Current Psychology (2022) 41:7500–7511
https://doi.org/10.1007/s12144-020-01186-1

Does spending self-earned money make college students happier? The effect of source of money on purchase happiness

Bihui Jin[1,2] · Jing Li[1]

Accepted: 11 November 2020 / Published online: 3 January 2021
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Abstract

Previous research on the hedonic benefits of experiential purchasing did not take into consideration that college students are financially dependent on their parents. Grounded in self-determination theory, the current study investigates the hedonic return when college students spend money from different sources (sponsored by parents/earned by themselves) on different kinds of purchases (material purchases/experiential purchases). Study 1 used a recall paradigm where 126 participants recalled their purchases according to their assigned group. Study 2 used a priming paradigm where 121 participants were instructed to imagine certain consumption situations. Using different paradigms, the participants in these two studies consistently reported that spending self-earned money made them happier than spending money sponsored by parents. Mediation analysis showed that this is because spending self-earned money satisfied students' needs for autonomy and competence. Discussion focuses on why college students' consumption patterns appear inconsistent with experiential recommendation.

Keywords Experiential purchase · Material purchase · Source of money · Basic psychological need · Purchase happiness

Introduction

The China Campus Market Association (2016) reported that Chinese college students spent a total of 685 billion yuan in 2016. The Engel's Coefficients was 32%, suggesting a relatively high standard of living. This shows that students have tremendous purchasing power. As the standard of living continues to rise, the pursuit of happiness through conspicuous consumption also increases. A series of studies suggest that it is how we allocate money that influences our well-being. To be more specific, buying life experience makes people happier than buying material goods (Gilovich, Kumar, & Jampol, 2015a; Howell & Hill, 2009; Nicolao, Irwin, & Goodman, 2009; Van Boven & Gilovich, 2003). However, the majority of Chinese college students are not financially independent. Most of them need financial support from their parents (Zou, 2016). Compared to financially independent adults, students' discretionary money may not be earned by themselves. Does the thrill of buying life experience still hold true even for financially dependent students?

Experiential Recommendation

Van Boven and Gilovich (2003) found that spending money on life experience makes people happier than spending money on material goods. Based on the intentions behind the purchase, they differentiate between experiential purchases and material purchases. Experiential purchases are purchases that are made with the primary intention of gaining life experience. These include traveling, going to a concert, watching a movie, etc. On the other hand, material purchases are made with the primary intention of possessing material goods like electronic gadgets, furniture, clothes, etc. (Van Boven & Gilovich, 2003). Material goods and experiences are two anchors on the material-experiential continuum rather than clear-cut divisions. People can derive life experiences from using tangible objects (Guevarra & Howell, 2015). Guevarra and Howell (2015) named them "experiential products". For example, when playing the guitar, we also acquire the experience of enjoying music. When we buy a camera, what comes with it is the ability to capture beautiful memories. Those purchases

✉ Jing Li
jinglee@mail.ccnu.edu.cn

[1] School of Psychology, Central China Normal University; Key Laboratory of Cyberpsychology and Behavior, Ministry of Education, and Hubei Human Development and Mental Health Key Laboratory, 152 Luoyu Road, Wuhan 430079, Hubei Province, China

[2] Collaborative Innovation Center of Assessment toward Basic Education Quality; , Beijing Normal University, Beijing 100875, China

are ambiguous and hard to categorize as either experiential or material purchases. Despite this, a number of studies show that the definition of experiential purchase and material purchase are meaningful and widely shared (Howell & Hill, 2009; Lee, Hall, & Wood, 2018; Nicolao et al., 2009; Van Boven & Gilovich, 2003; Zeng, Xu, & Jiang, 2017; Zhang, Howell, Caprariello, & Guevarra, 2014). And the material-experiential dichotomy makes it easier to investigate the hedonic benefits of purchasing (Gilovich, Kumar, & Jampol, 2015b).

Studies investigating the hedonic return on purchases have produced consistent results, revealing that investing on life experiences makes people happier than investing on material goods (Howell & Hill, 2009; Lee et al., 2018; Nicolao et al., 2009; Van Boven & Gilovich, 2003; Zeng et al., 2017; Zhang et al., 2014). In the pioneer study, participants were instructed to recall either an experiential purchase or a material purchase, and rate their purchase happiness. Results showed that participants who were instructed to recall experiential purchases were significantly happier than those instructed to recall material purchases (Van Boven & Gilovich, 2003). Nicolao et al. (2009), termed the hedonic benefits of experiential purchasing as "experiential recommendation". In addition to the retrospective happiness derived from experiential purchasing, researches have revealed that experiential purchases also promote individual's happiness contemporaneously and prospectively (Gilovich & Gallo, 2020; Kumar & Gilovich, 2016; Kumar, Killingsworth, & Gilovich, 2020). In a large-scale experiential-sampling study, participants who were surveyed while they were consuming an experiential purchase reported greater moment-to-moment happiness than when they were consuming a material purchase (Kumar et al., 2020). Kumar and Gilovich (2016) found that compared to anticipation of a material purchase, consumers derived more happiness and utility from anticipating an experiential purchase they intended to make in the near future. Together, these studies indicate that the experiential advantage is quite robust in that this phenomenon exhibits in varieties of research paradigms (e.g., recall, priming, experiential-sampling, etc.) and has been captured by different measures of happiness (i.e. retrospective, moment-to-moment, and prospective).

