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'Rapport myopia' in investigative interviews: Evidence from linguistic and subjective indicators of rapport

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Purpose. Rapport-building has beneficial effects in investigative and security contexts. However, there remains limited understanding of the extent of agreement between different parties in their judgments of rapport.

Methods. We observed 133 mock suspect interviews, and subsequently surveyed the lead interviewer and secondary interviewer (trainees undertaking an undergraduate Policing programme), the 'suspect' (an actor), and an expert observer (a retired, highly experienced police detective). Each of these parties provided subjective judgments of the degree of rapport that had been formed between suspect and lead interviewer. Furthermore, we assessed whether these subjective judgments were associated with the degree of 'Language Style Matching' (LSM) between lead interviewer and suspect: a key linguistic measure of interpersonal synchrony.

Results. The suspect, secondary interviewer, and expert observer had generally good agreement about the degree of rapport achieved, as evidenced through significant, moderate to strong correlations between their rapport ratings. However, these parties' rapport ratings were weakly associated with those of the lead interviewer. Our linguistic analysis provided similar results: the extent of LSM was significantly associated with suspects' and the expert's subjective ratings of rapport, but not with the interviewers' ratings.

Conclusions. The findings suggest that the demands of interviewing might impede interviewers' insight into the success of their rapport-building efforts, leading them to overlook cues that other parties rely upon. We discuss the need for future experimental manipulations to directly test this suggestion, and we consider the value of interpersonal synchrony in defining and measuring rapport.

Rapport-building has been shown to foster cooperation with both cooperative and uncooperative interviewees in investigative contexts. As such, rapport is a fundamental part of well-established models of investigative interviewing (Powell, Fisher, & Wright, 2005; Walsh & Bull, 2012). Nevertheless, little remains known about how reliably interviewers judge the effectiveness of their efforts to build rapport with interviewees. In this exploratory study, we examine whether mock interviewers' judgments of rapport

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align with those of other involved parties, and with a key linguistic measure of interpersonal synchrony.

Operationalizing rapport

Rapport is notoriously difficult to operationalize (Walsh, King, & Griffiths, 2017), both because of problems in defining exactly what constitutes rapport within investigative contexts, and problems in measuring it (Alison et al., 2014; Vallano & Schreiber Compo, 2015). Indeed, whereas rapport has been defined as a 'harmonious, empathetic, or sympathetic relation or connection' between people (Newberry & Stubbs, 1990, p. 14), other definitions point towards the promotion of equality, openness, and acceptance within interactions (e.g., Shepherd & Milne, 2006), or to matching of behaviour, displays of empathy, and establishing common ground (Duke, Wood, Magee, & Escobar, 2018). Broadly, it is argued that rapport is achieved through communicating positivity, friendliness, and mutual attention (Tickle-Degnen & Rosenthal, 1990; Vallano and Schreiber Compo, 2015); however, many of these definitions stem from the counselling literature, whereas investigative interviewers typically have less concern with forging positive relationships and more concern with developing mutual cooperation and respect in goal orientation (i.e., information exchange; Abbe & Brandon, 2013).

Regardless of the definition used, there is considerable agreement that rapport-building should feature prominently in the modern investigative interview (Gabbert et al., 2020). In several laboratory studies, mock investigators have successfully gathered more – and sometimes more accurate – information from witnesses when rapport has been built prior to the information elicitation phase (e.g., the Account phase of PEACE interviews; see Nash, Nash, Morris, & Smith, 2016; Vallano & Schreiber Compo, 2011; but see Sauerland et al., 2018 for an exception). Collins, Lincoln, and Frank (2002) tasked interviewers with creating rapport by varying their verbal and non-verbal behaviour (i.e., referring to witnesses by name and adapting their speech rate and body posture) and found that witnesses reported more correct information, as compared with interviews in which the interviewer's behaviour fostered neutral or abrupt interactions. Similarity, Holmberg and Madsen (2014) reported superior recall of event details from participant witnesses whose interviews were conducted using a humanitarian (e.g., rapport-focused) versus dominant (e.g., coercive) approach.

