

Why Tough Tactics Fail and Rapport Gets Results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to Generate Useful Information From Terrorists

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This field observation examines 58 police interrogators' rapport-based behaviors with terrorist suspects; specifically, whether rapport helps elicit meaningful intelligence and information. The Observing Rapport-Based Interpersonal Techniques (ORBIT; Alison, Alison, Elntib & Noone, 2012) is a coding framework with 3 elements. The first 2 measures are as follows: (i) 5 strategies adopted from the motivational interviewing (Miller & Rollnick, 2009) literature in the counseling domain: autonomy, acceptance, adaptation, empathy, and evocation and (ii) an "Interpersonal Behavior Circle" (adopted from Interpersonal theories, Leary, 1957) for coding interpersonal interactions between interrogator and suspect along 2 orthogonal dimensions (authoritative-passive and challenging-cooperative); where each quadrant has an interpersonally adaptive and maladaptive variant. The third (outcome) measure of ORBIT includes a measure of evidentially useful information (the "interview yield") and considers the extent to which suspects reveal information pertaining to capability, opportunity and motive as well as evidence relevant to people, actions, locations and times. Data included 418 video interviews (representing 288 hours of footage), with all suspects subsequently convicted for a variety of terrorist offenses. Structural equation modeling revealed that motivational interviewing was positively associated with adaptive interpersonal behavior from the suspect, which, in turn, increased interview yield. Conversely, even minimal expression of maladaptive interpersonal interrogator behavior increased maladaptive interviewee behavior as well as directly reducing yield. The study provides the first well-defined and empirically validated analysis of the benefits of a rapport-based, interpersonally skilled approach to interviewing terrorists in an operational field setting.

Keywords: rapport, terrorist, suspect interviewing, interpersonal observations

Several historical, biographic, and autobiographic accounts suggest that effective interrogators¹ are interpersonally competent and skilled at "building rapport" (e.g., Hoare, 2000; Toliver, 1971). Further, within investigative, defense, and security scenarios, considerable debate exists about the political, legal, and ethical issues of threats, coercion, and torture in dealing with terrorists and insurgents (Collins, Lincoln, & Frank, 2002; Soufan, 2011), and very little empirical research at all exists with respect to measuring rapport-based strategies in actual operational scenarios. This is a

key global challenge, because successful prosecution cases rely on evidence that interrogations have been conducted without relying on coercion or torture and several notable cases have fallen foul of legal arguments about the way individuals have been treated—either in police interviews or detention facilities. Moreover, psychologists have an obligation to ensure that psychological methods are employed humanely, ethically, professionally and legally and are, as such, also under the spotlight with regards to advice, assistance and research within this challenging domain. As with many developments in policing, several notorious cases (and the reviews that followed those cases) led to significant changes in the way in which police in the U.K. conducted their business. In cases such as the Guildford Four, the Birmingham Six, and the Maguire Seven (1975)—all investigations into IRA related terrorism; as well as the more recent controversy surrounding al-Qa'ida or militant Islamist terrorism cases such as the rendition of Abdul Hakim Belhaj and Sami al-Saadi to Libya (2004) and the detention and interrogation of Binyam Mohammed (2002); as well as the abuses of suspects reported at Abu Ghraib (2004) and Guantanamo (Lankford, 2009), such as the "Tipton Three" (2004) have led to

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¹ U.S. approaches favor the term "interrogation," whereas Europeans favor the term "interview." We use the terms interchangeably throughout to reflect the fact that most of the studies we refer to involve both U.S. and European sources.

long lasting negative effects. Though a minority of individuals from various defense and police agencies have argued that these methods confer short term tactical advantages and thus, despite their breaching of the European Court of Human Rights, may be worthy of consideration, the current paper highlights that there is no evidence at all for such short term apparent gain. Instead, there is compelling evidence that coercion, torture and the attempted debasement and humiliation of suspects creates significant long term disadvantages and elevates future threats, without securing any significant life-saving intelligence. Some of the negative effects include the loss of public confidence which may hamper the collection of critical background intelligence, such as the Northern Ireland Catholic community's deep distrust of the RUC (Murphy, 2010); the use of reported abuses for recruitment by extremist organizations (Ramsay, 2009); and direct retaliation from terrorist groups, such as the beheading of Nick Berg (2004) and the London 7/7 bombings in response to U.K. Prime Minister Tony Blair's policies in support of the War with Iraq. Dreher, Gassebner and Siemers (2010) found that terrorist attacks frequently emerge subsequent to human rights violations (including torture) across regions. One must also consider the international and domestic fall out of such actions with regards to reputation and foreign policy relations. Most concerning is the potential for gradual deterioration of acceptable moral, legislative and professional boundaries around such behavior. Allowing practices that violate human rights and liberties in extreme circumstances is a slippery slope to their application to prevent circumstances from "becoming" extreme or to inflate circumstances to a level that justifies such violations (Mialon, Mialon, & Stinchcombe, 2011). Adopting such practices as policy can also lead to a "deskilling effect," in which police and security forces adopt a default position of using coercion and intimidation rather than exploring more sophisticated and potentially productive tactics (Rejali, 2009).

Historically, the investigation of injustices has also provided the driving force behind reform in the conduct of police interviewing. Much previous research in the U.K. has focused on the legal framework and standardization of police interviewing (Clarke & Milne, 2001) through the evaluation of compliance with PACE and PEACE. There is also a great deal of literature examining the use of specific tactics within investigative interviewing, either to determine their level of influence (Baldwin, 1993), to detect deception by the interviewee (Vrij, Fisher, Mann & Leal, 2006), or to examine the influences on the interviewer, such as confirmation bias, or assumptions of guilt (Hill, Memon, & McGeorge, 2008; Granhag, Clemens & Strömwall, 2009).

Although previous research on rapport in police interrogations points to its efficacy over approaches involving coercion (Bull & Milne, 2004; Ord, Shaw, & Green, 2008) these studies tend to ignore macro level techniques and the overall "atmosphere of communication" created within the interview. Instead, they often create "task lists" for interviewers that are either poorly defined (e.g., "be empathic") or overly specific (e.g., "avoid closed questions"). As such, there is currently no theoretical model for defining, measuring and analyzing the effects of rapport-based interrogations. Difficulties include access to data, as well as problems in generating reliable ways to quantify independent and dependant behavioral measures. As such, rapport remains an elusive concept to define, observe, and measure. Critically importantly then is access to and the analysis of field interviews since it is important

to know what actually occurs and what the real challenges are rather than what we might imagine them to be. This paper seeks to create a taxonomic and conceptually sound method of observing rapport-based interrogation techniques as they occur in real operations as well as measure their effect (if any) on a set of outcome measures.

If rapport is underdefined and underresearched within an interrogation context, then one should look to domains where it is well established. One such domain is the counseling arena. In counseling there are clear definitions of the concept of rapport and an acceptance that simply training counselors to use specific "off the peg" question types is not effective in engaging and supporting clients in interactions (Miller & Rollnick, 2002).

The current paper outlines the conceptual and methodological development and application of a behavioral coding framework for reliably measuring interrogations in field operations. Referred to as the "ORBIT" coding framework (Observing Rapport-Based Interpersonal Techniques; Alison, Alison, Elntib & Noone, 2010) the underpinning theoretical concepts draw on more than 50 years of research on interpersonal dynamics and clinical and therapeutic approaches. Specifically, ORBIT adapts two previously diverse fields of therapeutic intervention: (i) motivational interviewing (MI), originally derived from approaches used with substance users (Miller & Rollnick, 1992) and (ii) aspects of the interpersonal circle, originally devised to examine interpersonal relating patterns associated with various psychological disorders (Leary, 1955), for application within the context of suspect interrogation.

Conceptual Basis of ORBIT

Motivational Interviewing

On first reflection, the contexts of a therapeutic engagement and an interrogation would seem to have little overlap. However, when the core approaches are more closely examined there are clear parallels. Both Motivational Interviewing and police interviewing seek to establish an empathic, respectful, and nonjudgmental atmosphere (i.e., "search for the truth") and to maintain a flexible but goal directed strategy throughout the interaction (i.e., adapting to the suspect's responses but focused on key topics and items relevant to the case at hand).

Motivational Interviewing has been developed within counseling and, in that context is defined as "a collaborative, person centered form of guiding to elicit and strengthen motivation for change" (Miller & Rollnick, 2009). More than 200 clinical trials of MI have been published, and efficacy reviews and meta-analyses have demonstrated its usefulness in motivating positive change on an array of target problems across the health care and therapeutic communities (Miller & Rollnick, 2002; Burke, Arkowitz, & Menchola, 2003; Dunn, Deroo, & Rivara, 2001; Erickson, Gerstle, & Feldstein, 2005; Rubak, Sandbaek, Lauritzen & Christensen, 2005; Rollnick, Miller & Butler, 2008; Arkowitz, Westra, Miller, & Rollnick, 2008). Underpinning the approach is a commitment to the "spirit" of MI as opposed to the use of a set of technical strategies. MI is characterized by establishing rapport through creating an environment that is collaborative rather than confrontational, by drawing information from the client rather than demanding it, and maintaining the client's autonomy rather than highlighting the counselor's authority.

Similarly, in a police interview (Moston & Stephenson, 1993) there is an emphasis on a “search for the truth”—it is the suspect’s right to choose whether or not and to what extent they will cooperate, including invoking the right to silence. Using techniques that attempt to apply external pressure, demands, or coercion are fraught with risks; including inducing false confession or contaminating the evidential value of a suspect’s account (Gudjonsson, 1997; Moston & Engelberg, 2011; Moston & Stephenson, 1993). It is not solely the legal or ethical risks that should warn interviewers against the use of such “tough” tactics—there are also clear indications that they do not work and that more empathic, rapport-based strategies are more effective in generating useful information from suspects. For example, Bull and Cherryman (1996) identified the presence of the following qualities in “skilful” police interviews: positive communication skills, empathy, flexibility, open-mindedness, clear structure, and open questions. Similarly, Shepherd (1991) highlights the importance of being empathic, respectful, and humane when interviewing difficult suspects. These qualities have a direct overlap with those highlighted in the MI literature, such as the use of open questions, being nonjudgmental, displaying empathy, and being goal-directed (Rollnick & Miller, 1995).

A second important overlap between MI and police interviewing is the idea of “versatility.” The literature on establishing a successful “therapeutic alliance” indicates this is dependent on the therapist’s ability to actively facilitate the exploration of meaningful information, to convey a sense of confidence, and to provide direction without becoming inflexible (Ackerman & Hilsenroth, 2003). These traditional therapeutic skills are congruent with structured police interview approaches (Soukara, Bull, Vrij, Turner & Cherryman, 2009), in which the manner in which topics are explored should be confident, without being judgmental and the interviewer should be able to respond flexibly based on the suspect’s response to questioning (Clarke & Milne, 2001; Milne & Bull, 1999). Interpersonally focused skills such as affirmation, understanding, and accurate empathy have all been associated with increased ratings of the quality and strength of the therapeutic alliance (Ackerman & Hilsenroth, 2003; Horvath & Bedi, 2002), suggesting that feeling understood and accepted is an integral part of successfully engaging clients during sessions (Beutler, Machado, & Allstetter Neufeldt, 1994; Bohart, Elliot, Greenberg, & Watson, 2002). Even in the adversarial environment of a police interview, suspects have emphasized the importance of how they feel the interviewer responds to and understands them as being central to cooperation and in some cases even predictive of confession (Holmberg & Christianson, 2002).

