

## Mapping Repeated Interviews

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### Abstract

The present study introduces an adaptation of the Griffiths Question Map (GQM; Griffiths & Milne, 2006) which extends the chronological, visual map of question types used in an investigative interview to include child interviewee's responses (through the addition of the Interview Answer Grid, IAG). Furthermore, it provides a rare evaluation of repeated interviews with children. From a sample of transcripts of Scottish repeated interviews with child victims, two 'good' and two 'poor' first interviews were chosen based on interviewer question types. First and second investigative interviews of these four children were mapped using the GQM and IAG in order to examine across the two interviews the similarity of interviewer and interviewee behaviours and the consistency and investigative-relevance of information provided. Both 'good' and 'poor' interviews were found to include practices discouraged by interviewing guidelines, which would not have been identified by examining question proportions alone. Furthermore, 'good' first interviews were followed by second interviews which began with poor question types, suggesting a possible impact of confirmation bias. Social support was also assessed and found to be used infrequently, mainly in response to the child being informative rather than pre-emptively by interviewers in an attempt to encourage this. Children were also found to disclose throughout their second interviews, suggesting that rapport-maintenance is vital for single and multiple interviews. The use of the GQM and IAG are encouraged as techniques for determining interview quality.

*Keywords:* investigative interviewing; child victims; repeated interviews; social support; question types; Griffiths Question Map.

## 1. Introduction

There is strong support in the literature for the concept that witness testimony quality is often highly dependent on the choice of questions used by the interviewer (e.g., Fisher *et al.*, 2009; Powell & Snow, 2007); laboratory and field studies agree that open questions often result in more correct and more detailed responses than do leading or option-posing questions (Brown *et al.*, 2013; Horowitz, 2009; Lamb *et al.*, 2003; Lamb *et al.*, 2008; Roberts *et al.*, 2004; Sternberg *et al.*, 1996; Sternberg *et al.*, 1997). Accordingly, several studies have measured interview quality by examining the percentage of each question type used (e.g., Lamb *et al.*, 2009; La Rooy *et al.*, 2013; Waterhouse *et al.*, 2016). However, another important measure of the quality of an interview is the temporal order in which these questions are asked. This is an overlooked but vital factor for evaluating the likely accuracy of the testimony obtained (Dodier & Denault, 2017; Griffiths & Milne, 2006).

Interviewing guidelines worldwide typically recommend that particular question types are used in a phased or stepped approach in which a free recall phase precedes a questioning phase. These guidelines include the England and Wales ‘Achieving Best Evidence in Criminal Proceedings: Guidance on interviewing victims and witnesses, and guidance on using special measures’ (ABE, Ministry of Justice, 2011), the National Institute of Child Health and Human Development interviewing protocol (NICHD, Lamb *et al.*, 2011) and the ‘Guidance on Joint Investigative Interviewing of Child Witnesses’ in Scotland (Scottish Executive, 2011). These phases are recommended to be conducted in the following order (for a description of different question types, please see Table I). The substantive phase should begin with non-suggestive questions, which focus on the alleged offence without introducing details of the allegation (Orbach & Pipe, 2011). Only if the interviewee does not mention the allegation in response to open-ended questions (or invitations) should the interviewer resort to more specific prompts. The interviewer should first encourage the interviewee to give a

free narrative of the alleged event, during which the interviewer should use facilitative prompts (such as echoing the interviewee's last comment) to support the interviewee to give as full and detailed an account as possible. This phase should be followed by a questioning phase in which open questions (or invitations) should precede, where appropriate, directive and option-posing questions. However, wherever possible, interviewers should always return to asking the interviewee invitation questions. Further, the use of suggestive or leading questions is strongly discouraged (Lamb *et al.*, 2011; Ministry of Justice, 2011; the Scottish Executive guidelines, 2011). As Orbach and Pipe (2011) note, this "funnel-shaped hierarchical structure" (p. 152) of question types across time reflects the findings from investigative interviewing research. Examining solely the overall proportion of question types may not give the full indication of the quality of an interview. Additionally, examining the order in which different question types are asked determines how well the interview corresponds with these guidelines, and the likely resulting quality of the testimony obtained.

