Adaptability in Undercover Operations: The Relationship Between Adaptability and Rapport

Master Thesis

University of Twente

First Supervisor: S. Watson

Second Supervisor: M. Stel

Department: Conflict, Risk, & Safety

By: Sandra H. Kleppe

Abstract

The present study examined the relationship between adaptive responses, perceived rapport, and goal achievement in the context of covert police work. An experimental paradigm was developed in which participants took on the role of an undercover agent. The agents completed three missions which included an objective, an expectation, and an expectancy violation. The expectancy violation was designed to elicit adaptive responses from the agents by changing the situation unpredictably, which required the agents to spontaneously adjust their strategy to achieve the goal. The degree to which the agents appropriately adjusted their behaviour to effectively respond to the new and uncertain situations is referred to as adaptability. The agents had to interact with another participant in each scenario to accomplish their goal. How well the agents were able to develop an initial social connection and positive atmosphere was measured as rapport. The outcome showed that in a specific changing, new, and uncertain situation where the agent could achieve their objective with the help of another individual, a) adaptability and perceived rapport are positively correlated, and b) perceived rapport is a predictive factor in goal achievement. This effect was no longer found in situations where the goal was perceived as more challenging to accomplish.

Keywords: law-enforcement, covert operations, adaptability, rapport, goal achievement

Adaptability in Undercover Operations: The Relationship Between Adaptability and Rapport

It has been argued that undercover agents should ideally be adaptable, flexible, and have good interpersonal skills (Arrigo & Wagner, 2007). However, what exactly is meant by adaptable behaviour is still unclear. In everyday language, the word "adaptable" has been used since the 15th century as meaning "to fit in or adjust" (Vocabulary Dictionary, n.d.). There are many situations during a life time that require the ability to adjust, for example when; starting school, moving, starting new a relationship, beginning a new career, and becoming a parent. What these situations have in common is the change from the regular everyday life into a situation marked by novelty and uncertainty (Martin, Nejad, Colmar, & Liem, 2013). That is, these situations require individuals to respond to changes and uncertainties they have never dealt with before.

Certain jobs will include a higher encounter with novel, uncertain, and changing situations than others, one example being working as an undercover agent. An undercover agent's job includes "working secretly using a false appearance to gather information for the police or government" (Cambridge Dictionary, n.d.). This means, for example, undercover agents have to adjust to speech patterns and cultural norms, present themselves as a criminal without engaging in illicit activity, and maintain their criminal appearance on a continual basis, all while trying to gather information necessary to prosecute criminals (Law Enforcement EDU, n.d.). While undercover agents receive general training in how to deal with such situations, they cannot train for every unexpected situation that may occur. Therefore, it is considered an important skill to be able to respond to these changing, novel, and uncertain situations, otherwise known as being "adaptive". However, the question remains, how can we identify those that are more adaptable than others?

Furthermore, undercover agents must often "befriend" criminal individuals to gather the necessary evidence (Kruisbergen, 2017). In order to "befriend" criminals, the undercover agent must modify their behaviour and be perceived in such a way that gains the confidence of the target. Meaning, the undercover agent must manage to develop a social connection between themselves and the target. The beginning of making such a connection is often referred to as developing "rapport". Although the ability to develop perceptions of rapport and being adaptable are known to be valuable skills for an undercover agent to possess, whether these two skills interplay, is unclear.

The present study proposes that being adaptable and developing perceptions of rapport are predictive factors in an undercover agent's ability to collect the necessary information (i.e., achieving the goal of the mission). Furthermore, this paper will explore the

relationship between adaptability and developing rapport. Specifically, whether the ability to develop perceptions of rapport partially mediates the effect of adaptive responding on mission success in social settings, where the true nature of the mission cannot be revealed.

Adaptability as a Psychological Construct

The American Psychological Association (APA) define the psychological construct adaptability as "the capacity to make appropriate responses to changed or changing situations; the ability to modify or adjust one's behaviour in meeting different circumstances or different people" (Van den Bos, 2015, p. 18). This definition focuses on the behavioural adjustments, but neglects the cognitive and emotional aspects of adaptability. Martin, Nejad, Clomar, & Liem, (2013) included these aspects in their proposed definition; adaptability is cognitive, behavioural, and emotional adjustments that assist in effectively responding to novel and uncertain situational demands, when goals cannot be changed or disengaged. Furthermore, Martin, Nejad, Colmar, & Liem (2012) stated that being able to effectively make cognitive, behavioural, and emotional adjustments are related to "an individual's capacity to constructively regulate psycho-behavioural functions in response to new, changing circumstances, conditions, and situations" (p. 3). That is, using one's affective, cognitive, and behavioural resources to make adjustments aimed at effectively dealing with the changing, novel situation (Martin et al., 2012). Based on the proposed definitions of adaptability, it can be concluded that to appropriately and effectively adapt to a situation, the ability to self-regulate one's emotions, cognition, and behaviour is required.

Affective regulation is the ability to adjust emotional responses to successfully interact with changing, novel, and uncertain situations (Martin, 2017; Martin et al., 2013). An example of this would be if your car breaks down while you are in a foreign country. You call for a mechanic, and explicitly state you need someone who speaks English. The person on the phone says that is not a problem and someone should be there shortly. However, when the mechanic arrives, he does not speak a word of English. You might be feeling frustrated or worried. Regulating your emotional state in this situation would mean to not let the feelings of frustration or worry overwhelm you and guide your decisions. Poor emotional regulation in this situation could lead to believing the situation cannot be solved, as the negative feelings can create a narrow and negative perspective on the situation, which would neglect possible solutions (Fredrickson, 2000).

Cognitive regulation refers to being able to adjust one's thoughts and thinking patterns to successfully deal with a changing, novel, and uncertain situation (Martin, 2017;

Martin et al., 2013). Meaning, cognitive regulation involves controlling mental strategies to improve cognitive performance (Santosh, Roy, & Kundu, 2015). In terms of the previous example, your initial thought might be "There is no way to communicate with the mechanic". If you successfully regulate your thoughts, you might end up with thoughts such as "Can I try to show him what the problem is rather than explain it?". In essence, you would change your thoughts to something which can help you respond to the new and uncertain situation you are in and help you achieve your goal.

Lastly, behavioural regulation is the ability to adjust the nature, level, and degree of behaviour to successfully deal with a changing, novel, and uncertain situation (Martin, 2017; Martin et al., 2013). This means changing your actions in a way that will lead to achieving the goal at hand. Continuing with the example above, it would mean to follow through with the affective and cognitive regulations. You would stay calm in your actions and try showing the mechanic the problem. In sum, in order to be adaptable, the ability to self-regulate is essential.

Moreover, to empirically study adaptability as defined by Martin et al. (2013), the Adaptability scale was developed (Martin et al., 2012). This scale was developed based on a framework where the following criteria were included; "1) a response to novelty, change, variability and/or uncertainty, 2) cognitive, behavioural, or affective functions, 3) regulation, adjustment, revision and/or a new form of access to these three functions, and 4) a constructive purpose or outcome." (Martin et al., 2012, p. 7). This framework was developed based on a literature review of self-regulation (of cognition, behaviour, and emotion), life-span theory of control, models of change, coping, buoyancy and resilience (see Martin et al., 2012). Due to the nature and theoretical background of the measurement, this scale is applicable in studying adaptability across multiple contexts. However, there is still the limitation of it being a subjective measure of adaptability. The main disadvantage of self-assessment is measurement error (Allen & van der Velden, 2005). Meaning that a person's self-assessment of their skills may differ substantially from another person's assessment based on their frame of reference. Nonetheless, at the current time, the Adaptability scale is the most empirically supported and widely applicable measure of adaptability.

Research conducted on adaptability using the Adaptability scale as a measure is limited to academic contexts. Nonetheless, previous research does indicate that being adaptable is a helpful skill in achieving a goal (Collie & Martin, 2016; Martin et al., 2013). Collie and Martin (2016) investigated the relationship between effective teaching and adaptability. It was discovered that adaptability was a helpful skill in responding to the

unpredictable, changing nature of a classroom and adjusting the content and teaching methods used to the individual needs of the students. Similarly, adaptability has been shown to aid students in adjusting to the changing demands of academia and respond in such a way that leads to academic achievement (Martin et al., 2013).

