Vicarious Power: The Interpersonal Transference of Power

by

Ning Zhang

A thesis submitted to the Department of Psychology
in conformity with the requirements for the
Degree of Doctor of Philosophy

Queen’s University
Kingston, Ontario, Canada
July, 2016

Copyright ©Ning Zhang, 2016
Abstract

Previous research on power has predominantly focused on power as an intrapersonal process. Relatively little research, however, has investigated the interpersonal transference of power. In the present research, I documented the vicarious power effect – people vicariously feel more powerful when their psychological connections with powerful figures were made salient. Compared to participants in the control conditions, who wrote about either a non-powerful figure with whom they felt psychologically connected or a powerful figure with whom they did not feel connected, participants writing about a powerful figure with whom they felt psychologically connected reported a higher level of power. This effect was true for both a real-life powerful figure (Study 1) and a powerful fictional character (Study 2). In Study 3, I found that, compared to participants in the control conditions (non-powerful but close, powerful but not close), participants writing about their experience of taking a picture together with a close and powerful person (close and powerful condition) made a lower counteroffer in a seller-buyer negotiation task. Furthermore, in Study 4, I found that, compared to participants in the control conditions (non-powerful but close, powerful but not close), participants writing about a close and powerful person (close and powerful condition) were more likely to engage in self-beneficial lying behaviors and less likely to engage in other-beneficial lying behaviors. The research sheds light on vicarious psychological processes in general. Remaining issues and directions for future research are discussed.
Co-Authorship

Co-authors: Dr. Li-Jun Ji (Supervisor)
Acknowledgements

Times flies! Reflecting back to my first to do list at Queen’s, I can’t believe that it has been about five years since I first stepped onto Queen’s campus. I would like to thank all the kind-hearted mentors, colleagues, friends, and family for their support during this learning journey.

First of all, I would like to express my sincere appreciation for the guidance of my supervisor, Dr. Li-Jun Ji. Your encouragement, patience, and striving for perfection constantly motivate me to work harder.

Second, I am very grateful to Dr. Ronald Holden and Dr. Jill Jacobson for your continuous support during my graduate study at Queen’s. Your constructive comments and suggestions have made my dissertation project better and the process easier. I would also like to thank Dr. Susan Brodt and Dr. Igor Grossmann for your time and help by serving on my dissertation committee.

Third, I would like to thank the research assistants from the Culture and Cognition Lab (especially Kathryn Bowles, Ivy Fong, Victoria Jin, Melissa Kang, Ryosuke Kobayashi, Elysee Kukwabantu, Betty Li, Amanda Lin, Ioana Petrar-Silca), who helped to make this research project happen. Special thanks go to my follow graduate students (Emily Hong, Faizan Intiaz, Mark Khei, Suhui Yap) for your constant support. It has been great to have you as learning buddies. I hope we will cross paths again in the future.

Last but not least, I would like to thank my parents and siblings for your support during this learning journey. Although you live far away, your unconditional love and support have always accompanied me. I look forward to spending more time with you after graduation.
# Table of Contents

Abstract .......................................................................................................................... ii
Co-Authorship................................................................................................................... iii
Acknowledgements ......................................................................................................... iv
Table of Contents ........................................................................................................... v
List of Figures .................................................................................................................. vii
Chapter 1 Introduction .................................................................................................... 1
Chapter 2 Study 1: Close and Powerful Figure ............................................................... 12
Chapter 3 Study 2: Powerful Fictional Character One Identifies With ......................... 16
Chapter 4 Study 3: The Effect of Vicarious Power on Negotiation ................................. 21
Chapter 5 Study 4: The Consequences of Vicarious Power on Self-beneficial versus Other-beneficial Lying Behavior .............................................................................. 27
Chapter 6 General Discussion.......................................................................................... 34
Chapter 7 Conclusion .................................................................................................... 42
References ....................................................................................................................... 43
Appendix A: Instructions for Vivid Writing Task for Study 1-4 ...................................... 58
Appendix B: Measures of Power ................................................................................... 63
Appendix C: Manipulation Check Questions for Study 1-4 ............................................. 64
Appendix D: Sumarry of Descriptive Statistics for Study 1-4 ......................................... 67
Appendix E: Unethical Behavior Scenarios for Study 4 .................................................. 69
Appendix F: Summary of ANOVA results for Study 4 ..................................................... 71
Appendix G: Letter of Information and Consent Form ..................................................... 72
Appendix H: Debriefing Letter ....................................................................................... 74
Appendix I: Letter of Clearance from GREB ................................................................. 76
List of Figures

Figure 1: Sense of power as a function of condition and measurement ......................... 20
Figure 2: Likelihood of lying as a function of condition and lie type ............................. 33
Chapter 1

Introduction

Imagine that you are reading a novel, in which the author vividly describes a character that is powerful (e.g., Superman). You really like and identify with the character. How would the experience of identifying with a powerful fictional character make you feel? You may feel happy or excited, but could there be other effects? The current research suggests that you also will feel more powerful.

Defining Power

Power has received substantial attention among social scientists during the past several decades (Blader & Chen, 2014; Keltner, Gruenfeld, & Anderson, 2003; Sturm & Antonakis, 2015; Tost, 2015). Although the definition of power varies across research, it is typically defined as a person’s actual or perceived capacity to control or influence others (Anderson, John, & Keltner, 2012; Keltner et al., 2003; Sturm & Antonakis, 2015). For example, Keltner and colleagues (2003) defined power as “an individual’s relative capacity to modify others’ states by providing or withdrawing resources or administering punishments” (p. 265). Similarly, Strum and Antonakis (2015) defined power as “having the discretion and means to enforce one’s will” (p.136). In line with these definitions, a powerful person is “a person who controls the ability of another person or persons to get something they want, or is in a position to evaluate others” (Galinsky, Gruenfeld, & Magee, 2003, p. 458). Recently, Anderson and colleagues (2012) defined power as a person’s perception that he or she has the capacity to influence others. On the basis of this definition, they developed the Sense of Power Scale to capture people’s subjective
sense of power. In the present research, I am investigating if sense of power can be transferred through psychological connections with powerful others.

Power is related to, but distinct from, constructs such as sense of control and dominance. Sense of control is “an individual’s beliefs about their capacities to exercise control in their own lives” (Gurin, Gurin, & Morrison, 1978, p. 275; see also Kay, Whitson, Gaucher, & Galinsky, 2009; Mittal & Griskevicius, 2014). Powerful people tend to report having a higher level of control (Fast, Gruenfeld, Sivanathan, & Galinsky, 2009). Having a high sense of control is one important aspect of being powerful (Keltner et al., 2003). However, power is distinct from sense of control because power usually targets influencing and controlling others; whereas sense of control focuses more on controlling one’s own life. Dominance is “the tendency for individuals to behave in assertive, forceful, and self-assured ways across a variety of contexts” (Anderson & Berdahl, 2002, p. 1362). Power can make people behave dominantly (Keltner et al., 2003), and people can use dominance as a strategy to gain power (Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013). In certain contexts, dominance can be viewed as an indicator or predictor of power (Anderson & Berdahl, 2002). However, a person who displays dominance in behavior does not necessarily have the capacity to control or influence others. Likewise, a person who has the capacity to control or influence others may not behave dominantly. Power is also distinct from Machiavellianism – “strategies of social conduct to manipulate others for personal gain” (Wilson, Near, & Miller, 1996, p. 285), in the sense that power refers to a person’s capability (or perceived capacity) for controlling or influencing others, whereas Machiavellianism focuses on a person’s general inclination to manipulate others.
**Antecedents of Power**

Although power is essentially an interpersonal process (Smith & Magee, 2015; Strum & Antonakis, 2015), previous research on power has predominantly operationalized it as an intrapersonal process. For example, completing a scrambled-sentences task with words related to power (Chen, Lee-Chai, & Bargh, 2001; Smith & Trope, 2006) or recalling a past experience of having power over others (Galinsky et al., 2003; Miyamoto & Ji, 2011) increases people’s sense of power. In addition, simply holding open and expansive body postures for a short period of time (Carney, Cuddy, & Yap, 2010; Huang, Galinsky, Gruenfeld, & Guillory, 2011; but see Nelson & Simonsohn, 2015), or lowering their pitch of voice while reading (Stel, Dijk, Smith, Dijk, & Djalal, 2012) can increase people’s sense of power.

Still relatively little research has explored the interpersonal antecedents of power – the interpersonal processes that enable people to gain power (Blader & Chen, 2014; Smith & Magee, 2015; Sturm & Antonakis, 2015; Tost, 2015). Although previous research has shown that playing various roles such as sitting in a professor’s chair (Chen, et al., 2001), serving as the “dictator” in a dictator game (Kahneman, Knetsch, & Thaler, 1986), or being assigned as the leader of a committee to decide the distribution of resources (Anderson & Berdahl, 2002) makes people feel more powerful, the induced power is generally based on what is presumed for those people in powerful positions rather than on the interpersonal connections people have with others. Inspired by recent research on psychological connectedness and vicarious processes, in the current research, I aim to fill this gap by investigating vicarious power and its downstream consequences on judgment and decision making. Based on previous research on vicarious psychological
processes, I define vicarious power as the sense of power people gain indirectly through psychological connections with powerful persons or characters.

**Consequences of Power**

Another line of research on power has focused on its effects on affect, cognition, judgment, and behavior (see Galinsky, Rucker, & Magee, 2015; Keltner et al., 2003; Magee & Smith, 2013; Smith & Magee, 2015; Sturm & Antonakis, 2015, for reviews). For example, power increases analytical and abstract thinking (Miyamoto & Ji, 2011; Smith & Trope, 2006), enhances perceived social distance (Lammers, Galinsky, Gordijn, & Otten, 2012; Magee & Smith, 2013), leads to overconfidence in judgment and decision-making (Fast, Sivanathan, Mayer, & Galinsky, 2012), reduces perspective-taking (Galinsky, Magee, Inesi, & Gruenfeld, 2006), increases action orientation (Galinsky et al., 2003; Jiang, Zhan, & Rucker, 2014; Magee, 2009) and risk-taking (Anderson & Galinsky, 2006), and decreases the impact of situational constraints on behaviors (Galinsky, Magee, Gruenfeld, Whitson, & Lijenquist, 2008). However, relatively little research has focused on the antecedents of power – the situations and processes that enable people to gain power (Blader & Chen, 2014; Smith & Magee, 2015; Strum & Antonakis, 2015).

Although plenty of research has demonstrated the consequences of power with the priming technique (Chen et al., 2001; Galinsky et al., 2003; Galinsky et al., 2015; Keltner et al., 2003; Magee & Smith, 2013; Smith & Magee, 2015; Smith & Trope, 2006; Sturm & Antonakis, 2015), recent replication attempts suggest that the priming effect of power may not be robust (Cusack, Vezenkova, Gottschalk, & Calin-Jageman, 2015; Ebersole et al., 2015). For instance, Cusack and colleagues (2015) failed to replicate the enhancing
effect of power on motor performance documented by Burgmer and Englich (2013).

Similarly, a recent replication attempt conducted by Many Labs 3 (Ebersole et al., 2015) was not successful in replicating the effect of priming power on reduced perspective taking as originally demonstrated by Galinsky et al. (2003). These failed replications have contributed to the ongoing debates on the “replication crisis” in social psychology (Earp & Trafimow, 2015; Klein, et al., 2014; Maxwell, Lau, & Howard, 2015; Pashler & Wagenmakers, 2012). I argue that, instead of indicating that the priming effects of power are false, the recent debate suggests that the effects may be more complex and moderated by factors that were not examined. In the current research, I concentrate on one potential moderator, psychological connectedness.

