



# The Adaptable Law Enforcement Officer: Developing A Paradigm To Assess And Measure Adaptability

FULL REPORT

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This report details the key findings of work conducted by the CREST commissioned project *The Adaptable Law Enforcement Officer: Developing A Measure Of Adaptive Effectiveness*. You can view all the outputs from this project at: [crestresearch.ac.uk/projects/the-adaptable-law-enforcement-officer](https://crestresearch.ac.uk/projects/the-adaptable-law-enforcement-officer)

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# EXECUTIVE SUMMARY

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## BACKGROUND

This study concerns the ability to adapt to changeable or uncertain situational demands.

Adaptability is critical for law enforcement and security officers who have to complete specific objectives when interacting with sources within criminal communities (i.e. covert law enforcement).

Although the importance of adaptability for social interactions has been highlighted in several fields, it remains understudied in the context of police work. Furthermore, despite extensive conceptual work on adaptability, no behavioural measure to evaluate the efficacy of adaptive responses exists.

This study remedies this by relating behavioural indicators of adaptability with subjective adaptability, the quality of the relationship (i.e. rapport and trust), and goal achievement.

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## THE EXPERIMENTAL TEST

To examine adaptive behaviour, we developed a novel experimental set-up inspired by observations of undercover training at the Los Angeles Police Department (LAPD).

In Experiment 1, university students ( $n = 30$ ) acted as agents that had to complete three undercover missions. Adaptive behaviour was elicited by three features:

1. A goal (e.g. the agent was tasked with collecting a secret note hidden in the office of a professor).
2. An expectation (e.g. the agent was told that the professor is friendly towards motivated students).
3. A violation of that expectation (e.g. the professor is on leave but an assistant is in his office). This violation creates the unexpected situation that

the agents must adapt to achieve their mission objective.

Adaptability was measured on the self-rated adaptability scale, as well as by the behavioural adjustments made in response to the changing situational demand.

In Experiment 2, practitioners ( $n = 22$ ) experienced in covert policing watched four video recordings from Experiment 1 and rated the adaptive responses.

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## MAIN FINDINGS

Although this study was a first explorative attempt to study behavioural adaptability, we tentatively suggest three preliminary conclusions:

1. Providing agents with a specific instrumental objective (e.g. to collect the fingerprints of a study advisor) may lead to adaptive behaviour associated with a reduced relationship with those they interact with.
2. Practitioners seem to consider adaptability as being more a feature connected with the quality of the relationship than a feature for accomplishing mission objectives.
3. Practitioners should – but do not – take the time spent on each adjustment into account when assessing adaptability in novel and uncertain situations.

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## ASSESSING ADAPTABILITY

Our findings suggest that adaptive behaviour may be tailored to its objective. That is, providing trainees with a purely instrumental objective (e.g. to collect a secret note) may reduce their capacity to consider relational objectives (e.g. to establish rapport) and vice versa.

We thus recommend informing trainees about both relational and instrumental objectives during their training. Otherwise, there is a risk that they underperform on one objective simply because they misunderstand what is expected of them.

However, by informing trainees on the importance of both these objectives you will be in a better position to assess their true qualities, as it will be clearer when specific qualities are lacking.

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## A BEHAVIOUR PREDICTIVE OF SUCCESS

Our findings suggest that agents that are successful at attaining mission objectives in changing situations spend less time on ineffective behaviour. This finding provides a starting point in the search for behavioural indicators of adaptability.

A thorough examination of such behavioural adjustments may be key for contextual assessments of adaptability.

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## FUTURE RESEARCH

The primary contribution of this research is the development of a clinical testing procedure that complements authentic training scenarios. For example, by altering mission specifics within the schematic set-up of an objective, expectation, and violation, we can examine an array of situations relevant to covert law enforcement.

This would allow us to study principles of adaptive expertise, which would help advance training programs and personnel selection. This would allow us to study principles of adaptive expertise, which would help advance training programs and personnel selection.

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# DEVELOPING A PARADIGM TO ASSESS AND MEASURE ADAPTABILITY

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When faced with novel or uncertain situations, the ability to adjust behaviour appropriately – the ability to *adapt* – is an invaluable skill. Adaptability is a central part of naturalistic decision-making (Klein et al., 2014) and has been praised as a necessary condition of expertise (Ward et al. 2018).

The importance of adaptability has been highlighted in an array of areas including academic achievement (Martin et al., 2013), teaching (Collie & Martin, 2016), selling behaviour (Spiro & Weitz, 1990), and work performance across different military and federal workplaces (Pulakos et al., 2000). The current study extends previous practical work on adaptability to a law enforcement context – specifically to covert operations. Despite the likely value of adaptability for practitioners in a law enforcement context, little research has examined the issue.

Adaptability refers to cognitive, behavioural, and emotional adjustments that assist in effectively responding to novel and uncertain situational demands, when goals cannot be changed or disengaged (Martin et al., 2013). Adaptability is closely related to the constructs of resilience and coping: all three concern one's ability to manage different situational demands. What primarily distinguishes these three constructs is the type of demand. Both resilience and coping concern adversities – negative or threatening situational demands. In contrast, adaptability refers specifically to one's ability to adjust to situational demands that are novel or uncertain, but not necessarily negative or threatening (Martin et al., 2013).

To examine adaptive behaviour in a law enforcement context, we have developed a novel experimental set-up designed to elicit adaptive responses. Inspired by observations of the undercover training at the Los Angeles Police Department (October 2016), in its most

simple form, this set-up plays with three key features: an objective, an expectation, and a violation of that expectation. Specifically, participants take on the role of an undercover agent who has to complete mission objectives during a covert operation (e.g. collect a secret note hidden in the office of a professor). Before each mission, the agent receives a brief casefile providing some background information on the upcoming situation.

However, during each mission, the agent faces a social encounter that is inherently different from what has been described. To successfully complete their missions, agents must adjust their behaviour to meet the unexpected situation. That is, they must adapt (as defined by Martin et al., 2013).

In addition to a paradigm to elicit adaptability, a suitable measure of the construct is also required. Arguably, the most concerted attempt to measure adaptability is Martin and colleagues (2012) adaptability scale. The adaptability scale is a self-report questionnaire that assesses people's ability to constructively regulate their feelings and behaviour when faced with novel and uncertain situational demands. Factor analyses suggest that adaptability, as measured by the scale, is composed of two sub-categories of adaptability.

The first, cognitive and behavioural adaptability, refers to one's ability to adapt one's thoughts or actions to situational demands. The second, affective adaptability, concerns one's ability to adapt one's feelings or emotions. In the high-school context, where the scale was validated, adaptability was positively correlated with academic achievement and enjoyment of school (Martin et al., 2012) as well as with self-regulation, buoyancy, and life satisfaction (Martin et al., 2013).

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## TOWARDS A BEHAVIOURAL MEASURE OF ADAPTABILITY

The adaptability scale (Martin et al. 2012) provides a subjective measure of adaptability. In addition to this, our experimental setup allows us to record and measure behaviour.

This lets us take the first steps toward a behavioural measure of adaptability. To the best of our knowledge, no such measure exists. We, therefore, examine several behavioural indicators that we argue may be of relevance.

We derive these measures from the aforementioned definition of adaptability as behavioural and emotional adjustments that assist in responding to novel situations. Specifically, we examine how quickly individuals adjust their behaviour (adjustment onset) and how many times they adjust their behaviour (adjustment productivity).

We surmise that both of these measurements tap into one's ability to generate alternative behaviours to adapt to the situation. We also measure the average time participants spend on a specific strategy or behaviour (adjustment activity). We argue that spending too much time on an ineffective strategy is maladaptive. It may, for example, be reflective of decision inertia or an inability to generate alternative avenues of action (cf. Nicola & Alison, 2018).