The Griffiths Question Map (Griffiths & Milne, 2006) is a novel tool that provides a visual representation of an interview which allows for temporal analysis of the question types used (i.e., which question types are used when within the interview). With time going from left to right along the x-axis, it maps the questions according to their question type along the y-axis. Recommended question types are represented at the top of the y-axis, while more risky question types are represented towards the bottom (for an example see the 'interviewer utterances' section of Figure 1). The GQM was originally developed to determine interviewing skill in interviews with suspects and using the method to map such interviews conducted before and after training indicated clear improvements (Griffiths & Milne, 2006). The GQM continues to be used by researchers for evaluating interviews with suspects (e.g., Walsh & Bull, 2015) and has also been recommended as a tool for expert witnesses to analyse the likely reliability of testimony (Dodier & Denault, 2017). Furthermore, such

mapping has been recommended for interviewers in order to evaluate their own interviewing skills (Griffiths & Milne, 2006; Oxburgh *et al.*, 2016).

On the other hand, the GQM has been criticised for only analysing the interviewer's utterances (Heydon, 2012). The Griffiths Question and Response Map (Stein, *et al.*, 2012) was a further development of the GQM which addressed this criticism by overlaying children's responses on to the GQM. In particular, responses were coded according to whether they were on-task (long or short) or off-task (clarification request, no response, or off-task response). Using a sample of 38 interviews of children with allegations of sexual abuse, the study examined the use of the GQRM as an evaluative tool to be used in training. In the present study, an alternative method of extending the GQM to include responses will be described (the Interview Answer Grid) and an exploratory analysis will be conducted with a sample of repeated interviews of children. The Interview Answer Grid extends the y-axis of the GQM to include the children's responses below the interviewer's questions (for an example, see Figure 1). The analysis of responses will include topic, investigative-relevance, and repetition in order to evaluate the efficacy of the interviewing practice in more detail and across multiple interviews.

Multiple interviews (also known as repeat interviews) are when an interviewee is interviewed more than once about the same event. Although comprehensive statistics have not been gathered, research suggests that multiple interviews occur fairly frequently. For example, Plotnikoff and Woolfson's (2001) sub-sample of Scottish child victims were interviewed by the police an average of 1.8 times and Korkman *et al.* (2017) report that children interviewed at one forensic psychology unit in Finland between 2006 and 2012 were interviewed twice on average. There has been very little evaluation of interviewing practice across multiple interviews with child witnesses/victims. The research that has been conducted has mainly examined the proportion of question types used in first and subsequent

interviews (Cederborg *et al.*, 2008; Hershkowitz & Turner, 2007; Katz & Hershkowitz, 2013; Patterson & Pipe, 2009; Santilla *et al.*, 2004; Waterhouse *et al.*, 2016). None of this research, however, examined the temporal order of questions across multiple interviews (i.e., the order in which the questions were asked from the beginning to the end of the interview).

Examining multiple interviews temporally can determine in more detail the interviewing similarities and differences between the first and second interviews. This may uncover a reduction in quality from first to second interviews, possibly caused by confirmation bias as suggested by the Scottish Executive guidance (2011).

Confirmation bias is the tendency to attempt to obtain, interpret and preferentially evaluate information so that it fits with existing views, and information that does not fit current beliefs is, conversely, either ignored or not sought out (Ask & Granhag, 2005). The Scottish Executive guidance (2011) proposes that interviewers may introduce and strengthen across multiple interviews suggestions that fit with their beliefs. Interviewers may not have developed their opinions/expectations as firmly prior to first interviews as prior to subsequent ones. As the investigation progresses, so probably does the interviewers' understanding of the alleged crime and the supporting evidence, and thus their beliefs about what occurred may also strengthen (Smith & Milne, 2011). Thus, they may be more biased in later interviews. Although it is a natural process for investigators to develop beliefs about what happened, it is important that these beliefs are tested in a fair manner which does not bias the information obtained towards confirming these beliefs and avoiding contradictory testimony. Bias could be visible in the GQM as a change in question order; interviewers may introduce closed questions earlier in the interview to encourage the interviewee to discuss topics that fit most with their beliefs about what happened.