Rapport

Rapport is a concept which has proven challenging to define, observe, and measure (Alison, Alison, Noone, Elntib, & Christiansen, 2013; Meissner, Surmon-Böhr, Oleszkiewicz, & Alison, 2017). Nonetheless, rapport has been well established in the context of therapeutic counselling. According to APA, rapport is defined as a warm, relaxed relationship of mutual understanding, acceptance, and sympathetic compatibility between or among individuals. More specifically, rapport can be defined by three aspects: a) rapport exists on a group level and refers to the quality of a connection between individuals, b) the interaction between the individuals must be considered positive, and c) the interaction should be coordinated between the individuals (Bernieri, 2005; Bernieri & Gillis, 2001; Tickle-Degnen & Rosenthal, 1987, 1990). Within counselling, rapport is considered part of the therapeutic alliance, and is established over multiple sessions (Leach, 2005). As such, the definitions of rapport within the counselling context often focus on the quality of relationship between two individuals which results from developing rapport over time. However, in this paper, the focus will lie on the initial development of rapport when meeting an individual for the first time.

The initial stages of developing rapport have been researched in the context of investigative interviewing (Alison et al., 2013). Within investigative interviewing, the focus shifts from the quality of a relationship towards the atmosphere and feelings one has about the other person. Rapport-based tactics "seek to create an atmosphere that is conducive to open communication." (Alison et al., 2013, p. 413) and develop a state of similarity, empathy, and liking, which creates feelings of positivity, attentiveness, and coordination (Bernieri, Gillis, Davis, Grahe, 1996; Tickle-Degnen & Rosenthal, 1990). Being able to create such an atmosphere within an interview is related to more effective communication and goal achievement (Caproni, 2006). Rapport leads to more effectively gathering information, as the interaction between interviewer and interviewee is more collaborative and respectful (Alison, Alison, Noone, Elntib, Waring, & Christiansen, 2014). The interviewer does not demand nor confront the interviewee, but rather focuses on being empathetic and patient, which aids the development of rapport (Risan, Binder, & Milne, 2016).

As being able to come across as empathetic and understanding is a vital part of initially developing rapport, self-regulation is a helpful skill (Risan et al., 2016). Having the ability to regulate one's emotions to reflect an understanding of the emotional state of the other person, can increase the relational connection experienced (Siegel, 2010). This in turn is helpful in coming across as empathetic and can create feelings of positivity and attentiveness. In sum, to develop rapport with an individual, it is important to self-regulate one's emotions, cognition, and behaviour to create an interaction in which the other party feels understood and comfortable. This will aid feelings of positivity, attentiveness, and coordination, which is required for the development of rapport (Tickel-Degnen & Rosenthal, 1990).

The Link Between Adaptability and Rapport

Adaptability as well as rapport have been linked to effectively achieving goals in a variety of contexts (see e.g., Joe, Simplson, Dansereau, & Rowan-Szal, 2001; Park, J. E., & Holloway; Pulakos, Arad, Donovan, & Plamondon, 2000; Wilson, Ryan, & Pugh, 2010). This raises the question of whether adaptability and rapport are independently related to success or if there is an underlying mechanism which contributes to an individual being adaptable and skilled at developing rapport. At the current time, limited research has been conducted on the relationship between adaptability and rapport. Nonetheless, a correlation between adaptability and rapport has been established, although the direction of this relationship is contradicting within the literature (see Khodadady, 2012; Nguyen, Artis, Plank, & Solomon, 2019).

Moreover, as discussed above, self-regulation is an important aspect in both adaptability and developing rapport. This paper proposes that adaptability and developing rapport are different expressions of self-regulation. Self-regulation can be seen as the ability to alter responses, including emotional, cognitive, and behavioural responses (Baumeister & Monroe, 2014). Adaptability requires the appropriate and effective regulation of emotion, cognition, and behaviour in response to changing, new, and uncertain situations (Martin et al., 2012). Whereas developing rapport can require appropriate and effective regulation of emotion, cognition, and behaviour in social interaction. Meaning, for adaptability to be displayed the situation has to be a change, new, and uncertain. The situation can include social aspects; however, a social aspect is not necessary for adaptability to be displayed. Moreover, developing rapport is inherently a social skill. If there is no other person to develop rapport with, rapport cannot be developed. Furthermore, rapport can be developed in

social interactions which are not necessarily considered a change, new, nor uncertain. Thus, although not necessary, situations in which adaptability and rapport are required may overlap. In such overlapping situations, it is possible that being adaptable and developing rapport would include the same regulatory processes to achieve both adaptive behaviour and rapport.

Furthermore, in the context of undercover operations, both adaptability and developing rapport are skills which can be useful. Often, the situations undercover agents find themselves in can be changing, novel, highly uncertain, and involve social interactions. Meaning, the situation would require the agent to be adaptable and develop rapport. For example, if an agent is asked to gather information from a specific individual, the agent must not only be able to respond to any novel, uncertain situation which might arise, but must also be able to develop a social connection with the target. As the ability to develop this connection with the target is a major aspect of the agent's mission, this paper proposes that the agent's adaptability would mainly be expressed via their ability to develop rapport.

The Present Study

In the current study, the aim is to examine the relationship between adaptability and rapport in the context of achieving a mission of covert nature in social situations. The main research question is whether adaptability is related to goal success. To investigate this, an experimental set up based on observations from practice and previous research has been developed (Martin, 2017). In this experiment, participants take on the role as an undercover agent and are given the goal to complete three sequential missions (e.g., retrieve the secret note hidden in the Social Cognition book in Prof. Baltezhar's office). The agents are given an expectation (e.g., the professor is friendly and lends out books to students in need), which is then violated when they enter the office (e.g., the professor is gone and an assistant who is rather unwilling to lend out the book is there instead). The agent must then adjust to the changing, new, and unexpected situation while trying to achieve their goal (e.g., collect the note). If the participants manage to successfully complete the tasks given, they will have achieved their mission objective.

Following the review of the literature it is hypothesized that:

Hypothesis 1 states that adaptability is a predictive factor in achieving the mission objective.

It is hypothesised that the agent's adaptability will be a predictive factor of their ability to achieve the mission objective as previous findings suggest that adaptability is linked with successfully achieving varying goals across domains. To achieve the mission objective,

the participants must respond to an unexpected situation which they have not been in before (i.e., be adaptable) to succeed.

Hypothesis 2 states that there will be a positive correlation between adaptability and rapport as experienced by the granter.

It is hypothesised that the agent's adaptability will be positively correlated with rapport experienced by the other individual they will interact with during the operation (henceforth referred to as the granter), as there have been previous findings which suggest that being adaptable and being able to build rapport in the context of coaching and sales is positively linked. Furthermore, both the concept of adaptability and rapport are linked with the ability to self-regulate. As being able to self-regulate has a positive influence on as individual's ability to be adaptable and to build rapport, it could be possible that adaptability and rapport are positively correlated.

Hypothesis 3 states that rapport as experienced by the granter is a predictive factor in the agent achieving the mission objective.

Rapport as a predictive factor in achieving the mission objective is hypothesised as past research has concluded that rapport is an effective tool in achieving a desired outcome in multiple contexts. The ability to develop rapport with an individual will lead to a more cooperative and focused interaction as well as a higher level of understanding between the two parties. When this atmosphere has been developed, it is more likely that a goal can be reached in an effective manner, as both parties are now likely more invested in mutual help. Specifically, in the context of a covert operation, the development of rapport can be helpful as the agent would be perceived as less suspicious if the granter views the agent as sympathetic and likable. As a result, the agent would be more likely to gain the information they are after, thus achieving their mission objective.

Hypothesis 4 states that rapport will act as a partial mediating factor between adaptability and achieving the mission objective.

