

Review

Consuming in response to loneliness: Bright side and dark side effects

Elena Fumagalli¹, L. J. Shrum² and Tina M. Lowrey²**Abstract**

This review synthesizes the most recent advances in psychology investigating the link between loneliness and consumption. We structure the review around the motives that loneliness activates, based on the Evolutionary Theory of Loneliness. More specifically, we detail how consumers use consumption experiences to repair perceived deficiencies in their belongingness needs, and how the motive to improve social connections through consumption can have both positive (bright side) and negative (dark side) effects. We also discuss how loneliness can activate a self-preservation motive that can breed interpersonal mistrust and thus potentially impede reconnection. We conclude by reviewing research on the depleting effects of loneliness on self-regulatory resources and the dark side effects of this depletion on self-control.

Addresses

¹ Escuela de Negocios, Universidad Torcuato Di Tella, Av. Pres. Figueroa Alcorta 7350, C1428, CABA, Argentina

² Marketing Department, HEC Paris, 1 Rue de la Libération, 78350, Jouy-en-Josas, France

Corresponding author: Shrum, L. J. (shrum@hec.fr)

Current Opinion in Psychology 2022, 46:101329

This review comes from a themed issue on **Consumer Psychology**

Edited by **Bob M. Fennis** and **Derek Rucker**

For a complete overview see the [Issue](#) and the [Editorial](#)

Available online 28 February 2022

<https://doi.org/10.1016/j.copsyc.2022.101329>

2352-250X/© 2022 Elsevier Ltd. All rights reserved.

Keywords

Loneliness, Social isolation, Social exclusion, Consumerism, Well-being.

Long before the COVID-19 pandemic emerged, forcing prolonged social isolation, governments and societies had begun to recognize how alienating modern life was becoming, and loneliness started to be considered a true epidemic [1]; by most accounts, the COVID-19 pandemic has only exacerbated the situation [2]. Even though loneliness cannot be diagnosed with a medical test, the comparison with an infectious disease is particularly fitting given that loneliness has been shown to spread contagiously among individuals within a social network [3], to affect humans' brain functioning

[4–6], and to have numerous physical and psychological downstream consequences compromising human well-being. For example, loneliness is associated with increased mortality, with an effect comparable to the impact of other well-known factors like obesity and smoking [7]. Lonely individuals are also more prone to depression, cognitive decline and dementia, and suicidal thoughts [8].

In the following sections, we review research that links loneliness with consumer behavior. In keeping with the theme of this issue, we highlight both the potentially bright and dark sides of this relation. Although loneliness is an aversive psychological state, in some cases the consumption-related means that individuals use to alleviate feelings of loneliness can have positive (bright side) consequences, at least in the short term. However, as we discuss, these short-term bright side effects may come at a long-term cost that has negative (dark side) effects. In other instances, consistent with the research showing often-times devastating negative effects on individuals' mental and physical health, loneliness can affect particular psychological processes that result in dark side effects on consumer decision-making.

Loneliness spurs reconnection motives

Loneliness is an aversive state that arises from the perception that one's social relationships are deficient [9,10]. Thus, loneliness is a subjective experience, and is not synonymous with objective social isolation. Some people may live relatively solitary lives yet not feel lonely. Other people may have many social connections yet nevertheless feel lonely because the social connections are not sufficiently satisfying (e.g., many friendships but not enough close ones). Still other people may have only a few social connections yet not feel lonely (e.g., just a few very close friends). Thus, it is not just about the quantity of social connections, but their quality, and relationship quality is a stronger predictor of loneliness than relationship quantity [11].

Virtually all theories of loneliness posit that loneliness triggers the motive of social reconnection [6,10,12]. Loneliness reflects a deficit in the need to belong, which is considered a fundamental human need that has evolutionary roots in self-preservation [9]. Although there are many avenues for social reconnection, one is

through consumption experiences. This process of reconnection through consumption is captured by Rucker, Galinsky, and colleagues' Compensatory Consumer Behavior Model [13,14], in which consumers compensate for self-discrepancies through consumption, which can have at least short-term bright side effects [15]. In some cases, consumers may seek interpersonal reconnection directly by tailoring their consumer choices to align with preferences of interaction partners. For example, in one study, relative to non-threatened participants, those who had their belongingness needs threatened via social exclusion were willing to pay more for foods their ostensible interaction partner liked even though they themselves found the foods unappealing (Mead, this issue). To the extent that such tailoring of choices restores a sense of affiliation, compensatory consumption can have bright side effects. However, a potential dark side emerges if the tailoring of consumption choices results in harmful behaviors. For example, threatened participants were also willing to consume illegal drugs if they believed it would increase their social connections [16].

