economic, professional, or educational standing. However, given the common mixture of power and social class, it is difficult to clearly delineate the effect of status from power, which results in an impoverished understanding of the effects of social status by itself.

Given the complexity of social hierarchies and the abundance of potential confounding factors such as feelings of power when using social class measures such as annual salary or education level, researchers analyzing the effect of social status often turn to controlled laboratory settings to prime social status (Zink et al., 2008). In these types of procedures, researchers manipulate the social status of participants by having them complete a rank-inducing task (e.g., trivia quiz, Ball et al., 2001; Albrecht et al., 2013), after which they give the participants a relative rank on the measured dimension in comparison with other participants, which is often indicated using stars (Ball et al., 2001; Zink et al., 2008; Hu et al., 2014, 2016). The use of stars is effective in indicating social status given their pervasive use in online shopping websites, videogames, and the military. This type of status, in which the participant is judged as "more" or "less" competent than other players, is a well-accepted tool for priming feelings of social status (Zink et al., 2008). Importantly, previous work shows that the effect of rank-induced status on responses to resource distribution is similar to the effect of status differences between men and women (Eckel and Grossman, 2001) and between high and low status African peasants (D'Exelle et al., 2009) on responses to resource distribution.

Past research on social status demonstrates the importance of social status during resource distribution, with low status individuals demanding less in bargaining situations than high status individuals (Ball et al., 2001; Albrecht et al., 2013; Hu et al., 2014, 2016). However, these studies have shortcomings that prevent a comprehensive understanding regarding the interaction between one's own status and others' status and its effect on economic decision-making. Albrecht et al. (2013) measured satisfaction ratings of disadvantageous, equitable, and advantageous payoffs between the participant and another hypothetical participant of inferior, similar, or superior status and found that individuals in inferior status perceived disadvantageous inequality payoffs as more satisfactory than superior status individuals. However, it is unclear to what extent the feelings of satisfaction can directly map onto actual economic decisions. Moreover, this study focused on the relationship between middle status participants and superior/inferior ranked partners, which does not allow for an investigation into the potential behavioral differences in participants of the lowest or highest status. Ball et al. (2001) did measure the effect of having high or low status in bargaining situations and found that low status participants demanded less than those in high status. However, this study separated low and high status by role (i.e., buyer and seller), which limits the amount of information regarding the potential interaction between self and other status across roles. Similarly, our previous research measuring the effects of social status on acceptance of low and high offers in the ultimatum game (UG) found that participants in low status were more likely to accept low offers than participants in high status (Hu et al., 2014, 2016). However, given that participants did not know their partner's status, it is unclear how self and other status may interact to affect responses to low and high offers.

One overarching question in the above-mentioned studies is that they did not manipulate the participants' and the party's status simultaneously, making it unclear whether individuals in low status were more willing to accept less of the pie in general or if their acceptance took into account the social status of other parties involved in the resource distribution. The lack of a systematic understanding of the interaction between self- and other-status on feelings toward resource distribution is critical not only because one's own and others' social status rarely exist independently in the real world, but also because people can accurately encode one's own and others' social status within minutes of meeting each other (Anderson and Kilduff, 2009), and adjust their behavior accordingly.

One of the most widely used research tools for measuring individuals' responses to resource distributions is UG (Güth et al., 1982). In UG, a proposer is given a set amount of money and asked to divide it with another player, the recipient. If the recipient accepts the offer, then the two receive the allocated amount; if the recipient rejects the offer, the two players receive nothing. Traditional economic theory suggests that proposers should offer the lowest acceptable amount, while the recipient should accept any non-zero offer. However, this type of economic mindset is rarely found in actual experimental settings, as proposers tend to divide the money evenly, and the recipients' acceptance rate of offers increases as a function of the offer level. Behavior in UG reflects not only fairness preferences but also strategic decision-making between two parties (Rabin, 1993). Importantly, previous studies have shown that the relationship between the two parties affects behavior in UG (Eckel and Grossman, 2001; Yu et al., 2015) or similar games (Wu et al., 2011).