**Psychological Connectedness and Vicarious Processes**

As social beings, people are fundamentally motivated to connect with others (Baumeister & Leary, 1995). Research has demonstrated that people can feel psychologically connected to others in a variety of ways. The situations that induce psychological connectedness can be hypothetical or real. For example, taking the perspective of another person makes people feel psychologically connected to the target person (Galinsky, Ku, & Wang, 2005). Sharing the same group membership (Brewer & Gardner, 1996; Tajfel, Billig, Bundy, & Flament, 1971), a similar name (Pelham, Carvallo, & Jones, 2005), the same birthday (Cialdini & de Nicholas, 1989; Miller, Downs, & Prentice, 1998), and having overlapped patterns of brainwaves with each other (Goldstein & Cialdini, 2007) all increase people’s perceived psychological connectedness with others. As interdependent people, relative to independent people, tend to define themselves by including attributes of close others and the groups they belong to (Aron,
Aron, Tudor, & Nelson, 1991; Markus & Kitayama, 1991), researchers find that inducing an interdependent mindset increases people’s perceived connection with others (Gino & Galinsky, 2012; Gunia, Sivanathan, & Galinsky, 2009).

One implication of psychological connectedness is that people may feel they are merged with the connected others (Aron et al., 1991; Cialdini, Brown, Lewis, Luce, Neuberg, 1997) and take on many attributes of the connected others (Cialdini et al., 1997; Davis, Conklin, Smith, Luce, 1996; Galinsky et al., 2005; Markus & Kitayama, 1991). This idea has inspired research on the interpersonal transference of psychological processes, also called vicarious psychological processes (Cooper & Hogg, 2007; Goldstein & Cialdini, 2007; Miller & Effron, 2010). For instance, Goldstein and Cialdini (2007) proposed the vicarious self-perception model and found that, after being induced to feel psychologically connected with another person (e.g., taking the perspective of the target person, or receiving feedback that their brainwave patterns overlap with the target person), people perceived themselves as having similar attributes (e.g., being prosocial) as the target person. The vicariously gained self-perception (e.g., being prosocial), in turn, led people to change their behavior consequentially (e.g., more willing to help).

Similar phenomena also are documented in other social psychological processes. For example, Gunia Sivanathan, and Galinsky (2009) have shown that people who are psychologically connected with others (e.g., taking another person’s perspective, sharing the birthday month and school year with the target person, or primed with an interdependent mindset) are more likely to justify failing investments made by others, and consequentially they display escalated commitments towards the previous investment decisions made by others. Similarly, people experience vicarious self-control depletion
after mentally simulating the perspective of another person exerting self-control (Ackerman, Goldstein, Shapiro, & Bargh, 2009), and experience vicarious self-control recovery by taking the perspective of another person engaging in a restorative activity after exerting self-control (Egan, Hirt, & Karpen, 2012). People also experience vicarious goal progress after giving advice to another person on a goal pursuit – expecting the advisee to act on their advice, the advisors tend to disengage from the advice-relevant goal, which presumably has been taken care of by the advisee (Chugani & Broniarczyk, 2011). Likewise, people experience vicarious goal satiation – observing another person completing a goal pursuit reduces the observers’ striving on the same task subsequently (McCulloch, Fitzsimons, Chua, & Albarracin, 2011). People also experience vicarious cognitive dissonance after witnessing in-group members engaging in attitude-inconsistent behaviors (Norton, Monin, Cooper, & Hogg, 2003; for a review, see Cooper & Hogg, 2007). Similar effects also are found in research on morality, such as the vicarious moral licensing effect. In particular, an in-group member’s previous engagement in nonprejudicial behavior licenses people to display prejudicial behavior later on in an ambiguous situation (e.g., a police-hiring task; Kouchaki, 2011).

Linking the literature on power and on vicarious psychological processes, I propose that people can vicariously feel more powerful when their connections with a powerful person/figure was highlighted. Little research has examined this possibility, with one notable exception by Goldstein and Hays (2011), who demonstrated the “illusory power transference” (p. 593) phenomenon. Specifically, they found that anticipating having to cooperate with a person who was powerful in an unrelated task increased male participants’ sense of power and confidence in a negotiation task, raised
their optimism about future events, and enhanced their engagement in risk-taking behavior. The illusory power transference effect documented by Goldstein and Hays is intriguing, as it indicates that people’s subjective experience of power could be changed simply by imagining a cooperative interaction with a powerful person in the near future without actually engaging in the interaction.

The research by Goldstein and Hays, however, also leaves several questions to be addressed in future research. First, they found the vicarious power transference effect when people were made to believe that they were going to have a cooperative interaction with a powerful person. It is not clear how strong the association between the participant and the powerful other has to be for the vicarious power effect to occur. For example, would psychological closeness or identification with a powerful person (without actual cooperation) be enough to produce vicarious power? Second, the powerful person in Goldstein and Hays’s studies were supposed to have real power (or influence) over others. Would people vicariously feel more powerful after being induced to think powerful fictional figures they identify with? Third, Goldstein and Hays found the power transference effect among men but not among women. Although they argued that gender differences in motivation for power might contribute to the finding, they did not examine this potential explanation explicitly. Is it possible that female participants in their studies somehow did not feel a strong connection with the powerful partner as did the male participants (which would result in no vicarious power according to my prediction)? Thus, it is not clear why the gender effect occurred and under what condition the vicarious power effect would be observed among female participants. Finally, the vicarious sense of power measured in Goldstein and Hays referred to sense of power
relative to the participants’ opponent in a negotiation task. Would an increase in the general sense of power be observed when people feel psychologically connected with someone powerful?

In summary, Goldstein and Hays (2011) provided a strong foundation for understanding the vicarious power transference phenomenon. The present research aims to address these remaining issues and to better understand when and how people can gain power vicariously from others.

The Present Research

In the present research, I aimed at expanding and further exploring the interpersonal transference of power. Specifically, I empirically tested two necessary conditions for the vicarious power effect to occur: (1) the perceiver is psychologically close to (connected with) the target person; (2) the target person is viewed as powerful by the perceiver. The first condition – psychological connection – is necessary because it is a defining characteristic of vicarious psychological processes; that is, people need to be psychologically connected to (e.g., taking the perspective of, belonging to the same group with) the target person for the vicarious psychological processes to occur (Cooper & Hogg, 2007; Goldstein & Cialdini, 2007; Miller & Effron, 2010). The second condition – powerful other – is necessary because it is the target psychological state that is to be transferred across individuals in the current research. Furthermore, I also investigated the downstream consequences of vicarious power on judgment and decision making – specifically, the amount of counteroffer people make in a hypothetical seller-buyer negotiation task and people’s likelihood of engaging in self-beneficial versus other-beneficial lying behaviors. I predicted that the effect of vicarious power on judgment and
decisions would be similar to what is documented in previous research on firsthand experience of power (Anderson & Galinsky, 2006; Galinsky et al., 2003; Galinsky et al., 2008; Galinsky et al., 2006; Magee, 2009; Magee & Smith, 2013).

I extended the study by Goldstein and Hays (2011) in the following aspects. First, I explicitly tested psychological connectedness as a necessary condition for the vicarious power effect. Psychological connectedness was operationalized as relationally close to the target person (Studies 1, 3, 4) or psychological identification with the target figure (Study 2). Second, instead of manipulating vicarious power by asking participants to anticipate a future interaction with a real powerful person as in Goldstein and Hays, I explored if the vicarious power effect would be observed when writing about a hypothetical powerful figure (e.g., a powerful fictional character with which one identifies; Study 2). Third, I used a new paradigm (e.g., recall and writing about a powerful target person/figure) to explore the vicarious power effect among both men and women. By not asking participants to recall or anticipate an interaction with a powerful target person/figure (Studies 1, 2, and 4), I circumvented the possibility that dominance complementarity (Tiedens & Fragale, 2003; Tiedens, Unzugeta, & Young, 2007) could lead women to report feel less powerful when anticipating an interaction with another powerful person as in Goldstein and Hays's research. Fourth, Goldstein and Hays focused on participants’ reported relative power compared to their opponent in a negotiation task, whereas I explored if psychological connectedness with a powerful person could increase people’s general sense of power.

Specifically, I conducted four studies to capture the phenomenon of vicarious power and its downstream consequences in judgment and decision-making. In Studies 1
and 2, I found that people who wrote about a close and powerful figure or a powerful fictional character with whom they identified exhibited higher levels of power than did people in the other two conditions. In Studies 3 and 4, I explored the downstream consequences of vicarious power on judgment and decision-making. In Study 3, I showed that, compared to people in the control conditions (non-powerful but close or powerful but not close), people associating themselves with a close and powerful person (powerful and close condition) made a lower counteroffer in a hypothetical seller-buyer negotiation task when playing the role of a buyer. In Study 4, I found that, compared to people in the control conditions (non-powerful but close or powerful but not close), people associating themselves with a close and powerful figure were more likely to engage in self-beneficial lying behaviors and less likely to engage in other-beneficial lying behaviors across three different scenarios (e.g., failing to submit an assignment on time).
Chapter 2

Study 1: Close and Powerful Figure

In Study 1, I investigated if people could vicariously gain power by writing about a close and powerful figure. I hypothesized that writing about a close and powerful figure would lead to a higher sense of power compared to writing about a close friend or a powerful figure with whom they had no personal connections.

Method

Participants. Eighty-one European Canadian students at Queen’s University participated for course credit (16 men, 64 women, $M_{age} = 18.87$ years, $SD = 2.47$). This study was conducted in March, 2014. Data analyses were only done after data collection was stopped at the end of the term (early April). One participant was excluded from the analyses due to missing data.

Procedure. Participants were randomly assigned through Qualtrics to write about a typical weekday of a powerful and close person ($n = 27$), a close friend ($n = 27$), or a powerful but not close person ($n = 26$), with the last two conditions as control conditions to examine the two necessary conditions of the vicarious power effect. Adapted from Galinsky et al. (2003), I defined for participants a powerful person as “a person in a powerful position to evaluate others or in control of the ability of another person or persons to get what they want” (Galinsky et al., 2003, p. 458). In the powerful and close person condition, participants wrote about a typical weekday of a powerful person to whom they were close. To avoid the potential confounds of relationship concerns, they were advised not to write about direct relatives or supervisors in the workplace. In the close friend condition, they wrote about a typical weekday of a close friend who was
attending the same university as they were. Similarly, to control for relationship concerns, they were advised not to write about their boyfriend or girlfriend. In the powerful but not close person condition, they wrote about a typical weekday of a powerful figure they read about in the news with whom they did not have any personal connections (see Appendix A Study 1 for detailed instructions).

Then, I measured sense of power by having participants complete the Sense of Power Scale (Anderson et al., 2012, see Appendix B, α = .87) on a 7-point scale (1 = strongly disagree, 7 = strongly agree). One sample item is: “In my relationship with others, I can get others to do what I want.” Afterwards, they completed two manipulation check questions on their relationship closeness with the target figure they wrote about (1 = not close at all, 7 = very close) and the extent to which the target figure they wrote about was powerful (1 = not powerful at all, 7 = very powerful, see Appendix C Study 1 for details). Finally, participants reported their age, gender, and ethnicity.

Results and Discussion

Manipulation checks. The manipulation for relationship closeness was successful, $F(2, 77) = 101.38, p < .001, \eta^2_p = .72$. Relationship closeness was higher in the close friend condition ($M = 6.19, SD = 0.79$) than in the powerful and close person condition ($M = 4.26, SD = 1.85$), $t(52) = 4.97, p < .001$, which was in turn higher than that in the powerful but not close person condition ($M = 1.35, SD = .75$), $t(51) = 7.46, p < .001$. The manipulation for power of the target figure was partially successful, $F(2, 77) = 3.57, p = .033, \eta^2_p = .08$. The target figures in the powerful but not close person condition ($M = 6.08, SD = 1.20$) were perceived as more powerful than targets in the powerful and close person condition ($M = 5.19, SD = 1.44$), $t(51) = 2.44, p = .018$. However, the target
figures in the *close friend* condition (*M* = 5.56, *SD* = 0.97) did not differ significantly from perceptions of targets in the *powerful but not close person* condition, *t*(51) = 1.74, *p* = .088, and targets in the *powerful and close person* condition, *t*(52) = 1.11, *p* = .27 (see Appendix D Table 1 Study 1 for a summary of the descriptive statistics of manipulation checks). This could be due to the fact that the instruction for participants in the *close friend* condition did not emphasize that the recalled close friend should not be powerful.