Lonely individuals can also use products to signal affiliation and social connection, either to others or to themselves (Pandelaere, this issue). For example, lonely individuals show greater preferences for majority-endorsed products when their preferences are public and they believe their loneliness situation is changeable, even though privately they prefer more distinctive, minority-endorsed products [17,18]. Thus, lonely individuals use products to signal to others that they have preferences in common. Threats to belongingness needs can also have bright side effects by spurring prosocial behaviors (e.g., charitable donations, general helping) as a way of broadly reconnecting with society [19–21; see Whillans, this issue].

Some products and services are specifically designed to increase social connections. Electronic communication generally, and social media more specifically, is a case in point. The development of electronic communications such as email and messaging apps and social media platforms such as Facebook and Instagram have dramatically increased people's ability to potentially establish, increase, and nurture social connections. Thus, it seems intuitive that increases in such communications would decrease feelings of loneliness, particularly for younger people, who are voracious users of social media. However, a growing body of research suggests that the opposite may be true. Several pre-pandemic studies of adolescents and young adults have found that social media usage is positively correlated with loneliness [22–24]. A post-pandemic study found similar results, but the effects depended on the type of communication devices used: Social media usage (e.g., Facebook, Instagram) during initial pandemic lockdowns was associated with greater feelings of loneliness, and this effect was

mediated by a fear of missing out (FOMO), but the use of messaging apps (e.g., WhatsApp) was associated with decreased feelings of loneliness [25]. These seemingly paradoxical findings may be explained in terms of the quality versus quantity of social connections noted earlier. Even though social media may increase the quantity of social contacts and interactions, the quality of contacts and interactions may actually decrease. That is, the lower-quality social media interactions may replace or crowd-out more high-quality in-person interactions.

In the aforementioned research, consumption situations and experiences were used to increase interpersonal connections, either directly through interactions with others, or indirectly through signaling to others shared preferences. However, products themselves can be used to assuage feelings of loneliness and restore feelings of social connectedness and belonging. For example, feelings of loneliness can spur individuals to consume certain types of products to increase or restore feelings of belongingness. Loneliness and belongingness deficits are associated with greater feelings of nostalgia [21,26,27], which has a bright side restorative effect of increasing perceptions of social support [28]. Accordingly, consuming nostalgic products can have a bright side effect of restoring feelings of belongingness that have been lowered through social exclusion [29]. Similarly, relative to less lonely consumers, lonelier consumers appear to be drawn to second-hand products because they provide a symbolic connection to previous users [30]. Finally, ritualistic behaviors also appear to alleviate feelings of loneliness. For example, consuming products in a ritualistic manner (e.g., eating a product in a certain, ritualistic manner, such as an Oreo cookie) reduces feelings of loneliness because the ritualistic behavior increases consumers' feelings that their life has meaning [31].

Products themselves can also serve a social connection function. Although brands and their associated products are of course not human, people often treat them as if they are. Consumers ascribe personality characteristics to brands [32], and develop close relations with them [33], to the point of assigning them names and ascribing nefarious motives to them when they fail to perform [34]. Thus, in the absence of the ability to establish or re-establish social connections with actual humans, lonely people may compensate by establishing closer relationships with products. This process is readily evident in research showing that increases in loneliness and general threats to belongingness needs increases anthropomorphic tendencies [35,36] and preferences for and attitudes toward anthropomorphized products [37,38]. This process of product anthropomorphism can have bright side effects on loneliness in several ways. First, interacting with anthropomorphized products can at least partially restore feelings of social connection for those whose belongingness needs have been threatened

[39,40] and can also reduce psychological pain by increasing feelings of social connection [41]. Second, anthropomorphizing products can affect feelings of vitality and increase self-control for lonely consumers. For example, in one study, participants who were induced to feel lonely and then given the opportunity to anthropomorphize a product reported greater levels of vitality and increased self-control compared to those who were not given the opportunity to anthropomorphize a product [39].