This positive association, between rapport indicators and information gain, has also been observed in field studies of suspect interviews. For example, analysing a sample of genuine interviews with male suspects of sexual offences, Collins and Carthy (2019) found greater amounts of forensically relevant information were reported by suspects whose interviews contained greater interpersonal attention and coordination. Likewise, Kelly, Miller, and Redlich (2016) found rapport-building differed significantly between cases in which suspects ultimately confessed versus denied involvement.

Interpersonal reliability of rapport judgments

Given the value of rapport, it seems important that investigators are equipped to reliably judge when they have built rapport well with a suspect, and when they have not. An interviewer with well-calibrated judgments of rapport should in principle be equipped to regulate the interaction effectively, knowing when to invest additional effort in building or maintaining rapport, and when to shift towards more substantive topics. What do we know about the effectiveness of investigators' rapport judgments? In many studies,

researchers have measured rapport using self-report scales administered either to the interviewee, the interviewer, or an independent observer (Duke, 2013; Vallano & Schreiber Compo, 2011; Walsh & Bull, 2012). Few studies have obtained these measures from multiple judges simultaneously. We therefore currently have minimal understanding of the extent to which interviewers' judgments of rapport are corroborated even by other people in the same room.

There are several reasons to predict that interviewers' judgments of rapport would not closely match other people's judgments. For instance, whereas police investigators typically report that rapport-building is among their most effective and frequently used interviewing tool (Abbe & Brandon, 2013; Dando, Wilcock, & Milne, 2008; Vallano and Schreiber Compo, 2015), experts who observe police interviews often fail to see evidence of rapport-building. In a study of 142 genuine interviews with suspects of fraud, Walsh and Bull (2012) judged that the quality of rapport-building fell below the professional standard in 65% of interviews, and more recently, Leahy-Harland and Bull (2017) found only sparse evidence of rapport-building in a sample of 56 genuine interviews with suspects of serious crime (see also Clarke & Milne, 2001).

These findings might lead us to surmise that interviewers often believe they have built rapport when their efforts have not, in fact, been effective. Indeed, in the few studies where interviewers' judgments of their own interviews have been directly compared with the judgments of expert observers, analysis has typically revealed discrepancies. In an examination of police interviews with suspects, trained interviewers retrospectively evaluated their own interviews – and their success in rapport-building – more positively than an expert observer (Walsh et al., 2017; see also Griffiths & Walsh, 2018). Likewise, in one of the only studies to compare interviewers' quantitative judgments of the interview experience with those of their interviewees, interviewers were more positive than interviewees about the degree of empathy they had expressed: a construct that is core to many definitions of rapport (Vanderhallen, Vervaeke, & Holmberg, 2011). These few studies all compared different parties' overall judgments when averaged across multiple interviews, yet no studies – to our knowledge – have explored the strength of association between different parties' judgments of individual interviews.

In short, the small research literature might lead us to conclude that interviewers' perceptions of rapport do not routinely align with other parties' perceptions, and that we need a better understanding of the relationship between interviewers' and interviewees' ratings of rapport (Vallano & Schreiber Compo, 2015). A primary aim of the present study was to test this relationship, and to assess how these parties' judgments relate to those of other involved parties: in this case, an expert observer, and a secondary interviewer. Furthermore, we were interested in the extent to which these subjective judgments of rapport would align with a more objective measure of interpersonal synchrony.

