

Participants indicated the type of mobile device they currently owned, and given this information, we created the categories; Apple, Samsung, and other. We further assessed monthly net income (see Table 1 for categories) and age, as the Behavior facet of the SOI-R positively correlates with age (Penke & Asendorpf, 2008).

Results

Simple correlations between the predictor variables are reported in Table 1. For both men and women, the ownership of an Apple device was negatively correlated with the ownership of a Samsung device (r=-.49 and r=-.43). Moreover, men's and women's monthly net income of 250 EUR up to less than 500 EUR was negatively related to a monthly net income of 500 EUR up to less than 1000 EUR (r=-.53 and r=-.41). Men's and women's age showed positive associations with a higher monthly net income and women's age was further positively correlated with the tendency towards short-term mating (r=.28) (see Table 1).

Independent t-tests showed no differences between men's and women's mean intentions to purchase the high-status smartphone ($M_{men}=47.44~{\rm vs.}~M_{women}=53.17,~t(350)=1.38,~p=.17,~d=-0.15$), while women were more likely to purchase the low-status smartphone ($M_{men}=28.56~{\rm vs.}~M_{women}=36.58,~t(350)=2.50,~p=.013,~d=-0.28$). To test our hypotheses, we conducted multiple regression analyses. All variance inflation factors (VIF) were less than 10, suggesting no multicollinearity between the predictor variables. As hypothesized, the interaction term of mating strategy and relationship status predicted men's willingness to purchase the high-status smartphone (B=13.51,~t(112)=2.53,~p=.012) (see Table 2). Following Aiken and West (1991) and Dawson (2013), we conducted simple slope analyses to further investigate the interaction.

Table 1. Correlations	(Two-Tailed)	among Study	Variables
-----------------------	--------------	-------------	-----------

Variable	1	2	3	4	5	6	7	8	9
1. Mating strategy	-	. 04	.20	09	.06	03	.07	.10	.10
2. Relationship status	.03	-	13	.17	.05	08	22	05	09
3. Mobile device owned: Apple	.11	09	-	49***	18	05	.25	.15	.06
4. Mobile device owned: Samsung	.07	.07	43***	-	05	.09	08	.00	.02
5. Income: 250 EUR - less than 500 EUR	01	.04	.05	11	-	53***	.14	14	04
6. Income: 500 EUR - less than 1000 EUR	.10	.01	05	.06	41***	-	16	16	.17
7. Income: 1000 EUR - less than 1500 EUR	.19	02	.19	11	11	08	-	04	.07
8. Income: > 1500 EUR	.06	12	00	03	10	08	02	-	.38***
9. Age	.28***	08	01	09	.05	.02	.30***	.27**	-

Note. Above the diagonal, correlations are reported for men (n = 123). Below the diagonal, correlations are reported for women (n = 229). Relationship status was represented as one dummy variable with committed relationship as the reference group. Mobile device owned was represented as two dummy variables with other as the reference group. Monthly net income was represented as four dummy variables with < 250 EUR as the reference group. Mating strategy and age were centered at their means. For correlations between dichotomous variables, phi coefficients were calculated. For correlations between metric and dichotomous variables, point biserial correlation coefficients were calculated. P-values were corrected using the Holm–Bonferroni method. **p < .01. ***p < .001

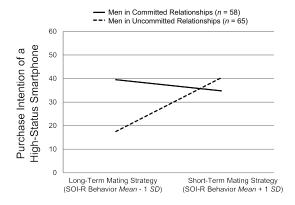


Figure 1. Regression of purchase intention for a highstatus smartphone respecting mating strategy for values from 1 SD below the mean of the SOI-R Behavior facet (i.e., a long-term mating strategy) to 1 SD above the mean of the SOI-R Behavior facet (i.e., a short-term mating strategy) for men in uncommitted and committed relationships.

Note. This graph was created using a template from http://www.jeremydawson.com/slopes.htm.

We thereby examined the relationship between mating strategy for values ranging from 1 SD below the mean of the SOI-R (i.e., a rather long-term mating strategy) to 1 SD above the mean of the SOI-R (i.e., a rather short-term mating strategy) and purchase intention for the high-status smartphone for both men in uncommitted and committed relationships. The results revealed a significant, positive slope for men in uncommitted relationships (B = 11.20, t(112) = 3.27, p = .001) but not for men in committed relationships (B = -2.31, t(103) = 0.56, p = .58), suggesting that men rather following a short-term mating strategy were more willing to purchase the high-status smartphone when in uncommitted relationships, while there was no significant association between mating strategy and purchase intentions among men in committed relationships (see Figure 1).