Although the research just reviewed suggests that establishing close connections with products can have bright side effects by at least momentarily assuaging feelings of loneliness and lack of social connectedness, the bright side effects may come at the expense of longer-term dark side costs. One risk is that the “temporary” substitution of product connections for human interpersonal connections may not be temporary after all, but instead may develop into more generalized chronic, trait-like tendencies. There is ample evidence that this may be the case. Loneliness and social connection deficits are associated with stronger self-brand connections [26], greater love of material possessions [42], and more materialistic value orientations [43–45], the latter of which has well-documented negative effects on well-being [46]. Thus, developing stronger brand and product connections and material value orientations to combat feelings of loneliness may in effect crowd out human social connections [47], leading to a vicious cycle in which loneliness leads to higher levels of materialism, which in turn lead to even greater loneliness (see Dittmar, this issue). A 6-year longitudinal study of 2789 Dutch consumers documented this vicious cycle, showing that initial levels of loneliness positively predicted scores on the Material Values Scale [48] in subsequent years, but also that initial levels of materialism positively predicted loneliness in subsequent years [45].

Loneliness spurs self-preservation motives

As noted earlier, most theories of loneliness posit a social reconnection motive. However, in addition to the approach motive of reconnection, Cacioppo and colleagues’ evolutionary theory of loneliness [6] posits that loneliness also activates an avoidance motive of self-preservation. They view loneliness in terms of its adaptive survival functions, positing that because social connections are critical to survival and reproduction, perceptions of loneliness and social isolation act as a warning signal that social connections are deficient, activating the reconnection motive. However, because social connections are critical for survival, loneliness also signals danger because of inadequate mutual aid and protection, and indiscriminate attempts to form trusting social relationships may expose one to intraspecies aggression. Thus, loneliness can increase the motivation

for short-term preservation, resulting in hypervigilance for social threats, increased self-centeredness [49], and a preference for larger interpersonal distance within intimate space [50,51]. The activation of the self-preservation motive is paradoxical because it may actually impede social reconnection.

The activation of the self-preservation motive in response to loneliness can have potentially dark side effects on consumer judgments. For example, in certain instances, threats to belongingness (e.g., through social exclusion) increases self-focused behaviors such as conspicuous consumption [19,20,52]. Similarly, the self-centeredness effects are consistent with research showing that the effects of loneliness on materialism are particularly strong for subdimensions of the Material Values Scale that are more self-focused (e.g., possession-defined success, acquisition as the pursuit of happiness [45]). The hypervigilance for social threats resulting from self-preservation motives can also breed distrust that can impede consumer interactions. For example, even though interpersonal touch has been shown to have broad therapeutic value in reducing a variety of psychological problems (e.g., anxiety, depression, aggression [53]), and thus may seem like an intuitive treatment for loneliness, more chronically lonely individuals actually exhibit less comfort with interpersonal touch compared to those who are less chronically lonely [54], because loneliness reduces interpersonal trust. The negative effect of loneliness on comfort with interpersonal touch in turn affects consumer preferences: Lonelier consumers show lower preferences for touch-related consumer services (e.g., massage, dance lessons) and service encounters (e.g., interpersonal touch contact with salespersons) compared to less lonely consumers.

Loneliness is depleting

In the research discussed thus far, loneliness typically exerts indirect effects on consumer judgments through mediators such as motives. However, loneliness can also affect other psychological and physiological processes that have direct implications for consumer judgments. One example is the effect of loneliness on self-regulatory resources. Threats to belongingness needs, which may be experienced momentarily through social exclusion or more generally through chronic feelings of loneliness, deplete self-regulatory resources [55,56], which impedes the execution of self-control (see Fennis, this issue). Consequently, threats to belongingness needs can have dark side effects on important consumer decisions. For example, threats to belongingness needs via social exclusion are associated with consuming less healthy foods [55] and making riskier financial decisions [57]. Similarly, consumers who experience essential relationship deficits engage in more impulsive spending and consume more unhealthy foods compared to those who do not experience essential relationship deficits [58].