There may be debate about the ethics of applying skills designed for use within a supportive, therapeutic context to the more adversarial environment of a police suspect interview. One may argue that the use of such strategies in this context may lead an individual into cooperating even when it may not be in their best interests. Central to this issue, is the concept of how such strategies operate. MI or rapport-based tactics do not work by “tricking” or “coercing” an individual into compliance. They simply seek to create an atmosphere that is conducive to open communication. The suspect may find it more difficult to fabricate or conceal incriminating information due to this atmosphere but the choice to answer or decline remains theirs. MI is not mind-control and more importantly it does not operate by creating threat, inducement, or exter-

nal pressure. Moreover, MI has become a standard approach across multiple contexts involving participants who may be at best ambivalent about cooperating and at worst overtly hostile, such as health care (Fleming et al., 2010), parenting supportiveness programs (Corcoran, 2003), court-ordered substance misuse (Clark, 2001), and correctional treatment programs (McMurran, 2009).

However, there are limitations to the use of Motivational Interviewing styles within police interviewing, and rapport-building is unlikely to be appropriate or productive for every phase of the suspect interview process. Therefore, the authors sought to establish a broader model of interpersonal interaction which would capture the interaction as a whole and the use of Motivational Interviewing type strategies within it.

Interpersonal Behavior Circle

The IBC model is based on Leary and Coffey’s (1954) argument that personality should not be considered in isolation but rather in the context of how people relate to one another. As such the IBC can be defined as a dynamic and dyadic model of inter relating in which interactions between individuals can be illustrated by reference to a circular ordering across two dimensions (love-hate and power-submission). Birtchnell’s (2002) rearticulation of the IBC was applied within therapeutic settings in which he argued that there were adaptive and maladaptive variants of the circle (thus authority, passivity, challenge and collaboration could be done adaptively *or* maladaptively). For example, one could challenge someone in a manner which was frank forthright and critical (adaptive) or one could be attacking, punitive, and sarcastic (maladaptive challenge). Further, he argued that effective therapists are interpersonally versatile and can utilize a range of adaptive interpersonal competencies (from cooperative to challenging styles and authoritative to passive styles) dependant on the interaction style of the client (i.e., applying the right style at the right time). That is, effective therapists were conditionally sensitive to the interpersonal requirements of the context within which they were operating. Simpson, Oriña and Ickes (2003) argue that this is a function of one’s capacity for empathic accuracy, that is, how well the therapist genuinely understands the client. Leary produced a conceptual model of these behaviors by organizing a set of interpersonal terms in a circular configuration, with two main axes. The horizontal axis consisted of the continuum for love and hate, and the vertical axis the continuum for dominance and submission. Additional terms were then added to the circle to represent their relative alignment with these polar extremes. Terms depicted as adjacent to one another on the periphery of the circle were highly positively correlated (e.g., “gregarious” and “self-assured”) and terms opposite one another on the circle had the highest negative correlations (e.g., “arrogant” vs. “unassuming”). For more than 50 years variants of Leary’s original model have been used to describe dyadic interactions in therapy, emotional states, doctors’ interactions with patients, and even interactions between primates (Birtchnell, 2002).

There are a limited number of studies that have examined the influence of dominant versus “befriending” approaches within interrogations. Criticisms of such interpersonal research includes that it tends to focus on specific aspects or solitary traits, such as argumentativeness (Infante & Gorden, 1989; Rancer, 1998) or willingness to communicate (MacIntyre, 1994), rather than con-

sidering how these aspects fit within a larger domain of communication-related possibilities. Birtchnell (2002) argued that the IPC model could be conceptualized as a full spectrum of adaptive and maladaptive modes of relating and that each of the positions carries potential advantages or disadvantages for the individual (i.e., that there are adaptive and maladaptive variants of each of the four major quadrants). He argued that in the course of interpersonal maturation a person needs to develop competence in attaining and maintaining all of the positions and that a person competent (e.g., able to communicate in all states) is considered versatile. Within the context of suspect interviewing, interviewers who are able to adopt a wide range of interaction styles, that are both responsive and adaptive to the suspect, will be the most interpersonally competent and versatile.

The concept of the interpersonal circle has had significant successes in accurately examining interpersonal relating (for reviews see Hatcher & Rogers, 2009; Horowitz, Turan, Wilson, & Zolotsev, 2008) and the validity of the scales for measuring the "Dimensions of the Interpersonal circle" have been well tested across a variety of domains (Ansell, Kurtz & DeMoor, 2011). It has been replicated across a range of interpersonal dynamics including traditional relationships such as sexual partners (Markey & Markey, 2009), interpersonal values (Locke, 2000) and interpersonal problems (Horowitz, Rosenberg, & Bartholomew, 1993). It has also been applied to criminal interpersonal dynamics such as tactics used by child sex offenders to secure and manipulate victims (Bennell, Alison, Stein, Alison and Canter, 2001), behavioral coherence in group robbery (Porter & Alison, 2006), and group sex offense behavior (Porter & Alison, 2004).

The Link Between the Models

The current research considered both MI and Interpersonal Circle Theory as critical in providing a link to rapport within interrogations. We argue that MI is useful in considering the approach and ethos adopted by an interviewer and his or her commitment to concepts such as collaboration over confrontation, evocation over imposition and autonomy over autocracy. In addition, we argue that the way in which interviewers deal with suspects at an interpersonal level will mediate the efficacy of these approaches. As such, individuals who are both versatile (know when to use which form of interpersonal responding) and competent (use adaptive rather than maladaptive variants), will facilitate rather than hamper communication. Thus, in the context of terrorist interrogations, it was proposed that both interpersonal competence (high adaptive IBC and low maladaptive IBC) and versatility (ability to utilize many adaptive approaches), alongside the effective application of MI strategies would generate enhanced information intelligence and evidence from suspects.

Current Research

Consistent with the theoretical model the following were hypothesized:

Hypothesis 1: Interviewers who displayed adaptive interpersonal behaviors would be more likely to generate adaptive interpersonal behavior from interviewees; Interviewers who

displayed maladaptive interpersonal behaviors would be more likely to generate maladaptive interpersonal behavior from interviewees (the principle of interpersonal mutual influence).

Hypothesis 2: Interviewers who used adaptive interpersonal behaviors would also use more of MI-consistent strategies throughout the interviews (interpersonal competence); Interviewers who used maladaptive interpersonal behaviors would also use MI-inconsistent strategies throughout their interviews (interpersonal incompetence). In sum, we argue that MI-consistent approaches are very likely positively correlated with adaptive IBC behaviors but that the combination will be especially effective in generating information and evidence.

Hypothesis 3: Both adaptive interpersonal behavior and MI-consistent behaviors would be associated with higher information yield from suspects; Maladaptive interpersonal behavior and MI-inconsistent behaviors would be associated with a reduced yield.

Method

Data Set

The study included 418 audio and video recordings of police interviews with 29 terrorist suspects (representing 288 hours of footage) who were subsequently convicted of terrorism-related offenses (see Table 1). Suspects included international terrorists ($n = 8$), right-wing terrorists ($n = 7$) and paramilitary terrorists ($n = 14$). The number of interview tapes (where a tape was 45 minutes) for each suspect ranged from 10 to 43 tapes. Each suspect was interviewed by two interviewers, and the same interviewers were used throughout their investigation.

All interviewers had completed advanced interviewer training (Tier 3) and were assigned specifically to regional Counter-Terrorism Units across a number of geographic areas in the U.K. The specific content and exercises used in the Advanced Interviewer Training (Tier 3) remains variable across the U.K. and Ireland, but follows the Home Office Investigative Interviewing Model (PEACE) and includes self-directed learning, classroom-based lectures, and immersive exercises over a minimum of 5 days. The level of direct input related to rapport and psychological approaches again varies by area but the suspect interviewing training focuses on and encourages use of "conversational management" strategies (Shepherd, 2003). A total sample of 58 interviewers representing four CTU teams (West Midlands, Metropolitan Police, and both the North East and North West CTU) were analyzed across the sample. Although the focus of observations was the primary interviewer, the supporting interviewer was also coded if their contribution to the interview segment was greater than 5 minutes within a 45-minute tape and combined to give an overall interview team score. This occurred in 84 (20%) of the 418 cases. The interviews were conducted in the United Kingdom and Ireland between 2004 and 2010.

Data Set Criteria

U.K. cases were identified by agreement with the U.K.'s National Counter Terrorism Branch and were selected if the suspect

Table 1
Details of Terrorism-Related Offences of Suspects

Terrorist affiliation	Offences (in order of frequency)	Plea	Engagement ^a
8 international (affiliated or inspired by Al Qaeda and other affiliated organizations)	Possessing Articles for the purpose of terrorism	7 Not Guilty/	5 No comment throughout
	Making a record of information of use to a Terrorist, Disseminating Terrorist Publications	1 Guilty plea	2 Engaged to No comment
	Funding Terrorism		1 Engaged throughout
	Conduct in preparation for Acts of Terrorism (making suicide videos/ suicide vests)		
	Recruitment of other individuals for the purpose of terrorism		
	Conspiracy to cause an explosion		
	Conspiracy to murder		
7 Right-wing Extremists	Preparation for acts of Terrorism	4 Not Guilty/	3 No comment throughout
	Possession of articles for purpose of terrorism	3 Guilty plea	2 Engaged throughout
	Dissemination of terrorist publications		1 No comment to engaged
	Possession of Ammunition without a license		1 Engaged to No comment
	Manufacture and Possession of Explosives		
	Manufacture and Possession of Firearms		
	Solicitation to murder		
	Stirring racial hatred		
	Possession of drugs with intent to supply		
	Possession of indecent images		
14 Paramilitary/Organized	Murder	Not available	Not available
	Possession of firearms with intent to endanger life		
	Attempted Murder		
	Activity to fund an unlawful organization		

^a ‘Engaged’ refers to the notion that a suspect actually spoke throughout the interview.

had been convicted and did not have any appeals pending, the interview sequence was available in full, and the suspect’s conviction was for offenses related to terrorist activity. Irish cases were identified by the An Garda Síochána (Ireland’s national police service) if all suspects identified had been convicted, suspects had no appeals pending, and suspects were known (by intelligence or conviction) to have engaged in terrorist related activity.² A Memorandum of Understanding was established with the U.K. Counter Terrorism Unit and the Garda in relation to the selection of cases, the recording and storage of the data file, the anonymity of the offenders and interviewers involved (i.e., preventing the incorporation of personally identifying factors into publications), and the dissemination and reporting of the data more widely.

Procedure

Each recording was classed as a single unit lasting 45 minutes. This reflects the average length of audio tapes used in U.K. police interviewing as there is a natural break point at least every 45 minutes when recording tapes are changed. Each new tape commences with a restatement of the caution and the principal charges against the suspect creating a distinct start and end point. Tapes of less than 20 minutes were added to the preceding tape for coding. This 20-minute cut-off was established as it is specified for the MISC (Version 1.0) as an adequate period of interaction to allow reliable observations of behavior between two individuals. Global ratings were completed at the end of each day’s worth of interviewing the suspect which equated to a “session.” Data were analyzed on a unit-by-unit basis.