Source of Money

When Van Boven and Gilovich (2003) put forward the notion of experiential purchasing, they aimed to guide those who had a sizeable discretionary income to allocate their money more on gaining experiences, rather than possessing material objects. Only relatively wealthy consumers subject to the benefits of experiential purchases (Gilovich & Gallo, 2020). However, the most widely used samples in studies on experiential purchasing are college students. As pointed out by Dunn and Weidman (2015), 58% of the studies reviewed by Gilovich et al. (2015a) relied on student samples. Although researchers noted that many college students are not financially independent and may have less discretionary money than financially independent adults (Caprariello & Reis, 2013), we are unaware of any research directly addressing the different sources of students' discretionary money. Do undergraduates who have two different sources of money also derive more happiness from experiential purchasing?

Unlike discretionary income owned by financially independent adults, Chinese undergraduate students' discretionary money mainly comes from two sources: money sponsored by parents or earned by themselves (Zou, 2016). The financially dependent nature of university students makes them a group of unique consumers. Undergraduates are in the transition period of emerging adulthood where they gradually step into society and become independent young adults (Arnett, 2007). Although students can earn money through part-time jobs, internships and scholarships, many of them are not fully financially independent yet (Sironi & Furstenberg, 2012; Xiao, Chatterjee, & Kim, 2014; Zou, 2016). With extended schooling years and a prolonged transition period, financial assistance from parents are an indispensable resource to facilitate a student's smoother transition to financially independent adulthood (Johnson, 2013; Johnson & Benson, 2012).

In China, a large number of undergraduate students are financially dependent on their parents (China Campus Market Association, 2016; Zou, 2016). Zou (2016) conducted a survey on income and expenditure of 173 college students in Dong Bei province in China. The study revealed that money sponsored by parents ranked the first among varies kinds of college students' money sources, followed by money earned through part-time jobs and scholarships. More than half of the students reported that they received financial support from their parents (Zou, 2016). In 2016, a large-scale survey was conducted covering 26,970 university students in 2301 universities around China. It demonstrated that 93.3% of students received financial support from their parents, while 43.2% of students made ends meet by doing part-time jobs (China Campus Market Association, 2016). In another survey, in all dimensions of independence, sophomores in Beijing rated their financial independence as the lowest (Wang, Fan, Guan, & Yang, 2018). In the United States too, conditions are similar with many college students who are not financially independent. The National Longitudinal Survey of Youth revealed that in 2007, the average age at which people entered full-time work was 25 (Sironi & Furstenberg, 2012). Compared to their counterparts aged 18–23 who never attended college, recent graduates from college and dropouts from college, currently enrolled college students have the lowest scores of perceived financial independence (Xiao et al., 2014). Under such circumstances, the family often provides sizeable financial support during their children's extended transition process. In 2005, parents in the United States spent

roughly 10% of their annual income on financially supporting their children aged 18–21 (Settersten & Ray, 2010).

Self-Determination Theory and Happiness

The self-determination theory argues that people have three, universal, basic psychological needs: autonomy, competence, and relatedness. Autonomy refers to the need to perceive their behavior as self-determined and an expression of their identity (Deci & Ryan, 2000). Competence reflects a person's need to be confident about his/her ability to achieve desired outcomes. Relatedness refers to the need to belong and feel connected with others (Deci & Ryan, 1985). The satisfaction of these basic needs is vital for optional human functioning and well-being (Ryan & Deci, 2000). Past research, including in the work and consumption context, has supported this claim (Landry et al., 2016; Sun, Wang, Xu, & Jiang, 2019). Both, type of purchase and sources of money are correlated to the satisfaction of these basic psychological needs. For purchase type, researchers have well established the relationship between experiential purchases and relatedness need satisfaction and examined several psychological mechanisms to explain this link (Caprariello & Reis, 2013; Gilovich & Gallo, 2020; Sun et al., 2019). For the sources of money, we will argue below that compared with spending money supported by parents, spending self-earned money are more likely to satisfy basic psychological needs, as spending self-earned money could elicit college students' feeling of pride and worth and render them more freedom to choose what to buy.

Based on the self-determination theory, previous studies suggest that experiential purchases tend to satisfy the need for relatedness (Howell & Hill, 2009; Sun et al., 2019; Zeng et al., 2017). Howell and Hill (2009) let participants recall a purchase they made and then, rate the extent to which the purchase made them happy and satisfied their needs for relatedness. Path analysis showed that relatedness mediated the effect of experiential purchases on purchase happiness. Experiential purchases are more likely to involve interaction with other people. Caprariello and Reis (2013) further categorize purchases based on "social-solitary" and "material-experiential" dimensions. They found that when recalling experiential purchases, participants tended to recall the social experience, but while recalling material purchases, it tended to be solitary. They argue that it is the social context of an experience that contributes to the hedonic return of experiential purchasing (Caprariello & Reis, 2013). Several underlining mechanisms that explain why compared to material purchases, experiential purchases foster relatedness needs satisfaction include: experiential purchases tend to be consumed more often with others (Caprariello & Reis, 2013); people are more likely to talk about and share their past experiential purchases with others (Sun et al., 2019); experiential purchases foster a greater sense of kinship with those who have made the same purchase (Gilovich & Gallo, 2020).