*Sense of power.* I predicted that participants in the *powerful and close condition* would report a higher sense of power than people in the other two control conditions. A set of planned orthogonal contrasts (Rosenthal & Rosnow, 1985) was conducted to test the prediction. The first contrast coefficients were 2, -1, and -1, and the second contrast weights were 0, 1, and -1 for the *powerful and close person* condition, the *close friend* condition and *powerful but not close person* condition, respectively. Consistent with the prediction, participants in the *powerful and close person* condition (*M* = 5.48, *SD* = 0.66) reported a higher sense of power than participants in the *close friend* (*M* = 5.01, *SD* = 0.94) and *powerful but not close person* (*M* = 4.50, *SD* = 0.75) conditions, *t*(77) = 3.87, *p* < .001. In addition, participants in the *close friend* condition (*M* = 5.01, *SD* = 0.94) also reported a higher sense of power than did participants in the *powerful but not close person* condition (*M* = 4.50, *SD* = 0.75), *t*(77) = 2.36, *p* = .021. (See Appendix D Table 2 Study 1 for a summary of descriptive statistics of the dependent variables).

In summary, the results of Study 1 demonstrated the phenomenon of *vicarious power* – people could vicariously feel more powerful after thinking and writing about powerful figures with whom they are psychologically connected. It is worth noting that participants in the *close friend* condition reported a higher level of power than did
participants in the *powerful but not close person* condition. This effect could have resulted from participants in the close friend condition perceiving their friends as relatively powerful, as indicated by the manipulation checks. I addressed this limitation in the follow-up studies by explicitly instructing people to write about a non-powerful fictional character with whom they identified (Study 2) or a close other who was not powerful (Studies 3 and 4).
Chapter 3

Study 2: Powerful Fictional Character One Identifies With

Study 2 was a conceptual replication of Study 1 with two major changes. First, I introduced a new method to induce vicarious power: instead of writing about a real person, participants wrote about a fictional literary character. Second, I added an indirect measure of perceived power – the Me Versus Other Scale, which measures people’s view on the relative size of themselves versus others (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). I hypothesized that compared to people in the control conditions (non-powerful but identifying, powerful but not identifying), people writing about a powerful fictional character with whom they identified (powerful and identifying) would experience a greater sense of power.

Method

Participants. One hundred and seventy-eight American or Canadian residents completed the study through Amazon’s Mechanical Turk. Twenty-six participants were excluded from the analyses for the following reasons: 11 people did not follow the instructions for the writing task (e.g., writing about a person they knew or themselves rather than a fictional character); 7 people finished the task in less than 4 minutes (beyond the 2.5 SD of the average time, 12 minutes, that participants took to finish the study), and 1 person finished the task in more than one hour (these participants also tended to give the same response to many consecutive questions); 8 people failed the manipulation checks (e.g., reporting that they did not identify with the fictional character even though they were assigned to the identifying conditions; responding with 1, 2, or 3 on the 1-7 identification scale; n = 3), reporting that they identified with the fictional
figures when assigned to the not identifying conditions (responding with 5, 6 or 7 on the 1-7 identification scale; \( n = 2 \)), writing about a fictional character who was not powerful when assigned to the powerful conditions (responding with 1, 2 or 3 on 1-7 power scale; \( n = 1 \)), or writing about a powerful fictional character when assigned to the non-powerful conditions (responding with 5, 6, or 7 on 1-7 power scale; \( n = 2 \)). As a result, the final sample consisted of 152 participants (65 men, 87 women; age ranges from 19 to 83 years, \( M_{age} = 39.15 \) years, \( SD = 13.84 \)).

Procedure. Participants completed all experimental materials online through Qualtrics. A prescreening questionnaire selected only English speaking North Americans of European descendent who were older than 18 years to participate in the study. The first part of the study was introduced to participants as a vivid writing task. Participants were randomly assigned to 1 of 3 conditions (45 in the powerful and identifying condition, 59 in the non-powerful but identifying condition, 48 in the powerful but not identifying condition) through Qualtrics. Participants read the following instructions (modified based on Galinsky et al., 2003, with instruction for the other two conditions in the parentheses):

Please think about a powerful fictional character that you identify with [fictional character you identify with who is not powerful or powerful fictional character that you read but do not identify with]. By powerful fictional character we mean that the character is in a powerful position to evaluate others or in control of the ability of another person or persons to get what they want. Please write down the name of the fictional character and describe his/her main characteristics and what his or her life is like in the following space (please provide as many details as you can so that other people can easily get a sense of
what the fictional character is like) (see Appendix A Study 2 for detailed instructions).

After the writing task, participants answered two manipulation check questions by indicating the extent to which they identified with the fictional character (1 = not identify with at all, 7 = fully identify with), and the extent to which the fictional character was powerful (1 = not powerful at all, 7 = very powerful) (see Appendix C Study 2). Then, participants completed the Sense of Power Scale (Anderson et al., 2012, \( \alpha = .96 \)) as in Study 1 and the Me Versus Other Scale (Campbell et al., 2004, see Appendix B) as an indirect measure of power (1 = much smaller than others, 7 = much larger than others). Finally, participants reported demographic information such as age, gender, and ethnicity.

**Results and Discussions**

*Manipulation checks.* Separate one-way ANOVAs indicated that the manipulations were successful, \( F(2, 149) = 298.11, p < .001, \eta^2_p = .80 \), for identification with the fictional character, and \( F(2, 149) = 346.20, p < .001, \eta^2_p = .82 \) for powerfulness of the fictional character. People in the powerful and identifying condition (\( M = 5.22, SD = .99 \)) and people in the non-powerful but identifying condition (\( M = 5.47, SD = .97 \)) reported a higher level of identification with the fictional character than did people in the powerful but not identifying condition (\( M = 1.54, SD = .68 \)), \( t(91) = 20.88, p < .001 \), and \( t(105) = 23.68, p < .001 \), respectively. Similarly, people in the powerful and identifying condition (\( M = 6.44, SD = .76 \)) and the powerful but not identifying condition (\( M = 6.35, SD = .76 \)) reported that the fictional characters they wrote about were more powerful than did people in the non-powerful but identifying condition (\( M = 2.37, SD = 1.13 \)), \( t(102) = \).
20.89, \( p < .001 \), and \( t(105) = 20.91, p < .001 \), respectively (see Appendix D Table 1 for a summary of descriptive statistics of manipulation checks).

**Sense of Power Scale.** I used the same two orthogonal contrasts as Study 1 and found that participants in the *powerful and identifying* condition (\( M = 5.15, SD = 1.14 \)) reported a higher sense of power than did participants in the *non-powerful but identifying* (\( M = 4.55, SD = 1.15 \)) and *powerful but not identifying* condition (\( M = 4.64, SD = 1.34 \)), \( t(149) = 2.61, p = .01 \). The latter two groups did not differ significantly from each other on sense of power, \( t(149) = .39, p = .70 \) (Figure 1).

**Me versus Other Scale.** Similarly, using orthogonal contrasts, I found that participants in the *powerful and identifying* condition (\( M = 4.44, SD = 1.14 \)) felt more powerful than those in the *non-powerful but identifying* (\( M = 3.66, SD = 1.17 \)) and *powerful but not identifying* (\( M = 3.77, SD = 1.09 \)) conditions, \( t(149) = 3.60, p < .001 \). The latter two groups did not differ significantly from each other, \( t(149) = .50, p = .62 \).

---

1 When no participants were excluded, ANOVAs indicated that the manipulations on identification with the fictional character, \( F(2, 175) = 183.56, p < .001, \eta^2_p = .68 \), and on power of the fictional character, \( F(2, 175) = 295.10, p < .001, \eta^2_p = .77 \), were successful. People in the *non-powerful but identifying* condition (\( M = 5.47, SD = 1.0 \)) and people in the *powerful and identifying* condition (\( M = 4.96, SD = 1.34 \)) reported a higher level of identification with the fictional character than people in the *powerful but not identifying* condition (\( M = 1.79, SD = 1.09 \)), \( t(124) = 19.76, p < .001 \), and \( t(108) = 13.66, p < .001 \), respectively. Similarly, people in the *powerful and identifying* condition (\( M = 6.42, SD = .75 \)) and the *powerful but not identifying* condition (\( M = 6.31, SD = .86 \)) reported that the fictional characters they wrote about were more powerful than did those in the *non-powerful but identifying* condition (\( M = 2.50, SD = 1.31 \)), \( t(118) = 19.30, p < .001 \), and \( t(124) = 18.92, p < .001 \), respectively.

2 When no participants were excluded, orthogonal contrasts showed that participants in the *powerful and identifying* condition (\( M = 4.96, SD = 1.22 \)) reported a higher sense of power than did participants in the *non-powerful but identifying* (\( M = 4.57, SD = 1.12 \)) and *powerful but not identifying* condition (\( M = 4.56, SD = 1.31 \)), \( t(175) = 1.97, p = .05 \). The latter two groups did not differ significantly from each other on sense of power, \( t(175) = .07, p = .94 \). When only participants did not follow the instructions, or did not take the task seriously were excluded, orthogonal contrasts showed that participants in the *powerful and identifying* condition (\( M = 4.99, SD = 1.25 \)) reported a marginally higher sense of power than did participants in the *non-powerful but identifying* (\( M = 4.55, SD = 1.14 \)) and *powerful but not identifying* condition (\( M = 4.66, SD = 1.31 \)), \( t(157) = 1.81, p = .073 \). The latter two groups did not differ significantly from each other on sense of power, \( t(157) = -.497, p = .62 \).
(See Figure 1 and Appendix D Table 2 Study 2 for a summary of descriptive statistics of dependent variables). ³

![Figure 1](image-url)

**Figure 1.** Sense of power as a function of condition, as measured by the Sense of Power scale, and the Me versus Other Scale. Error bars represent standard errors.

Thus, the results of Study 2 replicated the finding on vicarious power from Study 1. It showed that people could vicariously feel more powerful when thinking about fictional characters, as long as the characters were powerful and people psychologically identified with the fictional characters. ⁴

---

³ When no participants were excluded, I found that participants in the powerful and identifying condition ($M = 4.29$, $SD = 1.27$) felt more powerful than those in the non-powerful but identifying ($M = 3.94$, $SD = 1.38$) and powerful but not identifying ($M = 3.76$, $SD = 1.26$) conditions, $t(175) = 2.03$, $p = .044$. The latter two groups did not differ significantly from each other, $t(175) = .78$, $p = .44$. When only participants did not follow the instructions, or did not take the task seriously were excluded, I found that participants in the powerful and identifying condition ($M = 4.31$, $SD = 1.26$) felt more powerful than those in the non-powerful but identifying ($M = 3.72$, $SD = 1.24$) and powerful but not identifying ($M = 3.82$, $SD = 1.09$) conditions, $t(157) = 2.60$, $p = .01$. The latter two groups did not differ significantly from each other, $t(157) = -.48$, $p = .64$.

⁴ In Study 2, gender did not have any significant main effect on power as measured by the Sense of Power Scale, $F(1, 148) = 1.16$, $p > .25$, or the Me versus Other Scale, $F(1, 148) = .006$, $p > .25$. 