It is hypothesised that rapport is a partial mediating factor between adaptability and mission success, as the situations the agents will be in include social interactions. To successfully achieve the mission, the agent must respond to the social interaction with the other individual involved (aka the granter) in an effective way. Although the agent does not need the granter to explicitly give them permission to achieve their objective, developing

rapport with the granter would likely be beneficial in achieving their goal, as the granter can either be a barrier in achieving the goal, or a tool. Whether the granter is a barrier or a tool, depends on the granter's willingness to help the agent, which in turn can depend on the agent's ability to develop rapport with the granter. As individuals are more inclined to help people they have a positive interaction with, it is assumed that rapport will a partial mediating factor between adaptable behaviour and mission success.

Method

Participants

The sample consisted of 116 university students (44 female, 52 male) with an age between 18 to 41 years old ($M = 22.60$, $SD = 3.13$). Nationalities were distributed as follows: German (50%), Dutch (31.25%), and others (18.75%).

The agents. Twenty-nine (25%) of the participants were recruited on the premise of being an agent in a study designed to examine undercover police behaviour. The sample of undercover agents consisted of university students (11 female, 18 male) with an age between 19 to 41 years old ($M = 22.03$, $SD = 4.04$). Nationalities were distributed as follows: German (51.72%), Dutch (27.59%), and others (20.69%).

The granters. Eighty-seven (75%) of the participants were recruited to partake in a study on employee behaviour. This sample of participants, henceforth referred to as granters, consisted of university students and employees (40 female, 47 male) with an age between 18 to 34 years old ($M = 22.54$, $SD = 3.20$). Nationalities were distributed as follows: German (50.57%), Dutch (32.18%), and others (17.24%).

All participants were recruited through the Behavioural, Management and Social Sciences subject test pool at the University of Twente, social media, via personal contacts, in-person recruitment or through flyers. Participation was on a voluntary basis and the participants were compensated with course credit (1 for granters and 1.5 for agents) or a voucher (euro 5 and 10 respectively) for their participation. Due to the nature of the study, non-fluent English speakers were not recruited. Furthermore, potential participants were informed about the fact that the study might include socially stressful situations, thus not being suitable for socially anxious individuals. Potential participants were further informed that the experiment will be video-taped and if this made them feel uncomfortable, not to participate.

Experimental Set-up

To examine adaptive behaviour in the context of undercover police work, an experimental paradigm was developed. In this experiment, participants took on the role of undercover agents and attempted to complete three independent missions. Before each mission, the agents received short instructions on what they must accomplish and were given an expectation of how this can be achieved. For example, in one operation called the fingerprint operation, the agent was told to collect a study advisor's fingerprints who was believed to be committing fraud. The agent was informed that a meeting had been set up, where they could discuss their grades with the study advisor. The objective was to get the study advisor to touch the grade paper. The agent expected that all they had to do to achieve their goal, would be to hand the paper over to the study advisor. However, when the agent entered the room, it became clear that the study advisor was wearing gloves. This created an expectancy violation. The expectancy violation is vital, as the purpose of this violation was to create a situation which was viewed as a change, a novelty, and an uncertainty. Such a situation results in the agent having to adjust their approach to achieving the goal (i.e., collect the fingerprint), for which adaptability is presumed to be required.

Each agent was given up to five minutes for each mission. The agents had to complete three mission which included an objective, expectation, and expectancy violation to measure their adaptability in different situations. Furthermore, all agents were semi-randomly assigned to complete the missions in three different orders (see table 1 for an overview of the mission orders). With this method, across subject counterbalancing was made possible, thus reducing possible order effect.

Table 1

Mission set of questionnaire A, B and C.

Order A	Order B	Order C
Secret note	Fingerprints	Photograph
Fingerprints	Photograph	Secret note
Photograph	Secrete note	Fingerprints

Procedure

The undercover agents

As the participants arrived, they were invited to read and agree to the informed consent. Once the informed consent had been signed, the participants read the instructions (see appendix A for full instructions). The instructions explained that the participants will take on the role of an undercover agent and complete three missions. The participants were informed about their contact person (the experimenter) and of their cover name (Kim). After the general instructions were read and the agents confirmed they understood instructions, they were introduced to the first mission. The participants read the objective of the mission and were given up to 5 minutes to prepare. The start of a mission was indicated by knocking on the door of the specified office. The participants were then given five minutes to complete their mission. This was repeated before each new operation.

The secret note. In the case of order A, the first mission was to collect a secret note from a book that was located in a professor's office, without raising suspicion (objective). The participants received the expectation that the professor is friendly and will likely lend out the book (expectation). When entering the professor's office, the participant encounters the professor's assistant, who has been told to make sure the professor's belongings are in order for when he returns. As the assistant had not been informed whether they were allowed to lend out any books, they were hesitant to grant the agent's request (expectancy violation).

The fingerprints. For the next mission in order A, the participants were instructed to go to a scheduled meeting with a study advisor. The agents had to get the study advisor's fingerprints on a paper (objective). The agent was told that all they need to do to collect the advisor's fingerprints is to have them hold the paper with their grades (expectation). However, the study advisor had been encouraged to wear plastic gloves when touching another's belongings to avoid germs (expectancy violation).

The photograph. In the last mission in order A, the participants received the instructions to take a picture of the research assistant Lucas with their phone (objective). The participants were told to schedule participation in Lucas' study and get a picture during the interaction (expectation). When they arrived at the lab, they found that Lucas was sick, and the only way to get his picture was by taking one of the photograph of Lucas hanging on the wall. However, the assistant working in the lab had been given instructions saying no one is allowed to use their phones/take photos inside the lab (expectancy violation).

Following each mission, the participants filled out a post-mission questionnaire. After completing the post-mission questionnaire, the participants were presented with the next mission. Once all three missions had been completed, the 'mission phase' was over and the participants filled out a final questionnaire. After the participants were done, they were fully

debriefed and given the opportunity to ask any questions. The participants were also asked to sign a confidentiality agreement and give written consent to use the videos for the purpose of the study. Finally, the participants were thanked and given a voucher for €10 or 1.5 credits.

The granters

To avoid setting limitations on what behaviours lead to the successful completion of a mission, the agents engaged with other participants (aka granters) who were unaware of the true purpose of the study. The granters were recruited on the premise that they would participate in a study on employee behaviour, i.e., how new employees behave on the first day of a new job.

The participants were first asked to read and sign the informed consent, they were then given initial instructions about the experiment (see appendix B for full instructions). Once the granters had read and understood the initial instructions, they were given descriptions of the task they had to complete for their first day at the job (see appendix C for the full descriptions of each task). Three granters were required for each agent.

Assistant. The participants were told that the university wants to relieve successful researchers from administrative work and are therefore hiring assistants to help, specifically with inventorying their books and articles as well as setting up meetings with students. The participants were further told that the professor they are working for is very keen on order, which is why it is important that all his belongings can be found in the right place. Moreover, the participants were given a sign-up sheet where students could schedule a meeting with the professor, in case any students came to see the professor while the participants were there.

Advisor. In this role, the participants were instructed that the university wants to implement a program where students advise students with their study choices and that they will be meeting with a student to discuss what they want to do next semester. Moreover, the participants were informed that new protocols to avoid spreading diseases have been implemented, i.e., to wear plastic gloves when touching the belongings of others.

Lab manager. The participants working as lab managers, were given the job of organizing research material in a laboratory office. They had to create the schedule for different researchers and sign up participants. The participants were told that there will be personal and sensitive information in the lab (e.g., contact information of participants which needs to be kept anonymous), which means it is crucial that no one takes pictures in the lab (i.e., a zero-tolerance policy on phones/cameras, etc.).

Once the participants completed their role as the granter in the interaction with the agent, the task was over and they were asked to fill in a post-questionnaire. When the participants were done filling out the post-questionnaire, they were fully debriefed about the true nature of the study and given the opportunity to ask questions. The participants were also asked to sign a confidentiality agreement and give permission to use the videos for the purpose of the study. Lastly, the participants were thanked and given a voucher for €5 or 1 credit.

