

ELICITING INFORMATION IN INTELLIGENCE  
INTERVIEWS THROUGH PRIMING

---

An examination of underlying mechanisms

David Amon Neequaye



UNIVERSITY OF GOTHENBURG

Department of Psychology

Doctoral Dissertation in Psychology  
Department of Psychology  
University of Gothenburg  
November 2, 2018

© David Amon Neequaye

Printed by BrandFactory AB, Kållerød, 2018

ISBN: 978-91-7833-163-5 (Print)

ISBN: 978-91-7833-164-2 (PDF)

ISSN 1101-718X Avhandling/Göteborgs universitet, Psykologiska inst.

E-Published version available at: <http://hdl.handle.net/2077/57528>

*Dedicated to my parents, Elizabeth and David, for putting their  
dreams on hold so I could achieve mine*



## ABSTRACT

---

Neequaye, D. A. (2018). *Eliciting information in intelligence interviews through priming: An examination of underlying mechanisms*. Department of Psychology, University of Gothenburg.

An emerging body of research in human intelligence interviewing suggests that subtle influence tactics, such as priming, could be used to increase informants' disclosure of sensitive information. However, the mechanisms that elicit such subtle influences on disclosure are not fully understood. To contribute to this field of research, the present thesis sought to map out when and how priming tactics impact information disclosure. The work was based on a synthesis of current theoretical perspectives that generally explain how primes affect behavior. It was proposed that priming helpfulness motivations would facilitate information disclosure because previous research findings have indicated that activating individuals' helpfulness motivations increase their cooperation in various domains. In three studies with seven experiments (and two pilot tests) consisting of 1,347 participants, the underlying mechanisms of helpfulness priming and the processes that elicit the potential influence of helpfulness priming on disclosure were examined. **Study I** investigated the theoretical proposition that behavioral assimilation to helpfulness priming occurs because a helpfulness prime increases cognitive accessibility to helpfulness-related content, which in turn mediates the impact of the prime on helping behavior (Experiments 1, 2, and 3). In addition, Experiments 1 and 3 investigated the role of the potential moderators, perspective taking and suitability affordances, respectively. The results indicated that helpfulness priming reliably increases helpfulness accessibility. However, no main effects of priming on behavior, nor interactions between priming and any of the moderators, emerged. Mediation analyses results were consistent with the hypothesis that helpfulness priming indirectly increases helping behavior by heightening helpfulness accessibility, but only in two of the five experiments, where participants subjectively perceived more suitable or relevant affordance to enact helpfulness. Taken together, the results of Study I suggested that variability in helpfulness accessibility and suitable affordances may promote the enactment of helping behavior. These findings were extended to an intelligence interview context (Study II and Study III) to explore the underlying mechanisms that engender the potential influence of helpfulness priming on information disclosure. Participants assumed the role of an informant with information about an upcoming mock terror attack. Subsequently, an interviewer solicited information about the attack using an interview style that displayed either high

(helpfulness-focused) or low (control) fit with helpfulness. Before the interview, in a seemingly unrelated experiment, half of the participants were primed with helpfulness-related content and the other half were not primed. After the priming, the cognitive helpfulness accessibility of all the participants was assessed. **Study II** explored the proposition that a helpfulness-focused interview style, which draws on interviewees' primed helpfulness accessibility, would function as a high-suitability affordance and thus promote disclosure. Unexpectedly, the results revealed that the helpfulness-focused interview style decreased disclosure when helpfulness accessibility was low. **Study III**, which drew on the findings of Study II, examined the theoretical proposition that consistency between interviewees' primed helpfulness dispositions and an interviewer's (helpfulness-focused) interpersonal approach when soliciting information would facilitate disclosure. Providing some support for the proposition, the results indicated that helpfulness priming increased disclosure when the helpfulness-focused approach was used but not when the control approach was used. In all, regarding the underlying processes of information elicitation using priming tactics, this thesis suggests that implementing an interview style that does not match an interviewee's primed dispositions could counteract the goal of increasing disclosure. The findings also hint at the possibility that an interview approach that complements an interviewee's primed dispositions may work in concert with the previous priming to increase disclosure.

*Keywords:* disclosure, helpfulness, human intelligence gathering, investigative interviewing, priming

---

David Amon Neequaye, Department of Psychology, University of Gothenburg, P.O Box 500, 40530 Gothenburg, Sweden. Phone: +46(0)3178655975, Email: david.neequaye@psy.gu.se

ISBN: 978-91-7833-163-5

ISSN 1101-718X

## SWEDISH SUMMARY

---

En allt större mängd rättspsykologisk forskning menar att informanternas delgivning av känslig information angående hot mot säkerheten kan förstärkas genom priming (d.v.s. aktivering) av särskilda motiv. Priming brukar definieras som ett dolt sätt att underlätta för en viss motivation att aktiveras hos en individ, för att på så vis påverka ett efterföljande beteende i linje med primingen. Nuvarande forskning har visat att priming av motivation kopplat till tillit – genom att aktivera informanternas minnen av en nära vän – kan öka dessa informanternas delgivande av information gällande en (falsk) terroristattack. Annan forskning har även visat att egenskaper hos ett intervjurum, så som storlek och inredning, kan användas som priming av informanternas benägenheter att antingen vara öppna och tillmötesgående med information, eller stängda och hålla tillbaka information.

Denna forskning öppnar upp för möjligheten att intervjuare kan använda priming som ett verktyg för att styra informanternas motivationer med syftet att öka insamling av information. Dock, som med många innovativa vetenskapliga studier, är mekanismerna som ger upphov till påverkan av priming i utredningsintervjuer fortfarande okända. Det är viktigt att kartlägga de processer som påverkar informanternas delgivande vid priming, då denna kunskap kan hjälpa praktiker att bättre anpassa och genomföra priming effektivt på fältet. Det huvudsakliga syftet med denna avhandling var att visa processerna som kan leda priming till att potentiellt påverka informationsdelgivning i en utredningsintervju.

Priming av *hjälpssamhet* användes som ett sätt att uppmuntra delgivning av följande anledningar: (1) Hjälpssamhet – handlingen att bistå någon annan – antas finnas i de flesta individers uppsättning av mål. (2) Tidigare forskning har visat att priming av individers hjälpssamhet ökar deras samarbetsförmåga i olika domäner. Ökad motivation till hjälpssamhet är i linje med intervjuarens uppgift att anskaffa information då detta, i kontexten av en utredningsintervju, är besläktat med informanternas vilja att dela pålitlig information.

Studierna som presenteras i denna avhandling var baserade på den samlade bilden av de aktuella teoretiska perspektiv av hur

primes påverkar beteende. Sammanfattningsvis föreslår teorierna att primes påverkar beteende i en tvådelad process. Först ökar primen med vilken lätthet det aktiverade innehållet kommer till åtanke – detta kallas kognitiv tillgänglighet. Nästa steg är att det ökade kognitivt tillgängliga innehållet leder till att primen påverkar målbeteendet. Dock har primingteoretiker även föreslagit att sådana priminginflenser oftast uppkommer i situationer av hög lämplighet, det vill säga situationer som uppmuntrar att det önskvärda (primed) beteendet genomförs.

För att effektivt tillämpa hjälpsamhetspriming i kontexten av en utredningsintervju undersöktes först de underliggande mekanismerna av hjälpsamhetspriming (Studie I). Genom att använda resultaten av Studie I utforskade Studie II hur hjälpsamhetspriming påverkar informationsdelgivande i en underrättelseintervju.

**Studie I** ( $N = 662$ ) undersökte det teoretiska antagandet att beteendeanpassning gentemot hjälpsamhetspriming sker i och med att hjälpsamhetsprimen ökar kognitiv tillgänglighet till hjälpsamhetsrelaterat innehåll, vilket i sin tur har en medierande effekt på hjälpsamt beteende (Experiment 1a, 1b, 2a, 2b, & 3). Dessutom undersökte Experiment 1 och 3 rollen av de potentiella moderatorerna perspektivtagande och en främjande miljö. Resultaten indikerade att hjälpsamhetspriming ökade hjälpsamhetstillgänglighet. Dock visade sig ingen huvudeffekt av priming eller någon interaktionseffekt mellan priming och någon av moderatorerna. Medieringsanalysernas resultat var i linje med hypotesen att hjälpsamhetspriming indirekt ökar hjälpsamt beteende genom att öka den kognitiva tillgängligheten av hjälpsamhet. Det ska dock noteras att bara i två av de fem experimenten upplevde deltagarna att det faktiskt var en mer främjande miljö för att utöva hjälpsamhet. Sammantaget tyder resultaten av Studie I att hjälpsamhetstillgänglighet och främjande miljö kan gynna utförandet av hjälpsamt beteende.

Resultaten användes vidare i kontexten av en underrättelseintervju (Studie II och III) för att undersöka underliggande mekanismer som framkallar den potentiella påverkan som hjälpsamhetspriming har på informationsdelgivning. Deltagare antog rollen som en informant



med information om en kommande (falsk) terrorattack. Följaktligen använde en intervjuare en intervjustil som antog antingen en hög (hjälsamhetsfokus) eller låg (kontroll) anpassning till hjälpsamhet, för att på så vis frammana information om attacken. Innan intervjun genomfördes, i ett tillsynes orelaterat experiment, blev hälften av deltagarna utsatta för prime med hjälpsamsamhetsrelaterat innehåll, medan den andra hälften inte blev utsatta för någon prime. Efter primingen bedömdes den kognitiva tillgängligheten för hjälpsamhet hos deltagarna.

**Studie II** ( $N = 115$ ) undersökte antagandet att en hjälpsamhetsfokuserad intervjustil, som använder sig av informanternas aktiverade (primed) hjälpsamhet, skulle innebära en främjande miljö, och på så vis positivt påverka delgivande. Öväntat nog visade resultaten att den hjälpsamhetsfokuserade intervjustilen minskade delgivande när hjälpsamhetstillgängligheten var låg.

**Studie III** ( $N = 116$ ) drog nytta av resultaten från Studie II, för att på så vis undersöka den teoretiska uppfattningen att samstämmighet mellan informanternas hjälpsamhetsbenägenhet (som aktiverats via priming) och intervjuarens hjälpsamhetsfokuserade interpersonella tillvägagångssätt vid informationsinsamling skulle främja delgivning. Resultaten gav visst stöd för detta, genom indikationer på att hjälpsamhetspriming ökade delgivning när det hjälpsamhetsfokuserat tillvägagångssätt användes, till skillnad mot kontrollgruppen.

Sammanfattningsvis demonstrerar resultaten i denna avhandling på att primingtaktiker kan ha subtilt inflytande på delgivning. Särskilda fynd visar att när en delgivningsmotivation har blivit aktiverad genom priming kan inhämtningen av information kompletteras med ett interpersonellt tillvägagångssätt som utnyttjar denna motivation, vilket kan leda till informantens delgivning. Resultaten visade dessutom att, genom att implementera ett sådant prime-fokuserat tillvägagångssätt under intervjun, när informanten inte är tillräckligt utsatt för den genom priming aktiverade motivationen, kan motverka målet av ett ökat delgivande. Denna avhandling lägger fram initiala empiriska bevis för när och hur primingtaktiker kan främja och möjligtvis hindra delgivning. Denna avhandling bidrar till den kommande forskningen gällande priming

i utredningsintervjuer då den påpekar vikten av att använda primefokuserade tillvägagångssätt under intervjuer, för att på detta sätt kunna styra informanternas motivationer via priming. Vidare har detta arbete byggt grunden för hur framtida forskning kan undersöka hur diverse motivationer som aktiveras genom priming fungerar tillsammans med kompletterande intervjusätt, för att lyckas påverka delgivande.

## ACKNOWLEDGEMENTS

---

I am thankful to my supervisors; Professor *Pär Anders Granhag*, Associate Professor *Karl Ask*, and Professor *Aldert Vrij*. You gave me the best guidance and support to complete this PhD project. Pär Anders, thank you for teaching me to be creative and to think broadly about ideas. Karl, thank you for showing me how to test and communicate ideas effectively. Aldert, I am grateful for the insightful comments on my work. You have improved the rigor of my thinking.

For the additional help in putting this thesis together, I am particularly thankful to my examiner; Professor *Chris Meissner*. Thanks also to my opponent Professor *Paul Taylor*.

Many thanks to all the former and current members of the Criminal, Legal and Investigative Psychology (CLIP) research group. You have helped me, in unique ways, on this PhD project. Special thanks to *Sofia Calderon* for proofing the Swedish summary of this thesis.

Thank you to all the past and present members of the House of Legal Psychology. It was a privilege to work with such brilliant minds.

To all those at the Department of Psychology who endured listening to my dubious conspiracy theories and unwarranted warnings about how wild animals are organizing to take over the world, thank you. You make the department a pleasant place to work.

Thank you to my dear friends at home (Ghana) and all across the world who continually support me in various ways.

To my parents, *Elizabeth* and *David*; I owe you everything I have achieved. Thank you for sacrificing your comforts to give me the opportunities that led me here. To my brothers, *Reginald* and *Cyril*, I was able to complete this PhD project because of you. You taught me to keep moving forward regardless of my failures. I love you cutie pies.

*Johanna*, sharing my life with you is effortless. Thank you for accepting me as I am and making me a better person each day.

*David Amon Neequaye*  
*Gothenburg, September, 2018*



## PREFACE

---

This thesis is based on the following three studies, which are referred to by their Roman numerals:

- I. Neequaye, D. A., Ask, K., Granhag, P. A., & Vrij, A. (2018). *Priming Prosocial Behavior: An Examination of Underlying Mechanisms*. Manuscript.
- II. Neequaye, D. A., Ask, K., Granhag, P. A., & Vrij, A. (in press). Eliciting Information in Intelligence Contexts: The Joint Influence of Helpfulness Priming and Interview Style. *Investigative Interviewing – Research and Practice Journal*
- III. Neequaye, D. A., Ask, K., Granhag, P. A., & Vrij, A. (in press). Facilitating Information Gathering in Intelligence Contexts: The Joint Influence of Helpfulness Priming and a helpfulness-focused interpersonal approach. *Journal of Investigative Psychology and Offender Profiling*.

The studies were funded by the Erasmus Mundus Joint Doctoral program in Legal Psychology (EMJD-LP) under Framework Partnership Agreement (FPA) 2013-0036 and Specific Grant Agreement (SGA) 2015-1610.



## TABLE OF CONTENTS

---

<b>INTRODUCTION</b> .....	1
Objectives and Research Questions .....	1
The Link between Helpfulness, Cooperation, and Information Disclosure.....	3
The Arousal: Cost-Reward Model and Information Management ...	4
Cooperation, Helpfulness Priming, and Information Disclosure .....	5
An Overview of Priming Research .....	7
Current Theoretical Perspectives of Priming.....	11
The construct accessibility theme.....	11
The relevance of a representation (ROAR) framework. ....	11
The active-self account. ....	12
The constraint satisfaction and interactive competition model.....	13
The situation-based theme.....	13
The situated inference model. ....	13
The theory of situated conceptualization. ....	14
Summary and Implications .....	15
An Overview of Human Intelligence Interviewing Research .....	15
The High-Value Detainee Interrogation Group and Intelligence Research.....	16
Information-gathering approaches.....	17

The Scharff technique.....	18
Integrating Priming in Intelligence Interviews.....	20
<b>SUMMARY OF EMPIRICAL STUDIES .....</b>	<b>22</b>
Overview .....	22
Study I.....	25
Background. ....	25
Experiment 1.....	25
Overview. ....	25
Experiment 1a.....	26
Method.....	26
Results and discussion.....	26
Experiment 1b.....	27
Method.....	27
Results and discussion.....	27
Experiment 2.....	28
Overview. ....	28
Experiment 2a.....	28
Method.....	28
Results and discussion.....	29
Experiment 2b.....	29
Method.....	29
Results and discussion.....	29
Experiment 3.....	30



Overview.....	30
Method.....	30
Results and discussion.....	30
General Summary of Study I.....	31
Study II.....	31
Overview.....	31
Method.....	32
Phase 1 (background and planning).....	32
Phase 2 (priming).....	33
Phase 3 (the interview).....	33
Phase 4 (post-interview questions).....	34
Results and discussion.....	34
Study III.....	37
Overview.....	37
Method.....	37
Phase 1 (helpfulness values).....	37
Phase 2 (background and planning).....	38
Phase 3 (priming).....	38
Phase 4 (the interview).....	38
Phase 5 (post-interview questions).....	38
Results and discussion.....	39
<b>GENERAL DISCUSSION.....</b>	<b>41</b>
The Underlying Mechanisms of Helpfulness Priming.....	41

Theoretical Implications .....	42
When and How Helpfulness Priming Influences Information	
Disclosure.....	44
Applied Implications .....	46
Limitations and Future Directions .....	47
Priming Tactics and Interviewee Autonomy: An Ethical Analysis .....	51
Concluding Remarks .....	55
<b>REFERENCES</b> .....	<b>57</b>
<b>APPENDIX</b> .....	<b>72</b>





## INTRODUCTION

---

Gathering information about potential security threats (e.g., terror attacks) is an important aspect of improving security, since law enforcement agencies could use such information to prevent those threats from becoming reality (Brandon, 2011). Human intelligence (HUMINT) interviewing, which involves eliciting information from human sources in investigative interviews, is one of the means whereby security agencies gather information about potential threats. Typically, however, human sources who possess vital information pertaining to such threats have divided loyalties (Herbig, 2008). For example, consider a scenario involving a captured terror cell member who possesses information about an imminent terror attack planned by her/his comrades. In that light, a HUMINT interviewer is tasked with eliciting information about the attack. In this example, let us assume that there is a possibility for leniency with regard to an inevitable prison sentence, if the captured cell member provides credible information about the attack. Thus, to gain leniency on their prison sentence, the interviewee (i.e., the captured cell member) intends to be semi-cooperative and economize their information disclosure during the interview. This information management strategy could be implemented by the interviewee to partially satisfy the interviewer's information objectives and gain the sentence leniency while protecting her/his comrades.