It is also important to note the temporal pattern of children's responses to multiple interviews. Although both experimental and field research have consistently found children

to reminisce in second interviews (see La Rooy *et al.*, 2009 for a review), it is not clear how this transpires across the interview. Children may provide all the relevant, new information at the beginning of the interview, thus possibly negating the need for the interviewer to proceed beyond the initial recall. Alternatively, reminiscence may occur across the interview, highlighting the requirement for interviewers to continue encouraging the child's recall, both through appropriate questioning and rapport-maintenance.

The present study will also examine rapport-maintenance in the form of providing socially supportive verbal comments throughout the interview. Hershkowitz (2011) describes a variety of ways of providing non-suggestive support to maintain rapport during an interview (see Table II for details). Previous studies that have examined the use of rapport-maintenance skills have found them to be poorly carried out (Walsh & Bull, 2012), but to have a positive correlation with child informativeness (Teoh & Lamb, 2013). However, the correlation between support and informativeness does not allow for causation to be determined; children may be more informative in response to support, or alternatively, interviewers may become more supportive in response to children being informative. Using a GQM/IAG analysis can provide more information on the likely direction. Furthermore, this may be particularly crucial for multiple interviews; for example, children who did not feel supported during their first interview may feel especially disinclined to cooperate during their second interview.

### **1.1. The Present Study**

The aims of the present study were, therefore, to:

- introduce the Interview Answer Grid and exemplify how its use with the Griffiths Question Map can create useful visual representations for evaluating interviews in detail;

- compare interviewing techniques across a sample of ‘good’ and ‘poor’ first and second child interviews, focusing particularly on the use of different question types and social support;
- examine possible patterns in child responses across first and second interviews; in particular, patterns associated with the types of details provided, the investigative-relevance of these details and (for second interviews) whether these details fit with their previous testimony, and were new or repeated.

It was predicted that the maps of ‘good’ interviews would evidence the recommended question order more frequently than the maps of ‘poor’ interviews. Due to the lack of previous research examining multiple interviews of children using these methods, no further predictions were made as to the likely findings.

## 2. Method

### 2.1. Sample

A convenience sample was used. Transcripts from cases that had gone to trial were provided by lawyers to one of the authors for quality assessment through that author’s work as an expert witness. Ethical approval for this was obtained from the first author’s university and these transcripts had previously been used for research. Cases in which a child victim or witness had been interviewed more than once by the police or trained social workers were identified, revealing 14 appropriate cases, involving multiple interviewing of 21 children. The substantive sections of these interviews were all coded as described in the next section<sup>1</sup>. Based on this coding, four children’s first and second interviews were selected for visual mapping. Each GQM/IAG provides a vast amount of information and data. Therefore, as the

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<sup>1</sup> Full analysis of all 21 children’s interview transcripts can be found in Waterhouse *et al.* (2016).

present study aimed to act as an exploration of the method, the sample size was limited to four children to provide an example of the methodology and allow some comparison across interviews.

The sub-sample was chosen according to the quality of the first interview. Two particularly ‘good’ and two particularly ‘poor’ first interviews were analysed, along with their corresponding second interviews. Quality was assessed on the percentages of various question types. This was calculated by dividing the number of questions coded for each question type category by the number of questions asked in the substantive section of that interview overall (see Table I for question types). To identify the best interviews, for each first interview the percentage of suggestive questions was subtracted from the percentage of invitations. The two interviews with the highest scores were analysed as examples of ‘good’ interviews (child ‘A’ and ‘B’). ‘Poor’ interviews (child ‘C’ and ‘D’) were identified by subtracting the percentage of invitations from the number of option-posing and suggestive questions. This method for identifying ‘good’ and ‘poor’ interviews was used because the literature and guidelines (e.g., Scottish Executive, 2011) advise to use mainly open questions (invitations) and avoid suggestive questions. The ‘good’ interviews were those that did this most successfully, whereas the ‘poor’ interviews relied on closed questioning and avoided open questions. Thus, using the traditional way of evaluating interview transcripts (i.e., question type proportions), these would be termed as the best and the worst interviews in the sample. The current study wanted to examine if this continued to be evidenced using a chronological analysis (the GQM and IAG).