Materials

The undercover agents

  Manipulation checks. The study had manipulation checks in place to test for a) perceived difficulty in taking the participation seriously, b) participant motivation, c) predictability/expectedness of the operations, d) how well the operations measure adaptability (as opposed to e.g., resilience), e) how challenging each operation was perceived, and f) whether the agents accomplished the missions objectively.

  Two questions were asked to check for the perceived difficulty in taking the study seriously; 1) "How difficult/easy was it to take the *role* seriously?", 2) "How difficult/easy was it to take the *mission* seriously?". Both questions were answered on a seven-point Likert scale ranging from 1 = "Very difficult" to 7 = "Very easy".

  To test for the participants' motivation, the participants were asked how motivated they were to complete each of the three missions (e.g., "How motivated were you to complete your mission in operation 1?"). The participants gave an answer on a seven-point Likert scale ranging from 1 = "Not motivated at all" to 7 = "Very motivated".

  The participants were asked if they predicted the expectancy violation to occur for each of the three missions (e.g., "Before operation 1 started, I had predicted exactly that the professor would not be present".). They answered on a five-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree".

  The participants were asked to indicate how well each example in table 2 described the perception of the expectancy violation (e.g., that the professor was not present). The purpose was to ensure the situations were viewed as a change, a novelty, and an uncertainty, indicating the situation elicited adaptable responses. The participants responded on a five-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree".

  To confirm the three missions were equally challenging, the participants were asked to rate how much of a challenge they perceived the missions to be. The participants

responded on a five-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree".

Finally, the objective success rates of all mission were checked to ensure only "true" successes were included in the analysis. This was done by coding the videos of each participant. Two requirements had to be fulfilled for a success to be considered "true"; a expectancy violation had to occur and the agents had to accomplish the correct goal. For purposes of clarity regarding what is meant by the correct goal: as an example, in the photograph operation, the correct goal would be to take a picture of Lucas. However, some of the participants did not realize that the granter they interacted with was not Lucas. The participants were all instructed to confirm they were speaking with Lucas, nonetheless, this was not always done. Therefore, some participants took a picture of the granter believing this was Lucas, instead of taking a picture of the photograph of Lucas hanging on the wall in the lab. In such cases, the success was not considered "true".

Table 2

Given Examples for How the Participants Perceived the Expectancy Violation

Example	Description
A change	A new or different situation
An adversity	A difficult or unpleasant situation
A novelty	An original or unusual situation
A threat	A situation likely to cause damage or danger
An uncertainty	An unsure or unknown situation
A challenge	A situation that tests your abilities or is seen as difficult
A confrontation	A hostile or argumentative situation

Main measure - Adaptability scale

The state version of the Adaptability scale from Collie and Martin (2016) was used to measure the participants' adaptability. The scale includes nine questions as can be seen in table 3. The underlined text in the table indicates the part of the sentence that was altered in the three operations (see appendix D for the adaptability questions asked for each operation). The participants answered the nine questions three times; once after each operation. The

participants could answer on a five-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree".

Table 3

The Adaptability Scale for Operation 1

1. During the secret note operation, I was able to think through a number of possible options to assist me when I realized the professor would not be present

2. During the secret note operation, I was able to revise the way I was thinking (when I realized the professor would not be present) which helped me through it

3. I was able to adjust my thinking or expectations during the secret note operation to assist me in the interaction with the assistant when it was necessary

4. During the secret note operation, I was able to seek out new information or useful resources to effectively deal with the assistant (rather than the professor)

5. When dealing with the assistant during the secret note operation, I was able to develop new ways of going about things (e.g., a different way of doing something or finding information) to help me through

6. To assist me in dealing with the assistant during the secret note operation, I was able to change the way I wanted to do things when it was necessary

7. During the secret note operation, I was able to reduce negative emotions (e.g., social anxiety, feeling awkward) to help me deal with the fact that the professor would not be present

8. When I realized the professor would not be present during the secret note operation, I was able to minimize frustration or irritation so that I could deal with it best

9. To help me through the interaction with the assistant during the secret note operation, I was able to draw on positive feelings and emotions (e.g., enjoyment, satisfaction)

The granters

Manipulation checks. The study had manipulation checks in place to test for perceived difficulty of taking the participation seriously and participant motivation. The

participants were asked two questions about the perceived difficulty in taking to study seriously; 1) "How difficult/easy was it for you to take your role as a "*new employee*" seriously?" and 2) "How difficult/easy was it for you to take your "*day at work*" seriously?". Both questions were answered on a seven-point Likert scale ranging from 1 = "Very difficult" to 7 = "Very easy".

To test for the participants' motivation, the participants were asked "How motivated were you to do your job during your "day at work"?". The participants gave an answer on a seven-point Likert scale ranging from 1 = "Not motivated at all" to 7 = "Very motivated".

Main measure – Rapport

To measure the granters' perceived rapport, the granters were asked about their perception of and interaction with the agent. Six questions were asked about their interaction with the agent (see table 4). Three questions regarding the atmosphere (e.g., Kim was friendly towards me) based on research from Tickle-Degnen and Rosenthal (1987, 1990) were included. Three further questions regarding the interaction (e.g., My interaction with Kim was positive) from Bernieri (2001) were used. The participants responded on a five-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree", to all questions in this section. Cronbach's alpha for the rapport measure was .874.

Table 4

Rapport Atmosphere and Interaction Questions Asked to Granter

Atmosphere	Interaction
Kim was friendly towards me.	My interaction with Kim was positive.
I liked Kim.	My interaction with Kim was cooperative.
Kim is a warm person.	My interaction with Kim was focused.

Coding

The video-taped interactions between the agents and granters were coded by three coders. The items in the coding scheme relevant to this paper can be found in table 5. Of importance to this study were the items "expectancy violation" and "success". The filmed interactions were used to code the expectancy violation experienced by the agents across the missions. Two categories were used for coding the expectancy violation; one of the

categories was for the manipulated expectancy violation, meaning that each mission had one specific expectancy violation which had been manipulated. The manipulated expectancy violation for each operation can be found in table 5. If the video included the manipulated version of the expectancy violation, it was noted down. The other category included an interpreted version of the expectancy violation. In the case that one of the coders saw something occurring which could be interpreted as a version of the expectancy violation, they could note it down and give and explanation of what occurred. Missions which did not include an expectancy violation were excluded from analysis.

      The coders also took note of whether the agent succeeded in their mission (i.e., collected the note/fingerprint/photograph). Success was coded dichotomously; yes or no. This was used as an objective measure of whether the agents had achieved their goal. Furthermore, whether the granter had explicitly allowed the agent to achieve their goal (i.e., giving the agent the secret note, willingly touched the paper without gloves, or allowed the agent to take a picture of Lucas) was also coded. Finally, whether the success was an accident or not (e.g., the granter initially forgot to wear the gloves and touched the paper before remembering and putting the gloves on) or the success had occurred due to the expectancy not being violated was coded. This was done to ensure the successes included in the analysis were "true" successes resulting from adaptable behaviour (i.e., accidental successes were excluded from analysis).

Table 5

Coding Scheme

Item to code	Explanation
Expectancy violation (Interpretation)	The moment the agent is likely to realise that their expectancy of the events is violated
Interpretation explained	Here, the coder gives a short description of the expectancy violation, e.g., "Not Lucas" (e.g., granter says: 'I'm not Lucas')
Expectancy violation (Manipulation)	The moment the agent realises realise that their expectancy of the events is violated because of the experimental manipulation. A clear indication for the manipulation are: the granter wears gloves,

Item to code	Explanation
	the professor is not in the office, there is a strict no phone/ no-picture policy in the lab
	Count number of occurrences the cover story is repeated
Success	Dichotomous rating: Did the agent complete the mission objective? [1 = Success; 0 = Fail]
Explicit approval (Granter)	Dichotomous rating: Did the granter explicitly allow the agent to collect the note/fingerprints/picture? [1 = Yes; 0 = No]

To ensure the coders had a similar understanding of the coding scheme, all three coders coded the same 29 videos out of 87. The inter-rater reliability (Cronbach's alpha) for each of the items relevant for this study can be seen in table 6. Furthermore, the Intraclass Correlation Coefficient (ICC) was calculated as two-way mixed. The ICC can be found in table 6, reported as the absolute agreement as the agreement between the rater, including systematic errors of all rater and the random residual errors are of interest.