Interpersonal synchrony and rapport

The synchrony between two people – that is their tendency to spontaneously 'align' their behaviour during an interaction – is known to provide insights into social dynamics (Tickle-Degnen & Rosenthal, 1990), and to be important in investigative settings (e.g., Alison, Alison, Noone, Elntib, & Christiansen, 2013). Yet, interpersonal synchrony occurs not only in behaviour, but also in language. People spontaneously align their language (e.g., grammar and word choice) over time during dialogue, and this alignment can facilitate strategic behaviours such as the development of trust (Scissors, Gill, Geraghty, & Gergle, 2009), cooperation (Chartrand & Lakin, 2013; Duffy & Chartrand, 2015;

Richardson, McCulloch, Taylor, & Wall, 2019), and goal attainment (Garrod & Pickering, 2004). As well as this spontaneous alignment within dialogue, there is also evidence of synchrony being used intentionally. For instance, Communication Accommodation Theory (Coupland & Giles, 1988) suggests that speakers may deliberately increase or decrease the social distance between themselves and another person by adjusting the content and timing of their speech to signal either affiliation or mistrust (Cappella & Planalp, 1981).

Language style matching

One of the most prominent measures of linguistic synchrony is Language Style Matching (LSM: Boyd & Pennebaker, 2015; Chung & Pennebaker, 2007; Richardson et al., 2019). The basis of this measure is that the more reliable, predictive elements of language tend to be those words that signify *style*, rather than *content,* of speech. As such, LSM occurs not at the level of absolute word matching, but at the level of function word matching, including word categories such as personal pronouns, prepositions, and articles (Pennebaker, 2011). Words relating to content (e.g., nouns and regular verbs) convey 'what' the speaker wishes to say, whereas words relating to style – known as function words – shape 'how' something is said (Groom & Pennebaker, 2002). When two speakers adopt similar levels of formality, emotionality, and cognitive complexity in their function word choices, it is suggested that they have adopted a common conceptualization of the world (Pennebaker, 2011).

Language style matching has previously been linked to marked increases in cooperation during suspect interviews (though see Carmody et al., 2017). Driskell, Blickensderfer, & Salas (2013) found that increases in LSM over time correlated with measures of rapport such as mutual attentiveness, and Muir et al. (2016) found LSM was related to rapport in computer-mediated communications. In a sample of genuine suspect interviews, Richardson, Taylor, Snook, Conchie, and Bennell (2014) found that suspects tended to converge over time on the language style of their interviewer, and that the extent of this matching was positively associated with increases in cooperation in the form of confession. These findings suggest LSM could play an important role in signalling rapport and, in turn, facilitate effective intelligence gathering within suspect interviews.

The present exploratory study assessed the extent to which interviewers' judgments of rapport in mock suspect interviews would align with those made by other involved parties (the suspect themselves, an expert observer, and a secondary interviewer), and with the degree of LSM between the interviewer and suspect. Based on prior literature, we predicted that LSM would correlate positively with subjective rapport judgments, but that there would be relatively poor interpersonal agreement in these judgments.

Method

This research used a correlational design and received full institutional ethical review and approval. Data were collected in two waves over two successive academic years.

Participants

We observed 133 mock suspect interviews, each involving two trainee officers, one mock suspect, and a trainee solicitor, plus an expert police interviewer who observed from a separate room via video link.

Interviewers

A total of 266 trainee officers were involved in the study (176 females, 90 males; M_{age} = 23.5). In each interview, one trainee self-selected to be the lead (hereafter, *Interviewer 1*), and the other acted as a secondary interviewer and note-taker (*Interviewer 2*). In total, 76 of the 133 interview leads were female, 57 males. There were 46 mixed-sex interview pairs; of these, 11 had a female lead.

All interviewers were second-year students undertaking undergraduate degrees in Policing, and completing these interviews as a compulsory academic assessment independently of our research. This assessment concluded of a year-long 'Investigative Skills' module taught by experienced police interviewers. As part of this module, students received a series of in-depth lectures on the PEACE model of interviewing (Central Planning & Training Unit, 1992a,b), and they observed and analysed several example interviews. For their assessment, students were tasked with putting this training into practice in a mock interview.

Suspects

The mock suspect in each interview was either an actor recruited from the university's drama school (N = 75 interviews, four different actors), or a member of academic staff from the School of Policing (N = 58 interviews, four different academics).