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## THE PRESENT STUDY

The current study consists of two Experiments. In Experiment 1 we introduced an experimental paradigm designed to elicit adaptive responses. In Experiment 2 we had police officers, experienced with covert policing, assess the adaptive responses elicited in Experiment 1.

In Experiment 1, university students took the role of an 'agent' that has to complete three 'undercover missions'. Adaptive behaviour was elicited by three

features: a goal, an expectation, and a violation of that expectation. This violation creates the novel or unexpected situational demand that participants must adapt to attain their mission objective (i.e. their goal). We then examined how agents' self-reported adaptability relates to variables central to interpersonal interactions, such as rapport and trust – both of which are considered key to effective and humane relationship building (Brimbal, Kleinman, Oleszkiewicz, & Meissner, 2019).

To further examine adaptive behaviour in a law enforcement context, we also related self-reported adaptability to our three measures of observable behaviour: time until first adjustment (onset); number of adjustments (productivity); average time spent on each strategy (activity).

Finally, we examined how self-rated adaptability, the behavioural measures of adaptability, as well as trustworthiness and rapport, relate to the agents' success in accomplishing mission objectives.

In Experiment 2, we examined practitioners' perceptions of the agents' adaptive responses. A sample of practitioners experienced with covert policing watched four video recordings of agents from Experiment 1. They rated agents' adaptability, as well as other variables central to interpersonal interactions, such as rapport and trustworthiness.

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# EXPERIMENT 1

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## PARTICIPANTS

Participants were recruited as either ‘agents’ or ‘granters’. Agents took the role of an undercover operative who had to undertake three undercover missions. Granters allegedly took the role of a new employee at the university and were to perform simple work tasks. However, the simple work tasks were used as a cover for these participants true purpose, which was to unknowingly stand between the agent and the agent’s mission objective. The participants received payment in the form of vouchers (10 Euro for agents and 5 Euro for granters) or received course credit for their participation.

## AGENTS

30 university students (11 females, 19 males) with ages ranging between 19 to 41 ( $M = 22.0$ ,  $SD = 4.01$ ) took the role of an agent to perform three covert missions (collect a secret note; secure fingerprints; take a photograph)<sup>1</sup>. The majority of agents were German (53%) and Dutch (30%). Most agents had a bachelor’s degree (57%) or a master’s degree (10%). 28 agents performed all three missions whereas two agents performed the photograph mission only (as four granters did not show up for the other tests).

## GRANTERS

A total of 86 university students (38 females, 48 males) served as granters. Granters were told they were to take part in a study examining what it is like to be a new employee at the university and were randomly assigned to one of three different work tasks. These tasks were matched to the agent’s undercover operation, allowing the granter to unknowingly stand between the agent and the agent’s mission objective. Eleven females and

17 males (age range 18–25;  $M = 21.6$ ;  $SD = 1.77$ ) were assigned to assist a professor (i.e. granters for the secret note mission), (ii) 4 females, 14 males (age range 18–34;  $M = 23.0$ ;  $SD = 4.45$ ) were assigned to act as a student guidance counselor (i.e. granters for the fingerprints mission), and 13 females and 17 males (age range 18–30;  $M = 23.0$ ;  $SD = 2.69$ ) were assigned to act as a manager of a research lab (i.e. granter for the photograph mission). Four granters did not show up for the experiment; two in the assisting a professor task and two in the guidance counselor task. Most granters were German (51%) and Dutch (36%). Most granters had a bachelor’s degree (64%) or a master’s degree (30%).

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## DESIGN

We used a repeated-measure design (Mission: secret note vs. fingerprints vs. photograph) that was semi-randomised by changing the mission order every day of data collection: Order A (the secret note, the fingerprints, the photograph), Order B (the fingerprints, the photograph, the secret note) or Order C (the photograph, the secret note, the fingerprints). Due to the complexity of the data collection, we opted for a semi-randomised procedure instead of full randomisation, so as not to mix up instructions, questionnaires, and tasks. One research assistant was tasked with hosting the agent and one research assistant was tasked with hosting the three granters throughout each study session. The study was approved by IRBs at the University of Twente and Lancaster University. Below we describe the covert missions and the corresponding tasks given to the granters (see *Appendix* for each specific case file).

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<sup>1</sup> We had originally planned to collect data from at least 40 agents and 120 granters ( $N=160$ ) but due to the Coronavirus pandemic, the data collection was terminated early to ensure the safety and health of participants and research employees.



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## THE AGENT'S MISSIONS AND THE GRANTER'S TASKS

The three mock covert missions were designed to elicit an adaptive response on behalf of the agent by controlling a mission objective (i.e. a specific goal the agent had to accomplish), an expectation (i.e. some indication for what might happen during the mission), and a violation of that expectation (i.e. the description of the event was inherently misleading). The agents were encouraged to commit to achieving the mission objective and were informed that all mission objectives would be attainable, even if it would not seem so at first sight.

All granters were told that they would participate in a study on being a new employee at the University. Each granter was assigned to one task only and received instructions on their respective work tasks.

### THE SECRET NOTE

The agent was instructed to collect a secret note hidden in a book inside a professor's office (objective). To collect the note the agent had to borrow the book from the professor who was unaware of the existence of the note. The agent was informed that the professor was known to be friendly towards research-interested students and should therefore be willing to lend them the book (expectation). However, when the agent entered the professor's office, they would find that the professor was away on a business trip and that his assistant (i.e. the granter) was in the office in his stead (expectancy violation).

The granters were told that the University was considering employing assistants tasked with managing the administration of professors, to allow the professors more time for research. The granters were told their professor was away on a two-week leave and would be back in the office the following week. The granter's tasks included organising the professor's

research papers, catalogue his books, and schedule his appointments starting next week. The granters were told that the professor was very keen on having everything in order upon his return.

### THE FINGERPRINTS

The agent was instructed to collect the fingerprints of a student advisor at the University (objective), as the advisor was suspected of committing fraud. To collect the fingerprints, the agent had to make the advisor hold a paper with the agent's grades during a scheduled consultation meeting (expectation). However, when the agent would request the consultant to hold any items or objects the advisor would put on plastic gloves before touching them (expectancy violation).

The granters were told that the University was considering a new program called "students consulting students". The granter was tasked to meet another student (i.e. the agent) and help the student work out a study plan for the next semester. Additionally, the granter was informed about a new health policy to reduce the high number of sick leave among University staff. This initiative ordered all personnel to use plastic gloves when receiving items or objects from students to reduce the spread of viruses and bacteria. A box with plastic gloves was made immediately accessible for the granter in case any items would be offered by the student<sup>2</sup>.

### THE PHOTOGRAPH

The agent was instructed to take a picture of the face of a research assistant named 'Lucas' (objective) who was suspected of stealing and selling sensitive personal data from research participants. The agent was told that Lucas could be found in the Social Psychology Lab (expectation). However, when the agent arrives, he or she would encounter the research lab manager who informs them that Lukas is sick. Yet, there are pictures of three research assistants (including Lucas) on the wall. Moreover, there is a strict no-camera policy in

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<sup>2</sup> The majority of data for this study was collected before the Coronavirus pandemic. We ran six agents after the pandemic was starting to become a concern in Europe. Importantly, we did not identify a single case in which the agent expected the advisor to put on gloves.

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the research lab, meaning that phones are not allowed outside of the pocket (expectancy violation).

The granters were told that the university was considering employing research lab managers tasked with monitoring the ethical handling of research data. Their most pressing task was to reschedule the appointments for Lucas' wine tasting experiment, as Lucas was sick and his appointments had to be distributed to other research assistants.

Moreover, the granters were told that the lab office had a zero-use policy on cell phones. This was rationalised by claiming that many students would attempt to take pictures of the schedule for the experiments and that due to the personal and sensitive information kept in the office, it was forbidden to take pictures inside the office.