As for purchase type, there are good reasons to believe that for undergraduate students, spending self-earned money is favored over spending money supplied by parents. Landry et al. (2016) revealed that self-integrative motives for making money that foster personal growth in psychologically healthy environments contribute to individual's well-being through satisfaction of basic psychological needs. Money motives to earn fair compensation for one's value (market worth), to know that one can overcome difficulties in life (pride), to spend money for one's leisure and hobbies (leisure), to donate money to charities (charity) and to live one's life without interference from others (freedom) contribute to individual's well-being via satisfying their basic psychological needs of competence, autonomy and relatedness (Landry et al., 2016). Earning money, either through winning a scholarship or doing part-time work is proof of a students' ability. It means that students are getting rewarded for their own endeavors and worth. As college students shoulder increasingly larger responsibilities, they aim to reduce their dependence on parents and become independent adults. Thus, spending money that they have earned themselves is more likely to satisfy students' needs for competence. Whereas receiving financial support from parents diminishes youth's self-efficacy, as it undermines their sense of independence (Mortimer et al., 2016). Moreover, spending self-earned money gives them more freedom on what to buy. Financial support from parents is often limited and covers only the essentials, while self-earned money can be used to supply the extras. When spending self-earned money, students do not have the burden of guilt that comes from spending their parents' hard-earned money. Thus, spending self-earned money also satisfies the students' need for autonomy. Hence, spending self-earned money showcases college students' worth and renders them more freedom to buy what they want, which lead to greater basic psychological needs satisfaction.

The Current Study

Grounded in the self-determination theory, the current research was designed to investigate whether experiential recommendation holds true for college students who have different sources of discretionary money, and to examine the mechanism behind the hedonic benefits. We predicted that: (H1) purchase type affects purchase happiness. Experiential purchases make participants happier. (H2) The source of money affects purchase happiness. Spending self-earned money makes participants happier as it satisfies their basic psychological needs of autonomy and competence. (H3) The source of money moderates the purchase type and happiness link. It is likely that students who spend money earned by themselves on experiential purchases have the highest level of happiness.

While for those who spend money supported by parents, experiential purchases might not promote more happiness than material purchases. We tested these hypotheses across two studies that varied in paradigm.

Study 1: Recall Paradigm

Participants

After being approved by our institutional ethics committee, we recruited 158 Chinese undergraduate students who had the experience of earning money (e.g., part-time jobs, scholarships). All participants provided written informed consent and the researcher also assured the confidentiality of their responses. Thirty-two individuals (20.25%) who did not follow the instructions (e.g., reflected on the wrong source of money) or had extreme scores were excluded from all analyses. The final sample consisted of 126 students (M_{age} = 20.68, SD = 1.49, range 18–26; female, 53.17%). 92.06% of the students reported that part of their living expenses was funded by parents, 81.75% of students earned money through part-time jobs, and 46.03% of students had scholarship funding.

Procedure

In a 2 (Source of money: money given by parents vs. money earned by the self) × 2 (Purchase type: material purchase vs. experiential purchase) between-subject design, participants were randomly assigned to one of four conditions (i.e. money given by parents – material purchase, money given by parents – experiential purchase, money earned by the self – material purchase, money earned by the self – experiential purchase). Then, depending on the experimental condition, participants read either the definition of material purchase or experiential purchase. After that, they were asked to recall and describe a past purchase where they used money given by parents or earned themselves to buy a material good or an experience. To be more specific, participants in the "money given by parents - material purchase" condition were asked to recall a past material purchase that was made by using the money given by their parents. Participants in the "money given by parents – experiential purchase" condition were asked to recall a past experiential purchase that was made by using the money given by their parents. Participants in the "money earned by the self – material purchase" condition were asked to recall a past material purchase that was made by using money earned by themselves. Participants in the "money earned by the self – experiential purchase" condition were asked to recall a past experiential purchase that was made by using money earned by themselves. Importantly, we asked participants in all four conditions to consider a purchase that brought them happiness, as previous studies showed the valence of purchase outcome affects consumers' happiness (Nicolao et al., 2009). Later, they reported the cost and the time of the purchase and the extent to which the purchase satisfied their basic psychological needs and contributed to their overall happiness.

Measures

Purchase Happiness We administered two items used by Van Boven and Gilovich (2003) to measure purchase happiness. Participants answered: "How much does this purchase contribute to your happiness in life?", choosing from 1 (*not at all*) to 7 (*very much*). They also answered: "When you think about this purchase, how happy does it make you?" choosing from 1 (*not happy*) to 7 (*extremely happy*). Scores from the two items were aggregated. Cronbach's α was .77. Higher scores indicated greater purchase happiness.

Basic Psychological Needs Satisfaction during Purchase Participants answered 11 questions aimed at measuring their psychological needs satisfaction during the purchase (Guevarra & Howell, 2015; Howell & Hill, 2009). All responses were made on a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Four items were used to measure autonomy satisfaction (e.g., "During this purchase, I feel like I am free to decide for myself how to live my life."). Three items were used to measure relatedness satisfaction (e.g., "This purchase allows me to relate to others in a meaningful way."). Four items were used to measure competence satisfaction (e.g., "I feel a sense of accomplishment because of this purchase."). Cronbach's α for autonomy, relatedness and competence were .77, .74 and .68 respectively. Scores were aggregated for each dimension. Higher scores indicated more needs satisfaction.

Results

Manipulation Check

Unaware of experimental conditions, two coders were given the definition of material purchase and experiential purchase. Then, they rated participants' recalled purchases on a 7-point Likert scale, ranging from 1 (*definitely material*) to 7 (*definitely experiential*). The agreement among coders was strong (α = .84), and so the scores were averaged (Table 1). The result of a two-way ANOVA showed that the type of purchase made a significant impact, $F(1, 122) = 82.20$, $p < .05$, $\eta_p^2 = 0.40$; the source of money was not significant, $F(1, 122) = 1.73$, $p = .19$. As expected, regardless of the source of money, purchases reported by participants who were asked to recall a material purchase were rated as more material (M = 2.93, SD = 1.23) than those reported by participants who were asked to recall an experiential purchase (M = 5.41, SD = 1.80).