Expert

One expert agreed to participate in the study by rating each interview. He was a highly trained (PIP4), retired police detective with over 20 years' experience of conducting investigative interviews.

Solicitors

One of five trainee solicitors, recruited from the university's law school, also attended each interview. The solicitors' role was to introduce the suspect on arrival, and to offer clarification if needed during questioning; they did not provide data towards this study.

Materials

Crime scenario

Interviewers, the mock suspect, and the solicitor received detailed briefs about their character and the 'crime' 4–6 weeks in advance. This allowed time for familiarization of the case, construction of a timeline, and interview planning. Interviewer pairs were advised they were investigating an incident that occurred outside a public house. Todd Blackstone had been accused of assault and there were two witnesses. Interviewers received various documents to support their planning of the interview, including an

intelligence report, copies of witness statements, photographs of the public house, and photographs of the defendant's injuries. Interviewers were told they would be assessed on their ability to plan, prepare, and conduct the interview. Suspects chose how to respond to the interviewer's questions; they were not specifically instructed to withhold information or deceive the interviewer.

The format and structure of these interviews and of the crime scenario were dictated by the educational assessment rather than by the researchers. Nevertheless, we were interested to explore whether our subjective or linguistic measures might be associated with the actual success of the interview, in terms of information gain. Therefore, in advance of the study's start, we identified five critical details: pieces of information that would be most crucial for interviewers to gather from the suspect in this fictional case (e.g., reveals knowledge of make/model of the getaway car). None of the participants, or raters, were informed that specific details were 'critical'.

Measures

Ratings of rapport were gathered using both a single-item measure and a scale measure. For the single-item measure, we simply asked participants to rate the rapport between lead interviewer and suspect ('Overall, I believe that rapport was. . .') from 1 (poor) to 7 (excellent). The scale measure involved 12 items from Vallano and Schreiber Compo's (2011) Interaction Questionnaire, which we chose because it is frequently used in quantitative studies of rapport, has good internal reliability, and assesses perceptions of the interpersonal interaction and the quality of rapport between speakers (for each item, 1 = Not at all, 7 = Very)[1]. Interviewer 1 was instructed to rate the interaction between themselves and the suspect. Interviewer 2, suspects, and the expert were instructed to rate the interaction between Interviewer 1 and the suspect. Two scale items (the interviewer was awkward; the interview was awkward) were reverse-scored prior to taking an overall average for each participant. The rapport scale had good internal reliability (Interviewer 1s' ratings, $\alpha = .77$; Interviewer 2s' ratings, $\alpha = .90$; Suspects' ratings, $\alpha = .95$, Expert observer's ratings, $\alpha = .96$).

Procedure

All interviews were conducted in a dedicated police-training suite within the university, designed to mimic typical interview facilities in police stations throughout England and Wales. The conduct of these interviews wholly followed the requirements of the interviewers' educational assessment; that is to say, the researchers had no involvement in or influence upon how these interviews were conducted. All interviews were audio-recorded as a requirement of this assessment. We wished to avoid influencing participants' performance in ways that could have affected their educational outcomes; therefore, whereas interviewers knew they were being assessed for educational purposes, they were unaware of our involvement as researchers until their interview was complete. All suspects, solicitors, and the expert were aware of the research and what participation would involve for themselves – and they gave consent to be involved – but like the interviewers, they were not aware of our specific predictions until afterwards.

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[1] *Items measured for the Interviewer-Interviewee dynamic were* friendly, encouraging, cooperative, positive attitude, attentive, awkward. *Items measured for the Interview as a whole were* comfortable, friendly, smooth, cooperative, positive, awkward.

On the day of the interview, interviewers arrived 10 mins early to familiarize themselves with the room, set up the audio equipment, and review their notes. After this, the suspect and solicitor were admitted to the interview room, and the interviewers began their interview in accordance with their training. All interviewers were told in advance that they would have up to 30 mins to interview the suspect. If the interview had not concluded within 30 mins, the expert entered the room and asked the interviewers to draw their interview to a close. The interviews lasted 17–31 min (M = 26.8, SD = 6.55).