Contrary to our assumptions, men in uncommitted relationships (relative to men in committed relationships)

reported greater purchase intentions for the low-status smartphone (B = 14.45, t(112) = 2.86, p = .005). As expected, women's purchase intentions were neither related to relationship status nor mating strategy. Men's and women's purchase intentions were further predicted by the type of smartphone model they currently owned. Income and age were non-significant (see Table 2).

Discussion

The aim of this research was to investigate relationship status as a moderator variable in the conspicuous consumption of smartphones. As hypothesized, we found that the behavioral tendency towards short-term mating predicted the intention to purchase a high-status smartphone only among single men and men in uncommitted relationships, while there was no such association found among men in committed relationships. This study significantly contributes to research in the field of evolutionary consumer psychology, as it is the first to demonstrate that mating strategy predicts men's conspicuous consumption contingent on relationship status.

Replicating previous findings (Griskevicius et al. 2007; Sundie et al., 2011), we found no influence of mating strategy and relationship status on women's conspicuous consumption. Unexpectedly, regardless of mating strategy, single men and men in uncommitted relationships were more willing to purchase the low-status smartphone. This finding suggests that relationship status per se does not predict men's conspicuous consumption to attract a short-term mate. Purchasing a low-status product could rather signal men's willingness to save money and indicate the ability to acquire resources in the long term. This explanation is also supported by the finding that income did not account for men's purchase intentions. As resource acquisition ability is a trait women highly value in a long-term mate (Buss, 1989), single men and men in uncommitted relationships might communicate their interest in long-term mating by reporting greater purchase intentions for low-status products. Similarly, previous

Table 2. Blockwise OLS Multiple Regression Analyses of Purchase Intentions for Smartphones

Variable	High-status smartphone				Low-status smartphone			
	Men		Women		Men		Women	
	В	t	В	t ^a	В	t	В	t
Constant	37.15	4.46***	47.97	9.20***	26.55	3.50***	39.59	9.38***
Mating strategy	-2.31	-0.56	4.20	1.19	0.71	0.19	0.38	0.11
Relationship status	-8.23	-1.49	0.39	0.09	14.45	2.86**	-4.79	-1.30
Mating strategy x relationship status	13.51	2.53*	-0.42	-0.09	-4.47	-0.92	-0.25	-0.06
Mobile device owned: Apple	51.45	6.95***	36.78	7.29***	-19.14	-2.83**	-12.13	-2.56*
Mobile device owned: Samsung	-3.26	-0.51	-7.94	-1.50	5.65	0.97	11.85	2.74**
Income: 250 EUR – less than 500 EUR	10.90	1.43	-2.38	-0.46	0.39	0.06	-0.51	-0.12
Income: 500 EUR – less than 1000 EUR	-2.43	-0.32	-4.37	-0.80	-4.20	-0.61	-5.50	-1.15
Income: 1000 EUR – less than 1500 EUR	-8.23	-0.26	11.23	0.90	-2.16	-0.16	-0.08	-1.20
Income: > 1500 EUR	-12.65	-0.77	-1.88	-0.08	-5.68	-0.38	-0.00	0.00
Age	0.62	0.62	-1.57	-1.74	1.23	1.36	0.02	-0.34
R^2	0.49		0.29		0.24		0.13	
F	10.59***		8.61***		3.56***		3.21***	

Note. $n_{men} = 123$. $n_{women} = 229$. Relationship status was represented as one dummy variable with committed relationship as the reference group. Mobile device owned was represented as two dummy variables with other as the reference group. Monthly net income was represented as four dummy variables with < 250 EUR as the reference group. Mating strategy and age were centered at their means. ^aDue to heteroscedastic residuals, *t*-statistics and *p*-values were calculated based on robust standard errors (Newey & West, 1994). *p < .05. **p < .01. ***p < .001.

research shows that when men's income (i.e., the resources a man is potentially able to invest in a long-term mate) is the same, women consider men purchasing a low-status car as a more desirable long-term mate compared to men purchasing a high-status car (Sundie et al., 2011).

One limitation of our study could be that we did not assess relationship duration and relationship quality. It is conceivable that being in an unhappy long-term relationship could increase men's willingness to engage in conspicuous consumption to attract alternative mates, since the absence of strong feelings of love for a romantic partner enhances attention to alternative mates (Maner et al., 2008).

Future research could consider mate value as a further variable influencing conspicuous consumption. Men's mate value is positively associated with the pursuit of a short-term mating strategy (Surbey & Brice, 2007). Therefore, men with a rather low mate value are more likely to follow a long-term mating strategy, as attracting one romantic long-term mate could be a more reachable goal than mating with multiple partners (Penke & Denissen, 2008). Mate value might thus contribute to men's display of conspicuous consumption beyond mating strategy and relationship status.

Acknowledgement

We thank Benjamin P. Lange for helpful comments on an earlier version of this manuscript and Fabian Tinkl for statistical advice. This manuscript is part of the first author's doctoral dissertation.