However, there are boundary conditions to this general dark side effect. When the self-regulation task itself increases prospects for future acceptance, the effects are eliminated [59] and in some cases even reversed [60].

Conclusions and future research

Loneliness is a growing problem that can have potentially severe consequences for people's health and well-being, and alleviating feelings of loneliness is a strong human motivation. In this review, we have highlighted the interplay between loneliness and consumer behavior. In some instances, consumer products and services can serve a bright side function of decreasing feelings of loneliness and increasing feelings of social connections. However, we also detail how such use may have potential longer-term dark side effects if consumers come to rely too much on products and services as salves for the pain of loneliness at the expense of higher-quality social interactions and connections that are necessary to truly reduce loneliness.

Our review also suggests some fruitful avenues for future research. One potential research question that has yet to be fully addressed is the relation between situational and chronic loneliness and their associated effects. Everyone feels lonely from time to time, and most people are successful in alleviating feelings of loneliness by establishing or re-establishing satisfying social connections. However, for a subset of the population, loneliness can become a chronic state that can have severe mental and physical health consequences. Questions then arise as to what attributes determine whether individuals move from situational to chronic loneliness. These attributes might include personal trait characteristics (lack of social skills, personality traits, etc.) or external forces (e.g., high residential mobility). Relatedly, is situational versus chronic loneliness associated with the dominance of the two different motivations posited by the evolutionary theory of loneliness (social reconnection vs. self-preservation)? There is some research that suggests that the social reconnection motive is dominant for situational loneliness whereas the self-preservation motive is dominant for chronic loneliness [51]. If so, then situational and chronic loneliness may be differentially related to comfort with interpersonal touch, which has implications for the types of lonely consumers who may benefit from interpersonal touch-related services.

Another related question pertains to research we reported that suggests that chronic loneliness is negatively associated with comfort with interpersonal touch [54]. However, research also shows that interpersonal touch may decrease loneliness [61]. One possibility is that even though chronically lonely individuals report lower preferences for interpersonal touch, interpersonal touch might still have a palliative effect. If so,

then interventions might be directed to helping lonely individuals overcome their psychological aversion to interpersonal touch. In sum, understanding the conditions under which solutions (consumer-related or otherwise) to reducing loneliness work, don't work, or even potentially backfire, is critical to consumer well-being.

Conflict of interest statement

Nothing declared.

Acknowledgements

This research was supported by a research grant from the HEC Foundation of HEC Paris and Investissements d'Avenir (ANR-11-IDEX-0003/Labex EcoDec/ANR-11-LABX-0047) awarded to the second and third authors.

References

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest

1. Jeste DV, Lee EE, Cacioppo S: **Battling the modern behavioral epidemic of loneliness: suggestions for research and interventions.** *JAMA Psychiatr* 2020, **77**:553–554.
2. Pai N, Vella S-L: **COVID-19 and loneliness: a rapid systematic review.** *Aust N Z J Psychiatr* 2021, **55**:1144–1156.
3. Cacioppo JT, Fowler JH, Christakis NA: **Alone in the crowd: the structure and spread of loneliness in a large social network.** *J Pers Soc Psychol* 2009, **97**:977–991.
4. Cacioppo JT, Cacioppo S, Capitanio JP, Cole SW: **The neuro-endocrinology of social isolation.** *Annu Rev Psychol* 2015, **66**:733–767.
5. Cacioppo S, Capitanio JP, Cacioppo JT: **Toward a neurology of loneliness.** *Psychol Bull* 2014, **140**:1464–1504.
6. Cacioppo JT, Cacioppo S: **Loneliness in the modern age: an evolutionary theory of loneliness (ETL).** In *Advances in experimental social psychology*. Edited by Olson JM, Elsevier; 2018:127–197.
7. Holt-Lunstad J, Smith TB, Baker M, Harris T, Stephenson D: **Loneliness and social isolation as risk factors for mortality: a meta-analytic review.** *Perspect Psychol Sci* 2015, **10**:227–237.
8. Cacioppo S, Grippo AJ, London S, Goossens L, Cacioppo JT: **Loneliness: clinical import and interventions.** *Perspect Psychol Sci* 2015, **10**:238–249.
9. Baumeister RF, Leary MR: **The need to belong: desire for interpersonal attachments as a fundamental human motivation.** *Psychol Bull* 1995, **117**:497–529.
10. Perlman D, Peplau LA: **Toward a social psychology of loneliness.** In *Relationships in disorder*. Edited by Gilmour R, Duck S, Academic Press; 1981:31–56.
11. Pinquart M, Sörensen S: **Risk factors for loneliness in adulthood and old age—a meta-analysis.** In *Advances in psychology research*. Edited by Shohov SP, vol. 19. Nova Science Publishers; 2003:111–143.
12. Weiss RS: *Loneliness: the experience of emotional and social isolation.* The MIT Press; 1973.
13. Mandel N, Rucker DD, Levav J, Galinsky AD: **The Compensatory Consumer Behavior Model: how self-discrepancies drive consumer behavior.** *J Consum Psychol* 2017, **27**:133–146.