---

20
Chapter 4

Study 3: The Effect of Vicarious Power on Negotiation

Power has a variety of effects on negotiation processes and outcomes (Bacharach & Lawler, 1981; Carnevale & Pruitt, 1992; De Dreu & van Kleef, 2004; DeRue, Conlon, Moon, & Willaby, 2009; Lawler, 1992; Lewicki, Saunders, & Minton, 1999; Magee, Galinsky, & Gruenfeld, 2007; Nelson, Bronstein, Shacham, & Ben-Ari, 2015; Thompson, 1998; Watson, 1994). In particular, previous research has focused predominantly on how equal or unequal power relationships in a negotiation dyad influenced negotiation processes and outcomes (DeRue et al., 2009; Greer & Bendersky, 2013; Kim, 1997; Kim, Pinkley, & Fragale, 2005; Olekalns & Smith, 2013; Overbeck, Neale, & Govan, 2010; Rubin & Brown, 1975; Wei & Luo, 2012; Wolfe & McGinn, 2005). For example, compared to dyads with equal power, dyads with unequal power were less cooperative in negotiations (Sheposh & Gallo, 1973), more likely to engage in exploitative tactics (Swingle, 1970), more likely to reach higher-joint gain agreements (Wei & Luo, 2012), and more likely to engage in strategies for value creation in negotiation (Olekalns & Smith, 2013). DeRue and colleagues (2009) found that the positive relationship between straightforwardness and concession making was stronger in unequal power negotiations than in equal power negotiations. Similarly, Overbeck and colleagues (2010) found that high power negotiators were more responsive to their own emotions; whereas low power negotiators were more responsive to the emotions of their counterparts.

Although the role of relative or structural power on negotiation has been well documented, it is not until recently that researchers started exploring how the psychological experience of power influence negotiation behaviors and outcomes (Hong
& van der Wijst, 2013; Magee et al., 2007). For instance, Hong and van der Wijst (2013) found that priming women with power through writing about a past experience of having power over others reduced gender differences in the outcomes of distributive negotiation.

In another line of research, Magee and colleagues (2007) demonstrated that people primed with power were more likely to initiate a negotiation and to make the first offer in negotiation, which in turn, put them in an advantageous position in the negotiation. Similar effects were replicated across different cultural and negotiation contexts (Gunia, Swaab, Sivanathan, & Galinsky, 2013).

One decision that negotiators frequently make is whether or not to counteroffer, which has received substantial attention among negotiation researchers (Kristensen & Garling, 1997, 2000; Mason, Lee, Wiley, & Ames, 2013; Northcraft & Neale, 1987; Schweinsberg, Ku, Wang, & Pillutla, 2012). Specifically, Kristensen and Garling (1997, 2000) found that anchor points (e.g., the first offer given by a negotiator) and reference points (e.g., a negotiator’s reservation price) both had an effect on the counteroffer. The initial offer affected the counteroffer the other negotiator made, and the reference point influenced how the counteroffer was perceived by the party making the initial offer.

Magee and colleagues (2007) found that power led to a more aggressive first offer in a competitive interaction. Building on this line of research, Kim and colleagues (2015) used counteroffers in negotiation as a proxy for sense of power and found that people who were depleted of self-control made less aggressive counteroffers in a seller-buyer negotiation task, indicative of a lower level of power.

Given that Studies 1 and 2 showed that people could vicariously feel more powerful by connecting themselves with a real or fictional powerful figure, I wanted to
explore the implications of vicarious power for counteroffers made during negotiations. Therefore, in Study 3, I aimed at investigating how associating oneself with a powerful person could affect the counteroffer people make in a seller-buyer negotiation task. I hypothesized that, compared to participants in the control conditions (non-powerful but close or powerful but not close), associating oneself with a powerful person would lead a buyer to make a more aggressive (lower) counteroffer in a seller-buyer negotiation task. I expected no significant difference in the amount of counteroffer between the two control conditions.

Method

Participants. One hundred and ninety-three American or Canadian residents completed the study through Amazon’s Mechanical Turk. Similar to Study 2, only English speaking North Americans of European descendent who were 18 years or older were allowed to participate in the Study. Twenty-one participants were excluded from analyses for the following reasons: 1 person did not finish the writing task (i.e., wrote “NA” as the response); 2 people gave extreme responses for the counteroffer in the negotiation task (e.g., offering $30 or $1 for the new car); 2 people reported having participated in a similar study before; 16 failed manipulation check by reporting that the they were not close to the target person when assigned to the close conditions (n = 7), or that the target person was not powerful when assigned to the powerful conditions (n = 2), with responses lower than or equal to 3 on the 1-to-7-point scale; or reporting that they were close to the target person when assigned to the not close conditions (n = 2) or that the target person was powerful when assigned to the non-powerful conditions (n = 5), with responses equal to or higher than 5 on the 1-to-7-point scale. As a result, the final
sample consisted of 172 participants (73 men, 99 women; age ranged from 22 to 83 years, $M_{age} = 41.61$ years, $SD = 12.68$).

Procedure. As in Studies 1 and 2, the first phase of the study was introduced as a vivid writing task, in which participants wrote about a past experience in which they took a picture together with another person. Depending on the condition to which they were randomly assigned, the other person was described as someone who was powerful and close to them (powerful and close condition, $n = 62$), or someone who was not powerful but close to them (non-powerful but close condition, $n = 57$), with the latter serving as a control condition. In another control condition, participants were instructed to recall and write about a time they viewed a picture of a powerful figure who they did not know personally (powerful but not close condition, $n = 53$). The same definition of being powerful as in Study 1 and 2 was provided in the instruction. (See Appendix A Study 3 for detailed instructions).

Participants wrote down the initials of the person they thought about and then described the experience of taking a picture together with the person (powerful and close condition, and non-powerful but close conditions) or the experience of viewing the person’s picture (powerful but not close condition), and how that experience made them feel. Then, participants completed the seller-buyer negotiation task: “You are buying a new car. The seller suggested $20,000 for the first offer. What would be your counteroffer?” (cf. Magee et al., 2007). Next, as manipulation checks, participants indicated the extent to which they were close to the person they wrote about ($1 = not close at all, 7 = very close$), and the extent to which the person they wrote about was
powerful (1 = not powerful at all, 7 = very powerful; see Appendix C Study 3). Finally, participants reported their age, gender, and ethnicity.

Results and Discussions

*Manipulation checks.* Separate one-way ANOVAs indicated that the manipulations were successful, $F(2, 169) = 185.80, p < .001, \eta_p^2 = .69$ for relationship closeness with the target figure, and $F(2, 169) = 176.00, p < .001, \eta_p^2 = .68$ for the power of the target figure. Participants in the non-powerful but close condition ($M = 6.06, SD = 1.24$) reported greater relationship closeness with the target figure than did participants in the powerful and close condition ($M = 5.12, SD = 1.65$), $t(117) = 3.54, p = .001$, who in turn reported greater relationship closeness than did people in the powerful but not close condition ($M = 1.40, SD = 1.10$), $t(108) = 13.85, p < .001$. Similarly, the targets in the powerful but not close condition ($M = 6.68, SD = .67$) were more powerful than were the targets in the powerful and close condition ($M = 5.81, SD = .90$), $t(108) = 5.74, p < .001$, who were in turn more powerful than the targets in the non-powerful but close condition ($M = 3.03, SD = 1.49$), $t(117) = 12.16, p < .001$. (See Appendix D Table 1 Study 3 for a summary of descriptive statistics of manipulation checks).

*Negotiation.* Similar to Study 1 and 2, I used a set of two orthogonal contrast to test the hypothesis that participants in the powerful and close condition would make a
lower counteroffer than would participants in the non-powerful but close or powerful but not close conditions but that the latter two conditions would not differ significantly.

Consistent with my hypothesis, participants in the powerful and close condition (M = 15070.18, SD = 2668.33) made a lower counteroffer than did participants in the non-powerful but close (M = 16017.74, SD = 1692.95) and the powerful but not close (M = 16581.13, SD = 1872.99) conditions, t(169) = 3.58, p < .001. The two control groups did not differ significantly from each other in the amount of their counteroffers, t(169) = 1.42, p = .16. (See Appendix D Table 2 Study 3 for a summary of descriptive statistics of the dependent variables). 6

Consistent with Studies 1 and 2, the results of Study 3 showed that recalling a past shared experience with a close and powerful figure led buyers to make a more aggressive (lower) counteroffer in the seller-buyer negotiation task than did people in the control conditions. 7 It is worth noting that in this study, participants were playing the role of a buyer in the seller-buyer negotiation task. One would expect the opposite effect if they were instructed to play the role of a seller, such that they would make a more aggressive offer (e.g., a larger first offer or a higher counteroffer in response to the buyers’ counteroffer) in the negotiation task.

---

6 When no participants were excluded from the analysis, orthogonal contrasts showed that participants in the powerful and close condition (M = 15371.21, SD = 2634.55) and participants in the non-powerful but close (M = 15559.42, SD = 2716.18) and the powerful but not close (M = 16402.24, SD = 3052.83) conditions did not differ in the amount of counteroffers, t(190) = -1.44, p = .15. Participants in the non-powerful but close condition made a marginally lower counteroffer than those in the powerful but not close condition, t(190) = -1.69, p = .092. When the participant who did not finish the writing task, who gave extreme values for the counteroffer, and participants reported participating similar studies before were excluded, participants in the powerful and close condition (M = 15371.21, SD = 2634.55) made a lower counteroffer than did participants in the non-powerful but close (M = 15829.85, SD = 1939.07) and the powerful but not close (M = 16569.09, SD = 1854.71) conditions, t(185) = -2.47, p = .014. Participants in the non-powerful but close condition made a marginally lower counteroffer than those in the powerful but not close condition, t(185) = 1.86, p = .065.

7 There was no gender effect on the amount of counteroffer in the seller-buyer negotiation task in Study 3, Fs < 1.76, ps > .18.
Chapter 5

Study 4: The Consequences of Vicarious Power on Self-beneficial versus Other-beneficial Lying Behavior

Previous research on the consequences of power has found that power led people to engage in more self-beneficial behavior (Chen et al., 2001; DeCelles, DeRue, Margolis, & Ceramic, 2012; Dubois, Rucker, & Galinsky, 2015; Kipnis, 1972; Kipnis, Castell, Gergen, & Mauch, 1976; Rucker, Dubois, & Galinsky, 2011). For example, Kipnis (1972) found that power caused people (e.g., managers) to undervalue the performance of people who were less powerful (e.g., workers). In another line of research exploring the effect of power on consumer behavior, Rucker and colleagues (2011) found that people who were induced to feel powerful were more inclined to spend money on themselves than on others, whereas the reverse trend was observed for people induced to feel powerless. In some situations, the effect of power on self-beneficial behavior was moderated by other variables. For example, Chen and colleagues (2001) found that the effect of power on self-interested behavior was moderated by people’s relational orientation such that exchangers primed with power were more likely to engage in self-interested behavior; whereas communals primed with power were more likely to act social responsibly. Similarly, recent research in morality indicated that power led to self-interested behaviors among people with weak moral identity, but not among those with strong moral identity (DeCelles et al., 2012). The relationship between power and immoral behaviors also depends on who benefits from the behaviors (Dubois et al., 2015). Specifically, Dubois and colleagues (2015) found that people who felt powerful were more likely to engage in self-beneficial lying behaviors than people in the baseline
and low-power conditions; whereas people who felt powerless were more likely to engage in other-beneficial lying behaviors than people in the baseline and high-power conditions.

Inspired by recent research on the consequences of power on self-beneficial versus other-beneficial lying behavior (Dubois et al., 2015), I explored the implications of vicarious power on people’s likelihood of engaging in self-beneficial versus other-beneficial lying behavior in Study 4. Specifically, I hypothesized that, compared to people in the control conditions (non-powerful but close or powerful but not close), people recalling and writing a close and powerful person (powerful and close condition) would be more likely to engage in self-beneficial lying behaviors but less likely to engage in other-beneficial lying behaviors. As in the previous studies, I expected no significant differences between the two control conditions on people’s likelihood of engaging in self-beneficial versus other-beneficial lying behavior.

Method

Participants. One hundred and fifty-one undergraduate students from Queen’s University participated in Study 4 for course credit or monetary compensation. Fifteen of them were excluded from final analysis (14 did not follow the writing instructions, 1 did not finish the study), leaving 136 participants in the final sample (21 men, 115 women, \( M_{age} = 18.40 \) years, \( SD = 0.83 \)).