After the closure of the interview, the researcher entered the interview room, gave some contextual information about the study, and then asked interviewers for their consent to take part and for the recording of their interview to be used for research purposes. Interviewers were informed that the researchers were independent from the assessors, that neither their consent decision nor their ratings of rapport would have any bearing on the grades they received, and indeed, that their assessors would be unaware of whether they had agreed to participate and would not see their responses. Interviewers were also informed that they could withdraw their consent at a later time if they wished. No interviewers declined to participate or subsequently withdrew consent.

After obtaining consent, the researcher provided copies of the Interaction Questionnaire to Interviewer 1, Interviewer 2, and the suspect. These were completed privately inside the interview room, without collaboration or discussion. The researcher remained in the interview room throughout, to verify that interviewers and suspect did not interact in any way that could influence their responses. The video link to the observation room was terminated at the end of the interview, and the expert observer completed the questionnaires alone from that room.

Language style matching

All interviews were transcribed verbatim, and an overall LSM score was calculated for each Interviewer 1 – Suspect dyad (Ireland et al., 2011). As we were only interested in the rapport dynamic between Interviewer 1 and suspect, verbal data from Interviewer 2 and the solicitor were removed from the transcripts. Next, transcripts were segmented by speaker to produce two speaker-specific text files, one containing Interviewer 1's speech and one containing the suspect's speech. These transcripts were submitted for analysis by the software 'Linguistic Inquiry and Word Count' (LIWC; Pennebaker et al., 2007). LIWC analyses text documents on a word-by-word basis to calculate the percentage of total words that match various linguistic categories, including the nine function word categories used to calculate LSM (personal pronouns, articles, adverbs, conjunctions, quantifiers, negations, indefinite pronouns, prepositions, and auxiliary verbs).

The resulting LIWC scores are then used to calculate separate language-matching measures for each of the nine categories. This is achieved using the formula: $LSM_{category} = 1 - [(|category_I - category_S|)/(category_I + category_S + .0001)]$, where $category_I$ is the percentage of Interviewer 1's total words that fit the specific linguistic category, and $category_S$ is the equivalent percentage of the suspect's words. The .0001 is added to the denominator to prevent division by zero (Ireland et al., 2011; Taylor et al., 2013). The resulting nine category-specific scores were averaged to produce a single LSM score indicating the overall level of matching between Interviewer 1 and suspect. This score is bounded by 0 and 1, where higher scores indicate closer style matching between two speakers.

Information gain

A research assistant coded each interview by judging whether each of the five pieces of critical information (as described in the 'Crime scenario' section above) had been gained, thus producing scores between 0 and 5 for each interview. A second research assistant coded 10% of the interviews, and the inter-rater reliability was $r = .88$. There were no major disagreements; therefore, no changes were made within this 10% subsample; our analyses below are based on the first coder's judgments.

Results

Descriptive statistics

We first looked at participants' ratings of the extent to which Interviewer 1 built rapport with the suspect. On the single-item rapport measure, the lead interviewers (i.e., Interviewer 1) rated their rapport with the suspect as 4.53 out of 7 ($SD = 0.95$) on average. Similarly, secondary interviewers (i.e., Interviewer 2) rated Interviewer 1's rapport with the suspect as 4.88 ($SD = 1.08$). The suspects themselves rated their rapport with Interviewer 1 comparably ($M = 4.61$, $SD = 1.19$), whereas the Expert observer was somewhat more optimistic ($M = 5.28$, $SD = 1.20$). Looking to the scale measure of rapport, the results were similar (Interviewer 1s' ratings, $M = 4.75$, $SD = 0.84$; Interviewer 2s' ratings, $M = 4.89$, $SD = 0.95$; suspects' ratings, $M = 4.70$, $SD = 1.18$; Expert observer's ratings, $M = 5.18$, $SD = 1.17$). It is important to note that each of the four parties' rapport scale scores was correlated strongly with their single-item scores (see Table 1).