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## PROCEDURE

Participants taking the role of agents were scheduled to meet a research assistant outside the research lab. The assistant would then escort the agent to the instructions room in which the agent would read the general instructions of the study. After having signed the informed consent forms the agent was provided with brief instructions for the first mission. The agent was then escorted to the office in which the interaction would take place.

The agent was told that the study would start when they knocked on the door (they were allowed as much time as they wanted before knocking on the door). As soon as the agent entered the office the research assistant would start timing the interaction and monitor the video recording of it on their cell phone outside the office. If the interaction would take longer than 5 minutes the research assistant would politely enter the room to request the participants to come to an end within the next minute. When the agent left the office, the timer was stopped and the mission concluded, and the agent was escorted back to the instructions room.

The agent would return to their laptop and fill in the between-mission questionnaire.

When the questionnaire was completed the agent received instructions for the second mission. The same procedure was repeated for the second and third missions (see *Figure 1*). After the agent had filled in the third between-mission questionnaire they would read an initial debriefing statement before filling in the post-operation questionnaire.

The agents were then fully debriefed on the study and asked to confirm their consent for using their data. The agents then read another informed consent for including the videos of them in Experiment 2. Finally, the agents were asked not to share the details of the study until the data collection had been concluded, and received their incentive and were thanked for their participation.

A set of three granters were arranged for each agent. The granters were scheduled to arrive 30 minutes apart outside their respective office (carefully arranged so they would not encounter the agent). The granters would be seated in front of a computer and read the general instructions of the study. After having signed the informed consent forms the granters were provided with instructions for their specific work tasks.

The granters were told that the study would begin when they started working on their tasks and were then left alone in the office. This was timed to be about 5–10 minutes before the agent would knock on the door to the office. After the interaction with the agent, the granters were informed that the study was over and seated in front of the computer to fill in their respective questionnaire.

The questionnaire started with a statement clarifying the deceptive nature of the study and that all details would be explained to the granter after the questionnaire had been filled in. After having filled in the questionnaire the granters were fully debriefed on the true purpose of the study (i.e. that the study was on the adaptability of the agent and that their role was

to unsuspectingly stand between the agent and the agent's objective). No granter voiced objections to this deception.

They were then provided with an updated informed consent as well as the informed consent for including their videos in Experiment 2. The granters were asked not to share the details of the study until the data collection had been concluded and then received their incentive and were thanked for their participation.

## MATERIALS

### BETWEEN-MISSION QUESTIONNAIRE

After each mission, the agents filled in a questionnaire on their perception of the mission. The agents first filled in the domain-specific adaptability scale which was modified to the expectancy violation within each mission (Collie & Martin, 2016).

The scale included three items measuring cognitive adaptability (e.g. I was able to think through a number of possible options to assist me when I realised the professor would not be present), three items measuring

behavioural adaptability (e.g. I was able to seek out new information or useful resources to effectively deal with the assistant (rather than the professor)), and three items measuring affective adaptability (e.g.

During the 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). Each item was answered on a Likert scale (1=strongly disagree; 5=strongly agree). The internal consistency of the scale in the current study was acceptable (Cronbach's raw  $\alpha = 0.91$ ).

The agents then rated how their expectation of the situation had been violated (e.g. Please indicate how well x] describes your perception of the fact that the professor was not present). For each item see [Table 1](#). Each item was rated on a Likert scale (1=strongly disagree; 5=strongly agree).

Lastly, the agents answered if they had accomplished the mission objective (e.g. Did you collect the secret note?) with a Yes or No.

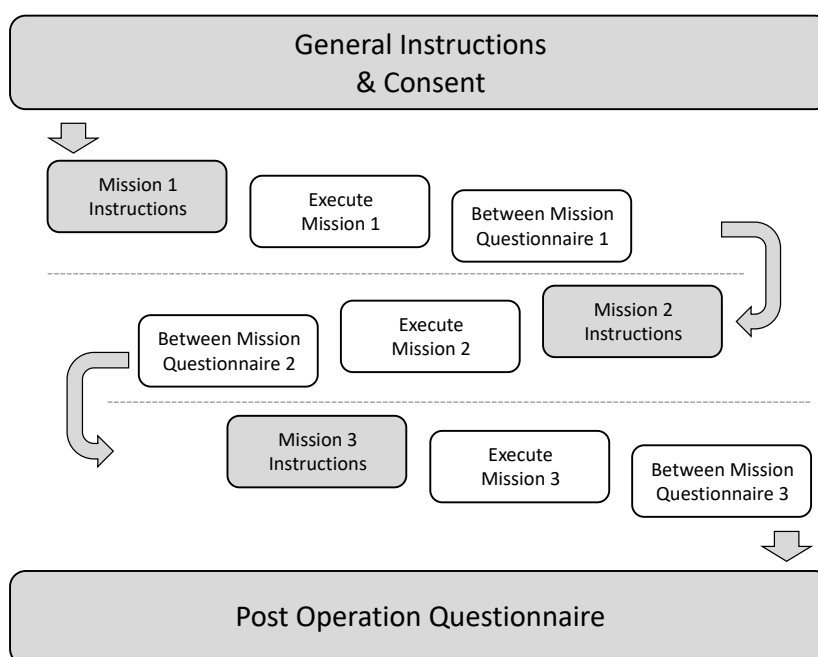


Figure 1: Flow chart of the procedure for the agents

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Perceived expectancy violation	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

*Table 1: Items measuring expectancy violation type*

Topic	Questions
Atmosphere	<p>Granter X was friendly towards me</p> <p>I liked Granter X</p> <p>Granter X is a warm person</p>
Coordination	<p>My interaction with Granter X was positive</p> <p>My interaction with Granter X was cooperative</p> <p>My interaction with Granter X was focused</p>
Self-monitoring (rated by agent)	<p>Granter X perceived that I faked my behaviour</p> <p>Granter X perceived that my behaviour was consistent with my character</p> <p>Granter X perceived that my behaviour was that of a genuine person</p>
Genuineness (rated by granter)	<p>The agent faked his/her behaviour specifically to influence the outcome in his/her favour</p> <p>The agent's behaviours were consistent with his/her character</p> <p>The agent's behaviour was that of a genuine person</p>

*Table 2: Items used for measuring the quality of the relationship*

## POST-OPERATION QUESTIONNAIRE

The post-operation questionnaire started with control questions about the participants' motivation (e.g. How easy/difficult was it for you to take your role seriously? How motivated were you to complete your objective in operation 1?) and the need to adjust behaviour (e.g. Did you perceive that you had to adjust your behaviour if to complete your objective in operation 1? Did you adjust your behaviour in operation 1?). All these items were rated on 7-point rating scales (e.g. 1=Not at all easy, 7=very easy). The agents were then asked to rate their expectation before each mission (e.g. Before operation 1 started, I believed that I would meet a professor (instead of the assistant) and rate the predictability of the violation within each mission (Before operation 1 started, I had predicted exactly that the professor would not be present). These items were rated on Likert scales (1=strongly disagree, 5=strongly agree).

The agents were then asked about their perception of rapport with the granter by rating six items on the communicative atmosphere and the communicative coordination (drawn from Bernieri, 1991), and three items on self-monitoring perceptions (see *Table 2*). The items were rated on Likert scales (1=strongly disagree, 5=strongly agree). Finally, the agents filled in the six-item uncertainty avoidance scale (e.g. I tend to get anxious easily when I don't know an outcome) (Jung & Kellaris, 2004). These items were rated on Likert scales (1=strongly disagree, 5=strongly agree). None of the items in this paragraph was examined in the current study.