14. Rucker DD, Galinsky AD: **Compensatory consumption**. In *The routledge companion to identity and consumption*. Edited by Ruvio AA, Belk RW, Taylor & Francis; 2013:207–215.
15. Rustagi N, Shrum LJ: **Undermining the restorative potential of compensatory consumption: a product's explicit identity connection impedes self-repair**. *J Consum Res* 2019, **46**: 119–139.
16. Mead NL, Baumeister RF, Stillman TF, Rawn CD, Vohs KD: **Social exclusion causes people to spend and consume strategically in the service of affiliation**. *J Consum Res* 2011, **37**:902–919.
17. Wan EW, Xu J, Ding Y: **To be or not to be unique? the effect of social exclusion on consumer choice**. *J Consum Res* 2014, **40**: 1109–1122.
18. Wang J, Zhu R, Shiv B: **The lonely consumer: loner or conformer?** *J Consum Res* 2012, **38**:1116–1128.
19. Lee J, Shrum LJ: **Conspicuous consumption versus charitable behavior in response to social exclusion: a differential needs explanation**. *J Consum Res* 2012, **39**:530–544.
20. Lee J, Shrum LJ, Yi Y: **The role of cultural communication norms in social exclusion effects**. *J Consum Psychol* 2017, **27**: 108–116.
21. Merchant A, Ford JB, Rose G: **How personal nostalgia influences giving to charity**. *J Bus Res* 2011, **64**:610–616.
22. Hunt MG, Marx R, Lipson C, Young J: **No more FOMO: limiting social media decreases loneliness and depression**. *J Soc Clin Psychol* 2018, **37**:751–768.
This article reports the results of an experiment that manipulated whether college undergraduates limited (or did not limit) their use of social media (Facebook, Instagram, Snapchat) to 10 min per day per platform, over a three-week period. The results indicated that limiting social media usage decreased feelings of loneliness and depression.
23. Primack BA, Shensa A, Sidani JE, Whaite EO, yi Lin L, Rosen D, Colditz JB, Radovic A, Miller E: **Social media use and perceived social isolation among young adults in the U.S.** *Am J Prev Med* 2017, **53**:1–8.
24. Twenge JM, Spitzberg BH, Campbell WK: **Less in-person social interaction with peers among US adolescents in the 21st century and links to loneliness**. *J Soc Pers Relat* 2019, **36**: 1892–1913.
This article reports the results of research drawing on two large-scale surveys of adolescents (N = 8.2 million) spanning several decades to investigate the effects of social media usage on in-person social interactions and subjective feelings of loneliness. The results showed that in-person social interaction generally declined since 2010, feelings of loneliness increased sharply after 2011, and those who were low on in-person social interactions but high on social media usage reported the greatest levels of loneliness.
25. Fumagalli E, Dolmatzian MB, Shrum LJ: **Centennials, FOMO, and loneliness: an investigation of the impact of social networking and messaging/VoIP apps usage during the initial stage of the coronavirus pandemic**. *Front Psychol* 2021, **12**: 620739.
This article reports the results of a study of the effects of social network app and messaging app usage by Centennials (born after 1995) on loneliness during the initial COVID-19 imposed isolation in March and April 2020 in three different countries (Italy, Argentina, UK). The results showed that only social network app usage increased in the initial stage of confinement, and usage of social network apps was associated with increased feelings of loneliness, and this relation was mediated due to increased fear of missing out (FOMO). In contrast, usage of messaging apps was associated with decreased feelings of loneliness.
26. Loh HS, Gaur SS, Sharma P: **Demystifying the link between emotional loneliness and brand loyalty: mediating roles of nostalgia, materialism, and self-brand connections**. *Psychol Mark* 2021, **38**:537–552.