Table 1 Manipulation check of recalled purchases by four groups

	Type of purchase			
	Material purchase		Experiential purchase	
Source of money	*N*	*M (SD)*	*N*	*M (SD)*
Sponsored by parents	32	2.69 (1.06)	32	5.30 (1.73)
Self-earned	32	3.17 (1.36)	30	5.53 (1.89)

Preliminary Analyses

All purchases described were divided into 10 categories (Table 2). Participants in the material purchase group mainly reported buying clothing, electronic products and beauty products, while those in the experiential purchase group, mainly reported spending on traveling, watching movies, going to concerts and buying clothing. As can be seen in Table 2, there were some overlaps in the material purchase category and experiential purchase category. It was because some purchases fell in the middle of the material-experiential continuum.

The results of correlation analysis between the measured variables (Table 3) showed that the source of money was positively correlated with happiness ($r = .26$, $p < .01$), autonomy ($r = .22$, $p < .05$) and competence ($r = .24$, $p < .01$). However, the purchase type only positively correlated with relatedness ($r = .37$, $p < .01$). The three psychological needs positively correlated with purchase happiness. As purchase price, and time elapsed since purchase, did not correlate with all variables, they were not included in subsequent analyses.

Happiness Variations across Purchase Types and Source of Money

A two-way ANOVA on purchase happiness yielded only a main effect of the source of money, $F(1, 122) = 8.59$, $p < .01$, $\eta_p^2 = 0.07$; the main effect of the type of purchase was not significant, $F(1, 122) = 0.22$, $p = .64$, and the interaction between the source of money and type of purchase was not significant, $F(1, 122) = 0.13$, $p = .72$. Regardless of the type of purchase, participants who spent money earned themselves ($M = 12.58$, $SD = 1.33$) were significantly happier than those who spent money sponsored by their parents ($M = 11.77$, $SD = 1.75$).

Testing for Mediation Effects of Basic Psychological Needs Satisfaction

To determine whether the increased happiness derived from spending self-earned money compared to spending money sponsored by parents, is mediated by psychological needs satisfaction when controlling for time elapsed since purchase, and purchase price, we used the Hayes PROCESS macro to conduct the mediation analysis (Model 4; see Hayes, 2018). This model supported the mediation effects of autonomy (see Fig. 1) by demonstrating that (a) spending money that's self-earned was associated with increased happiness ($c = 0.74$, $SE = 0.29$, $p < .05$); (b) spending self-earned money was associated with increased autonomy satisfaction ($a_1 = 1.36$, $SE = 0.57$, $p < .05$); (c) autonomy satisfaction was associated with increased happiness ($b_1 = 0.22$, $SE = 0.05$, $p < .001$). Importantly, the percentile bootstrap method revealed that the mediation effect of autonomy satisfaction was significant

Table 2 Category and percentage of material goods and life experiences recalled by participants

	Type of purchase			
	Material purchase		Experiential purchase	
	Sponsored by parents	Self-earned	Sponsored by parents	Self-earned
Travel/movie/concert	–	–	12 (38%)	13 (43%)
Clothing/shoes/bags/jewelry	18 (56%)	9 (28%)	9 (28%)	6 (20%)
Electronic devices/video games	4 (13%)	8 (25%)	1 (3%)	2 (7%)
Beauty/health	5 (16%)	3 (9%)	1 (3%)	–
Books/DVDs	2 (6%)	3 (9%)	2 (6%)	–
Dining experience	–	1 (3%)	1 (3%)	4 (13%)
Fees (fitness/driving school)	1 (3%)	–	3 (9%)	2 (7%)
Food/drinks	–	5 (16%)	3 (9%)	2 (7%)
Home products	2 (6%)	2 (6%)	–	2 (6%)
Toys	–	1 (3%)	–	–

Note. A dash means no one reported items in that purchase category. Percentages in parentheses indicate the purchase category frequency for that purchase type

Table 3 Descriptive statistics and correlations of measured variables ($N = 126$)

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1 Happiness	12.17	1.60	–							
2 Autonomy satisfaction	22.94	3.18	.50**	–						
3 Competence satisfaction	20.02	4.24	.33**	.58**	–					
4 Relatedness satisfaction	14.46	4.36	.23**	.33**	.42**	–				
5 Type of purchase	0.49	0.50	.04	.12	.12	.37**	–			
6 Source of money	0.49	0.50	.26**	.22*	.24**	.16	−.02	–		
7 Purchase price (Yuan)	741.31	1132.84	.16	.15	.14	.10	.07	.20*	–	
8 Time elapsed (Month)	3.89	6.22	.04	−.07	−.18*	−.16	.02	.17	.05	–

Note. *$p < .05$; **$p < .01$; The type of purchase was dummy coded by material purchase = 0; experiential purchase = 1; The source of money was dummy coded by sponsored by parents = 0; self-earned = 1

($a_1b_1 = 0.30$, Boot $SE = 0.15$, 95%CI [0.04, 0.63]). While the mediation effect of competence satisfaction ($a_2b_2 = 0.03$, Boot $SE = 0.10$, 95%CI [−0.18, 0.21]) and relatedness satisfaction ($a_3b_3 = 0.03$, Boot $SE = 0.06$, 95%CI [−0.07, 0.16]) was not significant. The model suggests that spending self-earned money has a greater impact on happiness, compared to spending money sponsored by parents, and that can be partially explained by autonomy satisfaction.