## THE GRANTER QUESTIONNAIRES

The granters first rated two questions into their motivation (e.g. How motivated were you to do your job during your 'day at work'?) on 7-point rating scales (e.g. 1=Not motivated at all, 7=very motivated). The granters then answered questions about the agent's trustworthiness (modified from Colquitt, et al., 2007; Mayer & Davis, 1999). Specifically, the granters rated six items on benevolence (e.g. I believe that Kim (all agents used the name Kim) would go out of his/her way

to help me), six items on ability (e.g. Kim was very skilled at getting me to agree to his/her request), and four items on integrity (e.g. I believe Kim tries hard to be fair in dealing with others). All trustworthiness items were rated on Likert scales (1=strongly disagree, 5=strongly agree). The internal consistency of the three trustworthiness facets was acceptable (Cronbach's raw  $\alpha = 0.86$  for Benevolence, 0.84 for Ability, and 0.86 for Integrity).

The granter then rated their perception of rapport with the agent. The granter rated six items into the communicative atmosphere and coordination (same items given to the agents; see *Table 2*) The rapport items were rated on Likert scales (1=strongly disagree, 5=strongly agree). The internal consistency for the rapport measure was acceptable (Cronbach's raw  $\alpha = 0.91$ ). The granters also rated three items aimed at measuring the agent's genuineness. These items were developed by the authors. However, the internal consistency for this measure was poor (Cronbach's raw  $\alpha = 0.45$ ) and was therefore not included in further analyses.

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## BEHAVIOURAL CODING

The expectancy violation was coded for each mission to mark the commencement of the agents' adaptive behaviour. Specifically, for the secret note mission, the agents' expectation was coded as violated when the assistant explained that the professor was not present. For the fingerprints mission, the agents' expectation was coded as violated when the consultant put on plastic gloves. For the photograph mission, the agents' expectation was coded as violated when the lab manager mentioned the no-phone policy.

When these expectancy violations occurred, the time of the interaction was reset to zero and all the agents' behavioural attempts that followed were coded. Specifically, we code for how quickly individuals make their first adjustment (adjustment onset), how many times they adjust their behaviour (adjustments productivity), and the average time participants spend

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on a specific behaviour (adjustment activity). The average time was calculated by dividing the total length of the interaction by the total number of adjustments in the interaction.

Three independent coders coded 30% (29 out of 90) of the videos. The ICC was calculated as a two-way mixed design (i.e. as the three raters independently coded the same subjects). The ICC is reported as the absolute agreement between all three coders because the agreement between the three raters, including systematic errors and the random residual errors, are of interest. After the agreement had been calculated the three coders discussed and resolved their differences before continuing with coding the rest of the material. The interrater reliability for the codes can be found in *Table 4*.

Importantly, the coding for the expectancy violation was excellent for the agent missions ( $\alpha = 0.98$ ). As for the photograph mission, there were two expectancy violations: one violation that was experimentally manipulated (i.e. mentioning the no-phone policy) and

another violation that was interpreted by the agent (i.e. the fact that the lab manager was not Lucas).

We calculated the ICC for both the interpreted expectancy violation and the manipulated violation. Three coders coded 37% (11 out of 30) transcripts. The coding for interpreted violation (the lab assistant is not available) was excellent,  $\alpha = 1.00$ , ICC = 1.00, (95% CI [1.00, 1.00],  $F(10, 20) = 19280.37$ ,  $p < .001$ ), the coding for the expected violation (no-phone policy) was fair,  $\alpha = 0.45$ , ICC = .390, (95% CI [-.36, .80],  $F(10, 20) = 1.81$ ,  $p = .124$ ).

As we purposefully provided very vague instructions for how the agents and granters should behave during the interactions the interpreted violation almost always came before the manipulated violation, which affected the agreement score negatively.

However, as the agreement score for the interpreted violation was perfect ( $\alpha = 1.00$ ) this code was used as the expectancy violation for the photograph mission (the manipulated violation was used for the other two missions).

#	Agent statement	Productivity	Label	Activity
0	I was wondering if I could borrow a book for a research project	-	Original attempt	-
1	Can I borrow the book to quickly copy a couple of pages? I just need it for a minute, I'll give it right back.	Adjust 1 (Onset)	Quick return	20 sec
2	What are you working on, can I help you out?	Adjust 2	Offer assistance	60 sec
3	Is it okay if I look in the book while I'm here?	Adjust 3	Request to look	40 sec

Table 3: Coding examples for the secret note mission

Item	$\alpha$	ICC (Average measure)
Expectancy violation	.981	ICC = .981, 95% CI [.97: .99], $F(24, 48) = 52.00$ , $p > .001$
Adjustment onset	.651	ICC = .621, 95% CI [.29: .82], $F(24, 48) = 2.87$ , $p = .001$
Adjustment productivity	.880	ICC = .867, 95% CI [.75: .93], $F(24, 48) = 8.32$ , $p > .001$

Table 4: ICC ratings for coded items

# RESULTS AND DISCUSSION

## MANIPULATION CHECKS

The agents reported that they took their role seriously ( $M = 5.03$ ,  $SD = 1.72$ ) and their missions seriously ( $M = 5.10$ ,  $SD = 1.63$ ). Motivation to complete all three missions was high, with ratings above the midpoint of the scale (see *Table 5*). Granters also reported that they perceived a need to adjust their behaviours to attain their mission objectives, and, indeed, reported that they did adjust their behaviours (see *Table 5*).

Finally, for all three missions, the expectancy violation was successful, as agents reported that they had not predicted the specific expectancy violations before the start of the mission (see *Table 5*).

The granters reported taking their ‘day at work’ seriously in all missions: secret note ( $M = 5.43$ ,  $SD = 1.20$ ); fingerprints ( $M = 4.90$ ,  $SD = 1.61$ ); photograph ( $M = 4.74$ ,  $SD = 1.53$ ). Furthermore, granters, in all missions, reported being motivated to do their work tasks: secret note ( $M = 5.36$ ,  $SD = 1.39$ ); fingerprints ( $M = 5.55$ ,  $SD = 1.08$ ); photograph ( $M = 4.84$ ,  $SD = 1.53$ ).

## SUITABILITY OF THE EXPERIMENTAL PARADIGM

As noted earlier, adaptability refers to adjustments in response to novel and uncertain situations, rather than negative and threatening situations.

For this reason, to elicit adaptability, instead of resilience or coping, the missions should be rated as more novel, uncertain, and requiring a change of behaviour, rather than threatening, adverse, or confrontational. Mean ratings on these measures suggest that this was largely the case.

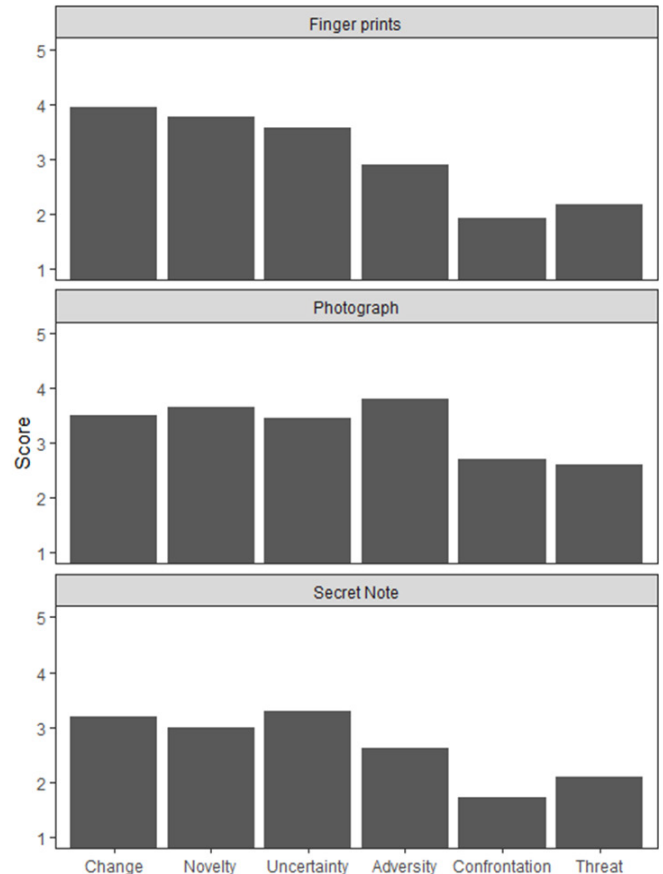


Figure 2: Agents' mean ratings of the three missions

Two of the three missions were rated as more novel, uncertain, and requiring a change of behaviour, rather than threatening, adverse, or confrontational (see *Figure 2*). The remaining mission – the photograph mission – was rated similarly, except for higher scores on adversity. This suggests there is room for improving specifics for this mission.