Such scenarios where interviewees have competing motivations to disclose and withhold information are common in HUMINT settings (e.g., Soufan, 2011). Thus, to maximize the likelihood that an interviewee would disclose rather than withhold information, the interviewer has to implement an interview strategy that utilizes the interviewee's intrinsic disclosure motivations and channel them toward information disclosure (e.g., Soufan, 2011). The general aim of this thesis, in that regard, was to investigate the possibility of eliciting information in a HUMINT interview by harnessing an interviewee's intrinsic disclosure motivations.

### **Objectives and Research Questions**

An emerging body of research suggests that temporarily increasing the mental accessibility—or priming—of certain traits

and concepts that motivate an interviewee to share information, indeed, affords a HUMINT interviewer the opportunity to utilize an interviewee's internal motivations to disclose information. Dawson, Hartwig, and Brimbal (2015) reported that priming a secure attachment, which is a trait characterized by a positive view of oneself and others, in a HUMINT interview context, may promote primed interviewees' information disclosure. Similarly, the findings of Davis, Soref, Villalobos, and Mikulincer (2016) suggest that priming attachment security (and self-affirmation) facilitates disclosures of sensitive information. Dawson, Hartwig, Brimbal, and Denisenkov's (2017) research also indicated that priming the concept of openness using spacious (vs. small) interview rooms may lead primed interviewees to be more forthcoming with information. These findings—though preliminary—are promising, and they have expanded current insights into possible priming influences on information disclosure. Nonetheless, the mechanisms that elicit such priming effects on information disclosure are not fully understood.

The present thesis explores whether an interviewee's internal prosocial motivation—helpfulness—can be harnessed through priming to facilitate information disclosure in a HUMINT interview. To contribute to this emerging field, this thesis addresses two novel objectives: (a) This thesis investigates the underlying mechanisms of helpfulness priming; that is, what are the processes that lead individuals who are primed with helpfulness-related content to increase their enactment of helping behavior? (Study I). (b) This thesis draws on the underlying mechanisms of helpfulness priming to examine when and how priming (helpfulness) influences information disclosure (Study II and Study III). Identifying the specific processes (and conditions) that influence primed interviewees' information disclosure is important because such knowledge affords practitioners the opportunity to tailor and implement priming tactics efficiently.

I have structured this thesis as follows: First, I discuss the origins of helpfulness tendencies and the link between helpfulness and cooperation in intelligence interviews. Afterward, I examine the potential utility of helpfulness priming as a tool to increase

disclosure. Next, I provide a brief overview of the evolution of priming research in social psychology and discuss current theoretical explanations of priming. Based on a synthesis of the current theories, I generate implications regarding the underlying mechanisms of helpfulness priming and the implementation of helpfulness priming as a tool to elicit information. In the subsequent section, I discuss the extant body of HUMINT interviewing research and highlight the potential contributions of priming. Next, I summarize the empirical research of this thesis that examines specific hypotheses about the underlying mechanisms of helpfulness priming and its applications in HUMINT contexts. In the final section, I discuss the theoretical and applied implications of the findings. Furthermore, the major limitations of the thesis, directions for future research, and ethical considerations are discussed.

### **The Link between Helpfulness, Cooperation, and Information Disclosure**

Helpfulness—the act of offering beneficial assistance to another—is assumed to preexist in most individuals’ goal repertoire. According to Bierhoff (2002), the concept of helpfulness includes all forms of interpersonal support (e.g., prosocial behavior and altruism). Scholars have offered various theories to explain the origins of helpfulness tendencies (for comprehensive reviews, see Penner, Dovidio, Piliavin, & Schroeder, 2005; Schroeder & Graziano, 2015). Some schools of thought posit an evolutionary basis to account for the existence of helpfulness; they argue that early humans who assisted one another in times of need—for example, parents catering for a defenseless child—ensured their collective survival and passed on such tendencies to subsequent generations (Barrett, Dunbar, & Lycett, 2002; Tomasello & Vaish, 2013). Others have proposed that socialization factors such as culture (Feygina & Henry, 2015) and parenting styles (Eisenberg, Fabes, Guthrie, & Reiser, 2000) contribute to the development of helpfulness tendencies. It has been noted that individuals learn to be helpful by complying with prosocial cultural norms (Gurven, Zanolini, & Schniter, 2008) and/or parental instruction (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000) that promote helpful behaviors. Some research findings also suggest that certain dispositional factors

are positively related to helpfulness. For example, it has been found that the Agreeableness and Empathy personality constructs are linked to helpfulness (Graziano, Habashi, Sheese, & Tobin, 2007).

### **The Arousal: Cost-Reward Model and Information Management**

Schroeder and Graziano (2015) note that the arousal: cost-reward model (Piliavin, Dovidio, Gaertner, & Clark, 1981; Dovidio, Piliavin, Gaertner, Schroeder, & Clark, 1991) is the most comprehensive theory to explain the mechanisms that contribute to the enactment of helping behavior (for other theories, see Cialdini et al., 1987; Batson, 2011). The arousal: cost-reward model posits that a given situation, which requires an individual to offer beneficial assistance to another, induces an aversive arousal state that individuals are typically motivated to alleviate. To this end, a cost-benefit analysis is performed to determine whether to offer such help—to eliminate the aversive arousal state—or not. The cost-benefit analysis includes two components, which are the costs of (a) helping and (b) not helping. Costs of helping refer to the resources (e.g., safety or time) that the helper is likely to expend when help is offered. Conversely, the aversive arousal state persists and becomes the cost of not helping (e.g., consequent guilt experienced) if the individual does not provide any beneficial assistance.

The model theorizes that the interaction between the perceived costs of helping and the perceived costs of not helping may produce one of the following outcomes: (1) Low costs of helping combined with high costs of not helping lead to a high likelihood of intervention. (2) When both costs of helping and not helping are low, the model predicts that helping interventions would vary widely depending on situational norms. (3) High costs of helping combined with high costs of not helping lead individuals to help indirectly. (4) Potential helpers are least likely to intervene when the cost of helping is high and the cost of not helping is low. Finally, the model posits that individuals usually opt for an outcome that simultaneously minimizes their net cost of helping and alleviates the aversive arousal state (for in-depth discussions, see Bierhoff, 2002; Schroeder & Graziano, 2015).



Although the arousal: cost-reward model was primarily developed to elucidate the processes of helping behavior in emergencies, the model has been extended successfully to explain helping in non-emergency scenarios (e.g., Erlandsson, Jungstrand, & Västfjäll, 2016; Fritzsche, Finkelstein & Penner, 2000; Lindenmeier, 2008). The model possibly accounts for the beneficial assistance (e.g., sharing useful information) that semi-cooperative interviewees may provide to interviewers in the context of an intelligence interview. As mentioned earlier, semi-cooperative interviewees typically have divided loyalties such that they are motivated to share some information to partially satisfy the interviewer's information objectives while protecting certain significant others and/or organizations. Thus, the semi-cooperative interviewees' information management dilemma resembles a scenario in which helping the interviewer by sharing useful information bears a high cost of helping—potentially betraying a significant other—and a high cost of not helping; for example, forfeiting a possible benefit of cooperating, such as sentence leniency. Under this scenario, the assumptions of the arousal: cost-reward model predict that the potential helper—the interviewee—is likely to help the interviewer indirectly; for example, by being semi-cooperative. In line with the model, extant findings indicate that semi-cooperative interviewees usually choose to offer such indirect assistance by economizing their disclosure and sharing some but not all of the information at their disposal (Herbig, 2008; Oleszkiewicz, 2016; Soufan, 2011).

### **Cooperation, Helpfulness Priming, and Information Disclosure**

As alluded to above, and relevant to the objectives of this thesis, it has been proposed that helping behavior and cooperation are inextricably linked because both phenomena increase others' positive outcomes (Grzelak & Derlega, 1982; Harcourt, 1991). In support of this assumption, helpfulness tendencies have been found to increase individuals' cooperation in social dilemmas (Van Lange, 1999; Capraro, Smyth, Mylona, & Niblo, 2014).

In HUMINT contexts, such cooperation where individuals offer beneficial assistance to another, beyond self-interest, fits neatly

with the interviewers' task of soliciting sensitive information. An interviewee can demonstrate their helpfulness motivations by cooperatively sharing reliable information with the interviewer. Indeed, an interviewee's cooperation is akin to information disclosure in intelligence contexts (Hartwig, Meissner, & Semel, 2014). Thus, the link between helpfulness and cooperation could be useful to the goal of increasing disclosure in a HUMINT interview by harnessing an interviewee's helpfulness motivations and channeling them toward aiding an interviewer's information-elicitation objectives.

It is widely accepted that dispositional factors (e.g., agreeableness) are important determinants of helpfulness (e.g., McClintock & Allison, 1989; De Dreu & Van Lange, 1995; Van Lange, Bekkers, Schuyt, & Van Vugt, 2007). Some schools of thought have proposed, however, that contextual variables interplay with individuals' dispositions in the causation of helpful behaviors (Penner, Fritzsche, Craiger, & Freifeld, 1995; Bierhoff, 2002; Graziano et al., 2007). Pertinent to the aims of this thesis, empirical evidence indicates that an array of contextual cues—specifically, priming influences—can facilitate individuals' likelihood to be helpful (Fitzsimons & Bargh, 2003; van Baaren, Holland, Kawakami, & van Knippenberg, 2004; Maio, Pakizeh, Cheung, & Rees, 2009). Importantly, it has been found that helpfulness priming (Arieli, Grant, & Sagiv, 2014, Study 2) and priming individuals to think positively about helpfulness (Capraro et al., 2014, Study 3) enhances cooperation. These research findings, described below, suggest that helpfulness priming may be utilized to activate interviewees' helpfulness motivations, thereby increasing their inclinations toward cooperation and consequently information disclosure.

Arieli et al. (2014, Study 2) implemented four exercises to prime helpfulness in their research. First, participants read a scientific prose emphasizing the personal benefits of helpfulness values. Next, they completed a checklist about their experiences over the past month. The checklist was, however, rigged to consist of helpful actions only (e.g., offering useful advice). Subsequently, the

participants wrote about a personal experience describing an instance when they had been helpful. Finally, they wrote a persuasive essay espousing the importance of helpfulness. For each of the exercises described above, participants in the control condition engaged in a corresponding exercise neutral to helpfulness. The results indicated that significantly more of the participants who received the helpfulness (vs. control) prime volunteered to undertake community work with real-world volunteer organizations ( $d = 0.64$ ).

In another study, Capraro et al. (2014, Study 3) examined the influence of helpfulness (vs. unhelpfulness) priming on cooperation. Helpfulness was primed using a writing task in which participants were instructed to write a paragraph describing a time when either acting benevolently led to a positive outcome or when acting malevolently led to a negative outcome. Conversely, unhelpfulness was primed by instructing participants to write a paragraph describing a time when either acting benevolently led to a negative outcome or when acting malevolently led to a positive outcome. Participants first received the helpfulness (vs. unhelpfulness) prime. Next, cooperation was measured using a standard prisoner's dilemma game. In all, the results indicated that participants who received the helpfulness (vs. unhelpfulness) prime cooperated to a higher extent.

### **An Overview of Priming Research**

Priming is generally defined as temporarily increasing the mental accessibility of meaningful concepts to influence thought and behavior in a prime-consistent manner. Importantly, priming effects are reported to occur outside individuals' conscious awareness (Dijksterhuis & Bargh, 2001; Dijksterhuis & Strick, 2016). Historical accounts on the origins of priming suggest that Karl Lashley was the first to contemplate the concept of priming and its potential role in the performance of behaviors (Bargh, 2014; Friesen & Cresswell, 2015). Lashley (1951) theorized that when one intends to enact a behavior, the sequence of the intended action is readied, or primed, in order to produce the behavior effortlessly (see also Rosenbaum, Cohen, Jax, Weiss, & Van Der Wel, 2007). Bargh (2014) argues that Lashley's theorizing about readying mental

representations for intended actions engendered the idea of priming in experimental social psychology. However, the seminal work of Higgins, Rholes, and Jones (1977) set the stage for current priming research, demonstrating that exposure to certain personality trait concepts influenced participants' subsequent impressions of an ambiguous target person (see also Srull & Wyer, 1979).

In Higgins et al.'s (1977) study, participants were first primed with either positive (e.g., adventurous) or negative (e.g., reckless) trait terms. Next, in a seemingly unrelated study, participants read ambiguous descriptions about some behaviors of a target person called Donald. The results indicated that participants' impressions of Donald were consistent with the previously primed traits. That is, those participants who had been primed with the positive traits formed more positive impressions of Donald than those primed with the negative traits. Critically, awareness assessments in Higgins et al.'s (1977) research showed that participants were not aware that the earlier trait priming study had influenced their impressions of Donald.

Several experimental works after Higgins et al. (1977) have demonstrated that beyond thoughts (e.g., impressions of an ambiguous target), meaningful primes could influence observable behavior outside of awareness (see Bargh, 2006 for an overview). It is worth noting, however, that some schools of thought have questioned the reliability of priming effects because recent attempts to replicate some of the influential priming research have failed (e.g., Harris, Coburn, Rohrer, & Pashler, 2013). The most prominent example of such priming research is a pioneering study by Bargh, Chen, and Burrows (1996), which revealed assimilative effects of semantic priming on participants' behavior. Bargh and colleagues primed the concepts of rudeness (vs. politeness [Experiment 1]) and the elderly stereotype (Experiment 2), using scrambled-sentence tasks that contained the respective primes. The findings showed that primed participants exhibited overt behaviors that were consistent with the concepts that had been primed. In Experiment 1, those participants who had been exposed to the rudeness primes interrupted the experimenter more frequently than those primed with

the concept of politeness did. In the second experiment, participants exposed to the elderly stereotype primes (vs. control) walked more slowly, down a hallway, when exiting the experiment, than the control group who received no prime did.

Another influential study by Dijksterhuis and Van Knippenberg (1998) demonstrated complex effects of meaningful primes on behavior. Using an imagination task that required participants to think about and list the attributes of a typical professor (or secretary), Dijksterhuis and Van Knippenberg (1998) primed some participants (or not [i.e., control group]) with the concept of intelligence. In an ostensibly unrelated experiment where intelligent behavior was measured with a general knowledge scale, the results indicated that the intelligence prime, indeed, enhanced primed (vs. control) participants' performance. In a further examination, Dijksterhuis and Van Knippenberg (1998) compared the effect of the previously mentioned intelligence priming to priming the concept of stupidity. Stupidity was primed by asking participants to imagine and list synonyms related to soccer hooligans—an exemplar that Dijksterhuis and Van Knippenberg (1998) argue embodies stupidity. Consistent with the hypothesis, the participants who had imagined the soccer hooligans performed worse on the general knowledge test than those participants who had imagined a typical professor.

To explain the seemingly automatic influence of primes on overt behavior, Dijksterhuis and Bargh (2001) proposed that perception and behavior are directly linked—a phenomenon referred to as the perception-behavior link (see also Carpenter, 1893 on ideomotor action). The perception-behavior link is drawn from an evolutionary standpoint; that is, perception engenders behavior naturally because, in humans, perceptual abilities and the resultant functions developed because our ancestors adapted to their environment by responding (i.e., behaving) to what they perceived (Aarts, Gollwitzer, & Hassin, 2004; Dijksterhuis & Bargh, 2001). Furthermore, empirical research has established a neurological link between perception and action. For instance, a review by Pulvermüller (2005) indicated that action words activate regions of the brain that generate the corresponding motor actions. In that light,

Dijksterhuis and Bargh, (2001) conclude that perceiving socially meaningful and actionable information (e.g., traits and stereotypes) activates one's mental readiness to act, which could lead to enacting behaviors that are relevant to the perceived social stimuli; one example being the previously discussed influence of the elderly stereotype prime on participants' walking speed. It is noted, however, that human behavior is flexible, such that perceiving social stimuli does not exact unfettered influence on behavior because the perception-behavior link can be inhibited. For example, an individual could refrain from enacting a primed behavior because engaging in the behavior would be ultimately detrimental (Bargh & Ferguson, 2000) or in conflict (Macrae & Johnston, 1998) with current goals and thus undesirable.

As mentioned earlier, replication failures of some prominent priming research have recently fueled skepticism about the reliability of priming effects (e.g., Harris et al., 2013). A direct replication of Bargh et al.'s (1996) study by Doyen, Klein, Pichon, and Cleeremans (2012) failed to obtain the elderly stereotype priming effect on walking speed. Furthermore, Shanks et al. (2013) conducted a series of experiments to replicate and probe the conditions under which the previously discussed intelligence priming effect (i.e., Dijksterhuis & Van Knippenberg, 1998) may be obtained; none of their attempts were successful (see also O'Donnell et al., 2018).