Brief Discussion

In terms of our predictions, hypothesis 1 regarding the relationship between purchase type and happiness was not supported: participants who recalled a past experiential purchase did not have higher level of happiness than those who recalled a past material purchase. The benefits of experiential purchasing were not verified. This result was consistent with a recent research on experiential purchases that used undergraduate students as participants (Razavi et al., 2020). For Malaysia and U.S undergraduates, recalling experiential purchases did not significantly elicit more happiness than recalling material purchases (Razavi et al., 2020). One possible reason was that we did not consider the fact that people sometimes purchase for others. Among all the purchases recalled by participants, some reported spending self-earned money to treat friends to a meal, or to buy gifts for their parents and siblings. Previous studies about prosocial spending revealed that compared to spending money on oneself, spending money on others promotes greater happiness (Dunn, Aknin, & Norton, 2008, 2014). In a pioneer study, participants were given $5 or $20 to spend either on themselves or on others (e.g., buy a gift, donate to charity). By the end of the day, those who spent money on others reported higher levels of happiness (Dunn et al., 2008). This may also be the reason for the lack of an interaction effect between the source of money and purchase type (Hypothesis 3).

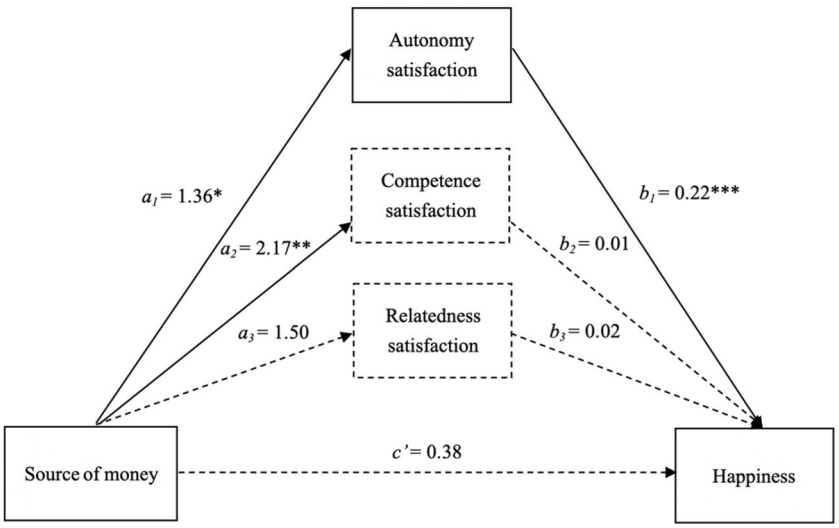

Fig. 1 The mediation effect of basic psychological needs satisfaction in study 1. *Note*. *$p < .05$, **$p < .01$, ***$p < .001$; The source of money was dummy coded by sponsored by parents = 0; self-earned = 1; *a*, *b*, *c'* were unstandardized pathway coefficients

However, previous studies on experiential purchasing, especially studies using the recall paradigm, seldom mention whether purchases described by participants were for themselves or for others. The question that arises is how to classify the material and experiential nature of purchases for others. When spending money on others, even if what they bought were material goods, they did not possess them. It is more about the emotional experience of gifting. Based on Van Boven and Gilovich's (2003) definition of material purchase and experiential purchase, should spending on others be classified as experiential purchasing? Or should we classify the material and experiential nature of a purchase based on what was bought, rather than whom they were bought for? In the present study, we followed the latter method when instructing coders to judge the purchase type of participants' recalled purchases. However, the matter of how to classify purchase type if the purchase is for others is still open to discussion. In Study 2, we used a priming paradigm to exclude the interference of purchase for others and aimed to replicate the happiness benefits of spending self-earned money as in Study 1.

As for hypothesis 2 regarding the relationship between the source of money and happiness was supported: participants who spend self-earned money derived more happiness than those who spend money sponsored by their parents. Besides, we further revealed that spending self-earned money promoted undergraduates' happiness through satisfaction of autonomy needs. According to self-determination theory, psychological well-being will flourish when their basic psychological needs are met (Ryan & Deci, 2000). The results of this study provide preliminary evidence for the role of source of money on college students' basic psychological needs satisfaction and purchase happiness.

Study 2: Priming Paradigm

Participants

After obtaining the institutional ethical approval, 138 undergraduate students from three universities in central China were recruited through an advertisement on a public social network platform. All participants provided informed consent, and the confidentiality of their responses was assured. Seventeen individuals (12.32%) who failed the manipulation check or had extreme scores were excluded from all analyses. The final sample consisted of 121 students (M_{age} = 19.78, SD = 1.33, range 17–22; female, 54.55%). 95.87% of the students reported that part of their living expenses was supported by parents, 47.11% of students earned money through part-time jobs, and 37.19% of students had scholarships.

Procedure

The study adopted a 2 (Source of money: money given by parents, money earned by the self) × 2 (Purchase type: material purchase, experiential purchase) between-subject design. Referencing Kumar and Gilovich (2016), participants were randomly assigned to imagine how they would spend money, sponsored by parents or self-earned, on a Kindle E-reader that cost 1000 yuan, or a concert by their pop idol also costing 1000 yuan. To be more specific, participants in the "money given by parents – material purchase" condition were asked to imagine that they've spent money sponsored by their parents on a Kindle E-reader. Participants in the "money given by parents – experiential purchase" condition were asked to imagine that they've spent money supported by their parents on a concert by their pop idol. Participants in the "money earned by the self – material condition" were asked to imagine that they've spent money earned by themselves on a Kindle E-reader. Participants in the "money earned by the self – experiential condition" were asked to imagine that they've spent money earned by themselves on a concert by their pop idol.