Table 6

ICC Ratings for Coded Items (see Table 5 for Coded Items)

Item	α	ICC (Average measure) [95% CI]	F	p
Expectancy violation	.147	.140 [-.524, .556]	1.17	.300
Expectancy violation (Manipulation)	.981	.981 [.965, .990]	52.00	.000

Note. ICC = Intraclass Correlation Coefficient. *CI* = Confidence Interval.

Results

Data Analysis

An ordinal logistic regression was used to investigate a) if the independent variable adaptability was a predictive factor for the dependent variable success for the three missions combined as proposed in hypothesis one, and b) if the independent variable rapport was a predictive factor for the depended variable success for the three missions combined as proposed in hypothesis three. An ordinal logistic regression was chosen, as when all three missions were examined combined, the dependent variable was treated as ordinal data. The original success data was dichotomous (1 = No success, 2 = Success), however when the data for each mission was combined, the mean of the participant's success across the three missions was used. This means the data was ranked (i.e., a lower score equals a lower success rate), but there was no meaningful difference between the scores. Therefore, the dependent variable was treated as ordinal data, thus an ordinal logistic regression was chosen. The independent variables were both ordinal variables as a Likert scale was used, which is appropriate for an ordinal logistic regression.

A binary logistic regression was used to investigate a) the relationship between the independent variable adaptability and the dependent variable success for each of the three missions separately, and b) the relationship between the independent variable rapport and depended variable success for each mission separately. The binary logistic regression was chosen in these cases because when examining the missions separately, the dependent variable was dichotomous. Furthermore, the independent variables were both ordinal variables as a Likert scale was used, which is appropriate for a binary logistic regression.

A Pearson's correlation analysis was chosen to investigate the strength and direction of the relationship between the two variables rapport and adaptability as stated in hypothesis 3. Although both rapport and adaptability were measured using a Likert scale, meaning the data is ordinal, the data was treated as continuous in this analysis. While it can be argued that using non-parametric tests such as Spearman's Rho for ordinal data is more appropriate, it has become "common practice to assume Likert-type categories constitute interval-level measurement" (Jamieson, 2004, p. 38). Furthermore, it has been suggested that more importantly, the sample size and distribution of data should be taken into consideration when deciding between parametric and non-parametric models (Knapp, 1990). Although the sample size in this study is rather small, the measures of adaptability and rapport are approximately normally distributed. For these reasons, a Pearson's correlation was employed to examine the relationship between adaptability and rapport.

Finally, the SPSS macro PROCCESS was used to investigate the proposed partial mediation of rapport in the relationship between the independent variable adaptability and

dependent variable successful achievement of a goal as stated in hypothesis 4. PROCESS uses ordinary least squares (OLS) regression to estimate the dependent and mediating variables (Hayes, 2020). This means the data for the dependent and mediating variable is treated as continuous. Furthermore, the independent variable is also treated as continuous in PROCESS (Hayes, 2020). Although treating the rapport and adaptability measures as continuous data is technically incorrect, the argument that Likert-type categories are often treated as interval-level measurements, lead to the decision of using PROCCESS.

Sample Characteristics

A Shapiro-Wilk's test and visual inspection of the histograms and normal Q-Q plots showed that the measures of adaptability, $W(29) = .96$, $p = .409$, and perceived rapport, $W(29) = .97$, $p = .480$, were approximately normally distributed, with a skewness of -.23 ($SE = .43$) and -.31 ($SE = .43$), and a kurtosis of -.88 ($SE = .85$) and -.75 ($SE = .85$), respectively.

Manipulation Checks

The participants in the role of undercover agents took their role ($M = 5.21$, $SD = 1.54$) and operations ($M = 5.31$, $SD = 1.49$) seriously. Furthermore, the agents were motivated to complete all three operations ($M = 5.92$, $SD = .76$). The participants in the role of granters took their role ($M = 5.07$, $SD = 1.44$) and task ($M = 5.07$, $SD = 1.44$) seriously. The granters were motivated to do their task ($M = 5.28$, $SD = 1.26$).

A one sample t test was used to compare the agents' perception of the operations as a change, novelty, and uncertainty ($M = 3.59$, $SD = .54$) against the mid-point of the scale (2.5) to test if the operations captured adaptability. The difference was found to be statistically significant, $t(28) = 10.83$, $p = < .001$. The results show the operations captured adaptability.

Furthermore, the missions were also perceived as a challenge ($M = 3.69$, $SD = .72$). The one sample t test which compared the agents' perception of the operations as a challenge against the mid-point of the scale (2.5), showed that the difference was statistically significant, $t(28) = 8.92$, $p = < .001$. Moreover, the secret note operation was perceived as significantly less of a challenge compared with the fingerprint operation, $t(28) = -3.47$, $p = .002$, and the photograph operation $t(28) = -2.31$, $p = .029$. See appendix E for the mean and standard deviation of all concepts measured for individual operations and all three operations combined.

A one sample t test was used to compare the agents' perception of the predictability of the operations ($M = 1.44$, $SD = .85$) against the mid-point of the scale (2.5) to test if the

operations were predictable. The difference was found to be statistically significant, $t(27) = -4.49$, $p = < .001$. The results show the operations were not predictable.

The success rates of each of the three missions was also examined to see whether the there was a notable difference between the success rates. The secret note operation had a success rate of 14 out of 29 (48.28%), the fingerprint operation had a success rate of 5 out of 29 (17.24%), and the photograph operation had a success rate of 8 out of 29 (27.59%).

To ensure self-assessed adaptability did not differ, a one-way repeated measures analysis of variance (ANOVA) was used to compare the self-assessed adaptability displayed by each participant across the three operations. The ANOVA results indicated that there was a difference in ratings of adaptability across the three operations, $F (2, 56) = 3.21$, $p = .048$, partial $\eta^2 = .103$. However, the pairwise comparison revealed that there were no significant differences between the three operations.

To ensure perceived rapport did not differ across operations, a one-way repeated measures analysis of variance (ANOVA) was used to compare the perceived rapport for each participant across the three operations. The ANOVA results showed that there were no significant differences in perceived rapport across the three operations, $F (2, 56) = .47$, $p = .630$.

Adaptability and Success

Hypothesis 1. To assess whether adaptability is a predictor of overall success in completing the three missions, an ordinal logistic regression was conducted. No significant effect was found. An increase in the score on adaptability was associated with a higher success rate, with an odds ratio (OR) of 2.84 (95% CI: .70, 11.53), however this association was not statistically significant, Wald $\chi^2(1) = 2.14$, $p = .143$.

To further investigate the relationship between adaptability and successful completion of a mission, a binary logistic regression was conducted for each operation separately. No significant effect was found for the secret note operation, $OR = 1.91$ (95% CI: .73, 4.97), Wald $\chi^2(1) = 1.74$, $p = .187$, the fingerprint operation, $OR = 4.86$ (95% CI: .75, 30.96), Wald $\chi^2(1) = 2.81$, $p = .094$, or the photograph operation, $OR = 1.17$ (95% CI: .46, 2.98), Wald $\chi^2(1) = .12$, $p = .735$.

Adaptability and Rapport

Hypothesis 2. To assess the relationship between the agent's adaptability and granter's perceived rapport, a bivariate Pearson's correlation coefficient (r) was calculated using the adaptability measure and combined rapport reported by the granters across the three missions.

To further investigate the relationship between adaptability and rapport, the same test was conducted for each operation separately. A significant correlation for the secret note operation was found, $r(27) = .40$, $p = .034$. No significant results were found in the fingerprint operation, $r(27) = -.13$, $p = .518$, or in the photograph operation, $r(27) = -.23$, $p = .226$.