Procedure. Participants were randomly assigned into 1 of 3 conditions for a vivid writing task through Qualtrics. In the powerful and close condition (\( n = 45 \)), participants thought about a close other and wrote about a specific experience that indicated the close other was powerful. In the non-powerful but close condition (\( n = 47 \)), participants thought...
about a close other and then wrote a specific experience that indicated the close other was not powerful. In the powerful but not close condition \( (n = 44) \), participants thought about a person with whom they had no personal connections and then wrote about a specific experience that indicated that this person was powerful. Similar to the first three studies, a powerful experience was defined as “having the ability to control others to get what they want, or being in a position to evaluate others, or both” (Galinsky et al., 2003, p. 458).

Participants first wrote down the initials of the person that came to their mind for the vivid writing task, reported their relationship with the target person they wrote about (for the powerful and close and non-powerful but close conditions) or how they learned about the target person (for the powerful but not close condition), and then described the specific experience they recalled (see Appendix A Study 4 for detailed instructions).

Afterwards, participants read three scenarios adapted from Dubois et al. (2015) and indicated how likely they would lie \( (1 = \text{not at all}, 9 = \text{very likely}; \text{see Appendix E}) \). The scenarios were used to measure people’s intention to lie for their own benefit or for the benefit of another person. The three scenarios involved not submitting a tax form on time, not mailing an important document to renew one’s driver’s license on time, or not handing in an assignment on time. In the self-beneficial lying condition, these events happened to the participant, lying would save themselves from a penalty, and therefore, it was self-beneficial. In the other-beneficial condition, these events happened to another person, their lying would save the other person from a penalty, and therefore it was other-beneficial. Participants were randomly assigned to either the self or other-beneficial
condition. Finally, participants completed two manipulation check questions (see Appendix C Study 4), and reported their age, gender, and ethnicity.

Results and Discussions

Manipulation checks. Separate one-way ANOVAs indicated that the manipulations were successful, $F(2, 133) = 56.83, p < .001, \eta_p^2 = .46$ for relationship closeness with the target person, and $F(2, 133) = 31.52, p < .001, \eta_p^2 = .32$ for perceived powerfulness of the target person. Participants in the non-powerful but close condition ($M = 5.62, SD = 1.79$) and participants in the powerful and close condition ($M = 5.82, SD = 1.37$) reported greater relationship closeness with the target person than did participants in the powerful but not close condition ($M = 2.27, SD = 2.07$), $t(89) = 8.26, p < .001$, and $t(87) = 9.55, p < .001$, respectively. The first two groups did not differ significantly from each other on relationship closeness, $t(90) = -.62, p > .25$. Similarly, participants in the powerful but not close condition ($M = 5.89, SD = 1.22$) and participants in the powerful and close condition ($M = 5.38, SD = 1.07$) reported that the target person was more powerful than did participants in the non-powerful but close condition ($M = 3.77, SD = 1.63$), $t(89) = 6.98, p < .001$, and $t(90) = 5.57, p < .001$, respectively. Participants in the powerful but not close condition also perceived the target person as more powerful than did participants in the powerful and close condition, $t(87) = 2.09, p = .040$ (see Appendix D Table 1 Study 4 for a summary of descriptive statistics of manipulation checks).  

---

8 When no participants were excluded, ANOVAs indicated that the manipulations were successful, $F(2, 148) = 70.90, p < .001, \eta_p^2 = .49$ for relationship closeness with the target person, and $F(2, 148) = 31.88, p < .001, \eta_p^2 = .30$ for perceived powerfulness of the target person. Participants in the non-powerful but close condition ($M = 5.66, SD = 1.76$) and those in the powerful and close condition ($M = 5.88, SD = 1.32$) reported greater relationship closeness with the target person than those in the powerful but not close condition ($M = 2.24, SD = 2.03$), $t(99) = 9.07, p < .001$, and $t(99) = 10.69, p < .001$, respectively. Similarly, participants in the powerful but not close condition ($M = 5.84, SD = 1.22$) and those in the powerful and
Likelihood of engaging in self-beneficial vs. other-beneficial lying behavior. A mixed-design ANOVA with condition (non-powerful but close vs. powerful and close vs. powerful but not close) and lie type (self-beneficial vs. other-beneficial) as the between-subjects variables and scenario as a within-subjects variable revealed a main effect of scenario, $F(2, 260) = 30.56, p < .001, \eta_p^2 = .19$. Post-hoc comparisons indicated that participants were least likely to lie for not submitting a tax form on time ($M = 5.58, SD = 2.27$), more likely to lie for not mailing an important document to renew one’s driver’s license on time ($M = 6.28, SD = 2.20$), and most likely to lie for not handing in an assignment on time ($M = 7.05, SD = 1.91$), $ps < .001$. However, the main effect was qualified by a significant interaction effect between condition and lie type, $F(2, 132) = 10.10, p = .002, \eta_p^2 = .071$. None of the other effects reached statistical significance, $Fs < 1.78, ps > .17$ (see Appendix F for details of the ANOVA results).

To better understand the interaction effect between condition and lie type, I conducted planned contrasts using the same coefficients as in the previous studies separately for participants’ likelihood of engaging in self-beneficial versus other-beneficial lying behaviors across conditions. First, for self-beneficial lying behaviors, participants in the powerful and close condition ($M = 7.15, SD = 1.41$) were more likely to engage in self-beneficial lying behaviors than were participants in the non-powerful but close ($M = 6.17, SD = 1.80$) and participants in the powerful but not close ($M = 5.99, SD = 2.21$) conditions, $t(67) = 2.26, p = .027$. The participants in the latter two groups did not differ significantly from each other on their likelihood of engaging in self-beneficial

close condition ($M = 5.40, SD = 1.07$) reported that the target person was more powerful than those in the non-powerful but close condition ($M = 3.82, SD = 1.65$), $t(99) = 7.01, p < .001$, and $t(98) = 5.68, p < .001$, respectively.
lying behaviors, $t(67) = .34, p = .74$. Similarly, for other-beneficial lying behaviors, participants in the \textit{powerful and close} condition ($M = 5.62, SD = 1.72$) were less likely to engage in other-beneficial lying behaviors than were participants in the \textit{non-powerful but close} ($M = 6.55, SD = 1.42$) and participants in the \textit{powerful but not close} ($M = 6.42, SD = 1.29$) conditions, $t(63) = -2.22, p = .03$. The latter two groups did not differ significantly from each other on their likelihood of engaging in other-beneficial lying behaviors, $t(63) = .29, p = .77$. Within each condition, participants in the \textit{powerful and close} condition were more likely to engage in self-beneficial lying behaviors ($M = 7.15, SD = 1.41$) than for other-beneficial lying behaviors ($M = 5.62, SD = 1.72$), $F(1, 130) = 9.25, p = .003, \eta^2_p = .066, d = .97, 95\% \text{ CI} = [.534, 2.523]$, whereas participants in the \textit{non-powerful but close} condition and the \textit{powerful but not close} conditions, did not differ significantly from each other for the intention to engage in self-beneficial versus other-

---

9 When no participants were excluded, participants in the \textit{powerful and close} condition ($M = 6.83, SD = 1.75$) were marginally more likely to engage in self-beneficial lying behaviors than were participants in the \textit{non-powerful but close} ($M = 6.19, SD = 1.76$) and participants in the \textit{powerful but not close} ($M = 5.73, SD = 2.30$) conditions, $t(74) = 1.86, p = .068$. The participants in the latter two groups did not differ significantly from each other on their likelihood of engaging in self-beneficial lying behaviors, $t(74) = .83, p = .41$. When participants who did not follow instructions, finished the task quickly were excluded, participants in the \textit{powerful and close} condition ($M = 6.97, SD = 1.63$) were marginally more likely to engage in self-beneficial lying behaviors than were participants in the \textit{non-powerful but close} ($M = 6.17, SD = 1.80$) and participants in the \textit{powerful but not close} ($M = 5.99, SD = 2.21$) conditions, $t(68) = 1.86, p = .067$. The participants in the latter two groups did not differ significantly from each other on their likelihood of engaging in self-beneficial lying behaviors, $t(68) = .33, p = .74$.

10 When no participants were excluded, participants in the \textit{powerful and close} condition ($M = 5.69, SD = 1.72$) were marginally less likely to engage in other-beneficial lying behaviors than were participants in the \textit{non-powerful but close} ($M = 6.60, SD = 1.41$) and participants in the \textit{powerful but not close} ($M = 6.13, SD = 1.61$) conditions, $t(71) = -1.71, p = .091$. The participants in the latter two groups did not differ significantly from each other on their likelihood of engaging in other-beneficial lying behaviors, $t(71) = 1.04, p = .30$. When participants who did not follow instructions, finished the task quickly were excluded, participants in the \textit{powerful and close} condition ($M = 5.62, SD = 1.72$) were less likely to engage in other-beneficial lying behaviors than were participants in the \textit{non-powerful but close} ($M = 6.65, SD = 1.42$) and participants in the \textit{powerful but not close} ($M = 6.42, SD = 1.24$) conditions, $t(65) = -2.38, p = .026$. The participants in the latter two groups did not differ significantly from each other on their likelihood of engaging in other-beneficial lying behaviors, $t(65) = .29, p = .78$. 

32
beneficial lying behaviors, $F_{s} < .72$, $p_{s} > .25$. (See Figure 2 and Appendix D Table 2 Study 4 for a summary of descriptive statistics of the dependent variables).

In line with previous research on the effect of power on people’s likelihood of engaging in self-beneficial versus other-beneficial lying behaviors (Dubois et al., 2015), people who vicariously feel more powerful were more likely to engage in self-beneficial lying behaviors and less likely to engage in other-beneficial lying behaviors than were people in the control conditions. These results provided further evidence that people who vicariously feel more powerful through their connections with powerful others behave similarly as people who experienced firsthand experience of power.

Figure 2. Likelihood of lying as a function of condition and lie type. Error bars represent standard errors.
Chapter 6

General Discussion

In summary, I consistently found that people could vicariously feel more powerful by thinking and writing about a powerful person with whom they were psychologically connected, regardless of whether the target person was real (a close and powerful figure) or hypothetical (a powerful fictional character one identified with). Furthermore, I found that vicarious power had effects on subsequent decisions and behaviors: people who wrote about their experience of taking a picture together with a powerful and close other made a lower counteroffer in the seller-buyer negotiation task when playing the role of a buyer compared to people who wrote about their experience of taking a picture together with a non-powerful close other or viewing a picture of a powerful other they were not close to (Study 3). People who wrote about a powerful and close other also were more likely to engage in self-beneficial lying behaviors and less likely to engage in other-beneficial lying behaviors compared to people wrote about a non-powerful close other or a powerful other whom they were not close to (Study 4).

The current research has demonstrated the vicarious power effect among both men and women, indicating that vicarious power is a more prevalent phenomenon than that suggested by previous research. That is, Goldstein and Hays (2011) found the vicarious power effect among men but not among women. They speculated that women might have a lower motivation for gaining power and that dominance complementarity could lead women in their research to report a lower level of power when expecting to interact with a powerful partner in the future, as suggested by previous research on dominance complementarity (Tiedens & Fragale, 2003; Tiedens et al., 2007). The current
research provided a more robust test of the vicarious power effect among women because they did not recall or expect an interaction with the powerful target person/figure in three of the studies (Study 1, 2, and 4). It was unlikely that dominance complementarity could lead women in the current research to report a lower level of power. Therefore, the current research expanded the vicarious power effect from men to both men and women.

The current research also contributes to our understanding of the interpersonal antecedents of power. Although power has drawn substantial attention among social scientists during the past several decades, research on power has predominantly focused on the consequences of power and the intrapersonal antecedents of power (see Blader & Chen, 2014; Smith & Magee, 2015; Sturm & Antonakis, 2015; Tost, 2015 for reviews). The current research resonates with recent advocates on investigating the interpersonal antecedents of power (Blader & Chen, 2014; Smith & Magee, 2015) and demonstrates that the interpersonal transference of power is a more prevalent phenomenon than previously thought. Specifically, people can vicariously feel more powerful through a variety of psychological associations with a powerful figure (e.g., thinking about a close and powerful figure’s typical life experience, psychologically identifying with a powerful fictional character, recalling one’s experience of taking a picture together with a powerful figure). Furthermore, people can vicariously feel more powerful by drawing on their connections with both real and fictional powerful figures.