It is worth noting that the Kindle E-reader which represents a material purchase and the concert which represents an experiential purchase were matched on price, and these two purchases were comparable in appeal. In the pilot study, 38 undergraduate students were recruited to rate the purchase type of Kindle E-reader and concert, ranging from 1 (*definitely material*) to 7 (*definitely experiential*). They also rated how appealing these two purchases seemed to them, on a scale ranging from 1 (*not at all appealing*) to 7 (*very appealing*). As expected, going to a concert (M = 6.42, SD = 1.72) was rated as significantly more experiential than buying a Kindle E-reader (M = 3.26, SD = 1.72), $t(37) = 11.04$, $p < .05$. Besides that, Kindle E-reader (M = 4.45, SD = 1.62) and concert (M = 5.00, SD = 1.87) did not differ in appeal $t(37) = 1.36$, $p = .18$.

Then, participants reported the extent to which the purchase satisfied their basic psychological needs and contributed to their overall happiness. As our manipulation check, the participants filled in the blank about what their source of money was for the described purchase, rated the purchase type after reading the definition of material purchase and experiential purchase on a scale from 1 (*definitely material*) to 7 (*definitely experiential*), and considered the subjective appeal of the purchase on a scale from 1 (*not at all appealing*) to 7 (*very appealing*).

Measures

We used the same scales from Study 1 to measure purchase happiness and basic psychological needs satisfaction. Cronbach's α for purchase happiness, autonomy, competence and relatedness were .90, .66, .57 and .78, respectively.

Results

Manipulation Check

Participants who failed to answer the question about their source of money for the described purchase were excluded from the subsequent analysis, leaving 121 participants' valid data, which was used.

As for classifying the type of purchases as material or experiential, a two-way ANOVA revealed that the type of purchase made a significant impact, $F(1, 117) = 255.02$, $p < .01$; the source of money used to make the purchase was not significant, $F(1, 117) = 1.08$, $p = .30$, and the interaction between them was not significant, $F(1, 117) = 0.01$, $p = .91$. Testifying to the success of the manipulation, regardless of the source of money, participants who were assigned to imagine buying a Kindle E-reader ($M = 3.33$, $SD = 1.63$) rated it as significantly more material than those who were assigned to imagine going to their idol's concert ($M = 6.80$, $SD = 0.40$).

As for the subjective appeal, a two-way ANOVA revealed that, in this case, the purchase type was not significant, $F(1, 117) = 2.36$, $p = .13$, the source of money was also not significant, $F(1, 117) = 2.22$, $p = .14$, and neither was the interaction significant, $F(1, 117) = 0.36$, $p = .55$. As expected, the Kindle E-reader and the concert were comparable in subjective appeal.

Preliminary Analysis

By examining the correlations between the measured variables (Table 4), it was demonstrated that the source of money positively correlated with happiness ($r = .26$, $p < .01$), autonomy ($r = .29$, $p < .01$) and competence ($r = .41$, $p < .01$). Purchase type was negatively correlated with competence ($r = -.19$, $p < .05$) and positively correlated with relatedness ($r = .50$, $p < .01$). All three, basic psychological needs satisfaction positively correlated with purchase happiness.

Happiness Variations across Purchase Types and Source of Money

The result of a two-way ANOVA revealed that the source of money made a significant impact, $F(1, 117) = 8.99$, $p < .01$, $\eta_p^2 = 0.07$; the main effect of the type of purchase was not significant, $F(1, 117) = 1.96$, $p = .16$, and the interaction between the source of money and purchase type was not significant, $F(1, 117) = 2.50$, $p = .12$. Regardless of purchase type, participants who imagined spending self-earned money ($M = 10.85$, $SD = 2.50$) derived more happiness than those who imagined spending money sponsored by parents ($M = 9.48$, $SD = 2.60$).

Testing for Mediation Effects of Basic Psychological Needs Satisfaction

To determine whether the increased happiness from spending money earned by themselves, compared to spending money sponsored by parents, is mediated by psychological needs satisfaction, we used the Hayes PROCESS macro to conduct the mediation analysis (Model 4; see Hayes, 2018). This model supported the mediation effects of autonomy and competence (see Fig. 2) by demonstrating that (a) spending self-earned money was associated with increased happiness ($c = 1.37$, $SE = 0.46$, $p < .01$); (b) spending self-earned money was associated with increased autonomy satisfaction ($a_1 = 2.35$, $SE = 0.72$, $p < .01$) and competence satisfaction ($a_2 = 3.48$, $SE = 0.71$, $p < .01$); (c) autonomy satisfaction was associated with increased happiness ($b_1 = 0.16$, $SE = 0.05$, $p < .01$), and competence satisfaction was also associated with increased happiness ($b_2 = 0.22$, $SE = 0.05$, $p < .001$). Importantly, the percentile bootstrap method revealed that the mediation effect of autonomy satisfaction ($a_1b_1 = 0.38$, Boot $SE = 0.18$, 95%CI [0.08, 0.79]) and competence satisfaction ($a_2b_2 = 0.75$, Boot $SE = 0.23$, 95%CI [0.30, 1.23]) was significant. While the mediation effect of relatedness satisfaction was not significant ($a_3b_3 = 0.05$, Boot $SE = 0.10$, 95%CI [−0.15, 0.27]). The model suggests that the happiness derived from spending self-earned money, compared to spending money sponsored by