27. Seehusen J, Cordaro F, Wildschut T, Sedikides C, Routledge C, Blackhart GC, Epstude K, Vingerhoets AJJM: **Individual differences in nostalgia proneness: the integrating role of the need to belong**. *Pers Individ Differ* 2013, **55**:904–908.
28. Zhou X, Sedikides C, Wildschut T, Gao D-G: **Counteracting loneliness on the restorative function of nostalgia**. *Psychol Sci* 2008, **19**:1023–1029.
29. Loveland KE, Smeesters D, Mandel N: **Still preoccupied with 1995: the need to belong and preference for nostalgic products**. *J Consum Res* 2010, **37**:393–408.
30. Huang F, Fishbach A: **Feeling lonely increases interest in previously owned products**. *J Mar Res* 2021, **58**:968–980.
This article reports the results of seven studies that demonstrate a causal effect of loneliness on preferences for previously owned products. Both correlational and experimental evidence show that, relative to less lonely consumers, lonelier consumers show greater preferences for previously owned products because the products provide a symbolic connection with previous users.
31. Wang X, Sun Y, Kramer T: **Ritualistic consumption decreases loneliness by increasing meaning**. *J Mar Res* 2021, **58**: 282–298.
The paper reports the results of a series of studies that test the proposition that performing ritualistic behaviors decreases feelings of loneliness. The general findings are that performing a ritualistic behavior reduces loneliness for lonely consumers (but not calm or angry consumers). This effect occurs because performing ritualistic behaviors increases consumers' feelings that their life is meaningful, which in turn reduces feelings of loneliness.
32. Aaker JL: **Dimensions of brand personality**. *J Mar Res* 1997, **34**:347–356.
33. Fournier S: **Consumers and their brands: developing relationship theory in consumer research**. *J Consum Res* 1998, **24**:343–373.
34. Yang LW, Aggarwal P, McGill AL: **The 3 C's of anthropomorphism: connection, comprehension, and competition**. *Consum Psychol Rev* 2020, **3**:3–19.
The article provides a comprehensive review of the latest research on psychology of anthropomorphism and its relation to consumer behavior. The authors propose a framework of three dimensions of anthropomorphism (connection, comprehension, and competition), and with respect to the connection dimension, highlight the social connection function of anthropomorphism and its relation with loneliness.
35. Epley N, Akalis S, Waytz A, Cacioppo JT: **Creating social connection through inferential reproduction: loneliness and perceived agency in gadgets, gods, and greyhounds**. *Psychol Sci* 2008, **19**:114–120.
36. Niemyjska A, Drat-Ruszczak K: **When there is nobody, angels begin to fly: supernatural imagery elicited by a loss of social connection**. *Soc Cognit* 2013, **31**:57–71.
37. Chen RP, Wan EW, Levy E: **The effect of social exclusion on consumer preference for anthropomorphized brands**. *J Consum Psychol* 2017, **27**:23–34.
38. Hadi R, Valenzuela A: **A meaningful embrace: contingent effects of embodied cues of affection**. *J Consum Psychol* 2014, **24**:520–532.
39. Chen F, Sengupta J, Adaval R: **Does endowing a product with life make one feel more alive? The effect of product anthropomorphism on consumer vitality**. *J Assoc Consum Res* 2018, **3**:503–513.
40. Mourey JA, Olson JG, Yoon C: **Products as pals: engaging with anthropomorphic products mitigates the effects of social exclusion**. *J Consum Res* 2017, **44**:414–431.
41. Reimann M, Nuñez S, Castaño R, Brand-aid: *J Consum Res* 2017, **44**:673–691.
42. Lastovicka JL, Sirianni NJ: **Truly, madly, deeply: consumers in the throes of material possession love**. *J Consum Res* 2011, **38**:323–342.
43. Ang C-S, Mansor AT, Tan K-A: **Pangs of loneliness breed material lifestyle but don't power up life satisfaction of young people: the moderating effect of gender**. *Soc Indic Res* 2014, **117**:353–365.
44. Gentina E, Shrum LJ, Lowrey TM: **Coping with loneliness through materialism: strategies matter for adolescent**