Due to the lack of research on the interaction between one's own and others' social status during resource distribution, we turn to social class research to inform our hypotheses regarding the effects of self- and other-status on responses to resource distribution. On the one hand, a wide array of findings demonstrate that one's own social status affects social interaction. In comparison with individuals with high social class, individuals with low social class are more perceptive and sensitive to the feelings and expressions of others (Kraus et al., 2010) and are more attuned to socially relevant and/or potentially threatening stimuli (Muscatell et al., 2012). Moreover, when compared with individuals in high social class, individuals in low social class are more compassionate and empathic to the needs of others (Kraus et al., 2012) and have been found to engage in more prosocial behavior such as generosity, charity, trustworthiness, and helping behavior, and in less selfish or destructive behavior such as breaking laws and social norms (Piff et al., 2010, 2012). On the other hand, a second line of research suggests the importance of other-status processing. For example, in situations that require unspoken coordination between two individuals, individuals of different social status coordinate more effectively than individuals of similar social status (De Kwaadsteniet and van Dijk, 2010). In addition, rhesus monkeys will give up sugary liquid reward to view high status monkeys (Deaner and Khera, 2005), and humans

remember better and focus more attention on high status faces than low status faces (Ratcli et al.,

FIGURE 1 | Schematic diagram of the experiment. Each experiment consisted of two sessions: the rank-inducing session and the UG session. In the

seven-point Likert Scale to what extent he/she perceived his/her status as higher (superior)/lower (inferior; 1 = much lower/more inferior, 7 = much higher/more superior) than the other players in the game. In order to confirm the usage of 3 yuan as a cuto for the operational definition of "low" and "high" UG oers, after the experiment, participants indicated their minimal acceptable UG amount (out of 10 yuan). Finally, to measure participants' fairness expectations, participants were asked to indicate what amount of UG oer (out of 10 yuan) would be considered a fair amount for each proposer status level.

Given the importance of emotions on decisions to reject in UG (Xiao and Houser, 2005; Harlé and Sanfey, 2007), after the experiment participants were asked to report on a five-point Likert scale (1 = not at all, 5 = very strongly) the extent

average, participants received around 50 Chinese yuan (about 8 USD). Informed consent was obtained from each participant before the test. The experiment was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of the School of Psychological and Cognitive Sciences, Peking University.

Design and Procedure

Experiment 2 had a $3 \times 3 \times 2$ within-participant factorial design, with the first factor referring to the participant's own social status (self-status: low vs. middle vs. high), the second factor referring to the proposer's social status (other-status: low vs. middle vs. high), and the third factor referring to UG offer level (low vs. high). The star system and operational definition of low and high offer levels were the same as in Experiment 1.

In Experiment 2, the participant first competed in six rounds of the rank-inducing task (i.e., math competition). Then he or she was given a rank (high, middle, or low) according to his or her performance on the task. Following the ranking, the participant played UG with one proposer randomly drawn from the opponents. Different from Experiment 1, the participant was informed that after every several rounds of UG (36 rounds/block), there would be a new block of the rank-inducing task. In other words, UG was interleaved between blocks of the rank-inducing task. Participants were also informed that the rank attained after each block of the rank-inducing task would pertain only to that particular block of the rank-inducing task and the ensuing block of UG. Each round of the rank-inducing task was composed of three easy and three difficult problems, which facilitated the manipulation of participant rank across rounds. The participants were also informed that the rank-inducing task had no direct relationship with UG. Partners in the rank-inducing task and UG were the same throughout the experiment.

In total, there were six blocks of the math competition, with six time-constrained math questions per block (36 in total, 10 s/question). The order of the ranks attained were counterbalanced across participants.

The second task was UG, which was identical to Experiment 1 (see Experiment 1 Method). There were six blocks of UG. We manipulated participant status (i.e., self-status: high vs. middle vs. low), proposer status (i.e., other-status: high vs. middle vs. low), and offer level (high vs. low), resulting in 18 critical conditions. Each condition included 12 trials.

Before the formal test, participants performed six trials of the math competition and 10 trials of UG to get familiar with the two tasks. To check the manipulation of social status, after the experiment, the participant was asked to indicate on a seven-point Likert Scale to what extent he/she perceived his/her status as higher (superior)/lower (inferior; 1 = much lower, 7 = much higher) than other players in the game when he/she was in each status condition. The participants were then debriefed, paid, and thanked for their participation.