Table 4 Descriptive statistics and correlations of measured variables ($N = 121$)

Variable	*M*	*SD*	1	2	3	4	5	6
1 Happiness	10.16	2.63	–					
2 Autonomy satisfaction	19.54	4.13	.45**	–				
3 Competence satisfaction	18.60	4.29	.51**	.42**	–			
4 Relatedness satisfaction	12.41	4.00	.30**	.21*	.18	–		
5 Type of purchase	0.50	0.50	.12	.11	−.19*	.50**	–	
6 Source of money	0.50	0.50	.26**	.29**	.41**	.06	.01	–

Note. *$p < .05$; **$p < .01$; The type of purchase was dummy coded by material purchase = 0; experiential purchase = 1; The source of money was dummy coded by sponsored by parents = 0; self-earned = 1

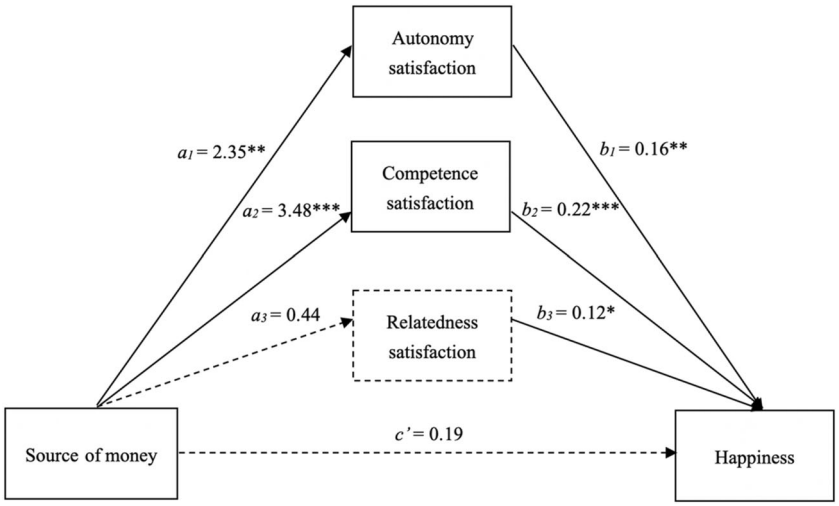

Fig. 2 The mediation effect of basic psychological needs satisfaction in study 2. *Note*. *$p < .05$, **$p < .01$, ***$p < .001$; The source of money was dummy coded by sponsored by parents = 0; self-earned = 1; *a*, *b*, *c'* were unstandardized pathway coefficients

parents, can be partially explained by autonomy and competence satisfaction.

Brief Discussion

With regard to the effect of purchase type on happiness (hypothesis 1), the result of study 2 did not supported our hypothesis: participants who imagined spending money on experiential purchase (concert) did not have higher level of happiness than those who imagined spending money on a material purchase (Kindle E-reader). This result is consistent with study 1. Previous research revealed that individuals with less disposable money may not benefit from spending money on experiences (Gilovich & Gallo, 2020; Lee et al., 2018). It was possible that the college student sample in our study has limited discretionary money, which made them not derive more happiness from the experiential purchase. Besides, as many college students we recruited in study 2 did not have the experience of earning money, imagine spending 1000Yuan, a relatively high price for college students, might elicit their feeling of financial constraints. These may also be the reason for the lack of an interaction effect between the source of money and purchase type (Hypothesis 3).

With regard to the effect of source of money on happiness (hypothesis 2), the result of study 2 supported our hypothesis: participants who imagined spending money earned by themselves reported higher happiness than those who imagined spending money funded by their parents. This result is consistent with study 1. Besides, the satisfaction of autonomy and competence mediates the effect of spending earned money on happiness. The mediating role of competence is only significant in Study 2. The discrepancy in results may be due to the difference in samples in the two studies. In Study 1, we recruited students who had had the experience of earning money. While in Study 2, many participants did not have the experience of earning money. As demographic statistic showed that in Study 1, 81.75% of students had the experience of doing a part-time job, while this ratio was only 47.11% in Study 2. When imagining spending self-earned money, those who had not earned money before may have had different psychological processes. Another possible reason may lie in the fact that in study 2, the purchase item was already set (i.e. the Kindle E-reader or a concert that costs 1000 Yuan). While in study 1, participants had the freedom to recall one of their past purchases. In study 1, the average purchase price that participants reported was 741.31 Yuan. Thus, compared with the average purchase price in study 1, the purchase that we let participants to imagine had higher price. The price and the purchase we chose at study 2 might affect how participants felt satisfied of competence need. Despite the results being consistent over both studies, Study 2 has one major limitation: although both options cost exactly the same amount, "Kindle E-reader" and "a concert" were not totally equivalent purchases. For example, Kindle is an electronic device that can be used for a long time, while going to a concert is an experience that comes with a time-limit. Compared to purchasing a Kindle, going to a concert also involves more interpersonal communication and interaction.

General Discussion

Previous research suggests that it's experiential purchasing that makes people happier (Howell & Hill, 2009; Nicolao et al., 2009; Van Boven & Gilovich, 2003). However, across two studies, using recall and priming paradigms, the current study found that undergraduate students who have different sources of money do not derive more happiness from experiential purchasing. Specifically, regardless of purchase type, spending self-earned money rather than money sponsored by parents makes students happier. Grounded in self-determination theory, we argue that spending self-earned

money influences purchase happiness because it satisfies students' needs for autonomy and competence.