Interview Coding Manual: Observing Rapport-Based Interpersonal Techniques (ORBIT)

The ORBIT was developed as a coding manual by the authors to evaluate (i) the quality of interpersonal interactions between interviewers and suspects as well as (ii) the extent to which useful intelligence and evidence is generated within an interview (Alison et al., 2012). The coding framework is designed around two core measures: 1) the interviewer’s application of a range of strategies, which are either consistent with or inconsistent with counseling-based approaches designed to build and sustain rapport and 2) a measure of the interpersonal style of communication being used by both the suspect and the interviewer over the course of the interaction.

Accordingly, interviewer behavior was coded into three elements measuring the following:

- (i) GMIS - Global Motivational Interviewing Scores
- (ii) RBS – Rapport-Building Skills
- (iii) IBC-I - Interpersonal Behavior Circle: Adaptive and Maladaptive – Interviewer

Suspect behavior was coded into two variables by measuring:

- (i) IBC-S - Interpersonal Behavior Circle: Adaptive and Maladaptive - Suspect
- (ii) IYA - Interview Yield Assessment

Each of these is discussed in more detail below. See Table 2 for a summary of each of the elements contained within ORBIT.

² It should be noted that the Garda sample principally includes individuals who are affiliated with current or past terrorist groups in Ireland and who engage in “murder for hire” along with other criminal activity. Therefore, the Garda sample contains a number of discreet cases of violence as opposed to the planning of more general violent terrorist “plots.

Table 2
ORBIT Codes and Descriptions

Tool code	Name	Description
IBC-I	Interpersonal Relatedness- Adaptive/Maladaptive: Interviewer	Assessment of Interviewer's Interpersonal style of relating to the suspect
IBC-S	Interpersonal Relatedness- Adaptive/Maladaptive: Suspect	Assessment of Suspect's Interpersonal style of relating to the interviewer
RBS	Rapport Building Skills- Motivational Interviewing of Suspects: Assessment of Skills	Assessment of the use of core MI skills or tactics that inhibit MI in establishing open communication
IYA	Interview Yield Assessment	Frequency count of items of information generated from the suspect during the interview that are Points of Evidence or Items of Intelligence
GMIS	Global- Motivational Interviewing Skills Code	'Global' assessment of the overall ethos established during an investigative interview

Rapport-building skills. Broad categories of rapport-based skills were refined from the literature on Motivational Interviewing approaches and a range of MI coding frameworks. The Global measures from the MISC-1.0 were retained, as they provided a holistic measure across each day's worth of interviews, classified as a "session." This resulted in five core MI approaches being selected for coding: (RBS-1) reflective listening, (2) rapport and resistance, (3) summaries, (4) developing discrepancy, and (5) autonomy) and five global MI qualities for coding sessions in their entirety: (GMIS-1) acceptance, (2) empathy interpersonal competence- composed of (3) adaptation/ (4) evocation/ (5) autonomy). See Table 3 for operational definitions of the RBS and GMIS.

Interpersonal behavior circles (interviewer & suspect). To complement and enhance the assessment of the rapport-based skills drawn from the literature on motivational interviewing, the researchers looked to broad models of interpersonal communication, such as the Interpersonal Circumplex (Leary & Coffey, 1954). After consideration of these models, four Interpersonal Behavior Circles were devised: 1) IBC-Interviewer: Adaptive, 2) IBC-Suspect: Adaptive, 3) IBC-Interviewer: Maladaptive, and 4) IBC Suspect: Maladaptive. Both the Adaptive and the Maladaptive circles consist of eight broad styles of relating, which move in a circular manner from Authoritative into Cooperative into Passive into Confrontational (see Figure 1 for a visual representation of these). These eight styles of communication are considered superordinate categories that then have adaptive and maladaptive variants. For example, it is possible for one to behave in an adaptive authoritative manner by being *in charge*, *setting the agenda*, and *advising* or to be maladaptive authoritative by being *demanding*, *dogmatic*, *pedantic*, and *rigid*. See Table 4 for a full comparison across each category.

Once the charts were compiled, researchers generated a number of interviewer and suspect behaviors, drawn from existing literature (Alison & Howard, 2005; Alison, Keibell & Leung, 2008), and considered to be broadly consistent with the variables outlined in the circular models (See Table 4). Each octant was associated with a variety of possible interviewer and suspect behaviors generated from the range of suspect interviews previously observed by the research team, consultation with police interview trainers, and the literature on counterinterrogation tactics (Granhag, Clemens, & Stromwall, 2009; the 17th Rule from the AQ handbook, the IRA Green Book). For instance, the IBC-I defines the Cooperative/

Passive Octant as Respectful/ Trusting/ Admiring- composed of behaviors such as *asking how the suspect would like to be addressed*, *complimenting an aspect of the suspect's character*, *verbal affirmations and encouragers*. For this same octant on the IBC-S, Supportive/ Conversational/ Nonjudgmental is defined as *deferent presentation*, *desire to be liked*, *eager to please*, *apologetic use of no comment*.

A core principle of the IBC is its use of descriptive behavioristic terminology to aid a high degree of observer reliability. As with other observational variants (Moskowitz & Zuroff, 2005; Shoda, Mischel, & Wright, 1993) of context-specific characteristics within situations (e.g., work), relationships (e.g., therapy, parenting), or under specific conditions (e.g., when under stress; Nugent, Amstader & Koenen, 2010), the IBC has been designed around interpreting interpersonal dynamics based on observable behaviors. The IBC also applies intensity scores to these observations. For this purpose, vector lengths are used to measure the intensity of individual scores in the circle ranging from absent to minimal to moderate to persistent (Moskowitz & Zuroff, 2005; Wiggins, Phillips & Trapnell, 1989). Absent meant the behavior never occurred, minimal meant an example of it was apparent but was not a defining characteristic, moderate that it occurred on several occasions, and persistent that it occurred throughout and could be considered a defining feature of the interaction.

Interview yield assessment (IYA). Suspect behavior was also measured to reflect the amount of useful information from the interview. The IYA is a recording tool for coding the information, intelligence and evidence "yield" from an interview. It is measured in relation to information which is of *evidential significance* or of *intelligence value*. Responses are coded across the following categories, which were highlighted by tactical interviewing advisors during consultation with the research team: capability (ability to commit offense); opportunity (circumstance allowing commission of offense); motive (reason to commit the offense); and descriptions (details about people, locations, actions and times that may be related to the offense). These categories are then also rated on a 5-point scale based on the level of cooperation where NA = *not asked about by interviewer*, 0 = *asked but I tell you nothing*, 1 = *I tell you as little as I can*, 2 = *I tell you what you have asked* and 3 = *I tell you what you have asked and elaborate, expand, or introduce new information*.

Coding participants. Once data were broken down into units and sessions, researchers could begin to code participants. Initial

Table 3
Motivational Interviewing (MI) Coding Frameworks

Global Motivational Interviewing Skills
 Code (adapted from MISC 1.1)

1) Acceptance	Unconditional positive regard
2) Empathy	Extent to which the interviewer understands the suspect's perspective
3) Adaptation	Interviewer is able to adapt to responses by suspect and manage a fluid interview format (e.g. timeline jumps, deviation from interview plan)
4) Evocation	Interviewer is able to draw out the beliefs and views of the detainee
5) Autonomy	Encouragement/support that it is the suspect's right to choose to reveal information or not
Rapport Based Skills	
Core skill	Definition & Interview Tactic Examples
Reflective listening	The ability to accurately reflect something the suspect has said to encourage further discussion or clarification.
MI Consistent scores	Accurate reflections or a summary of the suspect's content such as:
3 = Extreme	• Direct reflection of previous statements or dialogue
2 = Moderate	• Questions that seek clarification or explanation without judgment
1 = Mild	• Reflections that are emotionally accurate (i.e. congruent with what the suspect states they are feeling)
0 = Absence	
MI Inconsistent scores	Responses such as:
3 = Extreme	• Hammering suspect with rapid fire questioning without allowing time to respond
2 = Moderate	• Interruption with new question or statement without allowing suspect to complete their response
1 = Mild	• Being dismissive, argumentative, sarcastic or accusatorial
0 = Absence	• Making statements that are inaccurate or exaggerate what was said
	• Warning the suspect of consequences of lying or of conviction
	• Providing unsolicited advice or opinion ('what I think happened is . . .')
Rapport and resistance	This category refers to the ability to develop rapport and respond to resistance without judgment
MI Consistent scores	Responses such as:
3 = Extreme	• Evocative prompts ('how did you feel about that?')
2 = Moderate	• Statements that reflect back both positive and negative content (double-sided reflection);
1 = Mild	• Using three prompts when met with resistance and then shifting to an area of less resistance rather than continuing to push
0 = Absence	
MI Inconsistent scores	Responses such as:
3 = Extreme	• Threatening, ordering, advising, use of sarcasm or implied or overt judgment.
2 = Moderate	• Warning suspect of consequences;
1 = Mild	• Misleading or forced choice questions (e.g. did you take the money because of your debt or to buy drugs?)
0 = Absence	
Summaries/paraphrasing	Summaries are a particular use of reflection where the information or views discussed so far are fed back to the interviewee to check understanding and clarification. A summary should contain at least 3 points- 2 or less would be classed as a reflection.
MI Consistent scores	MI Consistent summaries should:
3 = Extreme	• Information is summarized using suspect's own words and then clarification or further detail is sought
2 = Moderate	• Summaries that include both positive and negative content
1 = Mild	• Summaries that draw out discrepancies (e.g. 'You said that you were very close to Alex and that he was a really important person in your life but you also said you haven't seen each other, phoned or had any sort of contact for the last nine months. Can you tell me why that is?')
0 = Absence	
MI Inconsistent scores	Summaries such as:
3 = Extreme	• Exclusive focus on negative aspects of the account which may paint the suspect in a negative light
2 = Moderate	• Summaries that introduce the interviewer's view rather than the suspect's.
1 = Mild	• Summaries where the information is summarized in a pejorative fashion or with a tone of sarcasm or disbelief (e.g. so are you seriously saying that even though 3 witnesses say they saw you and we have CCTV footage of your car in the area, you went straight home at half 11 and went to bed?)
0 = Absence	
Developing discrepancies	Discrepancies are those elements of the suspect's account or events that are inconsistent. This may be a factual discrepancy or they may be discrepant with the values and beliefs expressed by the suspect
MI Consistent scores	MI Consistent challenges are presented to the suspect for explanation without providing excuses or passing judgment
3 = Extreme	• Discovery- presentation of evidence or exhibits to the suspect and inviting an explanation;
2 = Moderate	• Use of suspect's own speech or specific details of forensic reports to ensure no misunderstanding
1 = Mild	
0 = Absence	
MI Inconsistent scores	Challenges are given in a way that is confrontational, accusatory, or judgmental such as:
3 = Extreme	• Lecturing, demanding explanations; shaming, blaming, criticizing, judging;
2 = Moderate	• Focusing on the police/victim perspective rather than the suspect (i.e. the family has been through hell, they need closure).
1 = Mild	• Rational cornering- laying out the facts in such a way that there is no face-saving option for the suspect to present

(table continues)

Table 3 (continued)

Global Motivational Interviewing Skills
Code (adapted from MISC 1.1)

0 = Absence	<ul style="list-style-type: none"> • Moralizes or leaks judgment (e.g. think how the victim’s mother must feel about what happened?; Anyone who’s done this can’t really respect family values)
Autonomy	Interviewer presents information consistently in such a way that the suspect can choose to respond without losing face (e.g. threatening their sense of self or values) and their choice to cooperate is emphasized.
MI Consistent scores	Positive contributions are reinforced and built upon by the interviewer, and the interviewer emphasizes that it is the suspect’s choice whether they cooperate or not.
3 = Extreme	<ul style="list-style-type: none"> • Emphasize personal choice- the interviewer directly acknowledges the suspect’s freedom of choice or personal responsibility (e.g. this is your opportunity to present your side of things; It is your choice whether you tell us anything or not; it is your right not to answer)
2 = Moderate	
1 = Mild	
0 = Absence	
MI Inconsistent scores	Responses that are antagonistic or which reinforce the adversarial relationship such as:
	<ul style="list-style-type: none"> • Providing excuses or minimizations for the suspect before they are offered • Use of repetitive prompts, • Rigid adherence to interview plan, • Disinterested or formulaic presentation of questions to the suspect (i.e. we don’t need your statement because we have so much evidence on you). • Direct challenge or question (e.g. did you kill them?; Did you do this?); • Admonishing to tell the truth (e.g. Come clean, Tell the truth, let’s be honest here)

coding passes were completed with a sample of 20-minute units to refine the criteria and categories within the framework and to establish interrater reliability.