Rapport and Success

Hypothesis 3. To assess the relationship between the granter's perceived rapport and the agent's success of a mission, an ordinal logistic regression was calculated using the combined rapport reported by the granters and overall success rate across the three missions. No significant effect was found, $OR = 1.36$ (95% CI, .44, 4.16), Wald $\chi^2(1) = .29$, $p = .591$.

To further investigate the relationship between rapport and successful completion of a mission, a binary logistic regression was conducted for each operation separately. One significant effect was found in the secret note operation. The omnibus model for the logistic regression analysis was statistically significant, χ^2 (df = 1, $N = 29$) = 11.72, $p = .001$, Cox and Snell $R^2 = .33$, Nagelkerke $R^2 = .44$. The model was 75.90% accurate in its prediction of a successful outcome, compared with 51.70% accuracy when the predictor variable was not included. Hosmer and Lemeshow test results indicate that the model was a good fit for the data χ^2 (df = 7, $N = 29$) = 3.35, $p = .851$. Coefficients for the model's predictor are presented in table 12.

Table 12

Rapport Predictor Coefficients for the Model Predicting Success

	b	*SE (b)*	*p*	*Exp(B)* [95% CI]
Constant	-7.58			
Rapport	2.03	.77	.008	7.60 [1.69, 34.20]

Note. CI = confidence interval

As demonstrated in table 12, the variable rapport significantly improved the model's predictive capabilities. An increase in the score on rapport was associated with a higher

success rate, with an odds ratio of 7.60 (95% CI, .1.69, 34.20), Wald $\chi^2(1) = .699$, $p = .008$. No other statistically significant outcomes were found for the fingerprint operation, $OR = .96$ (95% CI: .34, 2.66), Wald $\chi^2(1) = .01$, $p = .929$, or the photograph operation, $OR = 1.92$ (95% CI: .62, 5.90), Wald $\chi^2(1) = 1.23$, $p = .256$.

Rapport as a Partial Mediator Between Adaptability and Success

      Hypothesis 4. Hypothesis 4 stated that rapport is a partial mediating factor between adaptability and successfully completing a mission. To test this, a mediation analysis was conducted using SPSS's PROCESS macro. In step one of the mediation model, the regression of the independent variable adaptability on dependent variable successfully completing the mission was not significant, $b = .14$, $t(27) = .56$, $p = .131$. In step two, the regression of adaptability on the mediator rapport, was not significant, $b = -.02$, $t(27) = -.06$, $p = .950$. Step three of the mediation process revealed that rapport, controlling for adaptability was not significant, $b = .01$, $t(26) = .11$, $p = .914$. Finally, step four showed that controlling for rapport, adaptability is not a significant predictor or successfully completing a mission, $b = .14$, $t(1.53)$, $p = .140$. The indirect effect of the independent variable adaptability on successfully completing a mission was not statistically significant [Effect = -.0001, 95% C.I. (-.03, .07)].

Discussion

      This study examined two skills that are believed to help undercover agents successfully achieve the goal of their mission; rapport and adaptability. Specifically, this study tested four hypotheses. It was hypothesized that being able to effectively respond to changing, novel, and uncertain situations (i.e., adaptability) would be a predictive factor in achieving a goal. This hypothesis was not supported. Furthermore, it was predicted that the ability to develop an initial social connection and positive atmosphere (i.e., rapport) would be a predictive factor in achieving a goal. This hypothesis was not supported across all three missions. However, being able to develop rapport was a predictive factor in one of the three missions; the secret note mission. Next, it was hypothesized that adaptability and the ability to develop rapport would be positively correlated. Once again, the hypothesis was not supported across all three missions, but a positive correlation between adaptability and rapport was found in one of the missions; the secret note mission. Finally, it was

hypothesized that rapport would partially mediate the relationship between adaptability and successfully achieving a goal. This hypothesis was not supported, as there was no relationship between adaptability and successful goal achievement to mediate.

Main Findings

Adaptability

It was expected that adaptability would be a predictor for attaining the mission objectives. However, this study did not show any such effects. A possible reason for why adaptability was not related to the successful achievement of any of the three missions, could be based on how adaptability was measured. Although the Adaptability scale covers behavioural, cognitive and affective aspects of adaptability, the participants are self-assessing their abilities. Some individuals underestimate their abilities, while others overestimate it (Brown, Bull, & Pendlebury, 2013). People especially tend to overestimate their skills, for example, their ability to drive a car or their athletic capabilities (Greening & Chandler, 1997). The tendency to overestimate one's abilities was reflected in the results. Although the success rate across the three missions differed substantially, ranging from a 48.28% in the secret note operation to 17.24% in the fingerprint operation, the difference in scores on adaptability did not change considerably across the three missions. This supports the possibility that the participants self-assessed adaptability was not a true reflection of their displayed adaptability.

A solution to this issue, is finding a way to measure adaptability in a more objective way. So far, no such measurement has been developed, as creating an objective measure of adaptability poses several challenges. Nonetheless, examining the behavioural aspect of adaptability through observation could be a way to gain a more objective view of the participants' adaptive abilities.

Rapport

The expectation that there would be a relationship between rapport and adaptability as stated in hypothesis 2 was not supported. Once again, no effect was found when examining all three missions combined. However, during the exploratory analyses of the individual operations, a relationship between rapport and adaptability in the secret note mission was found. One possible reason for these findings is the difference in nature of the three operations.

As mentioned above, in the secret note operation, the granter was told that all the professor's belongings needed to be in the correct place when he returned. The granters were

not told whether it was acceptable to allow the agent to look through the professor's books. This means that it was up to the discretion of the granter whether they thought this would be acceptable or not. However, the granter in the fingerprint operation was told not to touch any of the agent's belongings without gloves, and the granter in the photograph operation was told not to allow the agent to use their phone in the lab. Due to these differences, it could be possible that in the secret note operation, if the agent was adaptable and realized that going through the book in the office to gather the note was an option, the agent would also likely focus on building rapport with the granter in order to get permission to do so. Seeing as a way to display adaptability in this scenario included having to respond to a social interaction successfully, it would follow logically that building rapport with the granter would be part of the displayed adaptability of the agent. In other words, the way in which the agents regulated their behaviour could have been beneficial in being adaptable as well as in developing rapport.

Moreover, the fingerprint and photograph missions were considered more challenging by the participants, and likely required more instrumental problem solving skills. The fact that the fingerprint and photograph missions were considered more challenging than the secret note mission was reflected in the participants' perception of the operations as well as in the success rates of each of the operations. This could mean that the participants regulated their behaviour in a way which was beneficial to achieve their goal, but negatively impacted the interaction with the granter. The goal of the agents was not to have a positive interaction with the granter or come across as friendly. Their goal was to complete the mission. Which means if the agents felt the optimal way to achieve their goal would not require a positive interaction with the granter, they would likely be more inclined to use techniques which increased their chances as succeeding, but could negatively impact rapport.

Hypothesis 3 expected to find that rapport as experienced by the granter was a predictive factor in the agent's successful completion of a mission. Hypothesis 3 was not supported. As in the previous hypotheses, no relationship was found when all three missions were combined, nonetheless during the exploratory analyses, rapport was found to be a predictive factor in successful completion of the secret note mission.

A possible reason rapport was related to achieving the goal in the secret note operation, but neither of the other two operations could once again be related to the difficulty level of the operations. If achieving the mission was an easy task and did not require the agent to attempt different approaches to persuade the granter, the likelihood that the interaction between agent and granter was experienced as more cooperative and positive

increases. However, if an individual continuously tries to persuade or demand another person to do something after the initial request has been denied, this could impact perceived rapport in a negative way (Leach, 2005; Risan et al., 2016). In other words, if the agents were heavily focused on achieving their goal and adamantly trying to persuade the granter, this type of behaviour could lead to the interaction becoming less coordinated. This could in turn have a negative impact on rapport (Bernieri, 2001). In sum, it seemed that in the more challenging scenarios, few agents were able to regulate their behaviour in a way which was goal-oriented and created rapport with the granter.