The resulting eight interviews (two interviews per child) were conducted between 2001 and 2012, with the majority conducted in 2012. The children in the sub-sample ranged in age from five to nine years old ( $M = 6.5$ ,  $SD = 1.73$ ), 75% of whom were male. The child’s age and gender were determined from a non-anonymised cover page of the interview

transcripts. They were all (alleged) victims and half of them were interviewed regarding allegations of child sexual abuse, with the other half regarding physical abuse. The ‘victim-perpetrator’ relationship was in the majority parental (75%).

The mean total number of child and interviewer utterances in the first interviews was 341.75 ( $SD = 219.21$ ) and in the second interviews was 306.50 ( $SD = 100.15$ ). The number of days between the first and second interviews ranged from two to 41. Only one of the children provided no disclosure in their first interview. The remaining three children provided full or partial disclosure (e.g., the child discussed the event but did not clarify what happened) in their first interviews and all four provided some disclosure in their second interviews. For all four children, their second interview was conducted by at least one of the same interviewers as their first interview.

## **2.2. Coding**

Prior to coding, the interview transcripts were anonymised by the first author. References to names, places, dates, and any particularly distinguishing aspects of the crime were removed. All utterances in the substantive section of the interview transcript were coded. Each change in speaker (interviewee to interviewer and vice versa) signified a new utterance. Interviewer utterances were coded for question type and social support. Coding for social support was added as an adaptation of the GQM (see Appendix A for an example section of the SPSS coding sheet).

### **2.2.1. Interviewer Question Types**

Every utterance that asked the child for information was coded for its question type. The question types employed were a simplification of the question types originally used in the GQM (Griffiths & Milne, 2006) and are explained in Table I.

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In some cases, an utterance fitted into more than one category. For example, an interviewer could ask more than one question and one or more of these questions could be leading. Thus, this could be categorised as multiple or suggestive questions. If this was the case, the higher numbered category was used as research suggests these question types comprise a higher risk to children's accuracy (Lamb *et al.*, 2007). Therefore the example above would be coded as suggestive (as five is greater than four).

Table I.

*Question Type Coding.*

<b>Question Type</b>	<b>Explanation</b>	<b>Example</b>
1. Invitation	Free recall questions which encouraged the child to freely recall any aspect of the event(s) and minimal encouragers that included very little information but prompted the child to continue.	‘Tell me everything that happened’ ‘Uhuh’ Echoing the child’s words.
2. Directive	Free recall questions on a cued topic, including wh-questions (e.g., what, where, when, who, why).	‘Where did that happen?’
3. Option-posing	All questions that required a ‘Yes’ or ‘No’ answer <sup>2</sup> and forced choice questions which include answers for the child to choose between.	‘Did you hit your head or your knee?’
4. Multiple	Single utterances in which the interviewer asked more than one question, and utterances in which the interviewer summarised what the child had said previously, either with or without including a direct question <sup>3</sup> .	‘Did you see the man? Where was he? What did he look like?’
5. Suggestive	Questions that introduce information the child has not mentioned previously in any interview or that imply a desired response. The question may also include other suggestive techniques, such as mentioning what the interviewer has heard from other sources.	‘Your mum told me your brother hurt you, what do you remember about that?’
6. Unknown	This category involved questions that were not clearly transcribed, parts of the question were missing, or questions which were unfinished, either due to the child interrupting or the interviewer changing their question.	‘When <unclear> the man?’

<sup>2</sup> This category included questions that started with ‘Can you tell me...’ as these sorts of questions are indirect and can be answered with a ‘yes’ or ‘no’. This ambiguity has been shown to be difficult for younger children to understand (Hardy & Van Leeuwen, 2004).

<sup>3</sup> This was included as children often responded to these summaries as if they had been asked to confirm the summary.

### **2.2.2. Interviewer Support**

Support was coded for every interviewer utterance, including all interviewers' questions (see Table II for coding based on Hershkowitz, 2011). If the interviewer said something but it was not a question, then the utterance was coded as a supportive, unsupportive or neutral utterance using the definitions below. If the utterance included supportive and unsupportive techniques, the utterance was coded as unsupportive, unless there were more supportive than unsupportive techniques used in the utterance.