The coding process involved observing and listening to the tapes in real time (20–45 min) while recording relevant observations according to the ORBIT framework. Because of data security agreements, these notes were taken exclusively by hand and within the location where they were held by the respective police service and are the property of the police service to be held securely after data entry. Completion of the coding then took between 15 and 25 minutes depending on the complexity of the content. Once refined, the entire coding process took between 60 and 70 minutes per tape. This is faster than similarly complex observer measures (e.g., MISC takes on av-

erage 85 minutes to complete on a 20-minute-long sample). The decision was taken to code all interviews available in full because of the unique and unprecedented nature of the data.

A total of six coders assisted in the analysis for this study—the principal researcher and three research associates (two with experience observing and delivering advanced interviewer training and one a serving police officer with the lead for advanced interview training in Ireland) and two novice coders. Once the framework was devised, monthly meetings were held in which the entire group of coders listened to and coded a number of example tapes drawn from police training samples. This included a coding session with 2 police advanced interview trainers which allowed the incorporation of practitioner feedback to improve and develop

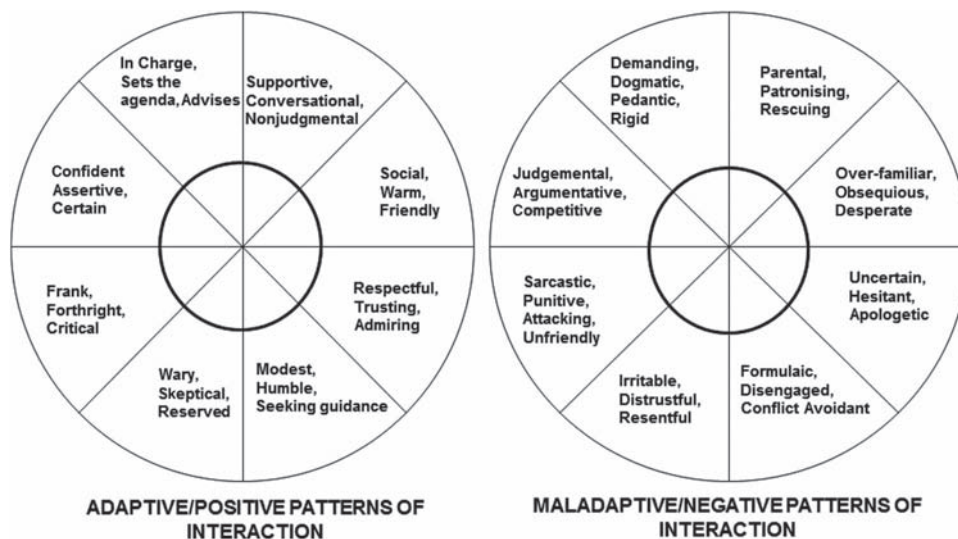


Figure 1. Adaptive (left) and maladaptive (right) interpersonal behavior circles (increasing intensity toward periphery, with center point = behavior absent, first inner circle = mild expression of behavior, mid circle = moderate expression of behavior, outer circle = persistent expression of behavior).

Table 4
Specific Interviewer and Suspect Behavior Associated With Octant Styles

		IBC-I	IBC-S
		Adaptive styles	
Octant style:	Core qualities:	Suggested interviewer behaviors:	Suggested suspect behaviors:
A- Authoritative	In charge, sets the agenda, advises	<ul style="list-style-type: none"> - Follows clear interview plan - Clearly sets out for the suspect the topics that will be covered - Sets the next topic for suspect to consider - Presents as confident and in charge - Robustly but politely responds to interruption by suspect or solicitor 	<ul style="list-style-type: none"> - Attempts to set the agenda, moves away from certain topics but introduces others (this is in opposition to or outside of the agenda set by the interviewer) - Suggests lines of enquiry to interviewer unprompted (e.g. 'You should really be speaking to the guy who lives downstairs'); asks for an update on case from interviewer - Assertively requests breaks/ consultation with solicitor/ etc. - Makes reference to 'rights' and legal procedure
A/C- Authoritative/ Cooperative	Supportive, Conversational, Non-judgmental	<ul style="list-style-type: none"> - Provides reassurance/explanations to suspect - Welfare questions - Checks for understanding - Warm but professional - Does not leak judgment about suspect or offence 	<ul style="list-style-type: none"> - Responds to attention/ encouragement - Offers personal information about background or relationships freely or when asked - Asks interviewer personal questions (*not intrusive or insulting) - Confident, engaged delivery of 'no comment'
C- Cooperative	Social, Warm, Friendly	<ul style="list-style-type: none"> - Appropriate use of humor - Friendly non-verbals (smiling, nodding, positive eye contact) - Warm tone - Reveals appropriate personal information to the suspect ('I've got a 6 month old at home as well- a lot of work at that age!') - Evocative questions ('How did you feel when you heard that?') 	<ul style="list-style-type: none"> - Smiling, eye contact, warmth - Seeks positive regard from interviewer - Offers confident explanations/ justifications for details that are challenged - Uses selective 'no comment' on challenging questions
C/P- Cooperative/ Passive	Respectful, Trusting, Admiring	<ul style="list-style-type: none"> - Asks how suspect would like to be addressed - Compliments an aspect of the suspect's character or behavior ('You're obviously a devoted family man') - Use of verbal affirmations (Um-hum, right, ok, I see) 	<ul style="list-style-type: none"> - Presents as eager to please/ desire to be liked - Efforts to present self in a favorable light (reference to positive acts or roles- father/ husband; wife/mother) - Use of deferent references (Sir/ Officer/ Madam) *not sarcastic - Apologetic use of 'no comment'; appears to feel ashamed or embarrassed by going 'no comment'
P-Passive	Modest, humble, seeking guidance	<ul style="list-style-type: none"> - Accepts own potential for error ('I don't think I've worded that right- let me try again'); - Allows suspect to correct them - Frequently requests opinion or assistance of second interviewer - Presents questions as uncertain or confused as opposed to assertive or challenging 	<ul style="list-style-type: none"> - Seeks advice or information frequently from solicitor or interviewer(s) in an uncertain manner (rather than assertive or demanding) - Avoids eye contact/ appears intimidated by process or by interviewers - Goes 'no comment' in response to prompt by a solicitor
P/CN- Passive/ Confrontational	Wary, Skeptical, Reserved	<ul style="list-style-type: none"> - Tactical use of silence (not oppressive but patient) - Presents calm but cold - Questions bore down into factual elements of account 	<ul style="list-style-type: none"> - Wants to get interview over with as quickly as possible (e.g. 'I don't know, can I go' approach) - Regards interviewer(s) with suspicion (e.g. 'You're trying to trick me'; 'Don't pretend to be my mate') - Uses breaks to interrupt any points of tension

(table continues)

Table 4 (continued)

		IBC-I	IBC-S
CN- Confrontational	Frank, Forthright, Critical	<ul style="list-style-type: none"> - Use of detail questions to establish specific knowledge ('Which side of the road is the bookie's you went past?') - Presents question of guilt directly to suspect (Did you have anything to do with this offence?) - Directly points out discrepancies in the suspect's account - Directly spells out consequences for the suspect if they are lying 	<ul style="list-style-type: none"> - Flat delivery of 'no comment'- no emotion- or simply silence/refusal to respond - Frequent reference to 'rights' or suggestion that 'rights' have been violated - Allegations of improper questions or strategies - Firm responses that appear almost scripted or formulaic with little or no elaboration - Criticism of police service or interviewer
A/CN- Authoritative/ Confrontational	Act confidently, Assertive, Certain	<ul style="list-style-type: none"> - Presenting certainty of guilt/overwhelming with evidence - Rational cornering (cutting off avenues of explanation) - Summarizes evidence against the suspect or inconsistencies - Requests explanations for discrepancies in an assertive direct manner 	<ul style="list-style-type: none"> - Uses the interview to make political/theological arguments to interviewer - 'No comment' delivered firmly without waiver - Challenges interviewer's competence/skill - Uses rational cornering/ deductive reasoning on interviewer (i.e. 'just because my fingerprints are in the car doesn't mean I had anything to do with this- I told you- I'm in that car all the time.')
Maladaptive styles			
A- Authoritative	Demanding, Dogmatic, Pedantic, Rigid	<ul style="list-style-type: none"> - Maintains a rigid adherence to interview plan (e.g. 'Wait, we'll get to that- answer my questions about this first') - Argues small points with suspect (e.g. 'you said it was dark but it was only half six- it doesn't get dark until half seven', 'well- it was getting dark then', 'that's not what you said'). - Presents certainty of guilt (e.g. 'there isn't any other explanation for what you were doing there, is there?') - Rattled by dismissive or demeaning behavior by suspect 	<ul style="list-style-type: none"> - Interrupts the interviewer repeatedly - Argues over small details - Responses appear scripted or rehearsed - Tries to display superior legal knowledge - Attempts to control space (e.g. position of chairs, who sits where)
A/C- Authoritative/ Cooperative	Parental, Patronizing, Mitigating	<ul style="list-style-type: none"> - Patronizing tone ('come on now mate, it's for the best') - Offering explanations/ justifications for offence (e.g. 'maybe this just got out of hand'; 'I'm sure you felt you were doing this for the right reasons') - 'Rescues' suspect from uncomfortable silence or challenging questions (e.g. 'where did you go next?' <i>brief pause</i> 'maybe you went to get something to eat or down by the bus stop to head home?') 	<ul style="list-style-type: none"> - Attempts to discuss unrelated matters in detail- thereby running down the clock - Speaks down to interviewer (e.g. 'You have got this all wrong', 'Listen carefully') - Tries to work out motive of interviewer's questions (e.g. 'I see what you're getting at ...') - Offers blanket justifications/ explanations for points of challenge (e.g. 'I've told you, I'm nothing to do with it')
C- Cooperative	Over-familiar, Obsequious, Desperate	<ul style="list-style-type: none"> - Overly familiar with suspect (e.g. mate, hon, lad, etc.) - Physical contact with suspect (e.g. patting hand, hand on shoulder, etc.) - Lack of professional boundaries (e.g. chatting or making jokes with other interviewer) - Appears to be begging or pleading with suspect to help 	<ul style="list-style-type: none"> - Drawn into a social style of chat with interviewer - Can't resist responding even after initial commitment to 'no comment' because they want to correct facts presented by the interviewer - Appears desperate for interviewer to accept explanations - Transparent attempts at flattery or compliment