Based on the several priming replication failures, some schools of thought have debated the role of unconscious processes (i.e., the perception-behavior link) in decision-making (Newell & Shanks, 2014). Apart from the reproducibility concerns, Newell and Shanks (2014) argue that procedures (e.g., funneled debriefing) often employed to assess participant awareness of the priming process and/or the intended purpose of the primed content have been inadequate. Specifically, they note that that funneled debriefing procedures lack the required sensitivity to fully uncover participant awareness in the priming process. According to Newell and Shanks (2014), such methodological flaws inflate the explanatory power of unconscious processes in decision-making and ignore the relevant role of conscious thought. They propose that awareness checks in

priming research should be reliable (unaffected by demand characteristics), relevant (relevant to target behavior), immediate (soon enough in order to avoid forgetting or interference), and sensitive (administered under the best conditions for retrieval).

### **Current Theoretical Perspectives of Priming**

New theoretical perspectives have emerged from the debate about the reliability of priming. These theories generally depart from the perception-behavior link and offer nuanced alternative explanations to delineate when and how priming occurs. I have categorized the theories under two broad themes: the construct accessibility and the situation-based themes.

**The construct accessibility theme.** Theoretical perspectives under the construct accessibility theme largely theorize that prime stimuli increase cognitive accessibility to the primed content, which in turn promotes cognitive and behavioral assimilation. Increased primed construct accessibility is essential for assimilative priming effects because previous research indicates that individuals are likely to draw on readily accessible concepts when making decisions (See Tversky & Kahneman, 1973, 1974; Mussweiler & Strack, 1999). Thus, construct accessibility theories suggest that increased prime construct accessibility mediates the influence of priming on a target behavior. Theories that I have categorized under the construct accessibility theme include the relevance of a representation (ROAR) framework (Eitam & Higgins, 2010; Higgins & Eitam, 2014), the active-self account (Wheeler, Demarree, & Petty, 2007, 2014), and the constraint satisfaction and interactive competition model (Schröder & Thagard, 2013, 2014).

***The relevance of a representation (ROAR) framework.*** The ROAR framework posits that increased primed construct accessibility influences thought and behavior in a prime-congruent manner only when the primed content is motivationally relevant (Eitam & Higgins, 2010; Higgins & Eitam, 2014). Eitam and Higgins (2010) theorize that individuals are able to determine the motivational relevance of accessible primed content quickly enough for such motivational relevance judgments to influence the

likelihood that the accessible primed content will influence behavior. To support this assumption, they draw on neurological research (e.g., Junghofer, Bradley, Elbert, & Lang, 2001; Schendan, Ganis, & Kutas, 1998), which indicates that the human brain discriminates rapidly between valenced and neutral items. Thus, the strength of the primed content's relevance determines the extent to which it influences the appropriate cognitive systems (e.g., goal pursuit) that drive judgments and behavior. Some priming research has demonstrated the importance of motivational relevance; for instance, Custers and Aarts (2007) found that when the goal to socialize had been primed, individuals who highly valued socializing spent more time pursuing socializing goals than those who valued socializing to a lesser extent. In another study, Karremans, Stroebe, and Claus (2006) demonstrated the impact of motivational relevance in priming physical needs. They found that participants preferred a drink brand that was previously primed only when the primed participants were thirsty.

***The active-self account.*** Wheeler et al. (2007, 2014) propose that increased primed construct accessibility influences behavior by activating existent prime-related self-concepts or introducing new prime-related content into an individual's current self-representation. The tenets of the active-self account are based on evidence, which suggests that individuals' self-concepts (unconsciously) guide their behavior (Hull, Slone, Meteyer, & Matthews, 2002) and that such self-concepts are malleable (DeSteno & Salovey, 1997; McConnell, 2011). Hence, increased primed construct accessibility induces a self-prime overlap, which then drives assimilation to a prime. It has been suggested that one way to induce the self-prime overlap (i.e., moderate the link between the self and primed content) is to engage in perspective taking (Wheeler et al., 2007). That is, taking the first-person perspective, compared to the third-person perspective, during a priming episode may enhance accessibility to the primed content and assimilation of the consequent self-prime overlap on behavior. Previous research lends some support to this assertion. Wheeler, Jarvis, and Petty (2001) found that participants who spontaneously wrote essays about an African American from a first-person perspective (i.e., self-prime overlap),



compared to those who wrote from a third-person perspective and those who wrote about a Caucasian, assimilated more to the characteristics of the negative African American stereotype of underachievement (see also Davis, Conklin, Smith, & Luce, 1996).

***The constraint satisfaction and interactive competition model.*** This model draws on classic theories, which posit that individuals naturally strive for psychological consistency (e.g., Festinger, 1957; Osgood & Tannenbaum, 1955). In that light, Schröder and Thagard (2013) theorize that increased primed construct accessibility biases individuals' interpretations of the different aspects of a situation to become a prime-consistent amalgamation. Consequently, the biased interpretation leads the primed individual to enact behaviors suggested by the prime. The constraint satisfaction model is based on the principle that primed content typically embodies affective meanings, which are linked to behavioral tendencies that stem from entrenched socialization within cultures (Schröder & Thagard, 2013). Crucially, Schröder and Thagard (2013) maintain that the brain can process affective meanings and their corresponding, culturally endorsed, behavioral responses without conscious intentions. Thus, increased primed construct accessibility produces prime-congruent behaviors because individuals strive to be consistent with the affective meanings carried by primes (see also Heise, 2007; Klatzky & Creswell, 2014).

**The situation-based theme.** The theories I have grouped under the situation-based theme explicitly include an additional element beyond construct accessibility to explain how priming occurs. They note that the behaviors allowed by a specific situation—situational affordances—determine when and how increased primed construct accessibility will mediate the influence of priming on behavior. These theories include the situated inference model (Loersch & Payne, 2011, 2014) and the theory of situated conceptualization (Barsalou, 2016).

***The situated inference model.*** In line with the construct accessibility theories, the situated inference model posits that primes do not influence behavior directly as posited by the perception-

behavior link (i.e., Dijksterhuis & Bargh, 2001). Instead, Loersch and Payne (2011) propose that exposure to a prime stimulus generally increases primed construct accessibility. Subsequently, the accessible primed content—when misattributed as internally generated—then becomes a heuristic that mediates the influence of the prime stimulus on behavior. This assumption aligns with the previously mentioned active-self account, which proposes that heightened construct accessibility induces a self-prime overlap. Critically, however, the situated inference model stipulates that affordances that promote the enactment of a primed behavior facilitate assimilation to the primed content (Loersch & Payne, 2011).

Consistent with such theorizing, Macrae and Johnston (1998) found that participants who had received a helpfulness prime exhibited greater helpfulness in situations that encouraged (vs. discouraged) the enactment of helpfulness. Their research indicated that the primed participants picked up more functioning pens (i.e., enabling situational cue) in aid of an experimental confederate, who had dropped the pens, than participants who had not been primed. However, when the pens were leaking (i.e., inhibitory situational cue), the helpfulness priming effect was eliminated. In a second experiment, participants primed with helpfulness helped an experimental confederate by picking up more pens than those participants who were not primed. Nonetheless, when participants were led to believe that they were running late (i.e., inhibitory cue) for a second experiment, the helpfulness priming effect was eliminated. The helpfulness priming effect was maintained when participants were under the impression that they were on time (i.e., enabling cue) for the second experiment. A medium-sized interaction effect between priming and situational affordance was observed in both experiments ( $d = 0.59$  and  $d = 0.51$  respectively; see also Cesario, Plaks, Hagiwara, Navarrete, & Higgins, 2010).

***The theory of situated conceptualization.*** Barsalou (2016) offers an account similar to the situated inference model to explain priming. He argues that *situated conceptualizations* are behavioral scripts specific to certain situations, which result from consistent

social interactions. Over time, situated conceptualizations become a collection of heuristics that guide future behavior in similar situations. Thus, increased accessibility to primed content, in situations that match a situated conceptualization (i.e., high- [vs. low-] suitability affordances), may trigger established behavioral scripts that will guide behavior (Barsalou, 2016).

### **Summary and Implications**

The theories categorized under the construct accessibility theme emphasize that increased construct accessibility drives priming effects. The situation-based models, on the other hand, extend the postulates of the construct accessibility theme by explicitly noting that primed individuals need suitable affordances to exhibit assimilation to the primed content. Taken together, the extant theories suggest that interventions aimed at activating helpfulness motivations to stimulate helping behavior must increase accessibility to helpfulness-related content and provide a high-suitability affordance in which helpfulness can be demonstrated (see Macrae & Johnston, 1998). These requirements are essential because increased prime construct accessibility assimilatively mediates the influence of a prime on a target behavior more strongly in high- (vs. low-) suitability affordances.

It is possible to extend the aforementioned implications to the HUMINT interview context and the overall objectives of this thesis. That is, in examining the possibility of facilitating information disclosure by priming interviewees' helpfulness motivations and delineating the underlying mechanisms thereof, (a) the implemented priming procedure must increase interviewees' cognitive accessibility to helpfulness-related content and (b) the interviewer must present the interviewee with a high-suitability interview context to exhibit their primed helpfulness motivations by sharing information.

### **An Overview of Human Intelligence Interviewing Research**

According to Granhag, Cancino Montecinos, and Oleszkiewicz (2015), HUMINT interviewing is best defined as an information-gathering process that is nested in the human interaction

between a primary collector (i.e., the interviewer[s]) and a primary source (i.e., the interviewee[s]) of information (see also Justice, Bhatt, Brandon, & Kleinman, 2010; Evans, Meissner, Brandon, Russano, & Kleinman, 2010). Generally, the purpose of a HUMINT interview is to secure information that can be used to bolster national security and/or further national interests (Evans et al., 2010). Thus, the objective of the interview could consist of, or encompass, eliciting information about past, present, and future events. Hartwig, Meissner, and Semel (2014) note that HUMINT interviews are characteristically more complex compared to investigative interviews conducted in criminal settings because the information objectives of a HUMINT interview could be prospective and/or retrospective. As an example, the aim of an intelligence interview could range from soliciting information about established terrorist networks to uncovering plans about an upcoming attack. The main objective of criminal investigative interviews, on the other hand, typically center on eliciting information about isolated past crimes only (Redlich, 2007; Evans et al., 2010; Hartwig et al., 2014). Consequently, psychology researchers have examined investigative interviews in the criminal context more widely than HUMINT interviews. For instance, the antecedents of true and false confessions (Kassin & Gudjonsson, 2004; Lassiter & Meissner, 2010), deception detection (Vrij, 2008), and eyewitness identifications (Wells, Memon, & Penrod, 2006) in criminal interviews have been investigated in depth.

### **The High-Value Detainee Interrogation Group and Intelligence Research**

A historical account by Meissner, Surmon-Böhr, Oleszkiewicz, and Alison (2017; see also Hartwig et al., 2014) traces the genesis of psychological research on HUMINT interviewing to former United States president, Barack Obama's signing of Executive Order 13491 in 2009 and the creation of the High-Value Detainee Interrogation Group (henceforth referred to as HIG) in 2010. One of the HIG's mandates is to develop ethical, effective, and scientifically valid intelligence interview methods, in light of the post 9/11 enhanced interrogation failures (Meissner et al., 2017). Hence, the HIG has funded the majority of the burgeoning

psychological research, which is specifically aimed at scientifically examining HUMINT interviewing. The following discussion delves into the emerging intelligence interviewing research.

**Information-gathering approaches.** Evans et al. (2013) developed an experimental paradigm to mimic an intelligence interview context. In the experimental setup, a source first witnessed an elaborate transgression committed by a confederate. Afterward, an interviewer interviewed the source about the transgression. The study examined whether an information-gathering (vs. accusatory) interview approach would yield higher interviewee information disclosure. Meissner et al. (2014) note that information-gathering interview approaches employ exploratory open-ended questions and rapport to elicit information. Conversely, accusatory methods are guilt presumptive and implement confirmatory questions that aim to obtain confessions. Evans et al.'s (2013) hypothesis was informed by previous criminal interview research, which indicates that information-gathering (vs. accusatory) interview approaches generate higher numbers of true confessions and fewer false confessions (Meissner, Redlich, Bhatt, & Brandon, 2012; Meissner et al., 2014). True (vs. false) confessions in criminal contexts comprise authentic information and thus are analogous to reliable information in a HUMINT interview. As Evans et al. (2013) predicted, and in line with the extant research, the findings showed that in an intelligence interview, an information-gathering approach leads to more relevant information disclosure than an accusatory approach.

In another study using Evans et al.'s (2013) experimental setup, Evans et al. (2014) investigated the efficacy of some interview approaches outlined in the U.S. Army Field Manual 2–22.3 (“Human Intelligence Collector Operations,” 2006). The Army Field Manual was officially approved to regulate HUMINT interviews in accordance with President Obama’s Executive Order 13491 in 2009 (Brandon, 2011). Evans et al. (2014) categorize the interview approaches recommended in the field manual into four themes—Direct, Emotional (i.e., Positive and Negative), Incentive-based, and Other questioning approaches. Evans and colleagues examined the

comparative utility of the Direct, the Positive-emotional, and the Negative-emotional approaches. Evans et al. (2014) note that the Positive-emotional approach comprises questions directed at alleviating interviewee anxiety and resistance while facilitating rapport. The Negative-emotional approach, on the other hand, constitutes a questioning style that rouses interviewee anxiety and reactions. As indicated in the Army Field Manual, the Direct Approach, which advocates asking direct questions, is most commonly used in intelligence interviews and, thus, was implemented as a comparison condition by Evans et al. (2014).

It was predicted that Positive-emotional approaches would lead to the most information disclosure. This hypothesis was based on research that suggests positive (vs. negative) moods (which are likely to be stimulated by Positive-emotional questioning) increase cooperation (see Hertel, Neuhof, Theuer, & Kerr, 2010). The prediction received some support; Evans et al. (2014) found that although the Positive- and Negative-emotional approaches yielded similar amounts of disclosed information, the Positive-emotional approach included an added benefit. That is, the Positive-emotional approach enhanced information disclosure by boosting a cooperative atmosphere. Furthermore, the Positive- (vs. Negative-) emotional approach reduced interviewee anxiety.

**The Scharff technique.** Another strand of intelligence interviewing research has recently developed and examined the efficacy of a novel interview technique that specifically facilitates information disclosure—the Scharff technique. The Scharff technique was developed through a scientific conceptualization of some interview tactics that were employed by Hanns Scharff in WWII (Granhag et al., 2013). Scharff (1907-1992) was a German Luftwaffe intelligence interviewer and he is famed for his exceptional information extraction abilities (Toliver, 1997). Scharff's overall interview framework consisted of five tactics that he implemented, in concert, to neutralize interviewees' counter-interrogation strategies (Granhag, 2010). Counter-interrogation strategies are resistance efforts interviewees usually adopt to appear cooperative and credible (see Granhag, Hartwig, Mac Giolla, &

Clemens, 2015). The tactics Scharff used included (a) being friendly, (b) not pressing for information, (c) establishing the illusion of being versed with pertinent information by presenting available evidence in a coherent storyline, (d) presenting claims to be confirmed or disconfirmed rather than asking direct questions, and (e) downplaying the relevance of new information an interviewee provides. An extensive discussion outlining the significance of the various components that constitute the Scharff technique is available for interested readers (see Oleszkiewicz, 2016).

In the first empirical test of the Scharff technique, Granhag et al. (2013) designed a new experimental paradigm to include certain important aspects of a HUMINT interview context. Participants took on the role of a police informant (i.e., a source) with some information about an upcoming mock terrorist attack. An interviewer then attempted to elicit information about the attack using either the Scharff technique, open questions, or specific questions. Critically, to mirror typical sources in intelligence interviews, participants were instructed manage their information disclosure. That is, not reveal too much or too little information. The results indicated that the Scharff technique did not elicit significantly more information compared to the comparison techniques. Nonetheless, participants interviewed using the Scharff technique found it more difficult to decipher the interviewer's information objectives and were more likely to underestimate the amount of information they objectively disclosed. The authors argued that, in all, the findings are promising for the operational value of the Scharff technique because masking information objectives and interviewees' underestimation of the amount of objectively elicited information are important aspects of effective HUMINT interviewing (see also, Justice et al., 2010).

Further studies have refined the Scharff technique and compared it to the Direct Approach, which is a widely used questioning technique (recommended by the U.S. Army Field Manual) that combines specific and open-ended questions to elicit information (Redlich, Kelly, & Miller, 2011). The results from these studies indicate that, compared to the Direct Approach, the Scharff

technique elicits more new information, conceals an interviewer's information objectives better, and leads interviewees to underestimate their objective amount of information disclosure (e.g., Granhag, Oleszkiewicz, Strömwall, & Kleinman, 2015; May, Granhag, & Oleszkiewicz, 2014; Oleszkiewicz, Granhag, & Cancino Montecinos, 2014; Oleszkiewicz, Granhag, & Kleinman, 2014). Additionally, the Scharff technique has been taught successfully to practitioners in the HUMINT field (Oleszkiewicz, Granhag, & Kleinman, 2017). In light of these findings, Vrij and Granhag (2014) have reiterated that the Scharff technique's operational effectiveness is reassuring, though the body of work examining the technique is in its infancy.