References

- Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage.
- Archer, J. (2006). Testosterone and human aggression: An evaluation of the challenge hypothesis. Neuroscience Biobehavioral Review, 30, 319-345. (doi:10.1016/j.neubiorev.2004.12.007)
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. Behavioral and Brain Sciences, 12, 1-14. (doi:10.1017/S0140525X00023992)
- Dawson, J. (2014). Moderation in management research: What, why, when, and how. Journal of Business and Psychology, 29, 1-19. (doi:10.1007/s10869-013-9308-7)
- Gettler, L. T., McDade, T. W., Feranil, A. B., & Kuzawa, C. W. (2011). Longitudinal evidence that fatherhood decreases testosterone in human males. Proceedings of the National Academy of Sciences of the United States of America, 108, 16194-16199. (doi:10.1073/pnas.1105403108)
- Gierl, H., & Huettl, V. (2010). Are scarce products always more attractive? The interaction of different types of scarcity signals with products' suitability for conspicuous consumption. International Journal of Research in Marketing, 27, 225-235. (doi:10.1016/j.ijresmar.2010.02.002)
- Griskevicius, V., Tybur, J. M., Sundie, J. M., Cialdini, R. B., Miller, G. F., & Kenrick, D. T. (2007). Blatant benevolence and conspicuous consumption: When romantic motives elicit strategic costly signals. Journal of Personality

- and Social Psychology, 93, 85-102. (doi:10.1037/0022-3514.93.1.85)
- Hudders, L., De Backer, C., Fisher, M., & Vyncke, P. (2014). The rival wears prada: Female luxury consumption as an intrasexual competition strategy. Evolutionary Psychology, 12, 570-587.
- Janssens, K., Pandelaere, M., Van den Bergh, B., Millet, K., Lens, I., & Roe, K. (2011). Can buy me love: Mate attraction goals lead to perceptual readiness for status products. Journal of Experimental Social Psychology, 47, 254-258. (doi:10.1016/j.jesp.2010.08.009)
- Lycett, J. E., & Dunbar, R. I. M. (2000). Mobile phones as lekking devices among human males. Human Nature, 11, 93-104. (doi:10.1007/s12110-000-1004-4)
- Maner, J. K., Rouby, D. A., & Gonzaga, G. C. (2008). Automatic inattention to attractive alternatives: The evolved psychology of relationship maintenance. Evolution and Human Behavior, 29, 343-349. (doi:10.1016/ j.evolhumbehav.2008.04.003)
- Miller, G. (2009). Spent: Sex, evolution, and consumer behavior. New York: Penguin/Putnam.
- Newey, W. K., & West, K. D. (1994). Automatic lag selection in covariance matrix estimation. The Review of Economic Studies, 61, 631-653. (doi: 10.2307/2297912)
- Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. Journal of Personality and Social Psychology, 95, 1113-1135. (doi:10.1037/0022-3514.95.5.1113)
- Penke, L., & Denissen, J. J. A. (2008). Sex differences and lifestyle-dependent shifts in the attunement of self-esteem to self-perceived mate value: Hints to an adaptive mechanism? Journal of Research in Personality, 42, 1123-1129. (doi:10.1016/j.jrp.2008.02.003)
- Sundie, J. M., Kenrick, D. T., Griskevicius, V., Tybur, J. M., Vohs, K. D., & Beal, D. J. (2011). Peacocks, Porsches, and Thorstein Veblen: Conspicuous consumption as a sexual signaling system. Journal of Personality and Social Psychology, 100, 664-680. (doi:10.1037/ a0021669)
- Surbey, M. K., & Brice, G. R. (2007). Enhancement of self-perceived mate value precedes a shift in men's preferred mating strategy. Acta Psychologica Sinica, 39, 513-522.
- Van den Bergh, B., Dewitte, S., & Warlop, L. (2008). Bikinis instigate generalized impatience in intertemporal choice. Journal of Consumer Research, 35, 85-97. (doi:10.1086/525505)
- Van Kempen, L. (2003). Fooling the eye of the beholder: Deceptive status signalling among the poor in developing countries. Journal of International Development, 15, 157-177. (doi:10.1002/jid.973)
- Veblen, T. (1899). The theory of the leisure class: An economic study of institutions. New York: Macmillan.
- Wang, Y., & Griskevicius, V. (2014). Conspicuous consumption, relationships, and rivals: Women's luxury products as signals to other women. Journal of Consumer Research, 40, 834-854. (doi:10.1086/673256)
- Zahavi, A. (1975). Mate selection A selection for a handicap. Journal of Theoretical Biology, 53, 205-214. (doi:10.1016/0022-5193(75)90111-3)

¹Adopted from CHIP (http://www.chip.de).