- development of unethical behaviors. *J Bus Ethics* 2018, **152**: 103–122.
45. Pieters R: **Bidirectional dynamics of materialism and loneliness: not just a vicious cycle.** *J Consum Res* 2013, **40**:615–631.
 46. Shrum LJ, Chaplin LN, Lowrey TM: **Psychological causes, correlates, and consequences of materialism.** *Consum Psychol Rev* 2022, **5**:69–86.
 47. Kasser T: **Materialistic values and goals.** *Annu Rev Psychol* 2016, **67**:489–514.
 48. Richins ML, Dawson S: **A consumer values orientation for materialism and its measurement: scale development and validation.** *J Consum Res* 1992, **19**:303–316.
 49. Cacioppo JT, Chen HY, Cacioppo S: **Reciprocal influences between loneliness and self-centeredness: a cross-lagged panel analysis in a population-based sample of African American, Hispanic, and Caucasian adults.** *Pers Soc Psychol Bull* 2017, **43**:1125–1135.
 50. Layden EA, Cacioppo JT, Cacioppo S: **Loneliness predicts a preference for larger interpersonal distance within intimate space.** *PLoS One* 2018, **13**, e0203491.
 51. Saporta N, Scheele D, Lieberz J, Stuhr-Wulff F, Hurlmann R, Shamay-Tsoory SG: **Opposing association of situational and chronic loneliness with interpersonal distance.** *Brain Sci* 2021, **11**:1135.
- This paper reports the results of a study of the effects of situational vs. chronic loneliness on preferences for interpersonal distance. Chronic loneliness was associated with preferences for greater interpersonal distance, whereas situationally induced loneliness (resulting from COVID-19 restrictions on social interaction) was associated with preferences for smaller interpersonal distances.
52. Liang S, He Y, Chang Y, Dong X, Zhu D: **Showing to friends or strangers? Relationship orientation influences the effect of social exclusion on conspicuous consumption.** *J Consum Behav* 2018, **17**:355–365.
 53. Field T: *Touch*. MIT press; 2014.
 54. Fumagalli E, Shrum LJ, Lee JH: **Chronically lonely consumers avoid rather than seek out interpersonal touch-related services because of lack of interpersonal trust and comfort with interpersonal touch.** Available at: <https://papers.ssrn.com/abstract=3999081>.
 55. Baumeister RF, DeWall CN, Ciarocco NJ, Twenge JM: **Social exclusion impairs self-regulation.** *J Pers Soc Psychol* 2005, **88**: 589–604.
 56. Stenseng F, Belsky J, Skalicka V, Wichstrøm L: **Social exclusion predicts impaired self-regulation: a 2-year longitudinal panel study including the transition from preschool to school.** *J Pers* 2015, **83**:212–220.
 57. Duclos R, Wan Echo Wen, Jiang Yuwei: **Show me the honey! Effects of social exclusion on financial risk-taking.** *J Consum Res* 2014, **40**:122–135.
 58. Sinha J, Wang J: **How time horizon perceptions and relationship deficits affect impulsive consumption.** *J Mar Res* 2013, **50**:590–605.
 59. DeWall CN, Baumeister RF, Vohs KD: **Satiated with belongingness? Effects of acceptance, rejection, and task framing on self-regulatory performance.** *J Pers Soc Psychol* 2008, **95**: 1367–1382.
 60. Jiang H, Yang Z, Sun P, Xu M: **When does social exclusion increase or decrease food self-regulation? The moderating role of time orientation.** *J Consum Behav* 2018, **17**:34–46.
 61. Tejada AH, Dunbar RIM, Montero M: **Physical contact and loneliness: being touched reduces perceptions of loneliness.** *Adapt Hum Behav Physiol* 2020, **6**:292–306.