### **Integrating Priming in Intelligence Interviews**

As was mentioned in the Introduction, some recent research has begun to explore whether priming disclosure-related motivations facilitate interviewees' information disclosure. This line of research is comparable to those that have examined the Scharff technique, since the main objective is also to develop interview tactics that specifically facilitate disclosure. Dawson et al. (2015) and Dawson et al.'s (2017) investigations showed that priming a secure attachment and the concept of openness may, respectively, promote disclosure about an imminent mock terror attack. Pertinently, both pieces of research, similar to those discussed previously, examined these priming influences on information disclosure in an intelligence interview setting. The findings (i.e., Dawson et al., 2015; Dawson et al., 2017) indicate that it is possible to facilitate interviewees' disclosures of sensitive information through priming, which presents essential benefits to the developing field of intelligence interviewing research and, importantly, practice.

Two of the core Scharff technique tactics require the interviewer to establish the illusion that they are versed with substantial information and then proceed to elicit unknown information by presenting claims to be confirmed or disconfirmed. Thus, to implement the Scharff technique successfully, interviewers need some prior information about the topic of investigation. Granhag et al. (2013) note that the Scharff technique is better suited



for later stages in the intelligence gathering process when some, but not all, of the needed information is available. Priming tactics, on the other hand, do not require extensive prior information in order to be applied. Consider a scenario where an interviewer uncovers a snippet of information, inadvertently disclosed by the interviewee, which might be worth exploring. In such instances, the interviewer could prime a disclosure motivation and harness the interviewee's primed motivations toward information disclosure. A primed motivation can be harnessed in an interview when the interviewer employs an interview approach that draws on the primed motivation. Hence, priming tactics, compared to the Scharff technique, can be implemented when there is little to no prior information about a subject of interest. Consequently, priming could be used as an opening tactic to elicit some information on a subject. Later, interview strategies like the Scharff technique, which require such prior information, can then be executed. In that regard, another potential benefit of priming in the HUMINT context is that it can serve as an addition, to ease the usage of interview strategies that require prior evidence.

## SUMMARY OF EMPIRICAL STUDIES

---

### Overview

Research exploring the potential utility of priming in intelligence interviews is still in its infancy. As mentioned previously, the emerging research suggests that priming could facilitate information disclosure. However, a closer inspection of some of these studies reveals mixed and/or inconclusive results. Dawson et al. (2015) found a small effect suggesting that priming a secure attachment may lead primed (vs. control) participants to disclose more information. However, the effect was not statistically significant by conventional standards and thus the experiment's replicability is unclear. Furthermore, the research of Dawson et al. (2017) demonstrated that priming the concept of openness promotes information disclosure. Nonetheless, the underlying mechanisms of this effect are still unknown because the research did not provide any evidence that increased cognitive accessibility to the openness construct elicited the observed behavioral assimilation to the openness prime, as current theories of priming would predict. Hence, in line with its main objectives, this thesis aimed to expand on the previous research in the following ways: (a) examine the influence of priming an intrinsic motivation (i.e., helpfulness), which most individuals typically possess, on disclosure in an intelligence interview, and (b) elucidate the mechanisms that underlie the influence of priming on disclosure.

I have noted earlier that recent discussions about the reliability of priming effects have led various schools of thought to propose nuanced theories that explain the mechanisms that underlie priming effects. Thus, this thesis first examined the underlying mechanisms of prosocial (i.e., helpfulness) priming (Study I). Drawing on the findings from Study I, Study II explored when and how helpfulness priming influences information disclosure in an intelligence interview. It was proposed that a helpfulness-focused interview style, which draws on interviewees' primed cognitive helpfulness accessibility, would function as a high-suitability affordance and thus promote disclosure. Study III expanded on Study II. Thus, in addition to the role of construct accessibility, Study III

investigated the theoretical proposition that consistency between interviewees' primed dispositions (i.e., helpfulness) and an interviewer's (helpfulness-focused) interpersonal approach when soliciting information would facilitate disclosure. The following discussion delves into the details of the three studies, and Table 1 provides an overview.

Table 1  
*Overview of Studies Constituting this Thesis*

<b>Study</b>	<b>Method</b>	<b><i>N</i></b>	<b><i>k</i></b>	<b>Independent variables</b>	<b>Dependent variables*</b>
Study I					
Exp. 1a	Online experiment	193	4	2 (priming: helpfulness vs. control) × 2 (perspective taking: first-person vs. third-person)	Intended future helping behavior
Exp. 1b	Laboratory experiment	100	4	2 (priming: helpfulness vs. control) × 2 (perspective taking: first-person vs. third-person)	Intended future helping behavior
Exp. 2a	Online experiment	86	2	Priming (helpfulness vs. control)	Helping behavior (donations to charity)
Exp. 2b	Online experiment	192	2	Priming (helpfulness vs. control)	Helping behavior (donations to charity)
Exp. 3	Laboratory experiment	91	4	2 (priming: helpfulness vs. control) × 2 (situational affordance: high vs. low)	Helping behavior (donations to charity)
Study II	Laboratory experiment	115	4	2 (priming: helpfulness vs. control) × 2 (interview style: helpfulness-focused vs. control)	Amount of information disclosed
Study III	Laboratory experiment	116	4	2 (Priming: helpfulness vs. control) × 2 (Interview style: helpfulness-focused vs. control)	Amount of information disclosed

*Note.* *N* = participants, *k* = conditions.

\*Helpfulness accessibility was included as a mediator variable in all the studies.

## **Study I**

**Background.** This study investigated the underlying mechanisms proposed by contemporary priming theories to explain when and how helpfulness priming effects occur. The current theories suggest that behavioral assimilation to helpfulness priming occurs because the helpfulness prime increases cognitive accessibility to helpfulness-related content, which in turn mediates the impact of the helpfulness prime on helping behavior, when the primed individual is given ample opportunity to enact helping behaviors. Experiment 1 examined the joint influence of helpfulness priming and perspective taking on intended future helping behavior. Experiment 2 investigated the impact of helpfulness priming on willingness to donate to a charity. Experiment 3 examined the joint influence of helpfulness priming and a high- (vs. low-) suitability affordance on willingness to donate to a charity.

We predicted that participants primed with the helpfulness-related content (vs. the neutral topic) would exhibit more helping behavior and helping behavior intentions (Hypothesis 1). In addition, we hypothesized that perspective taking would moderate the main effect of priming on helping behavior intentions, expecting that those participants who took the first-person (vs. third-person) perspective during the priming would exhibit more helping behavior intentions (Hypothesis 2). Furthermore, we anticipated that situational affordance would moderate the relationship between helpfulness priming and helping behavior, such that the priming effect would be stronger in the high- (vs. low-) suitability condition (Hypothesis 3). Finally, we predicted that helpfulness accessibility would mediate the helpfulness priming effect on helping behavior and helping behavior intentions (Hypothesis 4).

### **Experiment 1**

**Overview.** The aim of this experiment was to examine the joint influence of helpfulness priming and perspective taking on intended future helping behavior. Thus, Hypotheses 1, 2, and 4 were examined.

## Experiment 1a

**Method.** The sample consisted of 193 U.S. citizens, recruited via Amazon MTurk (95 women,  $M_{\text{age}} = 34.49$  years). We used a 2 (priming: helpfulness vs. control)  $\times$  2 (perspective taking: first-person vs. third-person) between-groups design. The following procedure was fully computerized and administered online. Participants in the helpfulness priming condition were instructed to visualize either a time when they had been helpful (*first-person perspective*) or another person they consider to be helpful (*third-person perspective*). Afterward, they completed an incomplete story about helpfulness. Correspondingly, the control priming participants reflected on and wrote about their morning routine or a typical student's morning routine. After the priming, cognitive helpfulness accessibility was assessed for all participants using an implicit word fragment/stem task. Finally, all participants completed an intended future helping behavior measure where they indicated the extent to which they were likely to engage in 20 helpful behaviors within the next year. We also conducted extensive awareness assessments of the priming manipulation's influence by following Newell and Shanks's (2014) recommendations.

**Results and discussion.** The main effects of priming and perspective taking were not significant. Participants in the helpfulness priming condition did not exhibit stronger intentions to engage in helping behavior as predicted. Therefore, Hypothesis 1 did not receive support. Furthermore, the Priming  $\times$  Perspective taking interaction did not achieve statistical significance. Thus, Hypothesis 2 was not supported.

Mediation analyses suggested that the effect of priming on helpfulness accessibility was positive and significant, indicating that the helpfulness (vs. control) prime induced higher cognitive accessibility to helpfulness. However, helpfulness accessibility did not significantly predict helping behavior intentions. In addition, the indirect effect of the helpfulness (vs. control) prime, through helpfulness accessibility, on intended future helping behavior was not significant. Thus, Hypothesis 4 did not receive support.

Examination of participants' verbal responses to the awareness check probes suggested that their perceptions about their ability to execute some of the acts (e.g., donate blood) listed in the helping behavior intentions measure, or the likelihood of a given situation occurring within the next year, offers potential explanations for the observed null results. Such feasibility and/or probability constraints may have limited the leeway of the helping behavior intentions measure to capture the influence of the helpfulness prime on helping behavior intentions.

### **Experiment 1b**

**Method.** This was a direct replication of Experiment 1a in a Swedish sample. The sample consisted of 100 university students and community members (77 women,  $M_{\text{age}} = 26.67$  years).

**Results and discussion.** No main effects of priming and perspective taking on helping behavior intentions emerged. Moreover, the interaction between priming and perspective taking on helping behavior intentions was not significant.

Mediation analyses indicated that the helpfulness (vs. control) prime significantly increased helpfulness accessibility. Although helpfulness accessibility was modestly associated with increased helping behavior intentions, helpfulness accessibility did not significantly predict helping behavior intentions by conventional standards. Nonetheless, the indirect effect of helpfulness priming on helping behavior intentions, through helpfulness accessibility, was positive and significant. Providing support for Hypothesis 4, this indicates that the data are consistent with the prediction that helpfulness priming increases helping behavior intentions by increasing helpfulness accessibility.

The difference in sample characteristics between Experiment 1a and 1b provides a potential explanation for why a mediation effect was only observed in Experiment 1b. As noted in the Discussion of Experiment 1a, feasibility concerns may have constrained the potency of the helping behavior intentions measure to capture a helpfulness priming effect in the first experiment. Possibly, the

Amazon MTurk workers, whose remuneration is contingent on completing many experiments, tended to discard the possibility of enacting any of the listed helping behaviors that they judged as unlikely to occur within the year or were slightly taxing, compared to those participants in Experiment 1b who were volunteers tested at a laboratory. It is possible that Amazon MTurk workers prefer tasks that require little time and effort in order to boost their earnings.

## **Experiment 2**

**Overview.** This experiment was designed in response to the null findings and potential weaknesses of the helping behavior intentions measure employed in Experiment 1. First, the priming manipulation was revised to activate a goal to enact helping behavior in addition to increasing helpfulness accessibility. We also created a new dependent measure—donations to a charity—to assess the helpfulness priming effect.

We examined the main effect of priming on helping behavior (Hypothesis 1) and the mediation effect of helpfulness accessibility (Hypothesis 4).

### **Experiment 2a**

**Method.** The sample consisted of 192 Amazon MTurk workers (102 women,  $M_{\text{age}} = 35.46$  years). The participants were randomly assigned to one of two groups in a simple between-subjects research design. Similar to Experiment 1, the priming manipulation consisted of a reflection and writing task. We instructed participants in the helpfulness condition to visualize and write about a past helpful action, focusing on their internal states before they had engaged in the action. Next, helpfulness accessibility was assessed using the same word fragment task used in Experiment 1. We then assessed helping behavior by soliciting donations to be given to a charity. An item, rated on a scale from 0 (*not important at all*) to 10 (*extremely important*), which assessed the extent to which a participant considered donating to the charity important, was included as a potential covariate.



**Results and discussion.** We conducted mediation analyses to examine the focal hypotheses. As observed in the previous experiments, the helpfulness (vs. control) prime significantly increased accessibility to helpfulness-related content. However, such helpfulness accessibility did not significantly predict the total amount donated—our measure of helping behavior. Furthermore, the total effect of priming on helping behavior was not significant, failing to support Hypothesis 1. The mediation effect of helpfulness accessibility was not significant. Therefore, Hypothesis 4 was not supported.

### **Experiment 2b**

**Method.** This experiment was a direct replication of Experiment 1a but conducted with a Swedish sample. The sample consisted of 86 university students and community members (62 women,  $M_{\text{age}} = 27.70$  years).

**Results and discussion.** The helpfulness (vs. control) prime significantly increased helpfulness accessibility. Helpfulness accessibility was positively associated with helping behavior. However, the total effect of priming on helping behavior did not achieve statistical significance. The indirect effect of the helpfulness (vs. control) prime, through helpfulness accessibility, on helping behavior was positive and significant. Providing support for Hypothesis 4, this finding is consistent with the prediction that helpfulness priming indirectly increases helping behavior by boosting helpfulness accessibility.

A comparison of the subjective importance of donating scores between the American (Experiment 2a) and the Swedish (Experiment 2b) samples indicated that, on average, the participants in the American sample considered donating to the charity to be of lesser importance than their Swedish counterparts did. Thus, a possible explanation for why we observed a mediation effect of helpfulness accessibility in Experiment 2b (vs. 2a) is that the invitation to donate was possibly a more suitable affordance for the Swedish participants, who considered donating to the charity more important than their American counterparts.

### Experiment 3

**Overview.** Building upon the previous findings, we manipulated priming and situational affordance orthogonally in Experiment 3 and investigated the interaction between helpfulness (vs. control) priming and high- (vs. low-) suitability affordance on helping behavior. Hypotheses 1 (i.e., the main effect of priming on helping behavior), 3 (i.e., the Priming  $\times$  Situational Affordance interaction), and 4 (the mediation effect of helpfulness accessibility) were examined.

**Method.** We recruited 91 university students and community members (69 women,  $M_{age} = 20.09$  years) from the United Kingdom to participate in the experiment. A 2 (priming: helpfulness vs. control)  $\times$  2 (situational affordance: high- vs. low-suitability) between-groups design was used. The same priming manipulation used in Experiment 2a was implemented in this experiment. Additionally, we maintained the same word fragment task and procedure protocols as used in Experiment 2a, after the priming. We assessed helping behavior by soliciting donations to be given to a charity. However, we manipulated suitability affordance by presenting each participant with one of two situations. A higher need for donations was induced in the high-suitability condition by telling participants that we had raised only 40% of the target amount. Conversely, participants in the low-suitability condition were told that we had already raised all (i.e., 100%) of the target amount. A pilot test ( $N = 81$ ) indicated that the high- (vs. low-) suitability manipulation was significantly more likely to elicit donations to the charity.

**Results and discussion.** Failing to support Hypothesis 1, moderation analysis indicated that the main effect of the helpfulness (vs. control) prime on helping behavior was not significant. Moreover, the main effect of situational affordance and the Priming  $\times$  Situational Affordance interaction on helping behavior was not statistically significant. The latter indicates that no significant differences between the high- and low-suitability affordances emerged, with regard to the effect of the helpfulness (vs. control)

prime on helping behavior. Hence, Hypothesis 3 did not receive support.

On a descriptive level, participants in the helpfulness (vs. control) priming condition displayed higher helpfulness accessibility. However, the relationship between helpfulness accessibility and helping behavior was not significant. The indirect effect of the helpfulness (vs. control) prime, through helpfulness accessibility, on the helping behavior was not significant. Thus, Hypothesis 4 was not supported.

### **General Summary of Study I**

Since the combined results of the five experiments in Study I provide a more reliable estimate of the helpfulness priming main effect than the individual studies, we conducted a cross-experimental meta-analysis to estimate the overall helpfulness (vs. control) priming effect. Each experiment represented a unit of analysis. We used the between-groups data from the helpfulness (vs. control) priming conditions, with the amount of helpfulness as the dependent variable, as assessed using the measures of helping behavior and future helping intentions. The results indicated that the overall main effect of the helpfulness (vs. control) priming on helpfulness was not significant.

In all, the examination of the underlying mechanisms of helpfulness priming revealed mixed results. However, taken together, the findings suggest that helpfulness priming reliably increases cognitive accessibility to helpfulness. Additionally, Experiments 1b and 2b indicated that when helpfulness accessibility was associated with helping behavior, the data were consistent with the prediction that priming increases helping behavior indirectly through helpfulness accessibility.

### **Study II**

**Overview.** The findings of Study I were extended to a HUMINT interview context to examine when and how helpfulness priming influences information disclosure. We theorized that a

helpfulness-focused interview style, which draws on helpfulness accessibility, provides a high-suitability affordance that may facilitate the helpfulness priming effect.

We hypothesized that participants in the helpfulness (vs. control) priming condition would disclose more information (Hypothesis 1). In addition, we predicted an interaction between the helpfulness (vs. control) prime and helpfulness-focused (vs. control) interview style, whereby the helpfulness priming effect would produce a stronger assimilative effect on disclosure when combined with the helpfulness-focused interview style (Hypothesis 2). Finally, we predicted a conditional mediation effect, expecting that the mediation effect of helpfulness accessibility would be stronger in the helpfulness-focused (vs. control) condition (Hypothesis 3).

**Method.** The sample consisted of 115 Swedish university students and community members (84 women,  $M_{\text{age}} = 28.88$  years). A 2 (priming: helpfulness vs. control)  $\times$  2 (interview style: helpfulness-focused vs. control) between-groups design was used. The experimental procedure consisted of four phases, which were disguised to appear as two independent experiments.