In sum, our experimental paradigm largely fulfilled all our criteria for eliciting adaptive responses.

First, the agents were goal-oriented as each mission had a fixed objective that could not be changed or disengaged, and the agents were highly motivated to complete their missions.

## RESULTS AND DISCUSSION

### The Adaptable Law Enforcement Officer

	Scenario		
	Secret Note M (SD)	Fingerprints M (SD)	Photograph M (SD)
Motivation to complete mission	5.40 (1.60)	6.07 (1.22)	5.93 (1.51)
Perceived need to adjust behaviour	4.48 (1.78)	5.03 (1.76)	4.60 (1.95)
Reported adjustment of behaviour	3.59 (1.40)	5.00 (1.81)	4.03 (1.88)
Expectancy Violation	4.34 (0.94)	4.28 (1.16)	3.51 (1.35)

Table 5: Agents' motivation and perception of the expectancy violation

Note: The Expectancy Violation measure was on a 5-point scale. The remaining measures were on a 7-point scale.

	Adaptability	Benevolence	Ability	Integrity	Rapport	Adjustment Onset	Adjustment Productivity	Adjustment Activity	Success
Adaptability	1								
Benevolence	-0.24*	1							
Ability	-0.08	0.42***	1						
Integrity	-0.20	0.81***	0.54***	1					
Rapport	-0.03	0.73***	0.45***	0.67***	1				
Onset	-0.22	0.07	-0.1	0.047	0.04	1			
Productivity	0.20	-0.21	-0.07	-0.22*	-0.08	-0.06	1		
Activity	-0.18	0.01	0.05	0.07	0.04	0.41***	-0.51***	1	
Success	0.16	0.16	0.30**	0.14	0.31**	-0.12	-0.02	-0.28**	1

Second, the agents perceived that the three missions demanded adaptive behaviour rather than resilient

Table 6: Correlates of self-reported adaptability

Note: Values refer to Pearson's r. Onset = time for first adjustment. Productivity = the total number of adjustments.

Activity = the total length of the interaction / the total number of adjustments. Success = whether the participant completed the mission or not. \*p <.05, \*\*p < .01, \*\*\*p <.001



or coping. That is, the missions were consistently assessed as involving change, novelty, and uncertainty, but were not assessed as a threat or a confrontation.

However, the photograph mission was assessed as rather adverse, meaning that the agents found this mission to be rather difficult and/or unpleasant in addition to involving change, novelty, and uncertainty.

Third, the agents reported that they had to adjust their behaviour to attain their objectives. This was supported by the fact that the agents (i) could not predict the exact expectancy violations, (ii) perceived that making adjustments would be necessary to attain their objectives, and (iii) reported that they did adjust behaviour during the missions.

In sum, our experimental paradigm successfully incorporated key conditions for eliciting adaptive behaviour.

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## CORRELATES OF SELF-REPORTED ADAPTABILITY

### INTERACTION MEASURES

Agents rated their adaptability after each mission. *Table 6* shows how agents' self-reported adaptability correlates with granters' ratings of the agents' benevolence, ability, integrity (i.e. trustworthiness), as well as the general quality of the interaction (i.e. rapport). Correlations between adaptability and ability, as well as adaptability and rapport, were near zero. However, there was a significant negative correlation between adaptability and benevolence. As well as a small to moderate negative correlation between adaptability and integrity, though this was not statistically significant. Against what we would have expected, these results suggest that more adaptable agents are perceived somewhat less favourably than less adaptable agents.

### BEHAVIOURAL MEASURES

Our three behavioural measures showed correlations with self-reported adaptability in the expected

directions. Specifically, adaptable individuals were quicker to make their first adjustment, made more adjustments, and spent less time, on average between adjustments. With that said, these correlations were non-significant, and should therefore be interpreted with caution. The behavioural measures showed even weaker correlations with benevolence, ability, integrity and rapport, with one notable exception. The total number of adjustments showed a weak negative correlation with integrity.

Assuming that number of adjustments does tap into some form of adaptability, this again suggests that more adaptable agents may be perceived less favourably by others. That self-reported adaptability showed higher, albeit non-significant, correlations with our behavioural measures compared to trustworthiness and rapport, suggests that adjustments may be a potential avenue for future research in the development of a behavioural measure of adaptability.

### SUCCESS MEASURES

The agent's self-rated adaptability measures showed only a weak relationship with success. For exploratory purposes, we also correlated the two sub-facets of adaptability with success. Stronger correlations with success were seen for the behavioural and cognitive component ( $r = 0.19$ ,  $p = .096$ ), compared to the affective component of adaptability ( $r = 0.05$ ,  $p = 0.65$ ).

In terms of behavioural measures, the highest correlation with the success measure was with the average time spent between adjustments. Specifically, agents who spent less time between adjustments were more likely to complete their mission. Of note, is that this correlation was of similar size to the strongest correlates of success, observed between rapport and success, and ability and success. Insofar as adjustment activity is indicative of adaptive behaviour, this suggests that adaptability may be an important component of tasks requiring uncertain and novel interpersonal interactions.

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# EXPERIMENT 2

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## PARTICIPANTS

We reached out to personal contacts within covert police units in the Netherlands, the UK, and the US. We asked our contacts to recruit police officers experienced with covert policing and request that they take the online survey. Twenty-two officers (4 Females, 17 Males, 1 unknown) with ages ranging between 33 to 58 ( $M = 46.05$ ,  $SD = 6.71$ ) participated in this study.

However, one officer watched and assessed two of the four videos only. The officers were Dutch (55%), British (32%), and American (10%) and had between 4 to 40 years ( $M = 23.24$ ,  $SD = 8.97$ ) of police experience. Fourteen of the officers volunteered information on their experience(s) with covert policing, which included working as a source handler and/or controller (15), with surveillance and/or intelligence gathering (13), as an undercover officer (6). The officers received no incentive for participating in this study.

This experiment was approved by IRBs at the University of Twente and Lancaster University. We used an English version of the survey for the UK and US officers and a Dutch version for the Dutch sample. The survey was translated to Dutch by two investigative psychologists from the National Dutch Police who worked closely with the first author.

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## DESIGN

We used a 2: Mission Stimuli (Video 1, Video 2) x 2: Goal Achievement (Success, Fail) mixed design. That is, each officer watched a total of four videos covering two missions on a Qualtrics online survey. For each officer, Qualtrics randomly displayed a set of two videos of the same mission stimuli (e.g. two cases of the secret note mission) and randomly displayed a successful attempt and a failed attempt of that stimuli.

Qualtrics then randomly displayed a set of two videos for one of the remaining two mission stimuli (i.e. either the fingerprints or the photograph mission) and randomly displayed a successful and a failed attempt for that stimuli (see *Figure 3*).

We made a pool of 18 videos across the three mission stimuli. Each mission stimuli were limited to three successful attempts and three failed attempts (i.e. nine successful and nine failed attempts in total).

This decision was based on the fact that only three agents attained their objective in the fingerprints mission, and we opted to standardise the number of successes/fails for all mission stimuli. Hence, for the missions that had more than three successful/failed attempts we randomly selected three stimuli to upload to Qualtrics.