Table II.

*Social Support Coding (based on Hershkowitz, 2011).*

Context	Interviewer Behaviour	Examples
<b>Supportive</b>		
Throughout	An utterance was coded as supportive if the interviewer used the child’s name, but not in order to get the child’s attention;* welcomed the child; expressed personal interest in the child; expressed caring for the child; checked the child’s feelings; included non-specific reinforcement; made a small gesture of ‘good will’; thanked or showed appreciation to the child.	<p>“Please could you tell me what happened next, George?”</p> <p>“I am glad to meet you today”</p> <p>“I really want to get to know you”</p> <p>“Your well-being is important to me”</p> <p>“Is there anything more you would like to tell us?”</p> <p>“Do you have any questions?”</p> <p>“You are doing very well”<sup>4</sup></p> <p>“Would you like a glass of water?”</p> <p>“I want to thank you for your help”</p> <p>“I know it is difficult for you to talk”</p> <p>“You can talk about bad things here”</p> <p>“Many children find it difficult to tell”</p> <p>“You can make it”</p> <p>“Don’t worry, nobody is going to arrest you”</p>
Child shows difficulties disclosing or elaborating	The interviewer showed empathy; legitimised expressions; generalised or normalised the child’s difficulties; expressed confidence in the child or optimism; reassured the child; or offered help.	

<sup>4</sup> Although children could perceive this as praise for what they have just said, this is meant to reflect the child’s interview performance generally rather than about the specific comment. This form of support occurred very infrequently in the current sample.

Child shows reluctance to disclose or elaborate	The interviewer expressed worry about children; ‘contained’; encouraged the child; or removed responsibility from the child.	Interviewer allowed the child to write about the event(s) instead of talking about it. “My job is to check that children are ok” “Children can trust me when something has happened to them” “It is important that children tell if...” “When something happens to children, it’s not their fault”
Child expresses distressing emotions	The interviewer explored the emotions; accepted the emotions; or echoed the child’s words.	“Tell me more about your fear” “I understand what you are saying” “You say you were frightened”
<b>Unsupportive</b>		
Throughout	The interviewer’s utterance was coded as unsupportive if the interviewer coerced the child in any way; made negative comments about the child’s behaviour; doubted the child’s accuracy;* or repeatedly asked the child the same closed question – possibly implying they were incorrect in their first answer.*	“Stop moving around” “Are you sure?” “Are you worried about getting X in trouble?” and later again asking “Are you worried about getting X in trouble?”
Child expresses distressing emotions	The interviewer ignored the child’s emotion, difficulties, worries, or wishes; or made a negative response.	Child says they were scared, and interviewer asks “What happened next?” “We are wasting time”

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<p>In response to a specific aspect of the child's response, despite there being no strong evidence of a crime having occurred<sup>5</sup>.</p>	<p>If the interviewer suggestively supported<sup>6</sup> the child in any way, their utterance would be coded as unsupportive. Suggestive support included using any supportive techniques to reinforce the <u>actual content</u> of the child's statement; expressing worry about the child specifically; using specific 'containment' techniques; encouraging the child with specifics or removing responsibility from the child.</p>	<p>"You can trust me if..."          "It is really important that you tell if..."          "If ... has happened, it is not your fault"</p>
<p><b>Neutral</b></p>		
<p>Throughout</p>	<p>The interviewer's utterance was coded as neutral if the interviewer used none of the techniques described in the above two categories, or used the child's name but in order to get the child's attention. *</p>	<p>Child has not mentioned any emotions and interviewer asks "What happened after that?"          "George, George, can you listen to me?"</p>

\* indicates an addition to Hershkowitz's (2011) definitions of supportive and unsupportive behaviours.

<sup>5</sup> The coders assumed there was no strong evidence unless the interviewer mentioned specific evidence, such as photographs.

<sup>6</sup> Suggestive support implies that a specific aspect of the child's response was particularly relevant and thus may encourage the interviewee to respond with more information on that subject, or uses supportive techniques to introduce new information into the interview. Thus, the comments can be very similar to non-suggestive support but are directed at eliciting a particular response from the child.