*Phase 1 (background and planning).* We used the same background and planning materials designed by Oleszkiewicz et al. (2014). Each participant prepared for an interview, assuming the role of a police informant with some information about an impending terror attack. To prepare for the interview, participants were provided with a booklet that contained incomplete information about a mock terror plot by a left-wing extremist group. We presented the information in a coherent storyline consisting of 37 distinct units of information. Participants received the following instructions (with an incentive) to fulfill the informant role: (a) not to provide too little information (since assisting the police was necessary to be granted free passage out of the country); and (b) not to provide too much information (because participants were to imagine having strong ties to the extremist group). These instructions embody the tenets of the previously discussed arousal cost-reward model (Dovidio et al., 1991) because they induce costs—associated with providing too much or too little information—that mimic a real-world instance.

That is, in the current informant role, providing too much information bears the cost of potentially betraying trusted comrades (viz., imagined strong ties to the extremist group). On the other hand, providing too little information bears the cost of losing the desired benefit (viz., free passage out of the country). Indeed, these instructions have been shown to successfully induce competing motivations to disclose and to withhold information, thereby leading participants to economize their disclosure such that they share some but not all the information at their disposal (e.g., Oleszkiewicz, 2016; Oleszkiewicz, Granhag, & Kleinman, 2017).

***Phase 2 (priming).*** When participants indicated completion of Phase 1, they were invited to complete the supposed second experiment. The priming phase was fully computerized and we used the same procedure protocols and materials as used in Study I (Experiment 2b) to administer the helpfulness (vs. control) prime and to assess helpfulness accessibility.

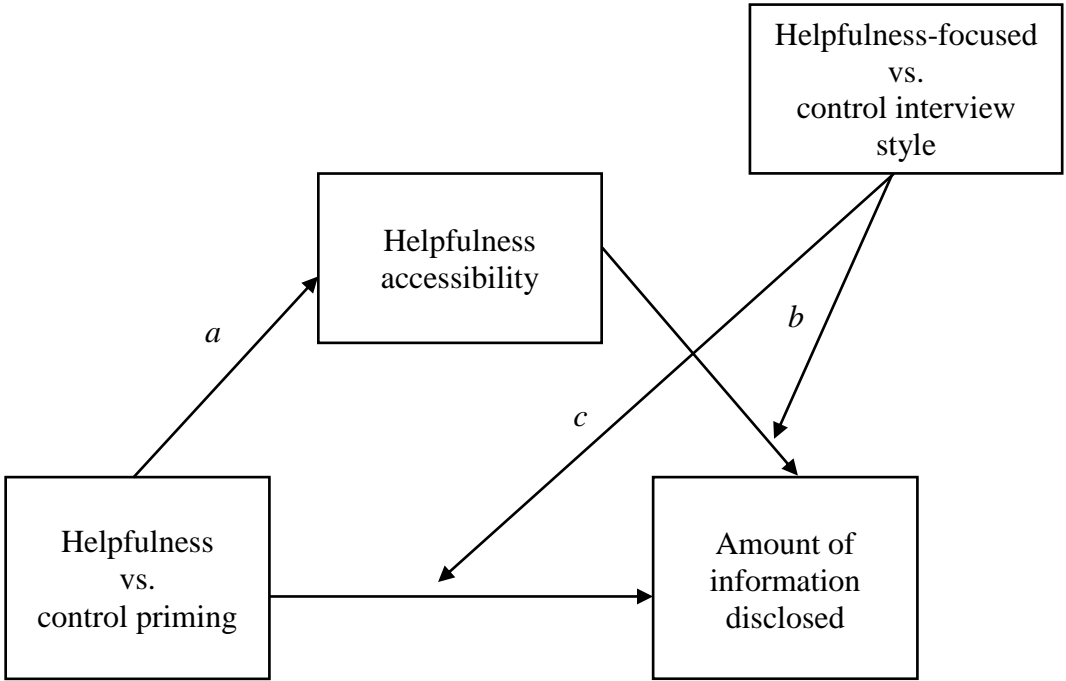
***Phase 3 (the interview).*** Participants were interviewed via an audio Skype call approximately three minutes after the priming and were permitted to fabricate information and lie.

The interview protocols were scripted and consisted of three thematically similar non-directive and open-ended questions. In each interview condition, the interviewer opened with an introduction, then asked for details about the attack. Next, the interviewer requested additional and omitted information respectively. Despite the similar internal structure of the interview protocols, the specific questions were phrased differently. In the helpfulness-focused interview condition, the questions were phrased to exude high-fit with helpfulness concerns (e.g., “We hope you can *help* us by providing details about the plans for the upcoming attack...”). Conversely, the phrasing of the questions in the control interview condition was relatively neutral to helpfulness (e.g., “You can start by telling us what you know about this attack”).

**Phase 4 (post-interview questions).** After the interview, each participant completed a computerized post-interview questionnaire where we conducted extensive awareness assessments.

**Results and discussion.** A moderation analysis indicated that the main effects of priming and interview style on information disclosed were not statistically significant. The former indicates that participants who received the helpfulness (vs. control) prime did not disclose significantly more units of information. Hence, Hypothesis 1 was not supported. Moreover, the interaction between priming and interview style was not significant. Thus, Hypothesis 2, which predicted that the helpfulness (vs. control) prime would produce a stronger assimilative effect on disclosure when combined with the helpfulness-focused (vs. control) interview style, did not receive support.

We conducted a conditional mediation analysis, allowing the helpfulness-focused (vs. control) interview style variable to moderate the helpfulness accessibility and helpfulness (vs. control) prime to disclosure links, in order to examine Hypothesis 3. On a descriptive level, the participants who received the helpfulness (vs. control) prime displayed higher levels of helpfulness accessibility (path *a* in Figure 1). As observed in the previous moderation analysis, the Priming  $\times$  Interview Style interaction was not significant (path *c*). However, the Helpfulness Accessibility  $\times$  Interview Style interaction was statistically significant (path *b*). The decomposed interaction revealed that at low levels of helpfulness accessibility, the helpfulness-focused (vs. control) interview style had a significantly negative effect on disclosure. This indicates that the helpfulness-focused interview style, which drew on helpfulness accessibility, decreased disclosure when such helpfulness accessibility was lacking. Though the effect of the helpfulness-focused (vs. control) interview style was positive at high levels of helpfulness accessibility, the effect was not statistically significant.



*Figure 1.* A conceptual model of the conditional mediation illustrating the relationships between priming, interview style, amount of information disclosed, and helpfulness accessibility.

Regarding mediations, the helpfulness (vs. control) prime had a significant negative indirect effect, through helpfulness accessibility, on disclosure in the control interview style condition. Thus, these data suggest that the helpfulness prime reduced disclosure by increasing helpfulness accessibility when participants were interviewed using the control interview style. This finding should, however, be interpreted with caution. Since the helpfulness (vs. control) prime did not significantly increase helpfulness accessibility by conventional standards, interviewees' variation in helpfulness accessibility may have also been due to more stable preexisting sources (e.g., helpfulness values). The mediation effect of helpfulness accessibility was positive but not statistically

significant among participants who were interviewed using the helpfulness-focused style. Overall, Hypothesis 3 received partial support.

In summary, the findings of Study I suggests that when accessibility to a primed motivation is lacking, using an interview style that seeks to draw on the primed motivation could counteract the goal of increasing disclosure. The previously discussed proposition that a helpfulness-focused interview style, which draws on helpfulness accessibility, would serve as a high-suitability affordance, and thus enhance—not counteract—the assimilative effect of the helpfulness prime on disclosure, cannot fully account for the findings. The proposition, which was deduced from current priming theories, largely informed the design of Study II. However, the proposition would not have predicted (a) the observed negative effect of the helpfulness-focused interview style when helpfulness accessibility was lacking, nor (b) the negative mediation effect of helpfulness accessibility among participants interviewed using the control interview style. We, hence, speculated that interpersonal dynamics between the interviewer and interviewee, in addition to the priming effect, may have been at play. Thus, we drew on principles of the interpersonal octagon (Birtchnell, 1994), which considers such interpersonal dynamics, to fully explain the findings.

Birtchnell (1994) posited that when pursuing a goal that requires interpersonal interaction with another individual, using an interpersonal style that considers the other individual's state of mind and/or needs is more likely to be constructive (i.e., adaptive) than a relating style that does not consider the others' state of mind (i.e., maladaptive). Hence, in terms of interpersonal relating, it is possible that among participants experiencing low helpfulness accessibility, the helpfulness-focused interview style functioned maladaptively—to the relating goal of increasing disclosure—because it was inconsiderate of interviewees' current low helpfulness accessibility.



### Study III

**Overview.** Drawing on the findings in Study II, Study III examined the proposition that consistency between an interviewee's primed helpfulness dispositions and an interviewer's interpersonal approach when eliciting information would facilitate disclosure. We aimed to increase the ecological validity in this study by expanding the interview protocols previously used in Study II to now include probing follow-up questions. In addition, we explored the potential influences of interviewees' interview experiences (e.g., autonomy and trust) and their perceptions about the interviewer. We predicted that participants primed with the helpfulness-related content (vs. control) would disclose more information (Hypothesis 1). Additionally, we predicted an interaction whereby the effect of the helpfulness (vs. control) prime would be stronger when combined with the helpfulness-focused (vs. control) interpersonal approach (Hypothesis 2). Finally, we predicted a conditional mediation effect, expecting that the mediation effect of helpfulness accessibility would be stronger in the helpfulness-focused (vs. control) interpersonal condition (Hypothesis 3). The design of Study III was similar to Study II, however, we included some important variations that are discussed in the following procedure protocol. The experimental procedure consisted of five phases, which were disguised to appear as two independent experiments.

**Method.** The sample consisted of 116 Swedish university students and community members (93 women,  $M_{\text{age}} = 29.91$  years). The participants were randomly assigned to one of four groups in a 2 (priming: helpfulness vs. control)  $\times$  2 (interpersonal approach: helpfulness-focused vs. control) between-subjects design.

**Phase 1 (helpfulness values).** We assessed participants' dispositional orientation toward helpfulness using a survey where participants indicated the importance of helpfulness values as a personal life-guiding principle. The rating was provided using a 9-point Likert scale (0 = *opposed to my principles*, 1 = *Not important*, 4 = *important*, 9 = *of supreme importance*). This was examined as a potential covariate when testing the influence of the independent

variables on disclosure. The survey was administered prior to participants' arrival at the lab for the main experiment.

***Phase 2 (background and planning).*** We used the same background and planning materials, designed by Oleszkiewicz et al. (2014), as used in Study II. A pilot test ( $N = 373$ ) indicated that all 37 distinct pieces of information in the background and planning material were considered to be substantially relevant to a police investigation. Participants were incentivized to economize their disclosure in order to induce competing motivations to disclose and withhold information.

***Phase 3 (priming).*** After completion of Phase 2, we primed and assessed participants' cognitive accessibility to helpfulness-related content, using the same materials and procedure protocols as used in Phase 2 of Study II.

***Phase 4 (the interview).*** Similar to Study II, each participant was interviewed about three minutes after the priming, and we implemented the same procedure protocols. However, unlike Study II, the scripted interview protocols consisted of three thematically similar open-ended questions that solicited specific details about the attack. Each interview condition opened with an introduction and request for details about the members of the terrorist group planning the attack. The next question, which included four sub-questions, solicited information about the specific plans for the attack. Finally, the interviewer requested additional information and closed the interview after the informant responded.

The specific questions in the helpfulness-focused and control interpersonal approach conditions were phrased differently to exude high-fit with helpfulness concerns or consisted of direct questions, respectively.

***Phase 5 (post-interview questions).*** Each participant completed a computerized post-interview questionnaire after the interview, where they provided ratings about their interview experiences. These comprised the extent to which they felt (a)

autonomy in choosing what information to disclose, (b) trust in the interviewer, and (c) at ease during the interview. The ratings were provided on a 7-point scale (1 = *do not agree at all*, 7 = *agree completely*). Finally, participants indicated their perceptions of the interviewer using 7-point Likert scales. We included perceptions about the interviewer's sympathy (-3 = *not sympathetic at all*, 3 = *very sympathetic*), friendliness (-3 = *not friendly at all*, 3 = *very friendly*), and interpersonal warmth (-3 = *not warm at all*, 3 = *very warm*), which were aggregated to create an interviewer likeability index.

**Results and discussion.** We analyzed the data using the same analyses strategy as in Study II. Overall, the analysis including the helpfulness values variable did not influence the nature of the results.

The main effects of priming and interview approach on the amount of information disclosed were not statistically significant. This finding indicates that participants primed with the helpfulness content did not disclose significantly more information, as predicted. Thus, Hypothesis 1 did not receive support. The Priming  $\times$  Interview Approach interaction was not significant by conventional standards. However, a conditional effects analysis to examine the interaction in detail revealed that participants who received the helpfulness (vs. control) prime disclosed significantly more information when the helpfulness-focused approach was used. The helpfulness priming effect on information disclosure was not significant when the control approach was used. Hence, Hypothesis 2 received some support. Finally, the conditional mediation analysis revealed no significant mediation effects.

Regarding participants' interview perceptions, participants in the helpfulness-focused approach condition rated the interviewer as more likable than their counterparts in the control approach condition did. Additionally, participants who were interviewed using the helpfulness-focused (vs. control) approach reported feeling more trust in the interviewer, more at ease during the interview, and

perceived a higher level of autonomy in deciding what information to disclose.

In summary, the findings of Study III provided some support for the theoretical proposition that consistency between an interviewee's primed (helpfulness) disposition and an interviewer's (helpfulness-focused) interpersonal approach, when soliciting information, could facilitate disclosure. Specifically, the full Priming  $\times$  Interview Approach moderation analysis suggested that helpfulness priming and a helpfulness-focused interpersonal approach may work symbiotically to facilitate disclosure. Additionally, even though participants in the helpfulness-focused (vs. control) approach condition reported more positive perceptions of the interviewer, the helpfulness-focused interpersonal approach promoted information disclosure only when helpfulness had been primed.

## GENERAL DISCUSSION

---

The objective of this thesis was to examine the possibility of eliciting information through priming and delineate the underlying processes thereof. Helpfulness motivation was primed as a means to facilitate disclosure based on previous research findings indicating that helpfulness motivation positively predicts cooperation (e.g., Van Lange, 1999), and cooperation fits neatly with the interviewer's task of soliciting information. This project commenced right around the start of the debate about the reliability of priming effects (e.g., Newell & Shanks, 2014). Thus, to conduct a well-informed application of priming in intelligence interview contexts, the underlying processes of helpfulness priming were first examined. The findings were then extended to an intelligence interview to address when and how (helpfulness) priming influences information disclosure.

### **The Underlying Mechanisms of Helpfulness Priming**

Study I, which consisted of five main experiments and a pilot test, was dedicated to investigating the processes that elicit helpfulness priming effects. From a synthesis of current priming theories, it was deduced that assimilative helpfulness priming effects result from the interplay between increased cognitive accessibility to helpfulness and suitability affordances that promote the enactment of helping behavior.

The results of experiments in Study I indicated that the helpfulness priming reliably increased cognitive helpfulness accessibility. However, unlike previous research (e.g., Arieli et al., 2014; Fitzsimons & Bargh, 2003; Macrae & Johnston, 1998), the total effect of the helpfulness prime on helping behavior was not significant in any of the five experiments. Recent research by Caruso, Shapira, and Landy (2017) has similarly found that money primes reliably activated cognitive accessibility to the concept of money but did not impact any subsequent dependent measure. Furthermore, the potential moderators, perspective taking and situational affordance, did not moderate the link between helpfulness priming and helping behavior.

The indirect effect of the helpfulness prime, through helpfulness accessibility, on helping behavior, was also examined. Overall, the examination revealed mixed results. Only two of the five experiments (i.e., Experiments 1b and 2b) indicated significant mediation effects of helpfulness accessibility. The results of those experiments suggested that when helpfulness accessibility was positively associated with helping behavior, the data were consistent with the hypothesis that helpfulness priming indirectly increases helping behavior by increasing helpfulness accessibility. One possible explanation to account for the indirect helpfulness priming effect, in the absence of a total helpfulness priming effect is that, perhaps, helpfulness accessibility positively mediates the helpfulness priming effect. Thus, it is possible that helpfulness priming indirectly increases helping behavior, through helpfulness accessibility, even though the sum of all the mechanisms (i.e., total effect) that link helpfulness priming to helping behavior is zero. These mechanisms may include an array of suppressors and moderators. Wheeler and DeMaree (2009) have proposed that a total priming effect usually consists of multiple mechanisms.