Lastly, hypothesis 4 was formed to answer the question of whether rapport as experienced by the granter is be a partial mediating factor in the relationship between adaptability and successfully completing the missions. The hypothesis was not supported. The step by step model showed that there was no relationship between the independent and dependent variable. Since there was no relationship to mediate, the model is not valid. The possible reasons as to why no relationship was found between the independent and dependent variable as well as the mediator and independent variable in the three missions combined, is discussed above.

Limitations and Future Directions

There are three main limitations in this study. First, the secret note operation was found to be considerably less challenging compared with the fingerprint and photograph operations. This was shown by the participants' perception of the difficulty level of each mission as well as the differences in success rates. Initially it was assumed that it would be more challenging for the agents to persuade the granters to look inside the book in which the secret note was hidden. However, it turned out that if the agent simply asked the granter to quickly look something up in this book, the granters were inclined to allow this. In the future, it would be recommended to explicitly instruct the granters that, for example, that the students need permission from the professor to gain access to his books. This would likely increase the difficulty level of the task to similar level of the other two missions, as simply asking once would likely no longer suffice to collect the secret note in most cases.

Secondly, the measure of adaptability was self-assessment, which means it was a subjective measure of the participants' perception of their own skills. This could potentially have skewed the results, thus not reflecting the participants' true adaptive skills used in the missions. A possible way to test whether the participants over- or underestimated their adaptive abilities, would be to observe the number of adjustments the participants made

during each operation and compare this with their self-assessment. As part of adaptability is to adjust to the situation, checking whether participants who scored high on adaptability did indeed make many adjustments, this could give an indication of whether the self-assessments were skewed or not. Nonetheless, as the number of adjustments made does not truly reflect adaptive behaviour either, this option would still not solve the problem. The difficulty with solving this limitation lies in how to determine if someone's self-assessment is a true reflection of their skills without being able to objectively measure the skill. Therefore, the optimal solution to this limitation, namely using an objective measure of adaptability, is currently not an option, as an objective measure of adaptability has not yet been developed.

Finally, the statistical analysis chosen for this data was not the optimal choice. Due to the complex nature of the data, conducting more advanced statistical analyses would have increased the reliability of the outcome. Furthermore, the data for success of the missions was mostly treated as ordinal, except for in the final mediation analysis, where it was treated as continuous data. Likewise, the data for adaptability and rapport was treated as continuous, although Likert-type categories are technically not interval-level measurements. It would be recommended to use models that treat the data in the correct format. Moreover, the experimental section of the study was concluded sooner than planned due to COVID-19. This had the implication of lowering the number of participants included in the study, which in turn lowered the power of the statistical analyses. The low sample size was also a limiting factor in conducting regression analyses, as larger sample sizes are generally required for reliable results.

Conclusion

This study investigated the role of adaptability in the context of undercover police work. Specifically, the relationship between adaptability, rapport, and successfully accomplishing a goal was examined. The findings of this study presented early evidence that although rapport does not seem to be linked to adaptability or succeeding in accomplishing a goal in every situation, there are specific circumstances in which this relationship can be seen. The results indicate that in situations where an individual stands in the way between oneself and the achievement of a goal, the ability to develop rapport is a predictive variable in achieving the goal. Furthermore, in such a situation, the ability to influence a perception of rapport is also positively correlated with adaptability. However, in situations where the goal was perceived as more challenging to accomplish, this effect was no longer found.

It is important for future research to further examine the relationship between adaptability, rapport, and success to gain a clearer understanding of the impact concepts such as adaptability and rapport have on effectively accomplishing a goal in a social situation where the true nature of the goal cannot be revealed. Gaining a deeper understanding of the nature of these relationships, hold theoretical and empirical implications for researchers and practitioners seeking to develop ways to train adaptability.

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Appendix A – Agent Initial Instructions

Instructions

In this study you will take the role of a special agent that will conduct three undercover operations. Before each operation you will receive a brief case file. The case file will (a) explain the background and the purpose of the operation, and (b) state your mission objective. After each operation you will answer a short questionnaire.

Please note that the operational descriptions will be concise and direct. This means that you will only be informed on <u>what</u> you are expected to complete (i.e., your objectives). No information will be provided for <u>how</u> to complete it. This will be left entirely up to you.

You will have about 5 minutes to prepare for each operation.

You have already been introduced to your "contact" (i.e., the experimenter). The contact will give you your case-files and you will bring any item you obtain back to your contact. When all three operations are completed you will fill in a post-operation questionnaire. When you have filled in this final questionnaire the study is over.

There will be a video camera recording the operations. We ask you to do your best to ignore the fact that you are being video recorded. The purpose of the video recording is to supplement the information you provide in the questionnaires.

Please note that as the operational scenarios are fictional you will have to play along with them. We thus request that you <u>take your role as an agent in a serious manner</u> and involve yourself in the role as if it was true.

Importantly, as we aim to simulate specific aspects of reality, the situations you are about to encounter may sometimes be more or less straightforward. But do note that all mission objectives are accessible, even if it would not seem so at first sight. It is therefore central that you do your best to <u>imagine the importance of completing your mission objectives</u> and commit yourself to that outcome.

Your alias during this study will be Kim

Appendix B – Granter Initial Instructions

Instructions

In this study you will take the role of a new employee at the University. Before starting your new job you will receive a brief job description. This description will (a) explain the purpose of your job and (b) state what is expected of you during your first day.

Please note that the job description will be brief and direct. This means that you will only be informed on <u>what</u> your job is (i.e., your duties). No information will be provided for <u>how</u> you will do it. This will be left entirely up to you.

You will have about 5 minutes to prepare before "starting your new job".

You have already been introduced to your "employer" (i.e., the experimenter). The employer will give you your job description. When your first day has been completed you will fill in a questionnaire (the employer will let you know when your first day is completed). When you have filled in this questionnaire the study is over.

There will be a video camera recording your "day at work". We ask you to do your best to ignore the fact that you are being video recorded. The purpose of videotaping you is to supplement the information you provide in the questionnaires.

Please note that as your "day at work" is fictional you will have to play along with it. We thus request that you <u>take your role as a newly employed person in a serious manner</u>. We also ask you to do your best to imagine that <u>you find it important to do well at your first day at work</u>.

Appendix C – Granter Job Descriptions

Assisting a professor

The job

The University of Twente has decided to relieve successful researchers from administrative tasks, so that they can focus more on research. In an effort to do so the University of Twente will try-out employing assistants tasked with managing the administration of professors. You have been assigned to be the assistant of Professor Balthazar.

Job description

Professor Balthazar has gained broad recognition because of his excellent studies into research methodology. However, Prof. Balthazar has recently been accused of committing research fraud by using questionable methods in his own research, which have placed him in serious controversy. Due to extensive public criticism, Prof. Balthazar has taken a two-week vacation to get away and recover from all the negativity. Prof. Balthazar will be back in his office on Monday next week.

Your task

As Prof. Balthazar left in a hurry, we want to make sure he has a good start when he comes back: being a clean and organized office! Your job will be to organize Prof. Balthazar's office during his absence. You will inventory his books, categorize his papers, and schedule his appointments starting next week.

Please note that Prof. Balthazar is very keen on order. It is very important that all his belongings can be found exactly on its right place when he returns.

Alias

Your alias during this study will be **Charlie**

The job

Recent studies have shown that students' academic concerns are better resolved by talking with fellow students rather than consulting professional study advisors. The University of Twente has thus decided to try out a new program called "students consulting students". You have been assigned to consult another student on what courses to take next semester.

Job description

Your task is to meet the student Kim who wants to discuss what courses to take next semester. You will listen to Kim's concerns and try to help Kim work out a path of future studies (e.g., what courses to take). Importantly, your job is not to convince Kim on what Kim should do, but rather to help Kim consider multiple options so that Kim can make informed decisions.

Please note that to reduce the high number of sick leave among staff the university has begun a new initiative to reduce the spread of viruses and bacteria from students to staff. This initiative has ordered all personnel to use plastic gloves when receiving items from students. Therefore, a box with plastic gloves has been made available in case you receive any items by the student (e.g., pens, papers, books etc.). Please remember to put on these protective gloves in case you are asked to touch any objects brought in by the student.