### **2.2.3. Interviewee Utterances**

Child utterances were coded as described in Waterhouse *et al.* (2016). Specifically, the type of information provided and its likely investigative-relevance were coded.

Repetitions of information within the same interview or utterances in which the information that the child provided was not related to the event(s) being discussed were coded as ‘non-substantive’, and no further coding of the utterance occurred. In second interviews, each child utterance was also coded, with regard to the prior interview, for the novelty and consistency of the information being provided.

### **2.2.4. Type of Details**

The types of details provided by the child were coded for each utterance. These were based on the work of Phillips *et al.* (2012) and consisted of (a) *people*: details relating to persons involved in the event(s), (b) *actions*: details explaining what happened during the event(s) and any other relevant time points, (c) *locations*: details of places involved in the event(s), as well as descriptions of the places, (d) *items*: any details of objects or items involved in the event(s), such as descriptions of clothing, and (e) *temporal*: details given regarding the timing of the event(s). If the child spoke about multiple types within one utterance, they were coded separately.

### **2.2.5. Investigative-Relevance**

Each child utterance was coded for investigative-relevance. Due to concerns over the possible subjectivity of defining high- and low-investigative-relevance and because both coders were not trained investigators, high investigative-relevance was defined in a relatively narrow and precise way. Details were coded as of *high investigative-relevance* if the child was directly discussing something illegal. For example, details about an adult sexually

touching them would have been coded as of high investigative-relevance, as would denials of illegal events. *Low investigative-relevance* was coded if the child was discussing the alleged crime or surrounding events, but not specifically an illegal act. For example, discussion of what happened after the child was touched sexually would be coded as of low investigative-relevance. When children discussed both high and low investigative-relevant details in the same utterance, these were coded separately.

### **2.2.6. Consistency and Novelty in Second Interviews**

For the second interviews, all child utterances were coded for whether the child had mentioned the details in her/his previous interview or not. New details were also coded for whether they fitted with the child's previous testimony, or directly contradicted something said in a prior interview. Utterances were coded as follows:

- *repeated*: the child had mentioned the detail in their preceding interview,
- *new consistent*: the detail had not been mentioned in the initial interview, and it did not directly contradict the information previously given by the child. Thus, in the present study, consistency relates to whether the information fitted with the child's previous story or contradicted it. This is a different definition of consistency from previous studies, where all new information would be categorised as inconsistent as it involves different information from that given in the first interview,
- *new contradictory*: the detail had not been mentioned in the prior interview, but it directly contradicts some of the testimony the child gave in that prior interview. For example, if the child had denied ever going to the crime location in interview one, but described going to the crime location in interview two, all the details regarding their visit to the suspect's house would be coded as new and contradictory.

### **2.2.7. Inter-rater Reliability**

For the full sample (i.e., all 21 children's interviews), a second person coded 19% of children's interviews (for more details, see Waterhouse *et al.*, 2016). This sub-sample was randomly determined. Agreement for coding of all five aspects of the interviewer and interviewee utterances ranged from 95.4% to 100%, with an average of 98.2% agreement. The lowest agreement was for coding 'support' in the child interviews. According to McHugh (2012), inter-rater agreement of 82% and over are equivalent to Cohen's Kappa scores of .9 and above, reflecting almost perfect inter-rater reliability.

### **2.3. Creating the GQM/IAG Analysis**

To create the GQM/IAG, all the interviewer's and interviewee's coded utterances within the substantive section were plotted with time running along the x-axis (from left to right) and type of utterance along the y-axis. In the GQM/IAGs, the type of utterance/question asked by the interviewer is on the top half of the y-axis (above the red line; the Griffiths Question Map). The utterances above the blue line are question types and between the blue and red line are non-question utterances. On the bottom half of the y-axis (the Interview Answer Grid), below and on the red line are the type of details the child responded with. The colour and shape of the data points which represent each utterance also signify the supportiveness of the question for the interviewers' utterances, and the novelty, investigative-relevance and consistency for the interviewee's responses. The key for each GQM/IAG explains this in more detail. Two fictional GQM/IAGs were created: one depicting a Best Practice interview (Figure 1) and the other a poor practice interview (Figure 2) for comparison with the GQM/IAGs based on real transcripts.