The current research also contributes to our understanding of the vicarious power effect by explicitly testing its two necessary conditions: (1) being psychologically close to (2) a powerful target person. When either one of the two necessary conditions is not met, the phenomenon of vicarious power is not observed. Across four studies with different
operationalization of psychological closeness (e.g., relationally close to a target person, psychologically identifying with a fictional character), I consistently found that only people who wrote about a powerful and close other reported a higher level of power and displayed similar downstream consequences of power than did people who wrote a non-powerful close other or a powerful other they were not close to, as if the power of the close other was transmitted to them.

The vicarious power effect documented in the current research also adds to the previous research on associative priming of power (Chen, et al., 2001; Galinsky et al., 2003; Smith & Trope, 2006). Associative priming is the process whereby activating certain concepts in memory increases the accessibility of associated concepts in social information processing and judgments (Srull & Wyer, 1979). In Studies 2, 3, and 4, the definition of being a powerful person was provided to participants in all three conditions. Therefore, all three groups could be influenced by the associative priming effect. However, vicarious power was observed only when both psychological connectedness with the target person and powerfulness of the target person/figure were high, suggesting that psychological connectedness moderates the priming effect of power. This idea should be explored further in future research.

The current research provides insights for us to understand the empowering effects of literature (Winsor, 2001). Many people have the experience of reading novels and watching movies with powerful fictional characters (e.g., Superman, Ironman); however, little research has empirically investigated the psychological effects of exposure to powerful fictional characters. The current research indicates that people actually can be empowered by identifying with powerful fictional characters. Future research should
further explore the empowering effect of literature and arts and their psychological consequences.

**Remaining Issues**

The current research has investigated the conditions under which vicarious power occurs, but it also leaves certain issues unanswered. First, I examined vicarious power by making people think about powerful others, but it is unclear how real-life interactions with powerful people may affect one’s sense of power. On the one hand, real life interactions might strengthen one’s psychological connection with the powerful person, leading to a stronger sense of power. On the other hand, interacting with a powerful person also might highlight one’s lack of power, resulting in a lower sense of power. Future research should further explore how people’s real interactions with different types of people influence their sense of power.

Second, I did not examine the behavioral consequences of vicarious power in everyday life. Participants in the current research responded to a hypothetical negotiation task and hypothetical scenarios of lying behavior rather than actually being given the opportunity to engage in the negotiation task and self-beneficial versus other-beneficial lying behaviors. Future research should investigate the consequences of vicarious power on judgment and decision-making in real life.

Third, although the current research provides empirical evidence for the vicarious power effect, it is not clear how long the effect lasts. In the current research, people completed the dependent measures immediately after the manipulations, typically within an experimental session of 15 to 30 minutes. I expect that the vicarious power effect may be stronger in real life because people may be motivated to gain power vicariously.
through their connections with powerful others (e.g., to feel powerful before an important negotiation task) or be prompted by situational cues (e.g., brief interaction with a close and powerful person) to enhance their sense of power. Indeed, even if the effect is short-lived, people who are motivated to gain power vicariously still might benefit from repeated exposures to a powerful person with whom they are psychologically connected; however, the effects of repeated exposure remains untested. Future research is warranted to further explore the strength and duration of the vicarious power effect in real life contexts and the role of motivated cognition in driving the observed effect.

Finally, one major limitation of the current research is that I did not include a baseline control condition (e.g., a condition in which participants wrote about a non-powerful person/figure they were not close to, which would form the complete 2 × 2 design). I did not include the non-powerful and non-close control condition for two reasons: (1) it may be difficult for the participants to write about a non-powerful and non-close person vividly (as instructed), which could reduce the validity of the manipulation; (2) a baseline control condition differs from the experimental conditions on two dimensions — powerfullness of the target person and relationship closeness to the target person, which might make comparison difficult to interpret. However, I agree that a full factorial design with a non-powerful and non-close control condition could help us to draw a solid conclusion on whether the vicarious power effect was due to people in the powerful and close condition gaining power by associating themselves with a powerful person/figure they are close to or was due to participants in the current research’s control conditions (non-powerful but close, powerful but not close) were losing power. Inclusion of this neutral baseline condition also would provide a more rigorous test of the vicarious
power effect by fully exploring the interaction between the two necessary conditions that I proposed, powerfullness of the target person and psychological connectedness to the target person. Future research on vicarious power using a full factorial design with different paradigms would be warranted to disentangle whether the vicarious power effect is due to a gain in power for people in the experimental condition (powerful and close) or a loss in power for people in the factored control conditions (non-powerful but close, powerful but not close) compared to the non-powerful and non-close condition.

Future Directions

The current research indicates that people can gain power by drawing on their connections with close and powerful others. It is important for future research to investigate potential moderators that determine when people assimilate with or contrast away from a close other’s power. Such moderators may include the dominant social comparison mindset activated (e.g., assimilation versus contrast, Mussweiler, 2003), legitimacy of the target person’s power (Lammers, Galinsky, Gordijn, & Otten, 2008; Lammers et al., 2012; Magee & Smith, 2013), and sociocultural factors (e.g., the cultural background of people and cultural differences in understanding of power, Markus & Kitayama, 1991; Torelli & Shavitt, 2010, 2011; White & Lehman, 2005; Zhong, Magee, Maddux, & Galinsky, 2006; see also Grossmann & Huynh, 2013 on their advocate for more cross-cultural research on the effects of social class). Given that people who are in an assimilation mindset are more likely to associate themselves with others and that people who are in a contrast mindset are more likely to contrast themselves with others (Mussweiler, 2003), an assimilation mindset should enhance the vicarious power effect, whereas a contrast mindset should weaken it. Furthermore, the vicarious power effect
might be moderated by the characteristics of power among power holders. Previous research has shown that the consequences of power could be moderated by the legitimacy of power (Lammers et al., 2008, 2012; Magee & Smith, 2013). I predict that the vicarious power effect would be observed only when the power of the target person is perceived as legitimate but not when it is perceived as illegitimate. At least, the vicarious power effect would be weaker when people perceive the target person’s power as illegitimate. Future research should investigate how the vicarious power effect may vary as a function of the characteristics of power.

Although I mainly focused on documenting the vicarious power effect among European North Americans, future research should explore the vicarious power phenomenon from a cross-cultural perspective. Based on previous research on cultural differences in self-construal, social comparison, and understanding of power, different predictions can be made regarding cultural differences in the vicarious power effect. First, previous cultural research has documented that East Asians (e.g., Chinese, Japanese, and Koreans) are more likely to include close others in their self-concepts, hold interdependent self-construal (Fiske, Kitayama, Markus, & Nisbett, 1998; Markus & Kitayama, 1991; Triandis, 1989), and are more susceptible to social cues in person perception (Masuda, Ellsworth, Mesquita, Leu, Tanida, & Van de Veerdonk, 2008) than European North Americans. Such stronger psychological connectedness with others would lead to a stronger vicarious power effect among East Asians. However, the stronger tendency for East Asians to engage in social comparison (White & Lehman, 2005) might lead to a weaker vicarious power effect among East Asians than among European North Americans, because people’s sense of power could be reduced by the
contrast effect when comparing oneself with a close and powerful other. Furthermore, power may be understood differently across cultures (Torelli & Shavitt, 2010, 2011; Zhong et al., 2006). For example, Torelli and Shavitt (2010, 2011) found that power was associated with self-serving motives (e.g., advancing one’s status and prestige) for people from vertical individualistic cultures (e.g., U.S.) and associated with other-oriented motives (e.g., helping and benefiting others) for people from horizontal collectivistic culture (e.g., Israel). Similarly, Zhong and colleagues (2006) found that Westerners tended to associate power with influence and entitlement, whereas East Asians were more inclined to associate power with obligation and responsibility. Thus, the desirability of gaining vicarious power likely will vary across cultures and may in turn, moderate the vicarious power effect.

It is worth noting that, in parallel to the documented consequences of firsthand experience of power (Dubois et al., 2015; Kim, Lee, & Rua, 2015; Magee et al., 2007), the current research suggests that vicarious power can bring about either positive (e.g., better decision in negotiation) or negative consequences (e.g., higher likelihood of engaging in self-beneficial lying behavior). Thus, vicariously gained power can help people to harvest the beneficial outcomes of power, but it also can lead to negative outcomes. Future research should further explore what moderates the personal and organizational consequences of vicarious power.
Chapter 7

Conclusion

In summary, the current research demonstrates that people can vicariously feel more powerful when their close connections with a powerful person was highlighted. The powerful person can be real or fictional. Furthermore, the research demonstrates that compared to people who are associated with a non-powerful person or who are not associated with powerful person, people who are associated with a powerful person give a more aggressive (lower) counteroffer when playing the role of buyer in a seller-buyer negotiation task, and are more likely to engage in self-beneficial lying behaviors and less likely to engage in other-beneficial lying behavior, effects similar to those induced by firsthand experience of power (Dubois et al., 2015; Kim et al., 2015; Magee et al., 2007). Future research should investigate the vicarious power effect and its consequences in real life settings and explore potential moderators of the effect.
References


entry and forced exist for negotiators with unequal power. *Organizational Behavior 
and Human Decision Processes, 71*, 263–286.


Kipnis, D. (1972). Does power corrupt? *Journal of Personality and Social 
Psychology, 24*, 33-41. doi:10.1037/h0033390


project. *Social Psychology, 45*, 142-152. doi:10.1027/1864-9335/a000178

actions on moral behavior. *Journal of Personality and Social Psychology, 101*, 702- 
715. doi:10.1037/a0024552

Kristensen, H., & Grling, T. (1997). The effects of anchor points and reference points on 
negotiation process and outcome. *Organizational Behavior and Human Decision 

Kristensen, H., & Grling, T. (2000). Anchor points, reference points, and counteroffers in 
negotiations. *Group Decision and Negotiation, 9*, 493-505. doi:1008722223618


doi:10.1016/j.jesp.2013.02.012


doi:10.1037/0022-3514.94.3.365


Appendix A

Instructions for Vivid Writing Task Study 1-4

Study 1

1. Powerful and Close Figure:

Please think about a powerful figure that you are close with. By powerful figure we mean that the person is in a powerful position to evaluate others or in control of the ability that another person or persons to get what they wanted. For research purpose, please avoid the persons that directly connected with you (e.g., direct relatives, or supervisor in the workplace). Please write down the initials of the powerful figure you’re thinking about and describe what his or her life (e.g., a typical week day) looks like in the following space (please provide as many details as you can so that a reader can easily get a sense of what the powerful figure’s life looks like):

(1) The initials of the powerful figure you are close with: _____________________

(2) The relationship of the powerful figure to you is: ________________________

(3) Please describe what the life of the powerful figure you're thinking about looks like in the space below:

2. Close friend:

Please think about a close friend who are attending the same university with you (for research purpose, please avoid boyfriend or girlfriend relationship). Then, write down the initials of the close friend you’re thinking about and describe what his or her life (e.g., a typical week day) is like in the following space (please provide as many details as you can so that a reader can easily get a sense of what your friend’s life looks like):

(1) The Initials of the close friend you are thinking about: _______________

(2) Please describe what your close friend's life looks like in the space below:
3. Powerful Figure but not Close

Please think about a powerful figure that you read in the news but have no connection with. By powerful figure we mean that the person is in a powerful position to evaluate others or in control of the ability that another person or persons to get what they wanted. Please write down the initials of the powerful figure you read in the news and describe what his or her life looks like in the following space (please provide as many details as you can so that a reader can easily get a sense of what the powerful figure’s life looks like):

(1) The initials of the powerful figure you read in the news: ________________
(2) The source of the news that you read about the powerful figure: ________________
(3) Please describe what the powerful figure’s life (you read in the news) looks like:

---

**Study 2**

1. Identifying but not Powerful:

Please think about a fiction character you like and identify with but he/she is not powerful (e.g., not in a powerful position). Then, please write down the name of the fiction character you identified with and describe his/her main characteristics and what his or her life is like in the following space (please provide as many details as you can so that other people can easily get a sense of what the fiction character looks like):

(1) The name of the fiction character you identified with:
(2) Please describe the main characteristics of the fiction character and what his/her life looks like in the space below:

2. Identifying and Powerful:

Please think about a powerful fiction character that you like and identify with. By powerful fiction character we mean that the fiction character is in a powerful position to evaluate others or in control of the ability that another person or persons to get
what they wanted. Please write down the name of the powerful fiction character you identified with and describe his/her main characteristics and what his or her life looks like in the following space (please provide as many details as you can so that other people can easily get a sense of what the fiction character looks like):

(1) The name of the powerful fiction character you identified with:
(2) Please describe the main characteristics of the fiction character and what his/her life looks like in the space below:

3. Powerful but not Identifying:
Please think about a powerful fiction character that you read in a book but you don't identify with him/her. By powerful fiction character we mean that the character is in a powerful position to evaluate others or in control of the ability that another person or persons to get what they wanted. Please write down the name of the powerful fiction character and describe his/her main characteristics and what his or her life looks like in the following space (please provide as many details as you can so that other people can easily get a sense of what the fiction character looks like):

(1) The name of the powerful fiction character you do not identify with:
(2) Please describe the main characteristics of the fiction character and what his/her life looks like in the space below:

**Study 3**

1. Close but not Powerful Figure:
For this writing task, we would like you to take about several minutes to think about an experience that you took a picture together with a person you are close to but he/she is not powerful (e.g., not in a position to evaluate others or in control of the resources that another person or persons want to get). Then, please write down the initials of the person and describe your experience of taking the picture together with him/her and how that experience make you feel (please provide as many details as possible).