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## PROCEDURE

The officers received a password protected link to the Qualtrics Survey from the first author or our police contacts. The officers were informed that their task was to watch four short videos and assess the adaptability of University students engaging in mock covert missions. Importantly, the officers would first watch an example video to get a sense of what the videos would look like (the example video was always on a mission stimulus that would not be included in their survey).

After having watched the example video – confirming that the video worked well and was of good quality – the officers were informed about key methodological procedures of Experiment 1. That is, we explained that the missions were designed to elicit adaptive responses (i.e. via a goal, an expectation, and a violation of the expectation) rather than mirroring all complexities of real undercover work. We also explained that the

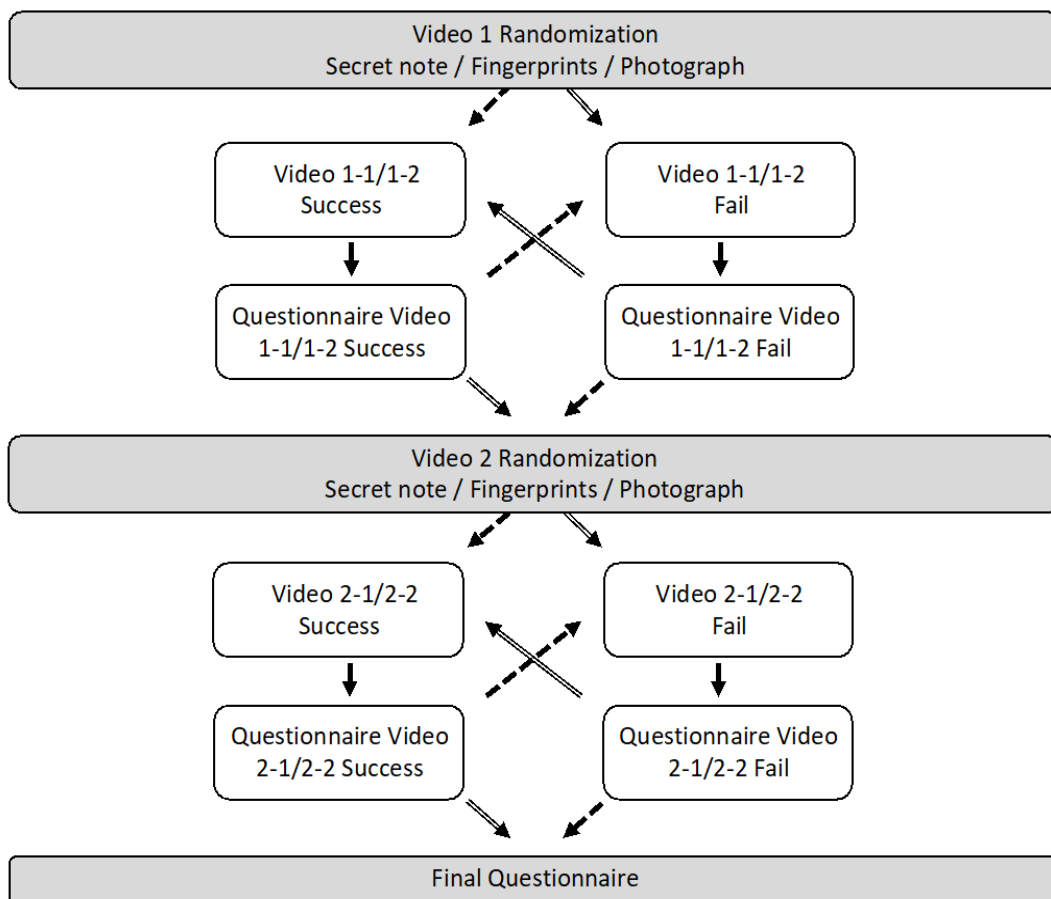


Figure 3: Flow chart of the procedure for the officers

granters had been unknowingly influenced to stand between the agent and the agents' objective (i.e. making it clear that the granters were not using role-playing scripts).

Furthermore, we explained that the ending of the videos would be cropped so that the officers' assessments of the agents would not be influenced by the outcome of the mission (the ending was not cropped for the example videos).

The officers were then informed that their main task was to observe and assess the agents' adaptive behaviour. Specifically, the officers would read: 'By adaptability in this context, we mean the agent's ability to adjust, change or modify their behaviour to reach their goal when faced with an unexpected event.

That is, we ask you to consider how skilled the agent was at adapting his or her behaviour when pursuing their mission objective.' The officers had to confirm that they understood this specific task before continuing. The officers were next presented with the background information of the first video (see Experiment 1). We summarised the specific case file and mission objective of the agent as well as the specific work task of the granter.

We also provided links to the agents' and granters' original instructions for the specific mission (see *Appendix*). The officers would then watch the video, rate the quality of the video, and fill out the video-specific questionnaire. Before watching the second video of the first set, the officer would again be presented with the same background information and instructions. The officer then rated the quality of the video and filled-out the second video-specific

## EXPERIMENT 2

### The Adaptable Law Enforcement Officer

questionnaire. The same procedure was repeated for the second set of two missions. After the officer had filled in the fourth mission-specific questionnaire they filled out the final questionnaire (see *Figure 3*).

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## MATERIALS

For each mission, the officers rated (i) the agent's adaptability, (ii) the degree of rapport the agent had with the granter, (iii) the agent's trustworthiness, and (iv) the agent's genuineness.

The officers first filled in the domain-specific adaptability scale (Collie & Martin, 2016) which we had modified to fit the expectancy violation within each mission. The adaptability scale included the same nine items that were provided to the agents (see Experiment 1). Each item was answered on a Likert scale (1=strongly disagree; 5=strongly agree). The internal consistency of the scale in the current study was acceptable (Cronbach's raw  $\alpha = 0.93$ ).

The rapport scale consisted of three items assessing how positive, cooperative, and comfortable the atmosphere between the agent and granter was. The rapport items were rated on Likert scales (1=strongly disagree, 5=strongly agree). The internal consistency for the rapport measure was acceptable (Cronbach's raw  $\alpha = 0.80$ ).

Trustworthiness was measured with six items (modified from Colquitt, et al., 2007, Mayer & Davis, 1999). Two items assessed benevolence (i.e. caring, helpful), two items assessed ability (i.e. competent, experienced), and two items assessed integrity (i.e. fair, sticks to their word). All trustworthiness items were rated on Likert scales (1=strongly disagree, 5=strongly agree). The internal consistency of the trustworthiness scale was acceptable (Cronbach's raw  $\alpha = 0.84$ ).

The agent's genuineness was measured with four items. Specifically, the officers rated how genuine, sincere, fake (reverse coded), and manipulative (reverse coded) the agent appeared. The internal consistency of the

genuineness scale was acceptable (Cronbach's raw  $\alpha = 0.81$ ). The agents' analytical and intuitive abilities were measured with three items each. For analytical, the officers rated how rational (i.e. used logical and analytical thinking), systematic (i.e. used behaviour that seemed planned or strategised in advance), and skilful (i.e. effective in pursuing the mission objective) the agent was.

For intuitive, the officers rated how intuitive (i.e. followed instinct or gut-feeling), spontaneous (i.e. made novel solutions on the fly), and coincidental (i.e. assumed the objective would be accomplished by chance or happenstance) the agent was. The six items were rated on Likert scales (1=strongly disagree, 5=strongly agree). However, this scale did not work as expected. The internal reliability was poor, and the measures of intuition and systematic behaviour were positively, rather than negatively, correlated.

This implies that intuition and systematic behaviour does not form opposing poles on a single continuum. For these reasons, these measures are not included in further analyses.

The officers also rated to what extent they believed the agent succeed in their mission. This was rated on a 7-point scale (1 = the agent will definitely NOT be successful; 7 = the agent will definitely be successful).