Table 4 (continued)

		IBC-I	IBC-S
C/P- Cooperative/ Passive	Uncertain, Hesitant, Apologetic	<ul style="list-style-type: none"> - Uncertain, hesitant, or apologetic questions - Backs down from challenge by suspect or responds to their criticism (e.g. sits upright when told, stops taking notes or checking them) - Allows suspect to ramble on about irrelevant subjects - Does not pursue topics where the suspect shows discomfort, avoidance, or emotion (e.g. appears embarrassed on their behalf) - Offers no clear structure to topics discussed 	<ul style="list-style-type: none"> - Finds challenge very uncomfortable (e.g. silence or attention on self) - Apologetic for lack of cooperation (e.g. I'd like to help but that's all I know) *without sarcasm - Mumbling, long pauses between responses - Eager to please- struggles with non-compliance- may reveal information after coaxing/ encouragement by interviewer- often despite solicitor's advice
P-Passive	Formulaic, Disengaged, Conflict Avoidant	<ul style="list-style-type: none"> - Asks questions in a tick-box 'get it over with' style - Accepts general or avoidant responses (e.g. 'I don't know, I can't remember, maybe) with no further probing - Rapidly moves away from topics when met with resistance (e.g. silence, irritation, aggression, or dismissal by suspect) 	<ul style="list-style-type: none"> - Overt hiding/ avoidant behavior (e.g. hood over face, head on table, flat affect, depressed state) - Bare minimum responses (e.g. I don't know, I can't remember, maybe) - Delivers mantra 'no comment' responses or completely disengages (i.e. 'appears elsewhere')
P/CN- Passive/ Confrontational	Irritable, Distrustful, Resentful	<ul style="list-style-type: none"> - Leaks disbelief/ judgment (scoffing) - Adopts a distrustful/ suspicious tone - Appears fed up/ exasperated with suspect 	<ul style="list-style-type: none"> - Responds to challenge by disengaging, mumbling responses, or going 'no comment' - Body language is closed, hostile, or withdrawn (e.g. looking down, arms crossed, turning toward wall) - Frustration at having to repeat responses - Grunts/ tuts/ or sighs in exasperation - Glaring, pointing, raising voice - Use of personal insults or aggressive language against organizations or interviewers (e.g. swearing) - Sarcasm - Accusations of mistreatment/ abuse/ torture;
CN- Confrontational	Sarcastic, Punitive, Attacking, Unfriendly	<ul style="list-style-type: none"> - Overt accusations of lying/ guilt - Use of sarcasm/personal insults - Barrage of questions - Implied threat of consequences (e.g. 'If you can't offer an explanation, we'll have to bring in your wife and son and see what they have to say') - Provocative comments 	<ul style="list-style-type: none"> - Deliberately talking over the interviewer (e.g. chants, monologue, etc.) - Refusal to follow instructions (e.g. sit, state name, etc.) *More extreme examples may result in suspension of interview - Demands to make a complaint or to be released - Shows deliberate 'siding' with solicitor - Attempts to put interviewers on back-foot (e.g. 'pronounce my name properly', 'You're making things up', 'this your first time?', 'you here to make the tea?') - Making accusations of racism/discrimination or violation of rights - Emphatic statements, even in the face of conflicting evidence ('I wasn't there' <i>but you're on CCTV</i> 'I told you, I wasn't there')
A/CN- Authoritative/ Confrontational	Judgmental, argumentative, Competitive	<ul style="list-style-type: none"> - Interrupting, talking over the suspect - Leaking irritation/ anger/ frustration - Presents as if guilt is a foregone conclusion - Dismissive of explanations 	<ul style="list-style-type: none"> - Demands to make a complaint or to be released - Shows deliberate 'siding' with solicitor - Attempts to put interviewers on back-foot (e.g. 'pronounce my name properly', 'You're making things up', 'this your first time?', 'you here to make the tea?') - Making accusations of racism/discrimination or violation of rights - Emphatic statements, even in the face of conflicting evidence ('I wasn't there' <i>but you're on CCTV</i> 'I told you, I wasn't there')

understanding of the likely expression of these skills within an investigative interview context. Discrepancies were discussed and resolved by using individual areas of expertise and increased refinement of the category descriptions. The final framework used for coding the field material had undergone 11 iterations of refinement.

Three additional formal coding exercises were conducted to establish interrater reliability. A series of four Garda interviews (totaling 7 units) was coded by all coders. After revisions to improve internal consistency, a second series of police interviews (from publically accessible material) was coded by three of the four coders. Finally, a sample of 20 interviews from the principle

data set was cross-coded by at least two members of the research team and two “novice coders” and assessed for interrater reliability (see Tables 9–11 for the results for each of the individual categories). Novice coders were given an afternoon of informal training on the categories to establish the ease with which a novice coder could apply the framework. We felt this was an important first step in establishing the extent to which training in ORBIT coding for monitoring interview performance could be achieved.

To calculate coder-agreement levels, the Kappa index for a series of 26 randomly selected interviews was calculated along with percentage agreements, bearing in mind the high sensitivity of Kappa values to peripheral methodological issues such as prevalence of one category over the other (particularly evident in *no-comment* interviews), sample size, number of ratings within each scale, and so on (Feinstein & Cicchetti, 1990). The results obtained served to ascertain the level of agreement for each component of the ORBIT (see Tables 9–11 for the full results). The classification system suggested and used by a number of authors (e.g., Fleiss, 1981; Landis & Koch, 1977) was used so as to categorize agreement into (0.00–0.20) poor, (0.21–0.4) fair, (0.41–0.6) moderate, (0.61–0.8) strong, and (<0.8) near complete agreement. Kappas for the 40 (of the 46) coding categories of the framework indicated moderate to complete agreement between coders. There were six (of 46) instances of fair to poor agreement between coders. These included adaptive authoritative behaviors (*in charge, sets the agenda, advises*), reflective listening (accurate reflection to encourage further discussion) and developing discrepancies (seeking explanation for inconsistencies without implying judgment or influence; see Tables 9–11 for a complete account of the IRR scores and percentage agreement ratings for each category). Reasons for poor agreement in these particular categories were explored through interrogating the dataset and consultation by the research team. Upon examining the data, these lower scores appear to be principally attributable to issues with the distribution of scores and a high number of instances where these behaviors were not present (0s).

To further ascertain the reliability of these variables we looked at the categorical coding of the data (dichotomous coding of the existence of behavior vs. absence) and found the reliability of this was much higher between coders. This may be an indication that it is more difficult to apply a more subtle scaling to these particular categories and that they are easily interpreted as mild to moderate based on small variations in interpretation. On discussion, there appeared to be some issues in relation to the domain of experience of the coder with those from a therapeutic background being more attuned to softer prompts (e.g., How did you feel when you were arrested?) versus coders from an investigative background being more attuned to deductive factual prompts (e.g., How many times did you visit his address?). However, the high categorical agreement still indicates good reliability for determining presence or absence of a particular category of behavior. Further refinement and additional training may assist in improving coders’ interpretation of the level of expression of these categories. For 6 of the 46 lower IRR scores, the data revealed that there were a higher number of inconsistencies between novice coders than coders from the direct research team, indicating that the training in the use of the ORBIT may need to be more extensive and require domain specific knowledge in interviewing or counseling.

Data Analysis

Before any analysis of the measurement models or the structural model of the data, all variables were log transformed. Maximum likelihood estimation was used to test the hypothesized model. Multiple indices of model fit were calculated to ensure that the model represented a good fit of the data. We did not use the χ^2 test for model fit as the standard χ^2 test is overly sensitive to kurtosis and distribution and tends to always indicate a model is not acceptable in sample sizes >200. Instead, a normed χ^2 value was also calculated (χ^2/df). χ^2/df values between 1 and 2 are indicative of a good model fit and between 2 and 3 an acceptable model fit (Carmines & McIver, 1981). The standardized root mean residual (SRMR) absolute fit index was also used to assess model fit, as this measure is less affected by sample size distribution and kurtosis as it is not a simple variation of χ^2 . For this measure of model fit values of 0 represent perfect fit and values under 0.08 are representative of a good model fit.

As well as using the aforementioned discrepancy function methods, model fit was also estimated using the normed fit index (NFI), as this method works well with larger sample sizes, NFI values above 0.9 are indicative of a good model fit (Ullman, 2001). However the NFI measure is highly sensitive to the number of parameters in the model, so for the current complex model the Tucker-Lewis index (TFI) was also used to verify model fit, as with the NFI, values of 0.9 are considered a good fit. Additionally, the comparative fit index (CFI) and root mean square error of approximation (RMSEA) noncentrality-based indices were also used to evaluate model fit (Bentler, 2007). CFI values equal to or greater than 0.95 and RMSEA values equal to or lower than 0.06 were used as cut offs for good fit (Hu & Bentler, 1999), with RMSEA equal or lower to 0.08 being described as acceptable (Browne & Cudeck, 1993). In describing specific relationships within the model, unstandardized regression coefficients are reported within the text. In addition, bias corrected bootstrapping was used to obtain confidence intervals ($CI_{0.95}$) and associated p values for all the unstandardized regression coefficients reported. Likewise, bias corrected bootstrapping was utilized to obtain bias corrected confidence intervals for the indirect effects in the structural model (again, bootstrap confidence intervals for indirect effects were $CI_{0.95}$).

The dependent variable for the hypothesized structural model was interview yield; a latent variable created from the capability, opportunity, motives and “PLAT³” scores (People, Location, Action, and Temporal). First, the hypothesized structural model investigated the direct effect of adaptive and maladaptive interviewing on interview yield. The model also assessed whether these variables had indirect effects on yield via encouraging or inhibiting adaptive or maladaptive responses in suspects. An MI latent variable was also created for the analysis (using mean scores on the acceptance, empathy, adaptation, evocation and autonomy scales). The model investigated the direct effects of MI on yield as well as its effects on interviewer and suspect adaptive and maladaptive behavior, thereby allowing the assessment of the indirect effects of MI on yield. We also controlled for the effect of interview duration on Yield. As recommended by Bollen (1989) fit for this hypothesized structural model was also compared with three alternative

³ PLAT has been devised by Kerry Marlow (South Wales Police) as a mnemonic to examine useful information extracted from police interviews.

models, a fully mediated model (with no direct effects), a nonmediated model (direct effects of variables only), and the independence model (no association between variables).

Results

Results include both interviewers’ and suspects’ relating scores on adaptive and maladaptive interpersonal behaviors (IBC), rapport building skills (RBS), and a structural model of the interactions of these various elements.

Descriptive Details of Interviews

Interviews varied considerably in length, with international terrorism (IT) suspect interviews ranging from 193–821 minutes, right-wing (RW) suspect interviews ranging from 540–1139 minutes, and suspects in the paramilitary (P) sample interviews ranging from 180–1395 minutes.