Inferential analyses

Next, we address our first key aim: assessing the strength of association between the different parties' rapport ratings. All variables measured in this study approximated a normal distribution, therefore, we report Pearson's correlation coefficients. As Table 1 shows, Interviewer 2, the suspects, and the expert observer were all in reasonable agreement about the extent to which rapport had been built. All inter-correlations between these parties' ratings were statistically significant (for the single-item measure, $.28 < r < .63$; for the scale measure $.40 < r < .61$). In contrast, Interviewer 1's judgments were weakly correlated with the other three parties' ratings (for the single-item measure, $-.01 < r < .18$; for the scale measure $.10 < r < .19$). This indicates that the people leading these investigative interviews were uniquely poor at appraising the success of their own rapport-building.

Turning to our second aim, the extent of LSM between Interviewer 1 and the suspect (which ranged from .71 to .95 across interviews, $M = .86$, $SD = .04$) was positively correlated with both measures of rapport as estimated by the suspects themselves, and by the expert observer. For Interviewer 2's rapport estimates, the evidence for this association was weaker: there was a significant positive association between LSM and the single-item rapport measure, but this significant relationship did not hold for the scale measure. Crucially, neither rapport measure as judged by Interviewer 1 was significantly correlated with LSM.

Finally, we looked to our exploratory measure of information gain, as shown in the rightmost column of Table 1. On average, lead interviewers successfully elicited 4.06 out of five critical items of evidence from the suspect ($SD = 0.78$; range = 2–5). Interestingly,

Table 1. Pearson's correlations between the dependent variables of interest

	Interviewer 1 Rapport (single-item)	Interviewer 2 Rapport (single-item)	Suspect Rapport (single-item)	Expert Rapport (single-item)	Interviewer 1 Rapport (scale)	Interviewer 2 Rapport (scale)	Suspect Rapport (scale)	Expert Rapport (scale)	LSM	Information Gain
Interviewer 1 Rapport (single-item)	–	.18	−.01	−.01	**.46*****	.14	.10	.12	.12	−.06
Interviewer 2 Rapport (single-item)		–	**.28****	**.33*****	−.00	**.53*****	**.23****	**.28****	**.27****	.10
Suspect Rapport (single-item)			–	**.63*****	−.11	**.21***	**.63*****	**.46*****	**.39*****	.15
Expert Rapport (single-item)				–	−.02	**.20***	**.44*****	**.68*****	**.45*****	**.19***
Interviewer 1 Rapport (scale)					–	.16	.10	**.19***	.10	.03
Interviewer 2 Rapport (scale)						–	**.45*****	**.40*****	.13	.12
Suspect Rapport (scale)							–	**.61*****	**.19***	**.21***
Expert Rapport (scale)								–	**.24****	.10
LSM									–	**.42*****
Information gain										–

Note. *$p < .05$; **$p < .01$; ***$p < .001$.

information gain was significantly and positively associated with suspects' perceptions of rapport as assessed using the scale measure, and also with the expert observer's perceptions of rapport as assessed using the single-item measure. There was also a significant and rather strong association between LSM and information gain.