(1) The initials of the person you took the picture together with:
(2) Please describe your experience of taking the picture together with the person you recalled above (e.g., what the occasion was, how the experience made you feel etc), please provide as many details as possible.

2. Close and Powerful Figure:
For this vivid writing task, we would like you to take several minutes to think about an experience that you took a picture together with a powerful person you are close to. By powerful, we mean that the person is in a position to evaluate others or in control of the resources that another person or persons want to get. Then, please write down the initials of the person and describe your experience of taking the picture together with him/her and how that experience make you feel (please provide as many details as possible).

(1) The initials of the person you took the picture together with:
(2) Please describe your experience of taking the picture together with the person you recalled above (e.g., what the occasion was, how the experience made you feel etc), please provide as many details as possible.

3. Powerful Figure but not Close
For this vivid writing task, we would like you to take several minutes to think about an experience that you viewed a picture of a powerful figure who you don’t personally know. By powerful, we mean that the person is in a position to evaluate others or in control of the resources that another person or persons want to get. Then, please write down the initials of the person and describe your experience of viewing the picture of him/her and how that experience make you feel (please provide as many details as possible).

(1) The initials of the person whose picture you viewed:
(2) Please describe your experience of viewing the person’s picture and how that experience make you feel:

Study 4

1. Close but not powerful:
Please think about a person you are very close to and then write about a specific experience that indicates he/she is **not powerful**. By **not powerful** we mean that the person does not the ability to control others to get what they want, or is not in a position to evaluate others, or both. Please write down the initials of the person comes to your mind and describe the specific experience that indicates he/she is not powerful.

1. The initials of the person comes to your mind:
2. The relationship of the person to you is:
3. Please take several minutes to describe the specific experience that indicates the person you are close to is not powerful (please provide as many details as you can):

2. Close and powerful:

Please think about a person you are very close to and then write about a specific experience that indicates he/she is **powerful**. By **powerful** we mean that the person has the ability to control others to get what they want, or is in a position to evaluate others, or both. Please write down the initials of the person comes to your mind and describe the specific experience that indicates he/she is powerful.

1. The initials of the person comes to your mind:
2. The relationship of the person to you is:
3. Please take several minutes to describe the specific experience that indicates the person you are close to is powerful (please provide as many details as you can):

3. Powerful but not close:

Please think about a person you have no personal connections with and then write about a specific experience that indicates the person is **powerful**. By **powerful** we mean that the person has the ability to control others to get what they want, or is in a position to evaluate others, or both. Please write down the initials of the person comes to your mind and describe the specific experience that indicates he/she is powerful.

1. The initials of the person comes to your mind:
2. How did you learn about the person you described?
3. Please take several minutes to describe the specific experience that indicates that the person you have no personal connection with is powerful (please provide as many details as you can):
Appendix B
Measures of Power

Sense of Power Scale (Anderson et al., 2012)

Below are several statements describing how people view their relationship with others, please use the following scale (1 – 7) to rate the extent that you disagree or agree with each of them:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree strongly</td>
<td>Disagree</td>
<td>Disagree a little</td>
<td>Neither disagree</td>
<td>Agree a little</td>
<td>Agree</td>
<td>Agree strongly</td>
<td></td>
</tr>
</tbody>
</table>

I feel that in my relationships with others . . .

_____ I can get people to listen to what I say.
_____ My wishes do not carry much weight.
_____ I can get others to do what I want.
_____ Even if I voice them, my views have little sway.
_____ I think I have a great deal of power.
_____ My ideas and opinions are often ignored.
_____ Even when I try, I am not able to get my way.
_____ If I want to, I get to make the decisions.

Me Versus Other Scale (Campbell et al., 2004)

Instruction: Please choose the diagram that best represents how you see yourself “M” compared to others “O”?

1 2 3 4

5 6 7
Appendix C

Manipulation Check Questions for Study 1-4

Study 1

1. Powerful and close figure:

   (1) Please use the following scale to rate the closeness you feel to the powerful figure you described earlier.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not close at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very close</td>
</tr>
</tbody>
</table>

   (2) To what extent do you think that the powerful figure you described earlier is powerful?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not powerful at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very powerful</td>
</tr>
</tbody>
</table>

2. Close Friend

   (1) Please use the following scale to rate the closeness you feel to your friend you described earlier.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not close at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very close</td>
</tr>
</tbody>
</table>

   (2) To what extent do you think that your friend you described earlier is powerful?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not powerful at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very powerful</td>
</tr>
</tbody>
</table>

3. Powerful but not close:

   (1) Please use the following scale to rate the closeness you feel to the powerful figure you described earlier.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not close at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very close</td>
</tr>
</tbody>
</table>

   (2) To what extent do you think that the powerful figure you described earlier is powerful?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not powerful at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very powerful</td>
</tr>
</tbody>
</table>
**Study 2**

1. To what extent do you identify with the fiction character you described earlier?

   1  2  3  4  5  6  7
   Not identified with him/her at all
   Fully identified with him/her

2. To what extent do you think that the fiction character you described earlier is powerful?

   1  2  3  4  5  6  7
   Not powerful at all
   Very powerful

**Study 3**

1. Taking a Picture together with a close and powerful person
   (1) To what extent are you close to the person you took the picture together with in the above recalled experience?

   1  2  3  4  5  6  7
   Not close at all
   Very close

   (2) To what extent do you think that the person you took the picture together with in the above recalled experience is powerful?

   1  2  3  4  5  6  7
   Not powerful at all
   Very powerful

2. Taking a Picture together with a close but not powerful figure
   (1) To what extent are you close to the person you took the picture together with in the above recalled experience?

   1  2  3  4  5  6  7
   Not close at all
   Very close

   (2) To what extent do you think that the person you took the picture together with in the above recalled experience is powerful?

   1  2  3  4  5  6  7
   Not powerful at all
   Very powerful
3. Viewing a Picture of a Powerful Figure

(1) To what extent are you close to the person whose picture you viewed in the above recalled experience?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not close at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very close</td>
</tr>
</tbody>
</table>

(2) To what extent do you think that the person whose picture you viewed in the above recalled experience is powerful?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not powerful at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very powerful</td>
</tr>
</tbody>
</table>

**Study 4**

1. Please use the following scale to rate the closeness of your relationship to the person you described at the beginning of this study.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not close at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very close</td>
</tr>
</tbody>
</table>

2. Please use the following scale to rate the extent to which the person you described in the experience at the beginning of this study is powerful or not.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not powerful at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very powerful</td>
</tr>
</tbody>
</table>
## Appendix D

### Summary of Descriptive Statistics

**Table 1. Summary of Descriptive Statistics for Manipulation Checks**

<table>
<thead>
<tr>
<th>Study 1</th>
<th>Condition</th>
<th>n</th>
<th>Relationship closeness with the target person</th>
<th>Powerfulness of the target person</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Powerful and close person</td>
<td>27</td>
<td>$M = 4.26, SD = 1.85$</td>
<td>$M = 5.19, SD = 1.44$</td>
</tr>
<tr>
<td></td>
<td>Close friend</td>
<td>27</td>
<td>$M = 6.19, SD = 0.79$</td>
<td>$M = 5.56, SD = 0.97$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not close person</td>
<td>26</td>
<td>$M = 1.35, SD = 0.75$</td>
<td>$M = 6.08, SD = 1.20$</td>
</tr>
<tr>
<td>Study 2</td>
<td>Condition</td>
<td>n</td>
<td>Identification with the fictional character</td>
<td>Powerfulness of the fictional character</td>
</tr>
<tr>
<td></td>
<td>Powerful and identifying</td>
<td>45</td>
<td>$M = 5.22, SD = 0.99$</td>
<td>$M = 6.44, SD = 0.76$</td>
</tr>
<tr>
<td></td>
<td>Non-powerful but identifying</td>
<td>59</td>
<td>$M = 5.47, SD = 0.97$</td>
<td>$M = 2.37, SD = 1.13$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not identifying</td>
<td>48</td>
<td>$M = 1.54, SD = 0.68$</td>
<td>$M = 6.35, SD = 0.76$</td>
</tr>
<tr>
<td>Study 3</td>
<td>Condition</td>
<td>n</td>
<td>Relationship closeness with the target person</td>
<td>Powerfulness of the target person</td>
</tr>
<tr>
<td></td>
<td>Powerful and close</td>
<td>62</td>
<td>$M = 5.12, SD = 1.65$</td>
<td>$M = 5.81, SD = 0.90$</td>
</tr>
<tr>
<td></td>
<td>Non-powerful but close</td>
<td>57</td>
<td>$M = 6.06, SD = 1.24$</td>
<td>$M = 3.03, SD = 1.49$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not close</td>
<td>53</td>
<td>$M = 1.40, SD = 1.10$</td>
<td>$M = 6.68, SD = 0.67$</td>
</tr>
<tr>
<td>Study 4</td>
<td>Condition</td>
<td>n</td>
<td>Relationship closeness with the target person</td>
<td>Powerfulness of the target person</td>
</tr>
<tr>
<td></td>
<td>Powerful and close</td>
<td>45</td>
<td>$M = 5.88, SD = 1.37$</td>
<td>$M = 5.38, SD = 1.07$</td>
</tr>
<tr>
<td></td>
<td>Non-powerful but close</td>
<td>47</td>
<td>$M = 5.62, SD = 1.79$</td>
<td>$M = 3.77, SD = 1.63$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not close</td>
<td>44</td>
<td>$M = 2.27, SD = 2.07$</td>
<td>$M = 5.89, SD = 1.22$</td>
</tr>
</tbody>
</table>
**Table 2. Summary of Descriptive Statistics for Dependent Variables**