IBC Analysis of Interrelating Behaviors Between Both Interviewers and Suspects

Preliminary analysis indicates that both interviewers and suspects tended to express predominantly adaptive behaviors. Assessment in the upper (authoritative) hemisphere of the IBC indicated a general pattern of significantly more adaptive than maladaptive interrelating for the interviewers (see Table 5). This held for every vector of the IBC, with a preference (in order of intensity) for “In Charge, Sets Agenda, Advises” (e.g., explanation of the caution, setting out topics to be discussed), followed by “Supportive, Conversational, Nonjudgmental” (e.g., welfare checks, open questions, encouragement), then “Act Confidently, Assertive, Certain” (e.g., presenting facts or exhibits, direct questions) and, finally “Frank, Forthright, Critical” (e.g., reflecting conflicting information back, drawing attention to failure to answer, direct question of guilt or involvement)—all adaptive rather than maladaptive variants. The order of intensity for the interactions was, in summary, therefore “authority” behaviors, then “cooperative,” and finally “challenge.” Generally, this points to a high level of interpersonal skill, flexibility, and interpersonal versatility among the interviewers, with the ability to use all variants of the adaptive behaviors and with very little expression of maladaptive variants. This also corresponds to the various “phases” of the interview process from explaining the process, to building rapport, and finally to challenging inconsistencies. The positive ratio of adaptive to maladaptive behaviors was especially pronounced when interviewing RW suspects, followed by IT suspects, and was less evident (although with adaptive still outweighing maladaptive) in dealing with P suspects.

In contrast, suspects’ preferred general pattern of relating was “Supportive, Conversational, Nonjudgmental,” “Act Confidently,

Assertive, Certain,” “Frank, Forthright, Critical,” and finally “In Charge, Sets Agenda, Advises.” The pattern with suspects was, therefore, cooperation, then challenge, and finally authority (almost the reverse of the interviewers’ pattern). Thus, suspects also provided more adaptive patterns of relating on some (but not all) vectors (though far less prominently than the interviewers).

As indicated in Table 6, in the passive spectrum of behaviors interviewers’ preferred in order of intensity: positive cooperation, positive challenge, cooperative passive, and finally negative passive (“formulaic, disengaged, conflict avoidant”). Again, adaptive relating significantly outweighed maladaptive behaviors except in the passive quadrant, where more maladaptive behaviors were evident. Suspects’ maladaptive passive’ relating style (“formulaic, disengaged, conflict avoidant”) was more prominent than its positive variant (“modest, humble, seeking guidance”).

Global Motivational Interviewing Scores (GMIS)

The highest MI score was autonomy (see Table 6), followed by adaptation, acceptance, empathy, and finally evocation (for both right-wing and international terror suspects). The most prominent MI score in the Paramilitary sample was acceptance followed by empathy, adaptation, autonomy, and finally evocation. The lowest general and sub MI scores were in the paramilitary sample and the highest scores in the RW sample.

Interview Yield Assessment (IYA)

The information obtained during interview (see Table 7) was highest for case specific details such as Persons, Locations, Actions, or Things (PLAT) and lowest in relation to motive across all three suspect types. Right-wing suspects were more forthcoming with information than international terror suspects or paramilitary suspects. Paramilitary suspects revealed the least information across all categories and also employed more varied counterinterrogation strategies.

Data Modeling

Confirmatory factor analysis of Yield and MI latent variables. Confirmatory factor analysis was used to test the construct validity of the latent variables created for Yield and MI. Importantly, all factor loadings for Yield were significant ($p < .001$). The overall fit of the Yield model was good on all measures (SRMR = .01, NFI = .99, TFI = .99, CFI = .99, $\chi^2/df = 1.27$, RMSEA = .03[CL₉₀ 0.01 to 0.14]). Likewise, factor loadings for the MI latent variable were also all significant ($p < .001$). The overall fit of the model was good to acceptable ($\chi^2/df = 4.05$, SRMR = .01 NFI = .99, TFI = .98, CFI = .98), although the

Table 5
Mean Interviewers’ Global Motivational Interviewing Skills as a Function of Suspect-Background

	Acceptance	Empathy	Adaptation	Evocation	Autonomy	Total MI score
RW (<i>SD</i>)	5.01 (1.56)	5.00 (1.26)	5.08 (1.53)	4.87 (1.56)	5.15 (1.27)	25.12 (6.49)
IT (<i>SD</i>)	4.65 (1.63)	4.06 (1.49)	4.51 (1.57)	3.99 (1.63)	4.85 (1.32)	22.01 (6.86)
P (<i>SD</i>)	4.24 (1.66)	3.38 (1.70)	3.86 (1.37)	3.04 (1.59)	3.83 (1.77)	18.36 (7.00)
All (<i>SD</i>)	4.60 (1.65)	4.09 (1.67)	4.43 (1.56)	3.88 (1.78)	4.51 (1.63)	21.53 (7.40)

Table 6
IPC Adaptive (A) and Maladaptive (M) Scores as a Function of Suspects' Background

	Cf (A)	Cf (M)	A/Cf (A)	A/Cf (M)	A (A)	A (M)	A/C (A)	A/C (M)
Interviewers' authoritative behaviors								
RW Suspects (SD)	1.24 (.84)	.23 (.48)	1.44 (.80)	.32 (.51)	2.11 (.73)	.39 (.61)	1.65 (.80)	.27 (.46)
IT Suspects (SD)	1.11 (.95)	.32 (.65)	1.32 (.91)	.55 (.78)	2.03 (.87)	.59 (.83)	1.54 (.87)	.40 (.68)
P Suspects (SD)	1.61 (.91)	.68 (.92)	1.48 (.90)	.59 (.82)	1.58 (.84)	.50 (.72)	1.16 (1.03)	.36 (.60)
All Suspects (SD)	1.37 (.92)	.44 (.76)	1.43 (.87)	.48 (.73)	1.87 (.85)	.48 (.71)	1.41 (.95)	.34 (.57)
Suspects' authoritative behaviors								
RW Suspects (SD)	.59 (.78)	.29 (.60)	.75 (.87)	.41 (.71)	.44 (.67)	.27 (.54)	1.04 (.87)	.26 (.53)
IT Suspects (SD)	.13 (.43)	.33 (.58)	.35 (.67)	.09 (.35)	.09 (.37)	.08 (.34)	.52 (.89)	.05 (.23)
P Suspects (SD)	.52 (.77)	.10 (.39)	.59 (.82)	.12 (.42)	.47 (.80)	.16 (.47)	.49 (.80)	.16 (.51)
All Suspects (SD)	.46 (.74)	.22 (.52)	.60 (.82)	.22 (.54)	.38 (.70)	.18 (.48)	.69 (.88)	.17 (.48)
Interviewers' passive behaviors								
RW Suspects (SD)	1.04 (.83)	.12 (.34)	.81 (.74)	.27 (.50)	.45 (.60)	.44 (.59)	1.20 (.84)	.28 (.53)
IT Suspects (SD)	1.03 (.88)	.08 (.27)	.88 (.79)	.18 (.45)	.33 (.51)	.83 (.96)	.73 (.70)	.22 (.59)
P Suspects (SD)	1.22 (1.01)	.06 (.27)	.67 (.95)	.07 (.30)	.20 (.50)	.52 (.82)	1.00 (.86)	.45 (.75)
All Suspects (SD)	1.12 (.93)	.09 (.30)	.77 (.86)	.16 (.42)	.31 (.55)	.56 (.80)	1.01 (.84)	.34 (.65)
Suspects' passive behaviors								
RW Suspects (SD)	.64 (.76)	.46 (.76)	.69 (.73)	.81 (.82)	.57 (.71)	1.00 (1.08)	1.11 (.95)	.48 (.78)
AQ Suspects (SD)	.35 (.65)	.15 (.42)	.30 (.53)	.36 (.71)	.48 (.76)	1.68 (1.34)	.50 (.75)	.45 (.73)
P Suspects (SD)	.57 (.86)	.03 (.19)	.29 (.53)	.03 (.16)	.14 (.42)	2.01 (1.19)	.50 (.79)	.31 (.68)
All Suspects (SD)	.54 (.79)	.21 (.54)	.43 (.69)	.37 (.69)	.37 (.65)	1.59 (1.27)	.71 (.89)	.40 (.73)

RMSEA was just over the acceptable level (.089 [CL₉₀ 0.05 to 0.14]).

Structural model. The dependent variable for the hypothesized structural model was interview yield. First, the hypothesized structural model investigated the direct effect of adaptive and maladaptive interviewing on interview yield. The model also assessed whether these variables had indirect effects on yield via encouraging or inhibiting adaptive or maladaptive responses in suspects. The model investigated the direct effects of MI on yield as well as its effects on interviewer and suspect adaptive and maladaptive behavior, thereby allowing the assessment of the indirect effects of MI on yield.

Model fit. The hypothesized structural model proved to be a good fit for the data, and a superior fit to the alternative models (fully mediated, direct effects and independence models; Table 8). The two discrepancy function measures found the hypothesized structural model to be an acceptable to good fit for the data ($\chi^2/df = 2.76$, SRMR = .04). The other indices all revealed a good model fit (NFI = 0.95; TFI = 0.95; CFI = 0.97), or in the case of the RMSEA acceptable model fit, 0.067 [CL₉₀ 0.06 to 0.08]. See

Table 7
Mean Interviewers' Yield Scores as a Function of Suspect-Background

	Capability	Opportunity	Motive	PLAT
RW (SD)	1.48 (1.23)	1.25 (1.10)	.87 (.89)	1.42 (1.15)
IT (SD)	.30 (.64)	.38 (.65)	.19 (.45)	.62 (.87)
P (SD)	.09 (.82)	.07 (.29)	.12 (.48)	.42 (.85)
All (SD)	.56 (.99)	.49 (.57)	.36 (.71)	.77 (1.05)

Table 8 for the comparison of the fit indices for the hypothesized model with the three alternative models.

Associations between adaptive and maladaptive relating and yield. The model revealed that adaptive interpersonal competence did *not* affect interview yield as hypothesized (see Figure 2). Indeed, there was a trend toward a negative association between high adaptive IBC scores and interview yield (unstandardized coefficient = -0.10 , $p = .088$; CI_{95%}: -0.20 to 0.01). There was however a significant direct association between maladaptive IBC scores and yield as expected with maladaptive strategies (interpersonal incompetence) associated with decreased yield (unstandardized coefficient = -0.12 , $p = .015$; CI_{95%}: -0.24 to -0.04).

In contrast, there was a strong relationship between suspect increased adaptive interpersonal behavior (competence) and increased interview yield (unstandardized coefficient = 0.07 , $p = .009$; CI_{95%}: 0.05 to 0.10) as well as between maladaptive responding and decreased yield (unstandardized coefficient = -0.07 , $p = .016$; CI_{95%}: -0.12 to -0.02). Importantly, adaptive responding by

Table 8
Model Fit for the Hypothesized Structural Model and Alternative Models

Model	χ^2/df	SRMR	NFI	TFI	CFI	RMSEA
Hypothesized model	2.76	.04	.95	.95	.97	.07
Mediated model	3.32	.10	.93	.93	.95	.08
Direct effects model	5.10	.15	.89	.88	.91	.10
Independence model	6.95	.23	.83	.83	.85	.12

Note. SRMR = Standardized root mean residual; NFI = Normed fit index; TFI = Tucker-Lewis fit index; CFI = Comparative fit index; RMSEA = root mean square error of approximation.