Results

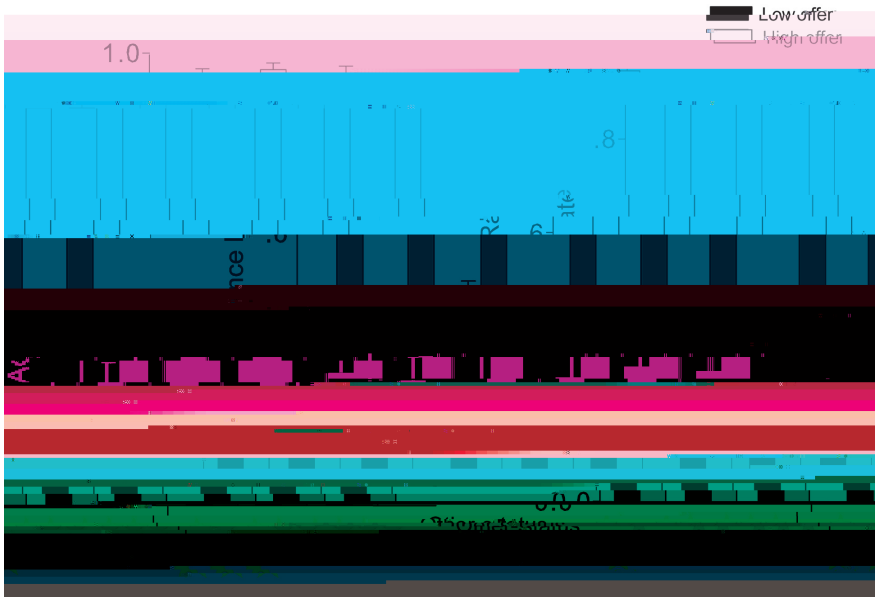

FIGURE 3 | The acceptance rate in Experiment 2 depicted as a function of self-status, other-status, and UG offer level. One star = low status; two stars = middle status; three stars = high status. Error bars represent standard errors of the means.

from high-status proposers (0.92 ± 0.02, CI = [0.88, 0.96], $p = 0.783$), and there was no difference in the acceptance rates of high offers from middle- and high-status proposers, $p = 0.629$.

We were most interested in the interaction between self-status, other-status, and offer level. The analysis revealed a three-way interaction, $F(4,112) = 9.66$, $p < 0.001$, $\eta_p^2 = 0.26$. To further analyze this three-way interaction, three separate two-way repeated-measures ANOVAs were conducted on participant acceptance rates when in low, middle, and high self-status. When participants were endowed with a low self-status, the main effects of offer level [$F(1,28) = 115.01$, $p < 0.001$, $\eta_p^2 = 0.80$] and other-status [$F(2,56) = 15.31$, $p < 0.001$, $\eta_p^2 = 0.35$] were significant, in addition to the interaction between offer level and other-status, $F(2,56) = 15.36$, $p < 0.001$, $\eta_p^2 = 0.35$. Simple effects tests showed that low status participants were less likely to accept low offers when they were offered by a low-status proposer (0.25 ± 0.07, CI = [0.12, 0.39]) than a middle- (0.37 ± 0.07, CI = [0.23, 0.51]) or high-status proposer (0.44 ± 0.05, CI = [0.33, 0.55]), $ps < 0.001$; participants in low status were slightly less likely to accept low offers from middle-status proposers (0.37 ± 0.07, CI = [0.23, 0.51]) than from high-status proposers (0.44 ± 0.05, CI = [0.33, 0.55]), $p = 0.090$. There was no difference between acceptance rates of high offers ($ps = 1.00$). When participants were endowed with a middle self-status, there was a main effect of offer level [$F(1,28) = 134.73$, $p < 0.001$, $\eta_p^2 = 0.83$], yet there was no main effect of other-status, $p = 0.525$, and the interaction between other-status and offer level was significant but had a smaller effect size than that of the low self-status condition $F(2,56) = 3.50$, $p = 0.037$, $\eta_p^2 = 0.11$. In addition, tests for simple effects showed no difference in acceptance rates for low or high offers given by low-, middle-, or high-status proposers, $ps > 0.236$. When endowed with a high self-status, the two main effects of offer level [$F(1,28) = 115.06$, $p < 0.001$, $\eta_p^2 = 0.80$] and other-status [$F(2,56) = 3.56$, $p = 0.035$, $\eta_p^2 = 0.11$] were significant, but the interaction was not, $p = 0.275$. Taken as a whole, the three-way interaction suggests that the effects of status and response decisions in UG were greatest when the participant was in a low-status position.