<table>
<thead>
<tr>
<th>Study 1</th>
<th>Condition</th>
<th>n</th>
<th>Sense of Power Scale</th>
<th>Me versus Other Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Powerful and close person</td>
<td>27</td>
<td>$M = 5.48, SD = 0.66$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Close friend</td>
<td>27</td>
<td>$M = 5.01, SD = 0.94$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powerful but not close person</td>
<td>26</td>
<td>$M = 4.50, SD = 0.75$</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study 2</th>
<th>Condition</th>
<th>n</th>
<th>Sense of Power Scale</th>
<th>Me versus Other Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Powerful and identifying</td>
<td>45</td>
<td>$M = 5.15, SD = 1.14$</td>
<td>$M = 4.44, SD = 1.14$</td>
</tr>
<tr>
<td></td>
<td>Non-powerful but identifying</td>
<td>59</td>
<td>$M = 4.55, SD = 1.15$</td>
<td>$M = 3.66, SD = 1.17$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not identifying</td>
<td>48</td>
<td>$M = 4.64, SD = 1.34$</td>
<td>$M = 3.77, SD = 1.09$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study 3</th>
<th>Condition</th>
<th>n</th>
<th>Counteroffer in negotiation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Powerful and close</td>
<td>62</td>
<td>$M = 15070.18, SD = 2668.33$</td>
</tr>
<tr>
<td></td>
<td>Non-powerful but close</td>
<td>57</td>
<td>$M = 16017.74, SD = 1692.95$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not close</td>
<td>53</td>
<td>$M = 16581.13, SD = 1872.99$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study 4</th>
<th>Condition</th>
<th>n</th>
<th>Likelihood to lie</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Powerful and close Self-beneficial</td>
<td>22</td>
<td>$M = 7.15, SD = 1.41$</td>
</tr>
<tr>
<td></td>
<td>Other-beneficial</td>
<td>23</td>
<td>$M = 5.62, SD = 1.72$</td>
</tr>
<tr>
<td></td>
<td>Non-powerful but close Self-beneficial</td>
<td>24</td>
<td>$M = 6.17, SD = 1.80$</td>
</tr>
<tr>
<td></td>
<td>Other-beneficial</td>
<td>23</td>
<td>$M = 6.55, SD = 1.42$</td>
</tr>
<tr>
<td></td>
<td>Powerful but not close Self-beneficial</td>
<td>24</td>
<td>$M = 5.99, SD = 2.21$</td>
</tr>
<tr>
<td></td>
<td>Other-beneficial</td>
<td>20</td>
<td>$M = 6.42, SD = 1.29$</td>
</tr>
</tbody>
</table>
Appendix E

Unethical Behavioral Scenarios for Study 4 (Dubois et al., 2015)

Self-beneficial:

1. Imagine that you were supposed to hand in an important paper for a class. You did not hand it in because you forgot. You are asked why you did not hand in the paper. If you tell the truth (i.e., you forgot), you will fail the class; If you report that you missed the assignment due to a personal health issue, you will pass the class: how likely would you be to report that you missed the assignment because of a health issue?

2. Imagine that you were supposed to hand in an important tax form. You did not hand it in because you forgot. You receive a call from the administration inquiring why you did not hand in the tax form. If you tell the truth (i.e., you forgot), you will pay a fine, in addition to your normal taxes; If you report that you missed the deadline due to a personal health issue, you will not be fined: how likely would you be to report that you missed the deadline because of a health issue?

3. Imagine that you were supposed to go to the post office to mail an important document to renew your driving license. You did not mail it because you were abroad on vacation. You receive a call from the DMV inquiring about the document. If you tell the truth (i.e., you were abroad on vacation), your license will not be renewed; If you report that you missed the deadline due to a personal health issue, your license will be renewed: how likely would you be to report that you missed the deadline because of a health issue?

Other-beneficial:

1. Imagine that an acquaintance of yours was supposed to hand in an important paper for a class. He/She did not hand it in because he forgot. He/She’s not in, and you are asked why he/she did not hand in the paper. If you tell the truth (i.e., he forgot), he/she will fail the class; If you report that he/she missed the assignment due to a personal health issue, he/she will pass the class: how likely would you be to report that your acquaintance missed the assignment because of a health issue?

2. Imagine that an acquaintance of yours was supposed to hand in an important tax form. He/She did not hand it in because he/she forgot. He/She’s not in, and you
receive a call from the administration inquiring why he/she did not hand in the tax form. If you tell the truth (i.e., he/she forgot), he/she will pay a fine, in addition to his/her normal taxes; If you report that he/she missed the deadline due to a personal health issue, he/she will not be fined: how likely would you be to report that your acquaintance missed the deadline because of a health issue?

3. Imagine that an acquaintance of yours was supposed to go to the post office to mail an important document to renew his/her driving license. He/She did not hand it in because she was abroad on vacation. He/She’s not in, and you receive a call from the DMV inquiring about the document. If you tell the truth (i.e., he/she was abroad on vacation), his/her license will not be renewed; If you report that he/she missed the deadline due to a personal health issue, his/her license will be renewed: how likely would you be to report that your acquaintance missed the deadline because of a health issue?
## Appendix F

### Summary of ANOVA Results for Study 4

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
<th>$\eta^2_p$</th>
<th>Observed power</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Within-subjects effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scenario</td>
<td>2</td>
<td>71.75</td>
<td>30.56</td>
<td>.000</td>
<td>.19</td>
<td>1.0</td>
</tr>
<tr>
<td>Scenario * Condition</td>
<td>4</td>
<td>3.08</td>
<td>1.31</td>
<td>.265</td>
<td>.02</td>
<td>.408</td>
</tr>
<tr>
<td>Scenario * Lie type</td>
<td>2</td>
<td>2.84</td>
<td>1.21</td>
<td>.30</td>
<td>.009</td>
<td>.263</td>
</tr>
<tr>
<td>Scenario * Condition * Lie type</td>
<td>4</td>
<td>2.16</td>
<td>0.92</td>
<td>.453</td>
<td>.014</td>
<td>.291</td>
</tr>
<tr>
<td><strong>Between-subjects effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>2</td>
<td>1.33</td>
<td>.156</td>
<td>.856</td>
<td>.002</td>
<td>.074</td>
</tr>
<tr>
<td>Lie type</td>
<td>1</td>
<td>5.75</td>
<td>.675</td>
<td>.413</td>
<td>.005</td>
<td>.129</td>
</tr>
<tr>
<td>Condition * Lie type</td>
<td>2</td>
<td>42.21</td>
<td>4.95</td>
<td>.008</td>
<td>.071</td>
<td>.802</td>
</tr>
</tbody>
</table>
Appendix G
Letter of Information and Consent Form

Ning Zhang, & Dr. Li-Jun Ji
Department of Psychology, Queen's University

NAME OF PARTICIPANT (please print): ____________________________

PURPOSE OF THE STUDY: This study is being conducted to investigate people’s experience of gaining a sense of power indirectly from a powerful figure and its behavioral consequences. For this study, you will be asked to write about the life experience a specific close other or a person you know indirectly (Study 1), role models you have in your life (Study 2), or fiction characters you knew (Study 3) or view a configured photo of yourself and another figure (Study 4), and complete several short questionnaires measuring judgment and decision-making processes (Study 1 - 4). The study will take half an hour to one hour to complete (participants will be informed about the actual duration of each study through specialized letter of information for each study).

RISKS: There are no known physical, economic, or social risks for this study, but there may be minor psychological (emotional) risk associated with this study. You can refuse to answer any of the questions (e.g., recalling your own or one close other’s life experiences) in this packet that may raise concerns for you or make you feel uncomfortable. Your participation is completely voluntary and you may withdraw from this study by notifying the researcher, Mr. Ning Zhang at onz10@queensu.ca, at any time without any penalty. Your data will be deleted if you chose to withdraw. If, as a result of your participation, you would like to speak to a psychologist about a psychological or emotional issue, you may contact Health, Counseling, and Disability Services at 613-533-2506.

COMPENSATION: You will receive course credit (e.g. 1/2 mark) if recruited through the Psychology Department subject pool or monetary compensation for your participation (e.g. $5) or win a $30 lottery for your participation if you’re recruited beyond the Psychology Department subject pool. You will also have the opportunity to learn more about social psychological research in general.
CONFIDENTIALITY: You understand that any information gathered from this study may be used in multiple analyses related to social and personality psychology, and that this information will remain entirely confidential and anonymous and will be stored in a locked cabinet in a secured building. For research purposes, the collected data will be retained permanently at Queen's Research Data Centre. Based on Society of Personality and Social Psychology’s guidelines, the collected data may be shared with competent professionals who seek to verify the substantive claims of any publications based on this research through reanalysis without identifying information about participants. For one of the studies, a photo of you will be taken and then configured with another figure, and then the photo will be displayed to you and you will be asked to answer some short questionnaires based on how you feel about the photo. The photo taken in the lab and the configured photo including you and another figure will only be used for research purpose and will be stored secretly and anonymized in the lab for the duration of the study.

IF I HAVE QUESTIONS: Any questions about study participation may be directed to Mr. Ning Zhang at Onz10@queensu.ca or Dr. Li-Jun Ji at lijunji@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at (613) 533-6081 or email Chair.GREB@queensu.ca.

VOLUNTARY PARTICIPATION: By signing below, you indicate that you have read this Letter of Information & Consent Form and understand the nature of this study. In addition, the experimenter has answered your questions satisfactorily. You know that you may refuse, without penalty, to answer any questions or discontinue your involvement at any time by notifying the experimenter. Your signature below indicates that you have read the information in this form and consent to participate in this study voluntarily.

______________________________
SIGNATURE OF PARTICIPANT

______________________________
DATE

This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's policies.
Appendix H
Debriefing Letter

The purpose of this study is to document the phenomenon that people gain power indirectly from those who are powerful and they are close to. Specifically, we predict that recalling life experience of a close powerful figure or recalling or anticipating shared experience with a powerful figure will increase people’s sense of power compared to those recalling or anticipating the life experience of a close but not powerful figure or a powerful figure that one is not close to. For research purpose, we would appreciate it if you Do Not Reveal the Purpose of This Study to Others as this may bias their responses should they sign up for this study.

Please note once again that the materials used in this study are for research purposes only and the confidentiality of your answers will be protected. Should the data be disposed of, or published, you will remain anonymous in all cases. However, if answering any of the questions in this packet raises concerns for you or makes you uncomfortable, and/or if you would like to speak to a psychologist about a psychological or emotional issue, you may contact Health, Counseling, and Disability Services at 613-533-2506.

Any questions about study participation may be directed to Mr. Ning Zhang at 0nz10@queensu.ca or Dr. Li-Jun Ji at lijunji@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at (613) 533-6081 or email Chair.GREB@queensu.ca.

Here is a reference relevant to the current study if you are of interest:

doi:http://dx.doi.org/10.1016/j.cobeha.2015.04.007

This study has been granted clearance according to the recommended principles of Canadian ethics guidelines, and Queen's policies.
Thank you for your participation! Your interest in participating in this study is highly appreciated.
Appendix I
Letter of Clearance from GREB

June 18, 2015

Mr. Ning Zhang
Ph.D. Candidate
Department of Psychology
Queen’s University
Craine Building, Room 317
62 Arch Street
Kingston, ON, K7L 3N6

GREB Ref#: GSYC-708-15; Romeo #: 6015756
Title: “GSYC-708-15 Vicarious Power”

Dear Mr Zhang:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled “GSYC-708-15 Vicarious Power” for ethical compliance with the Tri-Council Guidelines (TCPS) and Queen’s ethic policies. In accordance with the Tri-Council Guidelines (article D.1.6) and Senate Terms of Reference (article G), your project has been cleared for one year. At the end of each year, the GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of the obligation to advise GREB, with a copy to your unit REB, of any adverse(s) events that occur during this one year period (access this form at https://eservices.queensu.ca/romeo_researcher/ and click Events – GREB Adverse Events Report). An adverse event includes, but is not limited to, a complaint, a change, or
unexpected events that alters the level of risk for the researcher or participants or situations that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by GREB. For example, you must report changes to the level of risk, applicant characteristics, and new implementation procedures. To make an amendment, access the application at https://eservices.queensu.ca/romeo_researcher/ and click Events – GREB Amendment to Approved Study Form. These changes will be automatically sent to the Ethics Coordinator, Gail Irving, at the Office of Research Services or irvingg@queensu.ca for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours Sincerely,

Joan Stevenson, Ph.D.
Chair
General Research Ethics Board

c: Dr. Li-Jun Ji, Faculty Supervisor
   Dr. Stanka Fitneva, Chair, Unit REB
   Ms. Marie Tooley, Dept. Admin.