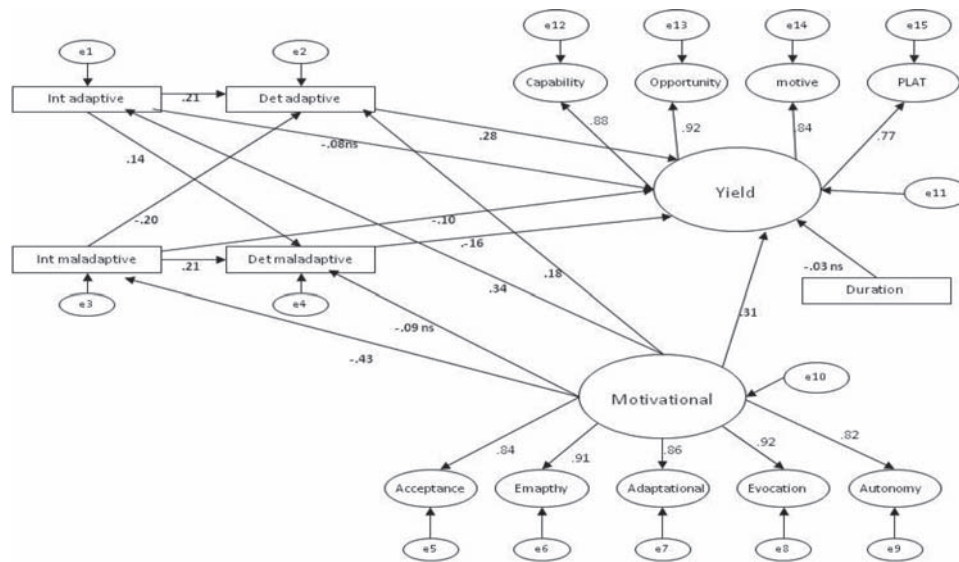


Figure 2. How interrelating behavior and motivational interviewing between interviewer and suspect interact with one another and overall interview yield. Standardized parameter estimates are presented and are statistically significant at ($p < .05$) unless otherwise indicated (ns); covariances removed for ease of understanding.

the suspect was increased by adaptive interviewing (unstandardized coefficient = 0.97, $p = .019$; CI_{95} : 0.50 to 1.41) and maladaptive responding by the suspect was increased by maladaptive interviewing (unstandardized coefficient = 0.59, $p = .025$; CI_{95} : 0.24 to 0.89, the principle of mutual influence). The reverse pattern was also observed in as much as maladaptive interviewing decreased adaptive responding in the suspects (unstandardized coefficient = -0.95 , $p = .004$; CI_{95} : -1.52 to -0.44). However adaptive interviewing did not decrease maladaptive responses in the suspect in fact significantly increased it (unstandardized coefficient = 0.39, $p = .006$; CI_{95} : 0.10 to 0.68, counter to principles of mutual influence).

Further analysis of these relationships indicated that although the direct effects of adaptive and maladaptive interviewing are small (and in the case of adaptive interviewing, in some aspects, the opposite direction as expected), these interviewing styles do have an indirect effect on interview yield. The effects of adaptive interviewing on yield is mediated by increased adaptive responding although this was only marginally significant (bootstrap estimates CI_{95} : 0.01 to 0.09, $p = .04$). In addition, the effect of maladaptive interviewing on yield was mediated by decreased adaptive responding and increased maladaptive responding from the suspect (bootstrap estimates CI_{95} : -0.19 to -0.07 , $p = .003$). It is notable that “less interpersonally competent” inter-

Table 9
Inter-Rater Reliability Scores: Interpersonal Behavior Circle

Octant category	Adaptive styles	Rater percentage agreement		Inter-rater score		Maladaptive styles	Rater percentage agreement		Inter-rater score	
		Int	Sus	Int	Sus		Int	Sus	Int	Sus
A- Authoritative	In charge, sets the agenda, advises	39%	85%	.10	.47	Demanding, Dogmatic, Pedantic, Rigid	85%	73%	.71	.24
A/C- Authoritative/ Cooperative	Supportive, Conversational, Non-judgmental	69%	92%	.54	.66	Parental, Patronizing, Mitigating	77%	81%	.51	.24
C- Cooperative	Social, Warm, Friendly	54%	80%	.37	.39	Over-familiar, Obsequious, Desperate	81%	62%	.43	.36
C/P- Cooperative/ Passive	Respectful, Trusting, Admiring	46%	85%	.26	.57	Uncertain, Hesitant, Apologetic	77%	73%	.42	.37
P- Passive	Modest, humble, seeking guidance	62%	77%	.43	.10	Formulaic, Disengaged, Conflict Avoidant	86%	69%	.66	.44
P/CN- Passive/ Confrontational	Wary, Skeptical, Reserved	62%	54%	.33	.23	Irritable, Distrustful, Resentful	89%	73%	.68	.20
CN- Confrontational	Frank, Forthright, Critical	46%	88%	.21	.57	Sarcastic, Punitive, Attacking, Unfriendly	85%	85%	.74	.14
A/CN- Authoritative/ Confrontational	Act confidently, Assertive, Certain	65%	88%	.51	.68	Judgmental, argumentative, Competitive	85%	81%	.71	.15

Table 10
Inter-Rater Reliability Scores: Global Motivational Interviewing Skills Code

Motivational interviewing skill	MI consistent (MIC)		MI inconsistent (MIIN)	
	Rater percentage agreement	Inter-rater score	Rater percentage agreement	Inter-rater score
Reflective Listening	44%	.12 (categorical .34)	58%	.21
Rapport and Resistance	51%	.27	77%	.53
Summaries	54%	.24	58%	.29
Developing Discrepancy	39%	.07 (categorical .35)	73%	.56
Autonomy	54%	.26	42%	.22

viewing had a much greater indirect impact on yield (decreasing yield) than competent adaptive interviewing had on increasing yield.

Associations between motivational interviewing, adaptive and maladaptive relating, and Yield. MI behaviors were the most crucial factor in the model (see Figure 2). First, high MI scores had a large direct effect on increasing interview yield (unstandardized coefficient = 2.12, $p = .005$; CI_{95} : 1.59 to 2.94). Higher MI scores were also associated with increased adaptive interviewing scores (unstandardized coefficient = 2.01, $p = .007$; CI_{95} : 1.39 to 2.60), and decreased maladaptive interviewer scores (unstandardized coefficient = -2.41, $p = .012$; CI_{95} : -3.03 to -1.76). Higher MI scores also were associated with increased adaptive responding from suspects (unstandardized coefficient = 4.83, $p = .013$; CI_{95} : 2.01 to 7.80) although it did not directly decrease maladaptive suspect responding (unstandardized coefficient = -1.68, $p = .14$; CI_{95} : -4.10 to 0.66). MI techniques seem to directly increase yield and improve adaptive interviewing and decrease maladaptive interviewing. It also increases positive suspect behavior but does not affect negative suspect behavior.

This is further highlighted when investigating the indirect effects of MI. It was found to improve suspect adaptive responding via its effects of increasing interviewer adaptive responding and decreasing interviewer maladaptive responding (bootstrap estimates CI_{95} : 2.70 to 6.08, $p = .002$). These effects translated into MI techniques having an indirect effect on increased yield (bootstrap estimates CI_{95} : 0.49 to 1.44, $p = .006$). There was however no indirect effect of MI techniques having an indirect effect on decreasing maladaptive suspect responding (bootstrap estimates CI_{95} : -1.52 to 0.60, $p = .29$). Indeed, negative responding seems resistant to the direct and indirect effects of MI techniques. The model indicates the only way to decrease maladaptive suspect responding is through decreasing maladaptive responding by the interviewer (which is itself improved by MI techniques), whereas positive responding by the suspect is less resistant to change and can be influenced directly and indirectly by MI techniques.

Discussion

This study provides the first comprehensive taxonomy for observing rapport-based interviewing techniques within the context of interviews with terrorist suspects in operational field settings. In addition, it has provided the first empirical basis for understanding the relationship between interpersonal competence, rapport building, and suspect behavior (specifically suspects' information yield and their interpersonal responses). Although the number of suspects is relatively small (although the number of interviews and hours of observations rather large) and the work would benefit from a larger cohort of case observations, the research highlights several findings worthy of further investigation. First, maladaptive and adaptive relating are (broadly) mutually influencing; negative relating begets negative relating and positive relating begets positive relating. However, with a highly entrenched maladaptive responder, any positive adaptive responding on the part of the interviewer may fail to have any effect or may even exert a negative influence resulting in an increase in the suspect's maladaptive responses. Thus, the principle of interpersonal mutual influence is not an inevitable pattern and is mediated by many subtle effects that merit further exploration. Second, this cohort of interviewers displayed almost exclusively interpersonally skilled adaptive and positive relating patterns, with very few instances of maladaptive, negative relating. No doubt in part attributable to the information gathering approach (as opposed to adversarial) used by both the Garda and U.K. sample of interviewers, the study found few instances of maladaptive behavior. This somewhat limited the opportunity to evaluate the impact of maladaptive interpersonal behaviors on suspect yield and engagement. Having said that, although there was no direct influence of adaptive relating on yield or resistance (its effects were indirect), even minimal instances of maladaptive relating profoundly and significantly reduced yield and increased suspect resistance. This supports the often noted but never previously formally established view that the best way to deal with suspects is to avoid techniques

Table 11
Inter-Rater Reliability Scores: Interview Yield Assessment

Category of information	Description	Rater percentage agreement	Inter-rater score
Capability (HOW)	Knowledge, skill, or ability to engage in the offence	81%	.53
Opportunity (WHEN, WHERE, WHO)	Access or circumstance to commit the offence	73%	.44
Motive (WHY)	Possible reasons for committing the offence	89%	.34
PLAT (WHAT)	Details about items/ people/ locations relevant to the offence	81%	.62

that are attacking, insulting, sarcastic (e.g., “you’ve been watching these revolting clips on your computer, haven’t you?”, “that wasn’t very clever now was it?”)—on the challenge dimension; or parental, patronizing, rescuing (e.g., “maybe this all just got a bit out of hand?”, “come on now, mate, it’s for the best”)—on the cooperative dimension.

Our results reinforce this message with clear evidence that maladaptive techniques further ossify suspects’ commitment to negative patterns of relating. Examples of this might include relatively subtle comments such as “I find that very hard to believe, don’t you?” or the presentation of evidence followed by statements that suggested there was only one way to explain that evidence: “What I think happened is this . . .” Even minimal expression of attacking, punitive, or sarcastic behavior tended to lead to either “no comment” or further commitment to previous statements. It also highlights the need for adaptive interview practice which takes into account the level of maladaptive responding from the suspect and the extent to which they are committed to noncompliance.