## RESULTS AND DISCUSSION

The officers were motivated to take the survey ( $M = 5.81$ ,  $SD = 1.17$ ), took the study seriously ( $M = 4.81$ ,  $SD = 1.54$ ), and found the scenarios to be well-designed for assessing adaptability ( $M = 4.86$ ,  $SD = 1.34$ ). When asked whether adaptability was more of a trait (i.e. a characteristic that people does or does not possess) or a state (i.e. a skill that can be learned) the officers rated adaptability as falling somewhere between a trait and a state ( $M = 3.71$ ,  $SD = 2.22$ ).

### CORRELATES OF OBSERVER-RATED ADAPTABILITY

For our primary analyses, we correlated the adaptability ratings with the ratings of agents' trustworthiness, rapport (between the agent and the granter), genuineness, as well as ratings of whether participants thought the agent would be successful (Success Rating) and whether they were, in fact, successful (Success Objective). See [Table 7](#) for details. Note: Values refer to Pearson's  $r$ .  $p$  values are corrected for multiple comparisons using the Holm (1979) correction. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Adaptability ratings showed large and statistically significant correlations with trustworthiness and rapport, and somewhat weaker correlations with genuineness. That is, agents perceived as more adaptable were also perceived as more trustworthy and as having had a more positive interaction with the granter. Insofar as trustworthiness and rapport are essential to effective interpersonal communication, their high correlations with adaptability provide indirect evidence for the importance of adaptability in covert interactions.

Furthermore, all three of these measures were positively correlated with the predicted success rating. Of note is that of these three measures, adaptability showed the strongest correlation with the perceived success rating. In other words, perceptions of whether the agent would succeed were strongly related to how adaptable the agent was perceived as being. This again provides indirect evidence for the importance of adaptability in covert interactions.

Complicating these findings, correlations of adaptability, trustworthiness, and rapport with actual

	Adaptability	Trust	Rapport	Genuine	Success Rating	Success Objective
Adaptability	1.00					
Trustworthiness	0.59***	1				
Rapport	0.47***	0.69***	1			
Genuine	0.25	0.61***	0.55***	1		
Success Rating	0.52***	0.34*	0.25	0.15	1	
Success Objective	-0.21	-0.04	-0.07	0.09	0.05	1

Table 7: Correlates of observer-rated adaptability

Note: Values refer to Pearson's  $r$ .  $p$  values are corrected for multiple comparisons using the Holm (1979) correction. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## RESULTS AND DISCUSSION

### The Adaptable Law Enforcement Officer

success were close to zero. In fact, adaptability showed a trend in the opposite direction. That none of these variables were related to actual success raises questions regarding the experimental paradigm.

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## GENERAL DISCUSSION

The present study aimed to introduce an experimental paradigm to assess and measure adaptability. The experimental set-up successfully elicited adaptive behaviour as the agents were goal-oriented, perceived the missions to demand adaptive responses, and reported a need to adjust their behaviour to achieve their objectives.

Furthermore, although the adaptability scale was not related to agent success, a modest relationship was observed between shorter adjustment activity (i.e. the average time spent between adjustments) and success.

Below we discuss the key findings of the present study. It should be noted that the present examinations of adaptive behaviour were explorative. For this reason, we focus primarily on trends and strength of relationships (effect sizes). Any conclusions drawn should therefore be seen as preliminary, requiring hypothesis-driven confirmatory studies.

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## MAIN FINDINGS

In this study, adaptability was measured from three different perspectives and each perspective provided unique insights. From the agents' perspective, the findings suggest that subjective adaptability might be important when facing novel and uncertain events, but that subjective adaptability can work against the quality of the relationship with those the agent interacts with.

The findings further suggest that it might be more important for agents to develop positive relationships when attempting to accomplish specific objectives in novel and unexpected situations. From the perspective of police officers, our findings suggest that observed adaptability strongly relates to ratings of the agents'

trustworthiness and rapport with the granter and that all three of these features are considered when predicting the agents' success in accomplishing mission objectives. Interestingly, however, the observers' predictions of success were not related to actual success. Moreover, there was some, albeit weak evidence, that behavioural adjustments are important for understanding how self-reported adaptability manifests in actual behaviour. Furthermore, one of these measures – a shorter adjustment activity – showed a positive relationship with actual success.

## PERCEIVED ADAPTABILITY AND THE QUALITY OF THE RELATIONSHIP

A surprising finding was that the agents' perceived adaptability was negatively related to the granters' assessment of rapport, as well as the granters' assessment of the agents' trustworthiness (particularly ratings of benevolence). This finding suggests that increased adaptability may negatively impair interpersonal relations.

A more nuanced interpretation is that this result is a consequence of the mission objectives of this paradigm. That is, since the mission objectives were instrumental (e.g. collect a secret note) rather than relational (e.g. establish rapport), developing a positive relationship with the granters may have been deemed as unimportant by the agents. Put differently, if the agents had been given a relational objective (e.g. if they had been tasked with creating a positive relationship with the granter) we predict self-reported adaptability would correlate positively with rapport and trustworthiness.

Although speculative, indirect support for this explanation comes from the result showing that self-reported cognitive and behavioural adaptability had higher correlations with actual success than affective adaptability. In sum, we suggest that adaptability is specific to the nature of its goal, and that adaptability can be tailored to instrumental tasks or relational tasks (cf. Taylor, 2002).

## OBSERVED ADAPTABILITY AND THE INTERACTIONAL ATMOSPHERE

In contrast to self-reported adaptability, practitioner rated adaptability of agents showed strong positive correlations with practitioner rated levels of rapport and trustworthiness. This finding suggests that practitioners with covert experience consider adaptability as similarly important as rapport and trustworthiness during goal-oriented interactions.

We believe this supports the idea that experienced practitioners have a developed understanding of the social contexts in which they operate. That is, these practitioners may consider operational success to be different to, or more complex than, simply attaining instrumental goals.

Hence, practitioners with covert experience might be guided by the premise; if a healthy relationship can be established then instrumental transactions will follow, indicating that instrumental adaptability might not be functional without a positive interactional atmosphere. Importantly, this would not mean that instrumental adaptability is irrelevant for practice, it rather means that relational demands come first and instrumental demands come second.

## MEASURES OF ADAPTABILITY AND SUCCESS

In this study, we take the first steps toward a behavioural measure of adaptability. Our tentative results suggest that both self-rated adaptability and mission success are related to behavioural adjustments.

More specifically, self-rated adaptability was primarily related to increased adjustment productivity (i.e. the total number of adjustments by the agent), whereas mission success was primarily related to shorter adjustment activity (i.e. the average time spent between adjustments). These findings suggest that behavioural adjustments, in their different forms, could form the base of a behavioural measure of adaptability.

Regarding measuring the outcome of the missions, our findings suggest that observer-rated success was most strongly informed by the agents' adaptability and trustworthiness, and less strongly informed by the agents' ability to establish rapport. However, when it comes to completing mission objectives, our findings suggest it is important to establish rapport and come across as trustworthy (particularly having ability), while also spending less time between adjustments.

Importantly, although observer-rated success did not predict actual success, we stress that the two measures are complementary. That is, although our measure of actual success was based on naturalistic decision-making, we do not know to what extent this measure is tapping into something important for real-world covert missions.

Moving forward, we find the relationship between adjustment activity and actual success most intriguing, as we argued that spending too much time on ineffective behaviour might be reflective of an inability to generate alternative avenues of action (cf. Power & Alison, 2019). Hence, we encourage continued research on adjustment activity as an ingredient of behavioural adaptability and as a predictor of success.