Your task

You will meet the student named Kim who wants to discuss what courses to take next semester. Your job is to learn what classes Kim has already studied, what grades Kim achieved on these courses, and have Kim explain if the grades truly reflect Kim's true qualifications (e.g., performance, skills, and effort). Based on Kim's answers to your question you will together come up with a plan for what Kim should do next semester. Please do not forget to wear the protective gloves if you are asked to hold any objects.

Alias

Your alias during this study will be **Alex**

Research lab manager

The job

The Research Data Management policy (RDM), adopted by the University of Twente, highlights that proper management of research data makes science more transparent while improving scientific integrity and societal trust. To ensure that our researchers adhere to the ethics and integrity of RDM, the University of Twente will try out employing laboratory managers tasked with monitoring the ethical procedures of the research data. You have been assigned to be the lab manager of the research group of Social Psychology.

Job description

Your task is to organize the research material in the laboratory office, to administer research assistants (i.e., students helping out with data collection) and to sign up research participants (i.e., students who want to participate in social experiments). Importantly, as there is plenty of personal and sensitive information kept in the lab office it is absolutely forbidden to take pictures or make videos in the office. Hence, the lab office has a zero-use policy on cell phones (i.e., a phone is not allowed out of the pocket). Be aware that many students who comes to sign up for participating in research wants to take a picture of the schedule for the experiments. You will have to inform them that they can look up the schedule on the lab webpage.

Your task

You will have to organize the working schedule for all employed research assistants (e.g., how many and who are working in what project). You also have the schedule for all ongoing and upcoming research experiments so that students who wants to participate can sign up on these.

Alias

Your alias during this study will be Kasey

Appendix D – Adaptability Scale Questions for Each Operation

Questionnaire
Operation 1: The Secret Note

We would like you to answer some questions with regards to your decision-making when you realized the professor would not be present.

	1–Strongly disagree; 7–Strongly agree

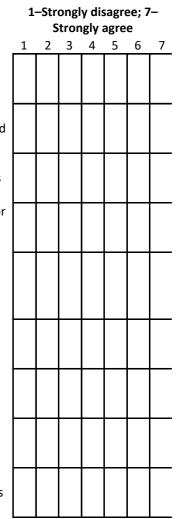|		1	2	3	4	5	6	7
1	During the secret note operation, I was able to think through a number of possible options to assist me when I realized the professor would not be present							
2	During the secret note operation, I was able to revise the way I was thinking (when I realized the professor would not be present) which helped me through it							
3	I was able to adjust my thinking or expectations during the secret note operation to assist me in the interaction with the assistant when it was necessary							
4	During the secret note operation, I was able to seek out new information or useful resources to effectively deal with the assistant (rather than the professor)							
5	When dealing with the assistant during the secret note operation, I was able to develop new ways of going about things (e.g. a different way of doing something or finding information) to help me through							
6	To assist me in dealing with the assistant during the secret note operation, I was able to change the way I wanted to do things when it was necessary							
7	During the secret note operation, I was able to reduce negative emotions (e.g., social anxiety, feeling awkward) to help me deal with the fact that the professor would not be present							
8	When I realized the professor would not be present during the secret note operation, I was able to minimize frustration or irritation so that I could deal with it best							
9	To help me through the interaction with the assistant during the secret note operation, I was able to draw on positive feelings and emotions (e.g., enjoyment, satisfaction)							

Questionnaire
Operation 2: The fingerprints

We would like you to answer some questions with regards to your decision-making when you realized the consultant would put on gloves

1–Strongly disagree; 7–Strongly agree

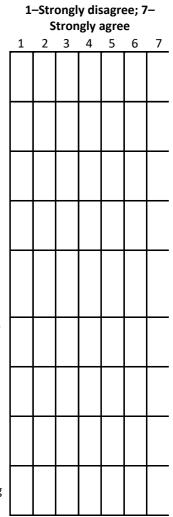|	1	2	3	4	5	6	7
1 During the fingerprint operation, I was able to think through a number of possible options to assist me when I realized the consultant would put on gloves							
2 During the fingerprint operation, I was able to revise the way I was thinking (when I realized the consultant would put on gloves) which helped me through it							
3 I was able to adjust my thinking or expectations during the fingerprint operation to assist me when the consultant had the gloves on when it was necessary							
4 During the fingerprint operation, I was able to seek out new information or useful resources to effectively deal with the consultant when the gloves was on (rather than when the gloves was off)							
5 When dealing with the fact that the consultant had gloves on during the fingerprint operation, I was able to develop new ways of going about things (e.g. a different way of doing something or finding information) to help me through							
6 To assist me in dealing with the consultant with the gloves on during the fingerprint operation, I was able to change the way I wanted to do things when it was necessary							
7 During the fingerprint operation, I was able to reduce negative emotions (e.g., social anxiety, feeling awkward) to help me deal with the fact that the consultant had gloves on							
8 When I realized the consultant would put on gloves during the fingerprint operation, I was able to minimize frustration or irritation so that I could deal with it best							
9 To help me through the fact that the consultant had gloves on during the fingerprint operation, I was able to draw on positive feelings and emotions (e.g., enjoyment, satisfaction)							

Questionnaire

Operation 3: The photograph

We would like you to answer some questions with regards to your decision-making when you realized it was not allowed to take pictures in the lab

	1–Strongly disagree; 7– Strongly agree						
	1	2	3	4	5	6	7
1 During the photograph operation, I was able to think through a number of possible options to assist me when I realized it was not allowed to take pictures in the lab							
2 During the photograph operation, I was able to revise the way I was thinking (when I realized it was not allowed to take pictures in the lab) which helped me through it							
3 I was able to adjust my thinking or expectations during the photograph operation to assist me in dealing with the fact that I was not allowed to take pictures in the lab when it was necessary							
4 During the photograph operation, I was able to seek out new information or useful resources to effectively deal with the fact that I was not allowed to take pictures in the lab							
5 When dealing with the fact that I was not allowed to take pictures in the lab during the photograph operation, I was able to develop new ways of going about things (e.g. a different way of doing something or finding information) to help me through							
6 To assist me in dealing with the fact that I was not allowed to take pictures in the lab during the photograph operation, I was able to change the way I wanted to do things when it was necessary							
7 During the photograph operation, I was able to reduce negative emotions (e.g., social anxiety, feeling awkward) to help me deal with the fact that I was not allowed to take pictures in the lab							
8 When I realized it was not allowed to take pictures in the lab during the photograph operation, I was able to minimize frustration or irritation so that I could deal with it best							
9 To help me through the fact that I was not allowed to take pictures in the lab during the photograph operation, I was able to draw on positive feeling and emotions (e.g., enjoyment, satisfaction)							

Appendix E - Means and Standard Deviations of the Extent to Which Each Mission was Viewed as a Change, Adversity, Novelty, Threat, Uncertainty, Challenge, and Confrontation.

Table 8

Means and Standard Deviations of the Extent to Which Each Mission was Viewed as a Change, Adversity, Novelty, Threat, Uncertainty, Challenge, and Confrontation.

	M (SD)			
	Secret Note (OP1)	*Fingerprint (OP2)*	*Picture (OP3)*	*Overall*
A change	3.31 (1.29);	4.07 (1.16)	3.45 (0.95)	3.61 (.68)
An adversity	2.79 (1.26)	3.10 (1.24)	3.45 (.91)	3.11 (.79)
A novelty	3.07 (.96)	3.90 (.90)	3.55 (1.02)	3.51 (.59)
A threat	2.14 (1.03)	2.31 (1.17)	2.59 (1.15)	2.34 (.81)
An uncertainty	3.45 (1.18)	3.72 (.96)	3.79 (1.01)	3.66 (.70)
A challenge	3.17 (1.44)	4.10 (1.11)	3.79 (.98)	3.69 (.72)
A confrontation	1.69 (.97)	1.96 (1.09)	2.62 (1.21)	2.09 (.80)

Note. OP = operation.