### **Theoretical Implications**

Taken together, and in line with the theories categorized under the construct accessibility (Eitam & Higgins, 2010; Wheeler et al., 2014; Schröder & Thagard, 2014) and situation-based (Loersch & Payne, 2011; Barsalou, 2016) themes, the experiments in Study I suggest that priming reliably increases cognitive accessibility to the primed construct. Retrospective reports, from the awareness probes, indicated that some participants may have noticed the priming influence on their increased primed construct accessibility. This is to be expected, since the delivery of the prime, in all of the experiments, was upfront and effortful. Nonetheless, it is likely that hindsight bias (Nisbett & Wilson, 1977) and retrospective inference, caused by the awareness assessment instructions (Ericsson & Simon, 1980), played a role in such awareness reports. Thus, Study I was unable to fully elucidate the extent to which priming automatically produces assimilative changes in construct accessibility. Failing to support all the previously discussed priming theories, however, there was no evidence of a total

priming effect on behavior, in any of the experiments, in spite of the significant increase in construct accessibility. In addition, the proposition put forth by the active-self account (Wheeler et al., 2007; 2014), that taking the first-person perspective during a priming episode is likely to enhance the assimilative priming effect by inducing a self-prime overlap, generally did not receive support. Perspective taking did not moderate the priming effect in the first experiment when tested. In the remaining experiments (i.e., Experiments 2 and 3), all participants took the first-person perspective during priming; again, a significant assimilation to the prime on target behavior was not observed.

The moderating role of suitability affordance, as proposed by the situation-based theme (Loersch & Payne, 2011; Barsalou, 2016) and demonstrated by Macrae and Johnston's research, also did not receive support in the critical experiment (i.e., Experiment 3). Perhaps, in the suitability affordance pilot test, participants in the high-suitability affordance condition may have overstated their generosity because the helping scenario was hypothetical. Hence, it is possible that in the main experiment, which featured a consequential helping scenario, the high-suitability manipulation was not evocative enough to elicit higher donations.

In all, the mediation effect analyses provided some support for situation-based models, which posit that assimilative priming effects are most likely to occur in situational affordances that encourage the enactment of the primed behavior (Loersch & Payne, 2011; Barsalou, 2016). In the two experiments where priming had an indirect assimilative effect on the target behavior, participants seemed to perceive a more feasible (i.e., Experiment 1b) or relevant (i.e., Experiment 2b) suitability affordance than in the three experiments where priming had neither direct nor indirect influence on behavior (i.e., Experiments 2a, 2b, and 3). Furthermore, in general support of the current theoretical perspectives of priming, the mediation results suggest that variability in construct accessibility is an important predictor of priming effects. That is, the indirect effect of priming achieved significance only in the experiments where construct accessibility was positively associated with the target

behavior. In the cases where construct accessibility displayed weak to no association with behavior, neither direct nor indirect priming effects emerged.

### **When and How Helpfulness Priming Influences Information Disclosure**

Based on the findings of Study I, Study II examined the proposition that when helpfulness has been primed, a helpfulness-focused interview style, which draws on the previously primed helpfulness motivation, would function as a high-suitability affordance and enhance the priming effect on disclosure. The majority of the hypotheses in Study II did not receive support. That is, participants who were primed with the helpfulness-related content did not disclose significantly more information than their unprimed counterparts did. In addition, there was no differential effect of the helpfulness prime when the helpfulness-focused, nor control interview, was used. Unexpectedly, however, it was discovered that among participants who exhibited low levels of helpfulness accessibility, the helpfulness-focused interview style decreased disclosure. The current theoretical perspectives of priming, on which Study II was based, could not fully account for the results. The priming theories would have predicted an increase in disclosure when there was consistency between helpfulness accessibility (i.e., predisposition) and interview style, but not the observed decrease in disclosure when there was a mismatch. Birtchnell's (1994) theory about interpersonal relating (i.e., the interpersonal octagon) was employed, in addition to the priming theories, to fully explain the finding.

Birtchnell (1994) proposed that adaptive (i.e., constructive) and maladaptive (i.e., unconstructive) relating styles revolve around eight octants. Most relevant to the findings of Study II are the vertical octants, which indicate relating styles that signal dominance (i.e., upperness) or submission (i.e., lowerness). It was speculated that, in terms of the interpersonal octagon, the helpfulness-focused interview style may have signaled submissiveness on the side of the interviewer and positioned the interviewee to assume dominance with regard to providing information (e.g., "We hope you can *help*



us by providing details about the plans for the upcoming attack”). It was proposed that at low levels of helpfulness accessibility, the helpfulness-focused interview style may have functioned maladaptively (i.e., low-suitability affordance). That is, the helpfulness-focused interview style counteracted the relating goal of increasing disclosure because it consistently sought help from interviewees who were least predisposed to be helpful. Possibly, signaling the interviewee to be helpful and inviting them to assume a dominant relating position (i.e., provide information), when in fact helpfulness is sparsely accessible, may have been a maladaptive approach. Indeed, Alison, Alison, Noone, Elntib, and Christiansen (2013) have found that interviewees disclosed less information when interviewers displayed even minimal amounts of maladaptive interpersonal behaviors during an interview.

The findings of Study II inspired Study III, which examined the theoretical proposition that consistency between helpfulness priming and a helpfulness-focused interpersonal approach would facilitate information disclosure. Specifically, it was proposed that when helpfulness priming predisposes the interviewee toward helpfulness (i.e., cooperation), employing a high-suitability affordance in the form of a helpfulness-focused interpersonal approach would promote disclosure. Overall, the proposal received some support. The results indicated that the helpfulness-focused interpersonal approach led primed participants to disclose significantly more information than their unprimed counterparts did. The participants interviewed using the helpfulness-focused approach rated the interviewer as more likable and reported higher levels of trust in the interviewer than the participants interviewed using the control approach did. Nonetheless, the helpfulness-focused approach increased disclosure only when helpfulness had been primed.

It is worth noting that the effects observed in Study II and III were small by conventional standards. However, these effect sizes are similar to previous research that has examined priming influences in intelligence interviews (e.g., Dawson et al., 2015; Dawson, et al., 2017). That notwithstanding, any amount of information loss or gain could be damaging or highly beneficial in intelligence contexts.

Thus, these small effects still have the potential to produce important impacts in the real world (see Lakens, 2013).

### **Applied Implications**

Taken together, Study II and Study III provide some useful practical implications regarding information elicitation through priming. First, the studies revealed no evidence that priming had a direct and/or independent influence on information disclosure. Instead, Study III suggested that a priming influence and a complementary interpersonal approach may work synergistically to increase disclosure in an intelligence interview. Interpersonal relating is an essential aspect of intelligence interviewing because intelligence interviewing typically involves some level of interpersonal interaction between an interviewer and an interviewee (Granhag et al., 2015). Birtchnell (1994) noted that in order to achieve a relating goal (i.e., information disclosure), it is important to implement an interpersonal approach that is considerate of the other relator's current state of mind and/or needs. Since priming predisposes the interviewee toward behaving consistently with the primed motivation, an interview style that embodies an interpersonal approach that encourages the enactment of the primed motivation is most likely to maximize the utility of the prime (i.e., disclosure), as observed in Study III.

Dawson et al. (2015) have cautioned interviewers to be wary of inadvertently priming certain concepts since such primes may influence disclosure decisions. Study II lends indirect support to such a caution. The findings of Study II indicated that implementing a prime-focused interpersonal approach (i.e., interview style), which draws on the primed motivation, when the interviewee is not effectively predisposed to the primed motivation, could counteract the goal of increasing information disclosure. Thus, it would be advantageous for interviewers who plan to harness potential benefits of combining a prime and a complementary interpersonal approach (as discussed above) to tailor their priming tactics to fit a specific disclosure-related characteristic of the interview, in order to effectively predispose the interviewee to the motivation of interest.

## **Limitations and Future Directions**

There is an important limitation in this thesis that is worth highlighting. The assessment of helpfulness accessibility, using a word fragment completion task, was identical throughout all the studies. During the word completions, all participants self-generated helpfulness-related (and relatively neutral) words. Mussweiler and Neumann (2000) posit that such self-generating priming procedures are more likely to induce misattribution of the source the priming influence as self- rather than prime-generated. Consequently, a self-generated prime is more likely to induce assimilation to the prime than external and effortful priming. Two experiments reported by Mussweiler and Neumann (2000) supported this assertion. It was found that participants who self-generated primes assimilated their judgments to the prime and the participants who received the external primes contrasted their judgments away from the prime (see also Hayes and Schimel, 2018). It is possible that in the studies presented in this thesis, the participants in the control groups were inadvertently primed with helpfulness-related content by generating helpfulness-related words. Thus, the total effect of the helpfulness (vs. control) prime on helping behavior and information disclosed may have been obscured. In addition, the self-generation process of the helpfulness accessibility measure may have induced a high self-prime overlap in both first- and third-person perspective conditions. Hence, eliminating the possibility of disentangling the potential role of perspective taking in inducing the self-prime overlap (i.e., Study I, Experiment 1).

I acknowledge the limitation discussed above. That notwithstanding, it was deduced from previous research that different sources of construct accessibility can influence behavior additively. For example, Higgins and Brendl (1995) have found that if a primed construct is applicable in an affordance, sufficiently higher accessibility to the prime can yield stronger assimilative judgments in spite of awareness of the priming event (see also Bargh, Bond, Lombardi, & Tota, 1986). In the individual studies, participants who received the helpfulness prime generally self-generated more helpfulness-related words than their counterparts in the control condition did. Additionally, all participants took the first-

person perspective during priming in the majority of the experiments (i.e., Study I [Experiments 2 and 3], Study II, and Study III. Hence, it was expected that both sources of helpfulness accessibility (i.e., external priming manipulation and self-generated words) would combine additively to produce a larger effect in the helpfulness priming conditions. Moreover, reported awareness of the possible influence of the priming manipulation, which could have led primed participants to contrast their behavior away from the prime (i.e., Mussweiler & Neumann 2000), did not influence the nature of the results in Study I. In fact, no significant contrast effects emerged in any of the studies. Furthermore, as no participants reported awareness of the priming manipulation's influence in Study II, and only two participants in Study III reported awareness, it is reasonable to assume that the intended effect of the helpfulness prime was not apparent to participants in Study II or Study III. It is also worth noting that the awareness reports were retrospective. Thus, the awareness probe instructions could have triggered participants to infer the priming manipulation's ostensible influence on their behavior.

The body of work examining the potential usefulness of priming in HUMINT contexts is in the nascent stages, and the specific processes that elicit the influence of priming on disclosure were relatively unknown when this project (i.e., this thesis) commenced. Current priming theories suggested that variability in primed construct accessibility is a critical component in the manifestation of priming effects. Thus, an explicit examination of the role of construct accessibility was necessary. Unfortunately, the assessment of construct accessibility in this thesis suffered from the shortcomings discussed in the preceding paragraph. Future research would benefit from implementing assessments of construct accessibility that are able to elucidate how priming influences disclosure without accidentally priming control groups. This is indeed a challenging task, since other possible measures of construct accessibility (e.g., the lexical decision task) also have the potential to expose control groups to the primed construct.

Pirlott and MacKinnon (2016) have proposed some alternative manipulation-of-mediator research-design approaches to experimental mediation that may be useful in providing insights about the mediating role of construct accessibility in the relationship between priming and information disclosure. One such approach is the *double randomization design*, in which a first experiment is dedicated to investigating the effect of an independent variable on both a mediating and a dependent variable to allow a clear estimation of any causal influence. Afterward, a second experiment is implemented where participants are randomly assigned to different levels of the mediating variable determined by how the previous independent variable influenced the mediator in the first experiment. Pirlott and MacKinnon (2015) note that if the different levels of the mediator significantly influence the dependent variable in the second experiment, then there is evidence to support an indirect effect of the independent variable on the dependent variable, through the mediator (see also Spencer, Zanna, & Fong, 2005).

Another limitation of this thesis pertains to the use of Skype interviews and the scripted nature of the interview protocols used in Study II and Study III. These features are not typical of real-world, face-to-face intelligence interviews. Hence, the external validity of Study II and Study III is reduced. Ideally, an interviewer in an actual intelligence interview would probably probe the responses of the interviewee further and be more sensitive to nuanced reactions. However, the purpose of the thesis was to investigate underlying mechanisms. In that regard, the scripted interview protocols and Skype interviews were deliberately employed to ensure interviewer equivalence across the interview conditions and maximize internal validity. Future research that aims to increase external validity would benefit from implementing semi-structured interview protocols, which embody the relevant prime-focused interpersonal approach. Using semi-structured interview protocols opens up the possibility for researchers to undertake additional relevant investigations, such as the effect of the interplay between a prime and its complementary interpersonal approach on interviewer-interviewee interpersonal dynamics. For instance, elements of the Observing Rapport-Based Interpersonal Techniques (ORBIT; Alison, Alison, Elntib & Noone,

2012) coding framework, which assess (mal)adaptive interaction patterns between an interviewer and interviewee, could be implemented to further explore whether (in)consistency between a prime and a (dissonant)complementary interpersonal approach, indeed elicits (mal)adaptive interviewee behavior. These recommendations may help researchers capture more nuanced insights and advance knowledge about subtle influences in intelligence interviews.

The extant research examining priming influences in intelligence interviews has found weak and preliminary results in support of priming. Similarly, the findings of this thesis are preliminary. It is possible that the various studies in this emerging body of research—including those in this thesis—have been underpowered because of the complex nature of potential priming effects in intelligence interviews. I acknowledge the limitation that the null findings of the interview studies (i.e., Study II and Study III) could have been due to low power. However, the design of the interview studies, in part, were conceptually based on Macrae and Johnston's (1998) research, which has demonstrated a consistent medium-sized Helpfulness Priming  $\times$  Situational Affordance interaction effect on helping behavior ( $d = .59$  and  $.51$ ). Sensitivity analyses suggested that the interview studies were adequately powered to detect a medium-sized interaction effect. The findings of this thesis hint at the possibility that in an intelligence interview, a priming tactic elicits additional interpersonal influences, which may facilitate or inhibit the effect of the priming tactic on information disclosure. As discussed, the extent of symbiosis between the priming tactic and an interviewer's interpersonal approach, when soliciting information, potentially contributes to the conduciveness of the priming influence to facilitating disclosure. Thus, in light of the potential benefits of priming, high-powered replications and theoretical extensions of the current findings are needed to fully uncover the nuanced interplay between priming and interpersonal dynamics in an intelligence interview.

## **Priming Tactics and Interviewee Autonomy: An Ethical Analysis**

In line with previous research (e.g., Dawson et al., 2015; Dawson et al., 2017), the findings of this thesis suggest that the use of priming tactics in HUMINT interviews could have a subtle influence on interviewees' disclosure. Critics may argue that interviewees' lack of awareness of the intended purpose of priming influences on their disclosure raises concerns about the extent to which such subtle influence tactics amount to morally problematic infringements on interviewees' autonomy; that is, freely deciding the specific type and amount of information to share. Indeed, Aarts and van Den Bos (2011) have found that individuals' beliefs in their ability to cause a preferred action and the corresponding outcome are particularly strong when unconscious priming of the action outcome engenders experiences of self-agency, when the primed outcome occurs. Put simply, primes that mentally activate action outcomes, before an individual actually performs the action and perceives the resultant outcome, lead individuals to erroneously assume that their behavior was self- rather than prime-generated (Aarts & van den Bos, 2011). In that light, one may argue that priming a disclosure motivation to increase interviewees' disclosure could give the interviewee a false sense of self-agency and lead the interviewee to make a decision (i.e., disclose more information) outside of their actual will and reason. I use the phrase *will and reason* to denote behaviors an actor performs due to a self-generated motive.

Hartwig, Luke, and Skerker (2016) have noted that individuals' autonomy—the ability to make independent decisions without interference—are inextricably linked with their human rights. Thus, in the wake of calls for ethically defensible interview tactics (e.g., Fallon, 2014), apprehensions about the potential for priming tactics to grossly violate interviewees' rights, by unjustifiably infringing on their autonomy, are not unfounded. Nevertheless, the inherent limitations of priming effects, as well as the ethos and purpose of priming tactics in the intelligence interview context, show that using priming as a tool to facilitate disclosure does not necessarily infringe on interviewees' autonomy. The following discussion, which draws on Di Nucci's (2012) contentions about the

impact of priming on free will, outlines a supporting argument. The propositions therein are not meant to be exhaustive. Instead, the reflections are intended to stimulate a discussion about the ethics of implementing subtle influence tactics to elicit information. It is also worth noting that I have focused solely on the impact of priming tactics on autonomy in intelligence interview contexts. The interested reader should see Skerker (2010) for a thorough discussion about the morality of interrogation (i.e., investigative interviewing).

Di Nucci (2012) has argued that priming influences are only efficacious within the will and reason of the primed individual. That is, the body of work on priming does not suggest that when individuals are under a priming influence it is impossible for them to perform behaviors that are not congruent with the prime. In fact, proponents of priming have maintained that primes do not have an unbridled influence on behavior (e.g., Dijksterhuis & Bargh, 2001). As noted in the earlier discussion about the origins and theoretical perspectives of priming, the influence of a prime can be inhibited when the primed individual perceives disincentives associated with the primed suggestion and/or when the primed suggestion is incompatible with the individual's current goals. These propositions have been supported empirically; in their experiment, Macrae and Johnstone (1988) found that when helpfulness had been primed, participants enacted more helping behavior than their unprimed counterparts did, by picking up more pens in aid of an experimental confederate who had dropped the pens. Critically, however, the helpfulness priming effect manifested only when the primed participants perceived that there was enough time to offer their help. The helpfulness priming effect was eliminated when the primed participants perceived that they were running late for another experiment. These findings are also in line with propositions of the previously mentioned situation-based theme of priming effects (Loersch & Payne, 2011; Barsalou, 2016), which posit that the occurrence of a priming effect is moderated by the behaviors allowed in a particular situation. These findings, thus, indicate that primes do not limit individuals' executive control over their decisions and behaviors (but, see Bargh, 2008). In that regard, it is unwarranted to conclude that priming tactics are overly manipulative such that



implementing priming as a tool to elicit information totally nullifies the interviewee's self-agency in determining whether to share or completely withhold information.