Discussion

Overall, findings from Experiment 2 replicate the findings from Experiment 1 in a changing social hierarchy. These findings confirm that both self-status and other-status influence the responses to resource distribution. In addition, Experiment 2 provides strong support for the Interactive Status Hypothesis by showing that, in comparison with high and middle self-status, participants in low social status were more affected by the social status of others when deciding whether to accept or reject UG offers. In particular, when participants occupied low status, acceptance rates of low UG offers increased as a function of proposer social status, an effect not present when the same participants occupied middle or high status, which provides direct support for the Interactive Status Hypothesis, and whichhig25,O57 Td [(prov424(o [(p)]TJ/F21oacupi(h(c)-1(c6at)-335(low)-3

two main e□ects suggest that both self- and other-status a□ect responses to resource distribution and confirm past studies suggesting that social status a□ects the acceptance of monetary allocations (Ball et al., 2001; Albrecht et al., 2013; Hu et al., 2014, 2016). Experiment 1 showed that participants were more likely to accept low o□ers from high status proposers, and this e□ect was more robust for participants in the low self-status group than in high self-status group. Experiment 2 largely replicated these findings in a changing hierarchy by showing that only in low status were participants more likely to accept low o□ers given by high status others. In addition, while in low status, participants' acceptance rates of low o□ers increased as a function of other-status (**Figure 3**). These findings provide strong support for the Interactive Status Hypothesis.

Here, we propose two potential mechanisms underlying the interaction between self- and other-status on acceptance of low o□ers during resource distribution: one cognitive and one emotional. We found that participants were more a□ected by other-status while in low status than in high status, which supports past research on the unique cognitive and emotional e□ects of being endowed with low social status (De Kwaadsteniet and van Dijk, 2010; Kraus et al., 2011). On the one hand, from the *social cognitive perspective of social class*, while individuals from a low social class typically exhibit a contextual and externally oriented cognitive pattern, individuals from a high social class exhibit a solipsistic and individualistic cognitive pattern (Kraus et al., 2012). In light of this line of reasoning, low-status individuals should increase attention to others' identities, thoughts, and actions (i.e., proposer social-status), and adjust their decisions accordingly (i.e., whether to reject low UG o□ers); high-status individuals should focus more on their own goals and interests (i.e., the inequality level of the o□er) than others' identity (i.e., proposers' social-status).

On the other hand, from an emotional perspective, past research using a similar paradigm has found that participants viewing their own low rank status exhibit an increased P2 amplitude in electrophysiology, in comparison with when they view their own high status rank (Hu et al., 2014), which is thought to represent increased attention to unpleasant stimuli, especially those with a negative emotional valence (i.e., negativity bias; Carretié et al., 2001, 2004; Delplanque et al., 2004; Olofsson and Polich, 2007). Using this line of reasoning, one could infer that increased negative emotions may lead to an increased likelihood of accepting low o□ers during resource distribution. This would be in contrast with existing findings on the e□ects of negative emotions during UG, which have shown that priming negative emotions leads to an increase in rejection rates of UG o□ers (Harlé and Sanfey, 2007). However, these di□erences may be due to di□erences in the experimental design, as Harlé and Sanfey (2007) primed feelings of sadness using short movie clips, whereas our past (Hu et al., 2014) and current studies elicited interpersonal emotions. Given certain constraints of the current and past studies (i.e., UG emotions were measured o□ine), future research aimed at better understanding the potential explanatory role of these two accounts in explaining acceptance behavior would greatly benefit our understanding of the e□ect of social status on responses to resource distribution.