Additional analyses

Recall that whereas some of our mock suspects were student actors, others were professionals with knowledge of police interviewing. The strong agreement between suspects' and our expert's ratings of rapport could plausibly be an artefact of the latter interviews, in which the suspects could also, in effect, be considered 'experts'. To address this concern, we repeated our correlation analyses of suspects' ratings, but based solely on the subset of 72 interviews in which the suspect was a student actor. Our conclusions were largely identical to those of our main analysis. Looking at the single-item measure, suspects' rapport ratings correlated significantly with those of Interviewer 2 ($r = .38$, $p = .001$) and the Expert ($r = .68$, $p < .001$), but not with those of Interviewer 1 ($r = -.00$, $p = .98$). These single-item ratings were also significantly associated with LSM ($r = .48$, $p < .001$), but not information gain ($r = .12$, $p = .30$). Looking at the scale measure, suspects' rapport ratings again correlated significantly with those of Interviewer 2 ($r = .45$, $p < .001$) and the Expert ($r = .61$, $p < .001$), but not with those of Interviewer 1 ($r = .10$, $p = .25$). Unlike in the full analyses, these suspects' scale rapport scores were not significantly associated with either LSM ($r = .19$, $p = .12$), or information gain ($r = .22$, $p = .07$), although the correlation coefficients in this subsample were almost identical to those in the full sample. In short, these analyses provide little reason to believe that the 'professional' suspects' expertise changed the overall findings.

We also noted that across our sample, Interviewer 1s were more likely to be male (43%), than were Interviewer 2s (25%; McNemar $\chi^2 = 9.12$, $p = .002$). One possibility then is that sex differences account for our findings: males more often self-selected to lead, but perhaps were less attuned than female interviewers to rapport. To address this possibility, we re-ran our analyses of rapport ratings using only the same-sex dyads ($N = 87$). The pattern of results was consistent with those reported above. Interviewer 2, Suspects and the Expert showed good agreement on both the single-item and scale measures of rapport, $.30^{**} < r < .68^{**}$. In contrast, Interviewer 1 had weak agreement with the other three parties on both rapport measures, $.00 < r < .21^{*}$. These analyses suggest that sex differences are not responsible for our findings.

Discussion

Rapport is crucial to successful investigative interviewing, yet we know little about the level of agreement between the rapport judgments of different parties within the same interview. Our exploratory data might suggest that the lead interviewers suffered what we could call 'rapport myopia': they were poor detectors of suspects' perceptions of rapport during their own interview. This is indicated by the fact that lead interviewers' rapport ratings were weakly related to the other three parties' ratings, yet the other three parties' rapport ratings were rather more strongly in agreement with one another. Put differently, there was reasonable consensus in multi-party judgments of rapport, but our lead interviewers did not meaningfully share this consensus.

It is well established that conducting effective interviews is cognitively demanding (Dando, Wilcock, Milne, & Henry, 2009; Hanway, Akehurst, Vernham, & Hope, 2020). One plausible interpretation of our findings is that these cognitive demands (e.g., paying attention to social cues whilst preparing what to say next, monitoring interviewees' responses) can lead interviewers to miss social cues that would indicate successful rapport. This interpretation is consistent with our finding that our secondary interviewers – who had similar levels of experience and training as lead interviewers, but would have experienced less cognitive demand during the interviews – were in closer agreement with our expert's and suspects' judgments.

It is important to note that our trainees self-selected into the lead vs. secondary interviewer roles. Nevertheless, there is little reason to predict that those trainees who are better at judging rapport would be systematically more likely to assume the secondary interviewer role – if anything, the opposite seems more likely, and certainly there was no evidence that interviewer sex differences affected the findings. We, therefore, propose that the roles themselves, and associated role demands, were key in determining interviewers' relative abilities to detect rapport. It would be beneficial to reproduce this study using randomized role assignment, and experimental manipulations of interviewers' cognitive load would also permit direct tests of this proposal in future research. Similarly, it is crucial to understand the extent to which rapport myopia would arise in genuine investigative interviews. Even though the results from our secondary interviewers make it difficult to attribute our findings entirely to lead interviewers' demographic or experience alone, nevertheless, it is possible that sufficient experience and training would equip professional interviewers to better manage cognitive load demands, and perhaps therefore to avoid rapport myopia.