Implications and Future Directions

The findings of our study have both theoretical and practical implications. Theoretically, the current study enriched the experiential purchase literature by taking college students' source of money into consideration. For both studies, we found that spending self-earned money made undergraduates happier than spending money sponsored by parents. Demographic statistics showed that 92.06% and 95.87% of students across two studies, reported that part of their discretionary funds was sponsored by parents. It is typical among Chinese college students that although they may earn some extra money through part-time jobs, most of them still need financial support from their parents (Zou, 2016). The results from this study suggest that when using students as participants to probe the relationship between spending and happiness, it might be important to note that the different sources of discretionary money used for the purchases, also play a part. Additionally, grounded in self-determination theory, our results shed light on the underline mechanism of linkage between the source of money and college students' happiness. Self-determination theory predicts that well-being and optional human functioning flourishes when basic psychological needs are satisfied (Deci & Ryan, 1985; Ryan & Deci, 2000). The results of our study suggested that for college students, spending money earned by themselves can make them experience greater feelings of autonomy and competence, which in turn increases their well-being. College students are in the transition period where they eager to become psychologically and financially independent adults. Although parental economic supports are important resources that help youth to have a smoother transition to adulthood, it may also undermine their sense of independence and sense of economic self-sufficiency (Mortimer et al., 2016). On the contrary, spending money earned by themselves renders students more freedom to choose what to buy, and indicates that they are in charge of their life. Autonomy and competence that comes along with spending self-earned money promotes students' happiness. Practically, our findings provide implications for educators. Although, as college students they have a low level of financial independence, research shows that after graduation, they quickly attain a high level of financial independence (Xiao et al., 2014). This makes the college years an important period for students to build identity capital. Beyond academic performance, educators also have the responsibility to cultivate students' awareness of financial independence, help college students to get prepared for their future career and providing students more opportunities to earn money, for example, through doing internship and earning scholarship. These measures could make it easier for students to become financially independent, and have the potential to promote their happiness.

In response to calls for moving beyond western samples and testifying to the generalization of experiential recommendation in broader samples (Dunn & Weidman, 2015), our study contributes to the field by using a Chinese student sample. The cultural difference can be seen from the described purchase experience of study 1. For example, when spending self-earned money, some participants recalled: "I first bought things for my parents after I earned money"; "This time, I finally have the opportunity to use my money to buy what my parents like - I am so happy." This component of "filial piety" is an important Chinese cultural value. To our knowledge, relatively few studies about experiential purchasing use eastern samples (Razavi et al., 2020; Sun et al., 2019; Zeng et al., 2017; Zeng, Xu, & Jiang, 2016). Using free recall and priming paradigm, Zeng et al. (2016), found that Chinese college students were happier with experiential purchases. However, Malaysia undergraduate students did not derive more happiness from experiential purchases (Razavi et al., 2020). Given the discrepancy in results, more cross-cultural research is needed.

Future studies could also take social class into consideration. Students' financial independence is affected by their family's socioeconomic status (Wang et al., 2018). Children from high-income families usually receive more financial assistance than those from low-income families (Settersten & Ray, 2010). A survey targeting sophomores in Beijing revealed that 47% of students from high-income families are totally financially dependent on their parents, while this rate is 38.2% for low-income families. Research shows that experiential recommendation only holds true for individuals from a higher social class (Lee et al., 2018). Given that social class is a basic pre-condition for experiential recommendation and that parents' social class is related to the financial independence of their children, future studies should take it into consideration.

Limitations

As mentioned in a brief discussion in Sections 2 and 3, using the recall paradigm and the priming paradigm has its own limitations. In the recall paradigm, we did not take into consideration that people sometimes reported that they bought things for others. This may contaminate the results, as studies show that people derive more happiness from spending on others (Dunn et al., 2008, 2014). As for the priming paradigm, "Kindle" and "concert" may not be totally equivalent purchases. Future studies should explore diverse research methods. In addition, the way we measured purchase happiness had its limitations. In the current study, we used two items that was widely used in the experiential purchase literature to measure purchase

happiness (Lee et al., 2018; Moldes, Banerjee, Easterbrook, Harris, & Dittmar, 2019; Sun et al., 2019; Van Boven & Gilovich, 2003). However, happiness is a complex concept with multiple components and meanings (Kumar et al., 2020). Scholars have distinguished between hedonic well-being and eudaimonic well-being. Hedonic well-being refers to pleasure and occurrence of positive affect, while eudaimonic well-being is defined as the satisfaction that comes from living a meaningful life and realization of one's full potentials (Kahneman et al., 1999; Ryan, Huta, & Deci, 2008). The current study only adopted a hedonic perspective. We believe that adopt an eudaimonic perspective to examine the happiness benefits of spend money earned by the self is a valuable future direction. The results need to be replicated before we can conclude that spending self-earned money increases happiness as it satisfies autonomy and competence needs.

Conclusion

Buying experiences rather than material goods has been rated higher as a path towards happiness. However, for undergraduate students, experiential purchasing itself did not seem to be an effective path to greater happiness. The results of our two studies consistently demonstrated that for undergraduate students, regardless of purchase type, spending self-earned money provided more happiness than spending money sponsored by parents. Moreover, the benefits of spending self-earned money can be explained by the satisfaction of autonomy and competence needs.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to them containing information that could compromise research participant privacy/consent.

Funding This work was supported by Humanities and Social Science Fund of Ministry of Education of China (No.18YJC190009).

Compliance with Ethical Standards

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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