As mentioned in the Introduction, in intelligence interview contexts, human sources who possess vital information are typically motivated to both disclose and withhold information (Herbig, 2008). Hence, such interviewees are usually semi-cooperative and implement information management strategies to satisfy their personal objective of appearing cooperative by providing some information to partially satiate the interviewer's information objectives. The purpose of priming in the intelligence interview is to harness the disclosure motivations of such semi-cooperative interviewees in order to increase their disclosure. Since priming effects are inhibited by disincentives and conflicting goals, it is unlikely that priming tactics could lead interviewees who have decided not to share any information at all (i.e., fully uncooperative) to disclose information because such disclosure would not be within their will and reason to be uncooperative. It is possible that such interviewees would provide completely deceptive information in order to seem cooperative. Such an outcome indicates that the interviewee has contrasted their behavior away from the prime, which would demonstrate that no assimilative priming effect has occurred.

It can be argued that showing that primed individuals have control over their behaviors still leaves unanswered the question of intentionality because priming effects are often reported to occur outside of individuals' awareness (Di Nucci, 2012). According to classic philosophical conceptions of intentional action (e.g., Davidson, 1963), an individual has performed an action intentionally if that individual has a favorable attitude toward said action and believes that performing the action would fulfill that favorable attitude. Thus, intentional action has occurred when a favorable attitude and the belief leads the individual to perform the action. In that light, Di Nucci (2012) argues that if the behaviors of control groups (in priming experiments) that resemble the targeted primed behavior are considered to be intentional, then the behaviors of primed participants ought to be intentional as well. The following

illustration is modeled after a similar example offered by Di Nucci (2012). Considering Study II and Study III of this thesis, it is uncontroversial to assume that the information units disclosed by participants in the control condition, who were interviewed using the control interview approach, were disclosed intentionally. If so, then it ought to be granted that helpfulness-priming participants, who were interviewed using the helpfulness-focused approach, must have also shared their information units intentionally.

To mimic the mindset and behavior of a typical semi-cooperative interviewee, recall that as part of their role-taking instructions, participants were incentivized to economize their disclosure. That is, (a) not to provide too little information (since assisting the police was necessary to be granted free passage out of the country), and (b) not to provide too much information (because participants were to imagine having strong ties to the extremist group). Under the assumptions of the previously discussed arousal: cost-reward model of helping behavior (Piliavin et al., 1981; Dovidio et al., 1991), the most likely course of action for the interviewee to fulfill the information management dilemma is to help indirectly by sharing at least some information. Thus, in their role-taking persona, all participants had some favorable attitude toward disclosing information and believed that sharing at least some information would positively serve the favorable attitude (i.e., being a semi-cooperative informant). Hence, if the control participants disclosed their units of information intentionally to fulfill the semi-cooperative informant role, then so did the helpfulness priming participants. This is because priming effects are one of many antecedents that play a role in influencing behavior (e.g., Wheeler & DeMarree, 2009; Klatzky & Creswell, 2014; Friesen & Creswell, 2015). Thus, the combined effect of the helpfulness priming and the helpfulness-focused interview approach is one of the numerous causal factors—not the primary (i.e., rational) factor—that led such participants to disclose the units of information they did (see Davidson, 1963 on rational and causal explanations). Indeed, the priming effects observed in the individual studies did not account for much of the variance in primed participants' disclosure. The interested reader

should see Lumer (2017) for a more in-depth discussion on automatic behavior and intentionality.

To conclude, I concur with Di Nucci's (2011) proposal that priming effects are only efficacious in scenarios in which multiple options equally satisfy an actor's goals and the actor is not compelled to choose a particular option. In that regard, I propose that priming tactics do not amount to a gross moral violation of interviewees' autonomy because such tactics are intended to specifically increase semi-cooperative—not uncooperative—interviewees' disclosure. Since semi-cooperative interviewees are typically motivated to both disclose and withhold information, an intelligence interview in such instances become a case where any amount of information the interviewee discloses rationally and equally satisfies their objective to be semi-cooperative. Thus, whatever amount of information a semi-cooperative interviewee shares due to the influence of a prime and a prime-focused interview approach is still within their will and reason.

### **Concluding Remarks**

To contribute to the emerging body of work examining priming influences in intelligence interviews, the present thesis sought to map out the underlying mechanisms that elicit the impact of priming tactics on information disclosure. The work was based on a synthesis and empirical examination of current theoretical perspectives that explain how primes affect individuals' behavior. In all, the findings indicated that priming tactics can have some subtle influence on disclosure. Specifically, it was found that when a disclosure motivation has been primed, soliciting information using a complementary interpersonal approach that draws on the primed motivation could facilitate the interviewee's disclosure. It was also discovered that implementing such a prime-focused interview approach when the interviewee is not sufficiently predisposed to the primed motivation could counteract the goal of increasing disclosure. This work provides initial empirical evidence about when and how priming tactics may facilitate and possibly discourage disclosure. Adding to the emerging body of research on priming in

intelligence interviewing, this thesis highlights the importance of implementing prime-focused interview approaches to harness interviewees' primed motivations. Furthermore, this work has laid the foundation for future research to examine how various primed motivations work in tandem with their complementary interview approaches to influence disclosure.

## REFERENCES

---

- Aarts, H., Gollwitzer, P. M., & Hassin, R. R. (2004). Goal contagion: Perceiving is for pursuing. *Journal of Personality and Social Psychology, 87*, 23-37. doi:10.1037/0022-3514.87.1.23
- Aarts, H., & van Den Bos, K. (2011). On the foundations of beliefs in free will: Intentional binding and unconscious priming in self-agency. *Psychological Science, 22*(4), 532-7. doi: 10.1177/0956797611399294
- Alison, L. J., Alison, E., Noone, G., Elntib, S., & Christiansen, P. (2013). Why tough tactics fail and rapport gets results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to generate useful information from terrorists. *Psychology, Public Policy, and Law, 19*(4), 411. doi: 10.1037/a0034564
- Alison, L., Alison, E., Elntib, S., & Noone, G. (2012). *Educing information through interpersonally competent interviewing: An assessment tool for coding interviews with high value suspects. coding manual*. Internal Document.
- Arieli, S., Grant, A. M., & Sagiv, L. (2014). Convincing yourself to care about others: an intervention for enhancing benevolence values. *J Pers, 82*: 15–24. doi:10.1111/jopy.12029
- Bargh, J. A. (2006). What have we been priming all these years? On the development, mechanisms, and ecology of nonconscious social behavior. *European Journal of Social Psychology, 36*(2), 147-168. doi: 10.1002/ejsp.336
- Bargh, J. A. (2014). The historical origins of priming as the preparation of behavioral responses: Unconscious carryover and contextual influences of real-world importance. *Social Cognition, 32*(Supplement), 209-224.
- Bargh, J. A., & Ferguson, M. J. (2000). Beyond behaviorism: on the automaticity of higher mental processes. *Psychological Bulletin, 126*(6), 925. doi: 10.1037/0033-2909.126.6.925
- Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology, 71*(2), 230-244.

- Bargh, J., Bond, R., Lombardi, W., & Tota, M. (1986). The additive nature of chronic and temporary sources of construct accessibility. *Journal of Personality and Social Psychology*, 50(5), 869-878. doi: 10.1037/0022-3514.50.5.869
- Bargh, J.A. (2008). Free will is un-natural. In J. Baer, J. Kaufman, & R. Baumeister (Eds.), *Are we free? The psychology of free will* (pp. 128–154). New York, NY: Oxford University Press.
- Barrett L., Dunbar R, & Lycett J. 2002. *Human Evolutionary Psychology*. Princeton, NJ: Princeton Univ. Press
- Barsalou, L. W. (2016). Situated conceptualization offers a theoretical account of social priming. *Current Opinion in Psychology*, 12, 6-11. doi:10.1016/j.copsyc.2016.04.009
- Batson, C. D. (2011). *Altruism in humans*. New York: Oxford University Press.
- Bierhoff, H. W. (2002). *Prosocial behaviour*. Hove: Psychology Press.
- Birtchnell, J. (1994). The interpersonal octagon: an alternative to the interpersonal circle. *Human Relations*, 47(5), 511-529. doi: 10.1177/001872679404700503
- Brandon, S. (2011). Impacts of psychological science on national security agencies post-9/11. *American Psychologist*, 66(6), 495-506. doi: 10.1037/a0024818
- Capraro, V., Smyth, C., Mylona, K., & Niblo, G. A. (2014). Benevolent characteristics promote cooperative behaviour among humans. *PLoS ONE* 9(8): e102881. doi:10.1371/journal.pone.0102881
- Carpenter, W. B. (1893). *Principles of mental physiology, with their applications to the training and discipline of the mind, and the study of its morbid conditions*. New York: D. Appleton and Company.
- Caruso, E., Shapira, O., & Landy, J. (2017). Show me the money: A systematic exploration of manipulations, moderators, and mechanisms of priming effects. *Psychological Science*, 28(8), 1148-1159. doi: 10.1177/0956797617706161
- Cesario, J., Plaks, J., Hagiwara, N., Navarrete, C., & Higgins, E. (2010). The ecology of automaticity. How situational contingencies shape action semantics and social

- behavior. *Psychological Science*, 21(9), 1311-7. doi: 10.1177/0956797610378685
- Cialdini, R. B., Schaller, M., Houlihan, D., Arps, K., Fultz, J., & Beaman, A. L. (1987). Empathy-based helping: Is it selflessly or selfishly motivated? *Journal of personality and social psychology*, 52(4), 749-758. doi: 10.1037/0022-3514.52.4.749
- Custers, R., & Aarts, H. (2007). In search of the nonconscious sources of goal pursuit: Accessibility and positive affective valence of the goal state. *Journal of Experimental Social Psychology*, 43(2), 312-318. doi:10.1016/j.jesp.2006.02.005
- Davidson, D. (1963). Actions, Reasons, and Causes. *The Journal of Philosophy*, 60(23), 685-700. doi: 10.2307/2023177
- Davis, D., Soref, A., Villalobos, J. G., & Mikulincer, M. (2016). Priming states of mind can affect disclosure of threatening self-information: Effects of self-affirmation, mortality salience, and attachment orientations. *Law and human behavior*, 40(4), 351-327. doi: 10.1037/lhb0000184
- Davis, M. H., Conklin, L., Smith, A., & Luce, C. (1996). Effect of perspective taking on the cognitive representation of persons: A merging of self and other. *Journal of Personality and Social Psychology*, 70(4), 713. doi:10.1037/0022-3514.70.4.713
- Dawson, E., Hartwig, M., & Brimbal, L. (2015). Interviewing to elicit information: Using priming to promote disclosure. *Law and Human Behavior*, 39, 443–450. doi: <http://dx.doi.org/10.1037/lhb0000136>
- Dawson, E., Hartwig, M., Brimbal, L., & Denisenkov, P. (2017). A room with a view: Setting influences information disclosure in investigative interviews. *Law and Human Behavior*, 41(4), 333-343. doi: <http://dx.doi.org.ezproxy.ub.gu.se/10.1037/lhb0000244>
- De Dreu, C. K., & Van Lange, P. A. (1995). The impact of social value orientations on negotiator cognition and behavior. *Personality and Social Psychology Bulletin*, 21(11), 1178-1188. doi: 10.1177/01461672952111006

- DeSteno, D., & Salovey, P. (1997). Structural dynamism in the concept of self: A flexible model for a malleable concept. *Review of General Psychology, 1*(4), 389-489. doi: 10.1037/1089-2680.1.4.389
- Di Nucci, E. (2012). Priming effects and free will. *International Journal of Philosophical Studies, 20*(5), 725-734. doi: 10.1080/09672559.2012.713376
- Dijksterhuis, A., & Bargh, J. A. (2001). The perception-behavior expressway: automatic effects of social perception on social behavior. In *Advances in Experimental Social Psychology, Vol. 23*, ed. MP Zanna, pp. 1–40. San Diego, CA: Academic
- Dijksterhuis, A., & Strick, M. (2016). A case for thinking without consciousness. *Perspectives on Psychological Science, 11*(1), 117-132. doi: 10.1177/1745691615615317
- Dijksterhuis, A., & Van Knippenberg, A. (1998). The relation between perception and behavior, or how to win a game of trivial pursuit. *Journal of Personality and Social Psychology, 74*(4), 865-877. doi: 10.1037/0022-3514.74.4.865
- Dovidio, J. F., Piliavin, J. A., Gaertner, S. L., Schroeder, D. A., & Clark III, R. D. (1991). The arousal: Cost-reward model and the process of intervention: A review of the evidence. In M. S. Clark (Ed.), *Review of personality and social psychology: Vol. 12. Prosocial behavior* (pp. 86–118). Newbury Park, CA: Sage.
- Doyen, S., Klein, O., Pichon, C., & Cleeremans, A. (2012). Behavioral priming: It's all in the mind, but whose mind? *Plos One, 7*(1), e29081. doi:10.1371/journal.pone.0029081
- Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of personality and social psychology, 78*(1), 136-157. doi: 10.1037/0022-3514.78.1.136
- Eitam, B., & Higgins, E. T. (2010). Motivation in mental accessibility: relevance of a representation (ROAR) as a new framework: Relevance of a representation. *Social and Personality Psychology Compass, 4*(10), 951-967. doi:10.1111/j.1751-9004.2010.00309.x



- Erlandsson, A., Jungstrand, A. Å., & Västfjäll, D. (2016). Anticipated guilt for not helping and anticipated warm glow for helping are differently impacted by personal responsibility to help. *Frontiers in psychology*, 7, 1475. doi: 10.3389/fpsyg.2016.01475
- Evans, J. R., Houston, K. A., Meissner, C. A., Ross, A. B., LaBianca, J. R., Woestehoff, S. A., & Kleinman, S. M. (2014). An empirical evaluation of intelligence-gathering interrogation techniques from the United States Army field manual. *Applied Cognitive Psychology*, 28(6), 867-875. doi: 10.1002/acp.3065
- Evans, J. R., Meissner, C. A., Brandon, S. E., Russano, M. B., & Kleinman, S. M. (2010). Criminal versus HUMINT interrogations: The importance of psychological science to improving interrogative practice. *The Journal of Psychiatry & Law*, 38, 215-249. doi: 10.1177/009318531003800110
- Evans, J. R., Meissner, C. A., Ross, A. B., Houston, K. A., Russano, M. B., & Horgan, A. J. (2013). Obtaining guilty knowledge in human intelligence interrogations: Comparing accusatorial and information-gathering approaches with a novel experimental paradigm. *Journal of Applied Research in Memory and Cognition*, 2, 83-88. doi:10.1016/j.jarmac.2013.03.002
- Fallon, M. (2014). Collaboration between practice and science will enhance interrogations. *Applied Cognitive Psychology*, 28(6), 949-950. doi: 10.1002/acp.3091
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Feygina, I., & Henry, P. J. (2015). Culture and Prosocial Behavior. In D. Schroeder & W. Graziano (Eds.), *The Oxford Handbook of Prosocial Behavior* (pp. 188-209). Oxford University Press.
- Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of You: Nonconscious Pursuit of Interpersonal Goals Associated With Relationship Partners. *Journal of Personality and Social Psychology*, 84(1), 148-164. doi: 10.1037/0022-3514.84.1.148

- Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of You: Nonconscious Pursuit of Interpersonal Goals Associated With Relationship Partners. *Journal of Personality and Social Psychology*, *84*(1), 148-164. doi: 10.1037/0022-3514.84.1.148
- Friesen, L., & Cresswell, J. (2015). Rethinking priming in social psychology: insight from James' notions of habits and instincts. *New Ideas in Psychology*, *46*, 17. doi: 10.1016/j.newideapsych.2015.09.001
- Fritzsche, B. A., Finkelstein, M. A., & Penner, L. A. (2000). To help or not to help: capturing individuals' decision policies. *Social Behavior and Personality: an international journal*, *28*(6), 561-578.
- Granhag, P. A. (2010). *The Scharff-technique: Background and first scientific testing*. Paper presented at the Professional Development Seminar, High-value Detainee Interrogation Group (HIG, FBI). Washington, DC.
- Granhag, P. A., Hartwig, M., Mac Giolla, E. M., & Clemens, F. (2015). Suspects' Verbal Counter-Interrogation Strategies: Towards an integrative model. *Detecting Deception: Current Challenges and Cognitive Approaches*, 293-313. doi:10.1002/9781118510001.ch13
- Granhag, P. A., Montecinos, C. S., & Oleszkiewicz, S. (2015). Eliciting intelligence from sources: the first scientific test of the Scharff technique. *Legal and Criminological Psychology*, *20*(1), 96-113. doi: 10.1111/lcrp.12015
- Granhag, P. A., Oleszkiewicz, S., Strömwall, L. A., & Kleinman, S. M. (2015). Eliciting intelligence with the Scharff technique: Interviewing more and less cooperative and capable sources. *Psychology, Public Policy, and Law*, *21*(1), 100.
- Graziano, W. G., Habashi, M. M., Sheese, B. E., & Tobin, R. M. (2007). Agreeableness, empathy, and helping: A person × situation perspective. *Journal of personality and social psychology*, *93*(4), 583-599. doi: 10.1037/0022-3514.93.4.583
- Grzelak, J., & Derlega V. (1982). Cooperation and helping behavior: An Introduction. In D. Derlega, V. Grzelak, and J. Grzelak

- (Eds.), *Cooperation and helping behavior: Theories and research* (pp. 1-11). New York Academic Press.
- Gurven, M., Zanolini, A., & Schniter, E. (2008). Culture sometimes matters: Intra-cultural variation in pro-social behavior among Tsimane Amerindians. *Journal of Economic Behavior & Organization*, 67(3-4), 587-607. doi: 10.1016/j.jebo.2007.09.005
- Harcourt, A. H. (1991). Help, cooperation and trust in animals. In R. Hinde & J. Groebel (Eds.), *Cooperation and Prosocial Behaviour* (pp. 15-26). Great Britain: Cambridge University Press
- Harris, C. R., Coburn, N., Rohrer, D., & Pashler, H. (2013). Two failures to replicate high-performance-goal priming effects. *PLoS one*, 8(8). doi:10.1371/journal.pone.0072467
- Hartwig, M., Luke, T. J., & Skerker, M. (2016). Ethical perspectives on interrogation. In J. Jacobs & J. Jackson (Eds.), *The Routledge Handbook of Criminal Justice Ethics*, (pp. 326-344). New York, NY: Routledge.
- Hartwig, M., Meissner, C. A., & Semel, M. D. (2014). Human intelligence interviewing and interrogation: Assessing the challenges of developing an ethical, evidence-based approach. In R. Bull (Ed.), *Investigative Interviewing* (pp. 209-228). New York: Springer.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Developmental psychology*, 36(5), 531-546. doi: 10.1037/0012-1649.36.5.531
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Publications.
- Hayes, H., & Schimel, J. (2018). Unintended effects of measuring implicit processes: The case of death-thought accessibility in mortality salience studies. *Journal of Experimental Social Psychology*, 74, 257-269.
- Heise, D. R. (2007). *Expressive order. Confirming sentiments in social action*. New York, NY: Springer.