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## METHODOLOGICAL CONSIDERATIONS

### ELICITING ADAPTIVE BEHAVIOUR

We believe the primary contribution of the current paper is the development of an experimental paradigm to examine adaptability in a law enforcement context. The basic set-up of which includes a mission objective, an expectation, and a violation of that expectation that participants must adapt to achieve the objective. Criticism can be levelled at the specifics of the missions in this study. For instance, the photograph mission was deemed as somewhat too adverse.

We nonetheless see the schematic set-up of the objective, expectation, and violation, as a promising

## RESULTS AND DISCUSSION

### The Adaptable Law Enforcement Officer

paradigm for future research on adaptability. Furthermore, by altering mission specifics, researchers should be able to examine an array of situations relevant to law enforcement contexts.

### MEASURING SUCCESS

For the present study granters were blind to the purpose of the study and were free to either grant or deny agents' requests. The benefit of this approach is that it allows for a measure of agent success. However, this greatly increases the cost and logistical difficulty involved in carrying out the study and increases the amount of variance in the data. Future research could use confederates as granters with standardised responses.

This would allow for more controlled assessments of the agents' behaviours. Through consultation with practitioners, it may even be possible to develop a master list of plausible adaptable behaviours that agents' actual behaviours can be compared to (for a similar approach in investigative decision making see Fahsing & Ask, 2018).

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### PRACTICAL IMPLICATIONS

To reiterate, the present study suggests that novice agents that are tasked with attaining instrumental objectives may become fixated on goal achievement, which may reduce their capability to establish positive relationships. Practitioners, however, seem to focus more on relational objectives when assessing the adaptability of agents, rather than considering the goal-oriented effectiveness of the adaptive behaviour.

This suggests that there might be a mismatch between what novice agents perceive they are supposed to do and what experienced practitioners find important to look for when assessing the agents' performance in our scenarios.

We thus recommend that practitioners clearly inform agents about both relational and instrumental objectives during their training. Otherwise, there is a

risk that novice agents underperform on one objective simply because they misunderstand what is expected of them. That is, it is important to align the thinking of novice agents with the understanding of seasoned practitioners when selecting and assessing novice agents.

By informing agents on the importance of both instrumental and relational objectives, practitioners will be in a better position to assess the true qualities of novice agents, as it will be clearer when specific qualities are lacking. Furthermore, the present study found an additional variable that might complement practitioners' assessments of adaptability; the average time for the adjustments made.

It might thus be an idea for practitioners to continue rating adaptability in the context of the overall relationship, and then calibrate their assessments with the average time spent on each adjustment. Although it is critical that this finding is validated with more research, adjustment activity – or decision inertia – seems to be the most promising avenue for developing a selection criterion for identifying adaptive skills of novice agents.

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### CONCLUSION

Although this study was a first explorative attempt to study behavioural adaptability it provides no less than three preliminary conclusions:

First, providing agents with a specific instrumental objective may lead to adaptive behaviour associated with a reduced relationship with their target.

Second, practitioners seem to consider adaptability as being more a feature of the quality of the relationship than a feature for accomplishing mission objectives.

Third, practitioners should – but do not – take the time spent on each adjustment into account when assessing adaptability in novel and uncertain situations.



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# APPENDIX A

## THE SECRET NOTE

Instructions given to the **Agent** (left column) and the **Granter** (right column)

Instructions given to the <b>agent</b> :		Instructions given to the <b>granter</b> :	
Collect the secret note		Assisting a professor	
<b>Purpose</b>	There is information that a double agent has left a secret message to a foreign intelligence agency at the University. We need you to collect that message before it gets into the wrong hands.	<b>The job</b>	The University of Twente will try-out employing assistants tasked with managing the administration of professors. <b>You have been assigned to be the assistant of Professor Balthazar.</b>
<b>Background information</b>	<p>The message is written on a note placed in the book “Social Cognition” by the author Fiske and Macrae. This book has a grey cover and can be found in Professor Balthazar’s office. You need to visit the Professor’s office, collect the note, and bring the note to your contact.</p> <p>The Professor is known to be friendly to students who show an interest in learning. Since you are going to ask to borrow a book on psychological theory (on how people make sense of social situations), it is likely that the Professor will be nice to you.</p>	<b>Job description</b>	<p>Due to extensive public criticism, <b>Prof. Balthazar has taken a two-week vacation</b> to get away and recover from all the negativity. Prof. Balthazar will be back in his office on Monday next week.</p> <p>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.</p>
<b>Mission objective</b>	<b>Collect a note hidden in a book in the office of Professor Balthazar without raising suspicions about your intent.</b>	<b>Your task</b>	Please note that Prof. Balthazar is very keen on order. <b>It is very important that all his belongings can be found exactly on its right place when he returns.</b>

## THE FINGERPRINTS

Instructions given to the **Agent** (left column) and the **Granter** (right column)

Instructions given to the <b>agent</b> :		Instructions given to the <b>granter</b> :	
Collect the fingerprints		Student advisor	
<b>Purpose</b>	There is reason to believe that a student, working on the new “students consulting students” program at the University, is committing fraud by working under a false identity. You need to collect this student’s fingerprints so that they can be matched with the personal identity system.	<b>The job</b>	The University of Twente has decided to try a new program called “students consulting students”. You have been assigned to consult another student on what courses to take next semester.
<b>Background information</b>	<p>A meeting with the student, Alex, has been arranged. You are to consult Alex on what courses you should take next semester. What courses you are planning to study and ask about is up to you, but it is recommended that you stay as close to the truth as possible.</p> <p>To collect the fingerprints, you need to make Alex hold a paper with your grades. If Alex holds the paper, the fingerprints will be collected.</p>	<b>Job description</b>	<p>Your task is to meet the student Kim who wants to discuss what courses to take next semester. <a href="#">You will listen to Kim’s concerns and try to help Kim work out a path of future studies</a> (e.g., what courses to take).</p> <p>Please note that the university has begun a new initiative to reduce the spread of viruses and bacteria from students to staff. <a href="#">This initiative has ordered all personnel to use plastic gloves when receiving items from students.</a> 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.).</p>
<b>Mission objective</b>	Collect the fingerprints of the student Alex when you discuss your future studies without raising suspicion about your intent.	<b>Your task</b>	You will meet the student named Kim who wants to discuss what courses to take next semester. 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.

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## THE PHOTOGRAPH

Instructions given to the **Agent** (left column) and the **Granter** (right column)

Instructions given to the <b>agent</b> :		Instructions given to the <b>granter</b> :	
Take a photograph of Lucas		Research lab manager	
<b>Purpose</b>	A foreign spy going under the name 'Lucas' is suspected of stealing sensitive personal data from the University. We have to urgently confirm his identity in order to prevent private information from being sold to fraud companies.	<b>The job</b>	To ensure that the researchers adhere to the Research Data Management policy (RDM), the University of Twente will try out employing laboratory managers tasked with monitoring the ethical procedures of the research data. <a href="#">You have been assigned to be the lab manager of the research group of Social Psychology.</a>
<b>Background information</b>	<p>Lucas true identity can be confirmed by securing a picture of his face. With a clear picture of Lucas' face we can compare it with a CCTV video (surveillance camera) from our intelligence unit and thereby identify who he truly is.</p> <p>Lucas is working with a team of research assistants in the Social Psychology Lab (Room C333). <a href="#">When you have confirmed that you are talking to Lucas (request to sign up for his experiment on <u>wine tasting</u>), take and secure a picture of his face and the mission is completed.</a></p>	<b>Job description</b>	<p>Your task is to organize the research material and administer research assistants. 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, <a href="#">the lab office has a zero-use policy on cell phones (i.e., a phone is not allowed out of the pocket).</a></p> <p>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.</p>
<b>Mission objective</b>	Enter the Social Psychology lab, sign up for Lucas wine tasting study, and take a picture of Lucas face in a manner that does not raise suspicions about your intentions.	<b>Your task</b>	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.

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