Social status is a relative construct that elicits changes in mindset from one context to the next. A professor may enjoy high status with his/her doctoral students and experience low status when meeting with the dean. Findings from Experiment 2, in which social status changes occurred within minutes of each other, suggest that individuals can enter new social status mindsets very quickly. Not only are adaptations to social status mindsets rapid, but these adaptations have meaningful influences on decision-making behavior with real economic consequences. One interesting question for future research is whether people experience social status di□erently depending on the status of their partners. For example, a low status participant could experience his/her low status di□erently when playing UG with a low status proposer than a high status proposer. Also, given the rapid adaptation to status-related mindset changes evidenced in Experiment 2 when participants were in a more passive role (i.e., responding to the o□er of the proposer), one other interesting question for future research would be whether previous findings regarding the e□ects of social status are adaptive across contexts when the individual is in an active role, such as choosing between ethical and unethical behavior (e.g., Pi□ et al., 2012).

There are three additional points worth mentioning. First, a classic study by Knoch et al. (2006) shows that, under certain conditions, recipients in UG are able to consciously perceive an o□er as unfair and still accept it. An interesting question would be whether or not participants in low status accepted low o□ers despite judging them as unfair. In the current study, post-experiment questions probing participants' fairness judgments of varying UG o□ers showed no clear influence of social status on judgments of fairness, which suggests that the e□ects of perceived fairness may need to be tested online or implicitly (e.g., via skin conductance response). In Experiment 1, high and low status participants reported no di□erence in emotions during UG, which could suggest that feelings of fairness may have been a□ected by social status. As these findings would have interesting societal ramifications, future studies should analyze online feelings of both emotions and fairness to see what is underlying the increased likelihood of accepting low o□ers while in low status. These findings may also have interesting implications for the debate over whether disadvantaged individuals are more likely to accept unfair realities. For instance, System Justification Theory proposes that low status people are more likely to support the system aHarl3arl3a9s

interactions with other group members are more salient socially and behaviorally than in stable hierarchies (Zink et al., 2008), as high status members are striving to maintain their status, whereas low status members want to increase their status, leading to potential struggles for social status. Moreover, in stable social hierarchies, the greatest amount of stress is experienced by low status individuals, whereas in unstable hierarchies, high status members experience the greatest amount of stress in order to retain their position and settle conflict (Sapolsky, 2004, 2005). Given the importance of hierarchy stability and that Experiment 2 confirmed the Interactive Status Hypothesis in individuals whose social status changed across contexts, future studies would benefit from analyzing the robustness of these e□ects in stable and unstable hierarchies.

Finally, given that social status and power are similar yet distinct constructs (Magee and Galinsky, 2008), future studies should also consider whether the social status e□ects found in the current study have any influence on or could be explained by a perceived sense of power. In the current study, the endowment of social status led to no direct influence or control over the amount of money another individual received, hence the e□ects we obtained are best interpreted as social status and not as power.

CONCLUSION

The current study showed that social status is a critical factor in responses to resource distribution. During economic interactions, low status individuals are more sensitive to the status of others. In particular, when occupying low status, acceptance of low UG o□ers increases as a function of others' social status, whereas high status individuals' behavior is far less a□ected by others' social status. The findings from the current study could have important implications for understanding the behavior and mindset of individuals in a social hierarchy, showing that low status individuals' acceptance of low o□ers may be strategic and related to the status of the other individual in question, and that high status individuals' behavior may be less attuned to contextual information during decision making in social interactions. Moreover, in general, support for the Interactive Status account also has interesting implications not only for social psychology (i.e., relative social status influences behavior), but also for behavioral economics (i.e., acceptance of low o□ers are context-dependent), and evolutionary psychology (i.e., reasons behind acceptance of low o□ers in a social hierarchy). Our results may also help us to understand responses to resource distribution in status-related interactions in the workplace.

AUTHOR CONTRIBUTIONS

PB, JH, EvD, and XZ designed the experiment; PB, JH, XW collected the data; PB, JH, XW, EvD, and XZ wrote the manuscript.

FUNDING

This study was supported by National Basic Research Program (973 Program: 2015CB856400) from the Ministry of Science and Technology of China and by grants from Natural Science Foundation of China (91232708, 31170972).

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