Also noteworthy was that, in terms of interpersonal behavior, the majority of suspects were mostly adaptive in their relating styles; contradicting the oft held view that suspects are de facto noncompliant and are all committed to frustrating the attempts of interrogators to interact positively. There were very few instances of confrontation (either adaptive or maladaptive) from suspects and, similarly, very few instances of authoritative styles of relating. Thus, in the majority of cases, suspects were also displaying adaptive patterns of relating. The exception was in relation to the maladaptive passive-challenge vector (formulaic, avoidant, disengaged) which, unsurprisingly, was associated with the most prevalent counter interrogation technique of disengagement, most often expressed as no comment or complete silence. Of note was the fact that approximately 70% of suspects were often supported and reminded of their right to silence by their solicitor during the interview. Thus, it is impossible to disentangle a poorly informed choice (guided by a solicitor) to enact this right (in cases where it might actually have been in the suspect’s best interest to talk) from the deliberate and clearly intended strategy of the suspect to withhold or obscure critically incriminating and significant information. Nonetheless, and in reference to the previously noted professionalism of this cohort of interviewers, at no instance were there any efforts to imply that any suspect was using this right as a counter interrogation strategy and, in contrast, all interviewers repeatedly referred to the suspect’s right to silence and ensured that this was clear throughout the (sometimes) many hours of “no comment” interviews. Interestingly, however, the very principles of the Right to Silence are concordant with the therapeutic broader notion of autonomy—one of the most significant indicators of MI spirit and, interestingly, one of the most salient features established in this study as reducing resistance and increasing yield (see Figure 2). Of course, autonomy extends well beyond the right to silence (with other examples including many other choices about what suspects chose to talk or not to talk about).

Of the two broad areas that this research has synthesized together, the impact of MI-related behaviors and “spirit” of MI was the aspect that had the largest impact on directly increasing yield and reducing resistance. Intriguingly, MI originated largely as an attempt to articulate the reasoning and motivation for handling therapeutic interactions in a process similar to cognitive task

analysis. Thus, what had been an implicit model of working became a conscious method of expertise (White & Miller, 2007). Concepts identified as of central importance to the use of MI were as follows: i) therapist empathy; ii) elicitation of change talk; iii) focus on the discrepancy between client behaviors and values; iv) encouraging confidence; and v) nonconfrontational responses to resistance. Similarly, within our cohort, key elements included empathy, developing discrepancies, adaptation, and acceptance. It was these qualities in particular that had the most profound and direct positive effect on reducing resistance and increasing yield. Given the degree of expertise in our cohort of interviewers, as well as the salience of the results around the MI aspects of this research, subsequent studies may benefit from similar scrutiny and cognitive task analysis with interviewees in order to more precisely identify what they are doing and how.

An apparent point for interviewer behavior was that, as well as ensuring autonomy and displaying empathy, many used robust questioning and a more challenge-oriented style at key points. However, these were almost exclusively adaptive rather than maladaptive variants of challenge behaviors. Commonly this involved a very “straight and neutral” presentation of evidence with an invitation for the suspect to assist in explaining this. A good example of this (not from this sample but available online for the interested reader) is an interview segment with Gary Dobson (convicted of the murder of Stephen Lawrence—an 18-year-old stabbed to death in London) in which the interviewer asks Dobson, “Is there a reasonable explanation for why the victim’s blood was found on your clothing? If there is one, will you please tell me now.” Other studies have noted aspects of confrontation as an effective mechanism for therapeutic intervention if, and only if it emerges within a wider context of the more archetypal motivational interviewing elements. For example, Moyers, Miller and Hendrickson (2005) established that clinicians’ versatility in their range of interpersonal skills directly facilitated client collaboration. They found, for example, that even MI-inconsistent behaviors (i.e., confrontation, warning and directing clients without permission) showed an unexpected *positive* relationship with client participation when, and only when, they were observed in the larger context of the therapist’s *overall* interpersonal skill level. In fact, the statistical relationship of clinical interpersonal skills with client involvement was *enhanced* in the presence of confrontation, challenge and warning. In the current context these concepts need further unpacking, but it is clear that the notion of mediating effects between interpersonal positive and negative relating and MI consistent and inconsistent behaviors are not simple relationships. Thus establishing a positive relating pattern at the outset allows a wider range of behaviors to use for both direct and indirect challenge. Clearly, subsequent research will be required to examine these sequential patterns, but there are strong indications here that such sequences and groundwork are critical.

As with previous studies on the efficacy of MI, it is critically important to recognize the impact of the client’s willingness to engage. This relates to the central concept that the client’s openness to consider change (or in the case of the present study the suspect’s willingness to engage or reveal information) is, ultimately, the most significant feature of what they will or will not say. For example, Apodaca and Longabaugh (2009) conducted a meta-analysis of MI effectiveness studies. They found both presence of client change talk (i.e., indicators that they were committed

to change) and client experience of discrepancy (i.e., awareness of the inconsistency of their behaviors) were most predictive of positive outcomes, and that therapist MI-inconsistent behavior (i.e., therapist's interactions as inconsistent with the ethos of MI) was most predictive of worse outcomes. Thus, a suspect firmly committed to a "no comment" or deeply resistant interview stance is very unlikely to be moved to more positive patterns of relating and is highly unlikely to change from giving nothing to a full and frank confession or revelation about key evidence, regardless of the techniques used by the interviewer.

The point, however, is that MI inconsistent behavior and maladaptive relating on the part of the interviewer is likely to further ossify the suspect's position and remove any doubt at all about whether he or she will more positively engage. In other words, it may not always be possible to improve engagement, but it is possible to make it worse. Thus, MI-consistent and interpersonally adaptive behaviors, although they realistically provide a low chance of success when used with suspects in the most entrenched position, they do provide at least some chance of engagement. It is worth noting that these effects are most pronounced in instances in which suspects are not fully or exclusively committed to an entrenched resistant position, thus implying that the most effective and experienced interviewers might be best deployed with the low-medium committed "peripheral player" suspects as opposed to reserving the most experienced interviewers for the more central and deeply committed "key" figures, where their efforts will have a significantly lower chance of success (though we concede this would be a difficult message to accept in the field). This may be challenging to implement in practice for fear of reducing focus on the key players, however this additional pressure on peripheral players may produce a much larger strategic advantage regarding information on wider networked terrorism. Indeed, the utilization of this technique on a multitude of peripheral players may extract a variety of information to contribute to a more informed and central model which could be more successful than trying to extract the full picture from one "key" figure, who may be firmly committed to a "disengaged" position. In addition, there are implications for increasing the adaptability of interview approaches to allow more fluid versatile responses. For instance, further exploration of the results may reveal that continued use of adaptive/cooperative styles and rapport building strategies with highly resistant suspects (e.g., no comment, silent) may actually result in increasing their resistance. This was observed in a number of interviews in which after a consistent delivery of no comment or silence by the suspect, if the interviewer continued to attempt rapport-building strategies these then became sarcastic or mocking and damaged the credibility of the interviewer. Interviewers may need to be flexible and adaptive to apply strategies that consider the interpersonal style of the suspect and his level of cooperation.

In summary, factors *predictive* of success are often related to the suspect's intention to talk and experience of discrepancy. Conversely, factors that *impeded* success were related to the interviewer—focused principally on the use of MI inconsistent behavior. This has implications for predicting the best chance of success model of interviewing. So, from the perspective of training interviewers, the most important thing they can do is to ensure that they avoid MI-inconsistent behavior because of its potential to impede the interview. Attempting to focus on the interviewer as a single and exclusive tool to improve output or success may not be appropriate

as success is highly dependent on the position of the suspect. However, the model provides a way to assess the suspect's position and to plot an interview strategy accordingly, increasing the chances of successfully securing useful information.

Implications

The added benefit and advantage of knowing that the MI consistent behaviors are most significant in this model relates to the potential that this research carries for interviewer training. Research on the effectiveness of workshops (expert-facilitated didactics and skill-building activities delivered in a group format) shows counselors consistently improve their attitudes, knowledge, and confidence, but immediate skill gains resulting from training diminish quickly, sometimes in as little as 2 to 3 months (Baer et al., 2004; Miller, Yahne, Moyers, Martinez, and Pirritano, 2004; Mitcheson, Bhavsar, & McCambridge, 2009; Walter, Nutley & Davies, 2005). However, it has been found that counselors who show inadequate MI performance after initial instruction were able to improve their performance significantly after subsequent training, practice development workshops, and appropriate supervision (Martino, Ball, Nich, Canning-Ball, Rounsaville & Carroll, 2011). Counselors who demonstrated adequate MI performance at the initial training point maintained similar levels of competence without any additional training intervention and those with inadequate MI skills benefited more post training than those with adequate skill. In other words, training gains were greater for those whose skills were initially deficient. This therefore indicates how training in MI skills is a useful possibility and, importantly, those with inadequate skills (which can harm the interview output) can be developed directly through training.

A further advantage of this study's model for interviewing high-value suspects is that it not only allows an assessment of the interpersonal relating between the interviewer and suspect, but it also overlaps with a predictive model of core personality traits. This may allow for further exploration of the use of personality measures to predict those interviewers who will be highly versatile (e.g., able to adopt a wide range of functional strategies; Merrill & Reid, 1981) and those who are rigid (e.g., limited to one or two predominant styles) or tend to relate in a less positive manner.

The use of a concise visual system also allows for a "shared model of understanding" to develop in this context. Interviewers can understand and interpret colleagues' as well as their own practice fluidly and within the context of "field" interviewing. Crucially, interview managers can also provide meaningful and measurable feedback in reference to their position on the model and the likely impact that their behavior or interview style will have on the suspect, both in real time and as part of structured skill development and feedback.

Conclusion

Overall, the model clearly demarcates and sets interpersonal parameters for what constitutes fair, proportionate, and humane methods for dealing with potentially highly resistant, dangerous, and critically significant suspects. The ORBIT coding and assessment framework developed during this research provides an effective mechanism for observing rapport-based interviewing techniques in field environments and at a macro rather than individual

“volley” level of analysis. Thus it is pragmatic, conceptually consistent with another large body of literature in the counseling arena, and our study provides empirical evidence for its ability to measure independent and outcome variables. There should, therefore be a greater transfer and sustainability of training by using this framework than that of many current interview training practices. Principally, this is because it is less reliant on specific techniques and much more focused on understanding the influence of macro, strategic approaches to interviewing; a key feature that has explained the effective transfer from training to practice of such methods in both an interviewing and a therapeutic context (Baer et al., 2004; Clarke, Milne & Bull, 2011; Martino et al., 2011; Miller et al., 2004; Moyers et al., 2005; Walsh & Milne, 2008). In seeking to examine the diverse range of interpersonal skills, as well as paying particular attention to rapport building, the model draws on a combination of two key research areas: interpersonal theory and motivational interviewing. Thus, the study recommends that interviewers be encouraged to adopt broad flexible interpersonal strategies, rather than specific “techniques to be learnt and applied.” The concept of interviewer versatility is poorly understood, yet our study hints that it is an important conditional skill (i.e., knowing when to apply what). In subsequent work we hope to collect further data to generate a larger sample that will lend itself to methods of analysis that enable examination of sequences of behavior and exploration of the extent to which interviewers are able to react to changes in interpersonal responding. As noted Birtchnell argues that effective interpersonal behavior displays both competence (presence of adaptive functioning and absence of maladaptive) and versatility (conditionally responding according to context). Studies on expertise note that conditional knowledge is one of the hallmarks of experience and proficiency (Alison & Crego, 2007) and further exploration of this concept is warranted within this domain (perhaps by reference to cognitive task analytic studies).

In addition, interviewer training should focus not only on positive strategies but on eliminating maladaptive or damaging tactics from interviewers’ practice to provide them with the best chance of improving suspect engagement during interview and to give them the best chance of securing meaningful intelligence or information of evidential significance from terrorism suspects.

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