Language style matching

Consistent with our findings for perceptions of rapport, we also found that lead interviewers' rapport ratings were weakly related to LSM, our linguistic measure of interpersonal synchrony, whereas the other three parties demonstrated rather stronger agreement between rapport ratings and the degree of LSM. This finding contributes to the growing literature that highlights the informational value of LSM as an objective marker of rapport (Muir, Joinson, Collins, Cotterill, & Dewdney, 2020), adding new evidence that rapport-building occurs at least in part via the coordination of language styles (Richardson et al., 2014). We chose to focus on an objective language measure, but subsequent work could consider the extent to which verbal and non-verbal cues operate together in determining the link between synchrony and rapport-building (Bernieri & Rosenthal, 1991). Practically, it could be possible to train interviewers in the basic positive language behaviours associated with rapport (Alison & Alison, 2017). Whereas the patterns of style matching that we identify tend to occur unconsciously in dialogue, recent work suggests that these styles can be intentionally mimicked (Van Baaren, Holland, Steenaert, & van Knippenberg, 2003; Muir, Joinson, Cotterill, & Dewdney, 2017). It would therefore be interesting to explore whether interventions could equip interviewers to attend to and strategically adapt their language use, and whether such interventions would improve interpersonal dynamics with interviewees.

This study's correlational design precludes causal inferences, and further studies are required to tease apart competing explanations. For example, LSM could arise from rapport having already been developed: a manifestation of, rather than a cause of, rapport. Indeed, another unresolved question about causality is whether the rapport was

associated with the suspect matching the interviewer, or the interviewer matching the suspect. Research suggests that people in low-power roles tend more often to accommodate to the language styles of those in high-power roles (Cotterill, Muir, Joinson, & Dewdney, 2015); further research on this issue would be of both theoretical and forensic value.

Whereas research often associates rapport with liking or positivity, our LSM results suggest that this conceptualization is likely over-simplistic. Instead, as suggested by Abbe and Brandon (2013), rapport should be viewed more as a type of conversational engagement (Neiderhoffer & Pennebaker, 2002; Richardson et al., 2019) that involves the presence of a productive working relationship (Kelly, Miller, Redlich, & Kleinman, 2013; Walsh & Bull, 2012). This definitional difference could be important to the way interviewers perceive and subsequently judge rapport. For example, when rating rapport some interviewers may look for suspect behaviours that signify affiliation (i.e., open demeanour, friendly), whereas others may look for signs of mutual attention and goal-directed behaviour. Clarifying these definitions with interviewers beforehand might improve alignment of rapport judgments.

Information gain

Finally, our results provide tentative indications of an association between subjective rapport and LSM with information gain, assessed here by the number of critical details the suspects provided. Our measure of information gain was weak and post-hoc by necessity, because the interviews concerned a fictional crime that participants had learned about prior to acting different roles. This arrangement precluded any assessment of the completeness or accuracy of suspects' accounts, and the information gain data must therefore be interpreted with caution. Our exploratory findings nevertheless complement those of prior literature that showed a link between LSM and interview outcomes (e.g., Richardson et al., 2014). Such a link is not necessarily causal; indeed, an alternative explanation is that interviewer skill is the common factor underlying all our dependent variables. More-skilled interviewers may be both (1) more adept at managing their interpersonal style, and (2) more likely to have asked the best questions for eliciting critical information. This latter explanation would frame rapport and LSM as characteristics of high-quality interviews, but not necessarily causally related to information gain.

Conclusion

In sum, this study demonstrates that certain behavioural cues to rapport not only can be detected by actors and observers but that multiple parties can be in good agreement about the presence or absence of these cues. However, the data also give cause to believe that the situational and cognitive demands of conducting an interview might interfere with the ability to detect these cues, and to therefore attune to the interpersonal dynamics in valuable ways.

Conflicts of interest

All authors declare no conflict of interest.

Author contributions

Beth H Richardson, Ph.D (Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Supervision; Visualization; Writing – original draft; Writing – review and editing). Robert A Nash (Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Writing – original draft; Writing – review and editing).

Data Availability Statement

Data are available from the authors on request.

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