- Herbig, K. L. (2008). *Changes in espionage by Americans: 1947-2007*. Monterey, CA: Defence Personnel Security Research Center.
- Hertel, G., Neuhof, J., Theuer, T., & Kerr, N. L. (2010). Mood effects on cooperation in small groups: Does positive mood simply lead to more cooperation? *Cognition and Emotion*, 14, 441–472. doi: 10.1080/026999300402754
- Higgins, E. T., & Brendl, C. M. (1995). Accessibility and applicability: some "activation rules" influencing judgment. *Journal of Experimental Social Psychology*, 31(3), 218-243. doi: 10.1006/jesp.1995.1011
- Higgins, E. T., & Eitam, B. (2014). Priming... Shimming: it's about knowing when and why stimulated memory representations become active. *Social Cognition*, 32(Supplement), 225-242.
- Higgins, E. T., Rholes, W. S., & Jones, C. R. (1977). Category accessibility and impression formation. *Journal of Experimental Social Psychology*, 13(2), 141-154. doi: 10.1016/S0022-1031(77)80007-3
- Hull, J. G., Slone, L. B., Meteyer, K. B., & Matthews, A. R. (2002). The nonconsciousness of self-consciousness. *Journal of Personality and Social Psychology*, 83(2), 406-424. doi: 10.1037/0022-3514.83.2.406
- Junghofer, M., Bradley, M. M., Elbert, T. R., & Lang, P. J. (2001). Fleeting images: A new look at early emotion discrimination. *Psychophysiology*, 38, 175–178.
- Justice, B., Bhatt, S., Brandon, S. E., & Kleinman, S., M. (2010). *Army Field Manual 2-22.3 interrogation methods: A science-based review*. Washington, D.C. (Draft, September).
- Karremans, J. C., Stroebe, W., & Claus, J. (2006). Beyond Vicary's fantasies: The impact of subliminal priming and brand choice. *Journal of Experimental Social Psychology*, 42(6), 792-798. doi:10.1016/j.jesp.2005.12.002
- Kassin, S. M., & Gudjonsson, G. H. (2004). The psychology of confessions: A review of the literature and issues. *Psychological Science in the Public Interest*, 5(2), 33-67. doi: 10.1111/j.1529-1006.2004.00016.x
- Klatzky, R., & Creswell, J. (2014). An intersensory interaction account of priming effects—and their absence. *Perspectives*

- on *Psychological Science*, 9(1), 49-58. doi: 10.1177/1745691613513468
- Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. *Front. Psychol.* 4:863. doi: 10.3389/fpsyg.2013.00863
- Lashley, K. S. (1951). The problem of serial order in behavior. In L. A. Jeffress (Ed.), *Cerebral mechanisms in behavior* (pp. 112-131). New York: Wiley.
- Lassiter, G., & Meissner, C. A. (2010). *Police interrogations and false confessions: Current research, practice, and policy recommendations*. Washington, D.C.: American Psychological Association.
- Lindeman, M., & Verkasalo, M. (2005). Measuring Values With the Short Schwartz's Value Survey. *Journal of Personality Assessment*, 85(2), 170-178. doi: 10.1207/s15327752jpa8502\_09
- Lindenmeier, J. (2008). Promoting volunteerism: Effects of self-efficacy, advertisement-induced emotional arousal, perceived costs of volunteering, and message framing. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 19(1), 43-65. doi: 10.1007/s11266-008-9054-z
- Loersch, C., & Payne, B. (2014). Situated inferences and the what, who, and where of priming. *Social Cognition*, 32(Supplement), 137-151. doi:10.1521/soco.2014.32.supp.137
- Loersch, C., & Payne, B. K. (2011). The situated inference model: An integrative account of the effects of primes on perception, behavior, and motivation. *Perspectives on Psychological Science*, 6(3), 234-252. doi: 10.1177/1745691611406921
- Lumer, C. (2017). Automatic actions: Agency, intentionality, and responsibility. *Philosophical Psychology*, 30(5), 616-644. doi:10.1080/09515089.2017.1291928
- Macrae, C. N., & Johnston, L. (1998). Help, I need somebody: automatic action and inaction. *Social Cognition*, 16(4), 400-417.

- Maio, G., Pakizeh, A., Cheung, W., & Rees, K. (2009). Changing, priming, and acting on values: Effects via motivational relations in a circular model. *Journal of Personality and Social Psychology*, 97(4), 699-715. doi: 10.1037/a0016420
- May, L., Granhag, P. A., & Oleszkiewicz, S. (2014). Eliciting intelligence using the Scharff-technique: Closing in on the confirmation/disconfirmation-tactic. *Journal of Investigative Psychology and Offender Profiling*, 11(2), 136-150. doi: 10.1002/jip.1412
- McClintock, C. G., & Allison, S. T. (1989). Social value orientation and helping behavior<sup>1</sup>. *Journal of Applied Social Psychology*, 19: 353–362. doi:10.1111/j.1559-1816.1989.tb00060.x
- McConnell, A. R. (2011). The multiple self-aspects framework: Self-concept representation and its implications. *Personality and Social Psychology Review*, 15(1), 3-27. doi: 10.1177/1088868310371101
- Meissner, C. A., Redlich, A. D., Bhatt, S., & Brandon, S. (2012). Interview and interrogation methods and their effects on true and false confessions. *Campbell Systematic Reviews*, 13, 325-352. doi:10.4073/csr.2012.13
- Meissner, C. A., Redlich, A. D., Michael, S. W., Evans, J. R., Camilletti, C. R., Bhatt, S., & Brandon, S. (2014). Accusatorial and information-gathering interrogation methods and their effects on true and false confessions: A meta-analytic review. *Journal of Experimental Criminology*, 10(4), 459-486. <http://dx.doi.org/10.1007/s11292-014-9207-6>
- Meissner, C. A., Surmon-Böhr, F., Oleszkiewicz, S., & Alison, L. J. (2017). Developing an evidence-based perspective on interrogation: A review of the US government's high-value detainee interrogation group research program. *Psychology, Public Policy, and Law*, 23(4), 438. doi: 10.1037/law0000136
- Mussweiler, T., & Neumann, R. (2000). Sources of mental contamination: Comparing the effects of self-generated versus externally provided primes. *Journal of Experimental Social Psychology*, 36(2), 194-206. doi: 10.1006/jesp.1999.1415

- Mussweiler, T., & Strack, F. (1999). Hypothesis-consistent testing and semantic priming in the anchoring paradigm: a selective accessibility model. *Journal of Experimental Social Psychology*, 35(2), 136-164. doi: 10.1006/jesp.1998.1364
- Newell, B., & Shanks, D. (2014). Unconscious influences on decision making: A critical review. *Behavioral and Brain Sciences*, 37(1), 1-1. doi: 10.1017/S0140525X12003214
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84(3), 231-259. doi:10.1037/0033-295X.84.3.231
- O'Donnell, M., Nelson, L. D., Ackermann, E., Aczel, B., Akhtar, A., Aldrovandi, S., ... & Balatekin, N. (2018). Registered Replication Report: Dijksterhuis and van Knippenberg (1998). *Perspectives on Psychological Science*. doi: 1745691618755704.
- Oleszkiewicz, S. (2016). *Eliciting human intelligence: A conceptualization and empirical testing of the scharff-technique* (Doctoral dissertation). University of Gothenburg, Sweden.
- Oleszkiewicz, S., Granhag, P. A., & Cancino Montecinos, S. (2014). The Scharff-Technique: eliciting intelligence from human sources. *Law and Human Behavior*. Advance online publication. <http://dx.doi.org/10.1037/lhb0000085>
- Oleszkiewicz, S., Granhag, P. A., & Kleinman, S. M. (2014). On eliciting intelligence from human sources: Contextualizing the scharff-technique. *Applied Cognitive Psychology*, 28(6), 898-907. doi: 10.1002/acp.3073
- Oleszkiewicz, S., Granhag, P. A., & Kleinman, S. M. (2017). Gathering human intelligence via repeated interviewing: Further empirical tests of the Scharff technique. *Psychology, Crime & Law*, 1-16. doi: 10.1080/1068316X.2017.1296150
- Osgood, C. E., & Tannenbaum, P. H. (1955). The principle of congruity in the prediction of attitude change. *Psychological Review*, 62, 42-55. doi: 10.1037/h0048153
- Penner, L. A., Fritzsche, B. A., Craiger, J. P., Freifeld, & T. R., (1995). Measuring the prosocial personality. In J. Butcher, C. Spielberger (Eds.), *Advances in Personality Assessment*. Volume 10 (pp. 147-63). Hillsdale, NJ: LEA

- Penner, L., Dovidio, J., Piliavin, J., & Schroeder, D. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology*, *56*, 365-92. doi: 10.1146/annurev.psych.56.091103.070141
- Philippe Rushton, J., Chrisjohn, R. D., & Fekken, G. C. (1981). The altruistic personality and the self-report altruism scale. *Personality and Individual Differences*, *2*(4), 293-302. doi: 10.1016/0191-8869(81)90084-2
- Piliavin, J. A. , Dovidio, J. F., Gaertner, S. L., & Clark, R. D., III. (1981). *Emergency intervention*. New York: Academic Press
- Pirlott, A. G., & Mackinnon, D. P. (2016). Design approaches to experimental mediation. *Journal of Experimental Social Psychology*, *66*, 29-38. doi: 10.1016/j.jesp.2015.09.012
- Pulvermüller, F. (2005). Brain mechanisms linking language and action. *Nature Reviews Neuroscience*, *6*(7), 576-582. doi: 10.1038/nrn1706
- Redlich, A. D. (2007). Military versus police interrogations: Similarities and differences. *Peace and Conflict: Journal of Peace Psychology*, *13*, 423-428. doi: 10.1080/10781910701665741
- Redlich, A. D., Kelly, C. E., & Miller, J. C. (2011). *Systematic survey of the interview and intelligence community*. Federal Bureau of Investigation/High-Value Detainee Interrogation Group: Washington, DC.
- Rosenbaum, D. A., Cohen, R. G., Jax, S. A., Weiss, D. J., & Van Der Wel, R. (2007). The problem of serial order in behavior: Lashley's legacy. *Human Movement Science*, *26*(4), 525-554. doi: 10.1016/j.humov.2007.04.001
- Schendan, H. E., Ganis, G., & Kutas, M. (1998). Neurophysiological evidence for visual perceptual categorization of words and faces within 150ms. *Psychophysiology*, *35*, 240-251. doi: 10.1111/1469-8986.3530240
- Schroeder, D., & Graziano, W. (2015). The field of prosocial behavior: An introduction and overview. In D. Schroeder & W. Graziano (Eds.), *The Oxford Handbook of Prosocial Behavior* (pp. 3-37). Oxford University Press.
- Schröder, T., & Thagard, P. (2013). The affective meanings of automatic social behaviors: three mechanisms that explain



- priming. *Psychological Review*, 120(1), 255-280.  
doi:10.1037/a0030972
- Schröder, T., & Thagard, P. (2014). Priming: constraint satisfaction and interactive competition. *Social Cognition*, 32(Supplement), 152-167. doi: 10.1521/soco.2014.32.supp.152
- Shanks, D. R., Newell, B. R., Lee, E. H., Balakrishnan, D., Ekelund, L., Cenac, Z., & Moore, C. (2013). Priming intelligent behavior: An elusive phenomenon. *Plos One*, 8(4), e56515. doi:10.1371/journal.pone.0056515
- Skerker, M. (2010). *An ethics of interrogation*. Chicago: University of Chicago Press.
- Soufan, A. H. (2011). *The black banners: The inside story of 9/11 and the war against al-Qaeda*. New York: Norton.
- Spencer, S. J., Zanna, M., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, 89, 845-851. doi: 10.1037/0022-3514.89.6.845
- Srull, T. K., & Wyer, R. S. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social Psychology*, 37(10), 1660-1672. doi: 10.1037/0022-3514.37.10.1660
- Stöber, J. (2001). The Social Desirability Scale-17 (SDS-17): Convergent validity, discriminant validity, and relationship with age. *European Journal of Psychological Assessment*, 17, 222-232 doi:10.1027//1015-5759.17.3.222
- Tomasello, M., & Vaish, A. (2013). Origins of human cooperation and morality. *Annual review of psychology*, 64, 231-255. doi: 10.1146/annurev-psych-113011-143812
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5(2), 207-232. doi: 10.1016/0010-0285(73)90033-9
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: heuristics and biases. *Science*, 185(4157), 1124-1131.

- van Baaren, R. B., Holland, R. W., Kawakami, K., & Van Knippenberg, A. (2004). Mimicry and prosocial behavior. *Psychological science*, *15*(1), 71-74. doi: 10.1111/j.0963-7214.2004.01501012.x
- Van Lange, P. A. M. (1999). The pursuit of joint outcomes and equality in outcomes: An integrative model of social value orientation. *Journal of Personality and Social Psychology*, *77*, 337. <http://dx.doi.org/10.1037/0022-3514.77.2.337>
- Van Lange, P., Bekkers, R., Schuyt, T., & Vugt, M. (2007). From games to giving: social value orientation predicts donations to noble causes. *Basic and Applied Social Psychology*, *29*(4), 375-384. [dx.doi.org/10.1080/01973530701665223](http://dx.doi.org/10.1080/01973530701665223)
- Vrij, A. (2008). *Detecting lies and deceit: Pitfalls and opportunities*. (2nd ed.). Chichester, England: Wiley.
- Vrij, A., & Granhag, P. A. (2014). Eliciting information and detecting lies in intelligence interviewing: An overview of recent research. *Applied Cognitive Psychology*, *28*(6), 936-944. doi: 10.1002/acp.3071
- Wells, G. L., Memon, A., & Penrod, S. D. (2006). Eyewitness evidence improving its probative value. *Psychological Science in the Public Interest*, *7*(2), 45-75. doi: 10.1111/j.1529-1006.2006.00027.x
- Wheeler, S. C., DeMarree, K. G., & Petty, R. E. (2007). Understanding the role of the self in prime-to-behavior effects: the active-self account. *Personality and Social Psychology Review*, *11*(3), 234-261. doi: 10.1177/1088868307302223
- Wheeler, S. C., Jarvis, W. B. G., & Petty, R. E. (2001). Think unto others: the self-destructive impact of negative racial stereotypes. *Journal of Experimental Social Psychology*, *37*(2), 173-180. doi:10.1006/jesp.2000.1448
- Wheeler, S., & DeMarree, K. (2009). Multiple Mechanisms of Prime-to-Behavior Effects. *Social and Personality Psychology Compass*, *3*(4), 566-581. doi: 10.1111/j.1751-9004.2009.00187.x
- Wheeler, S., DeMarree, K., & Petty, R. (2014). Understanding prime-to-behavior effects: insights from the active-self

account. *Social Cognition*, 32(Supplement), 109-123.  
doi:10.1521/soco.2014.32.sup.109

## APPENDIX

---

Table 2

*Cross-experimental meta-analyses for the main effect of priming and the Priming × Interview Style interaction effect on information disclosure in the interview studies (i.e., Study II and Study III)*

---

Type of effect	Estimate Type	Estimate <sup>a</sup>	95%CI	
Main effect of priming	Hedges' <i>g</i>	0.11	-0.45	0.67
Priming × Interview Style interaction	Cohen's <i>d</i>	0.10	-0.45	0.59

---

*Note.* <sup>a</sup>Computed under a random effects model.