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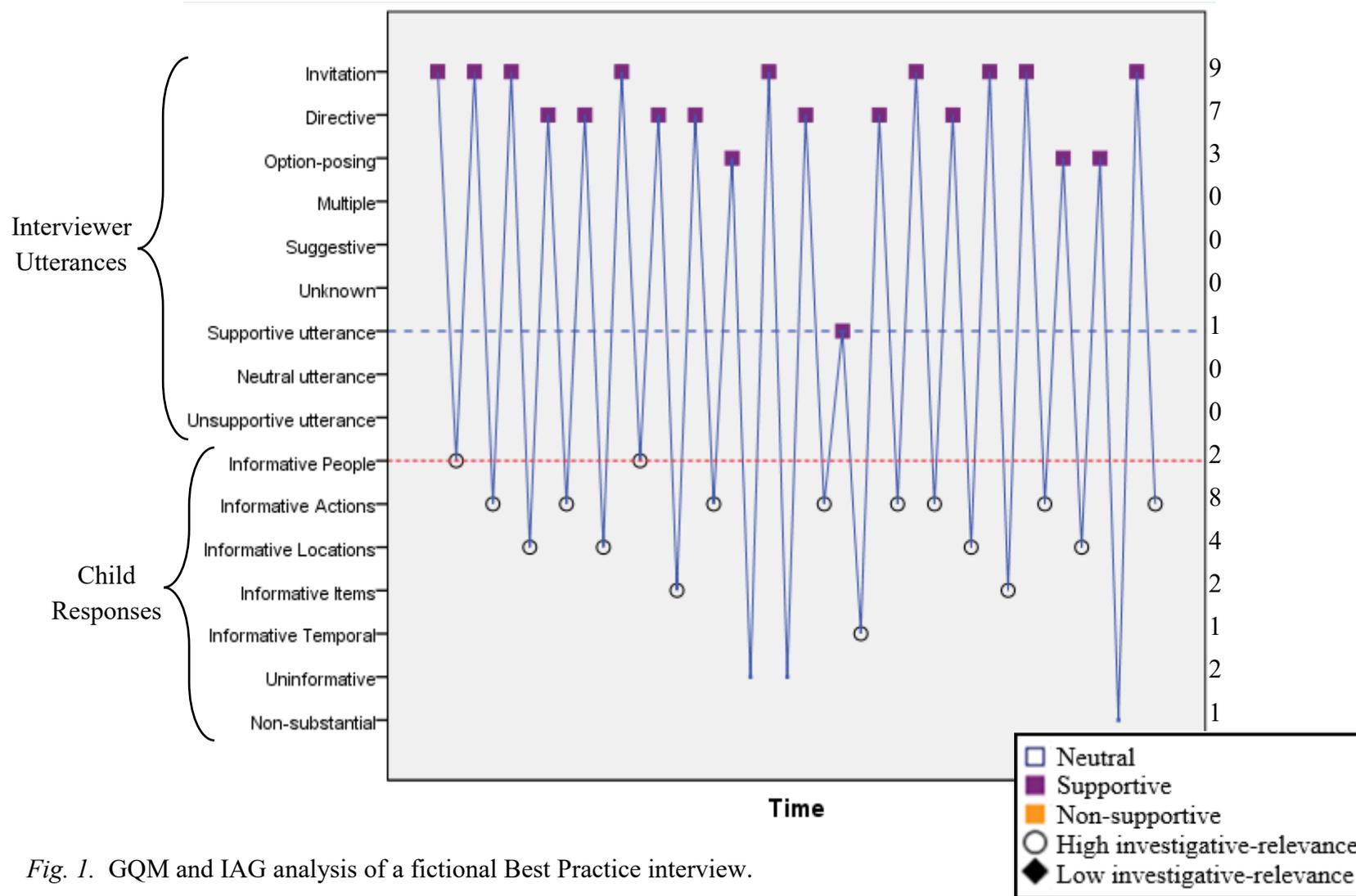


Fig. 1. GQM and IAG analysis of a fictional Best Practice interview.

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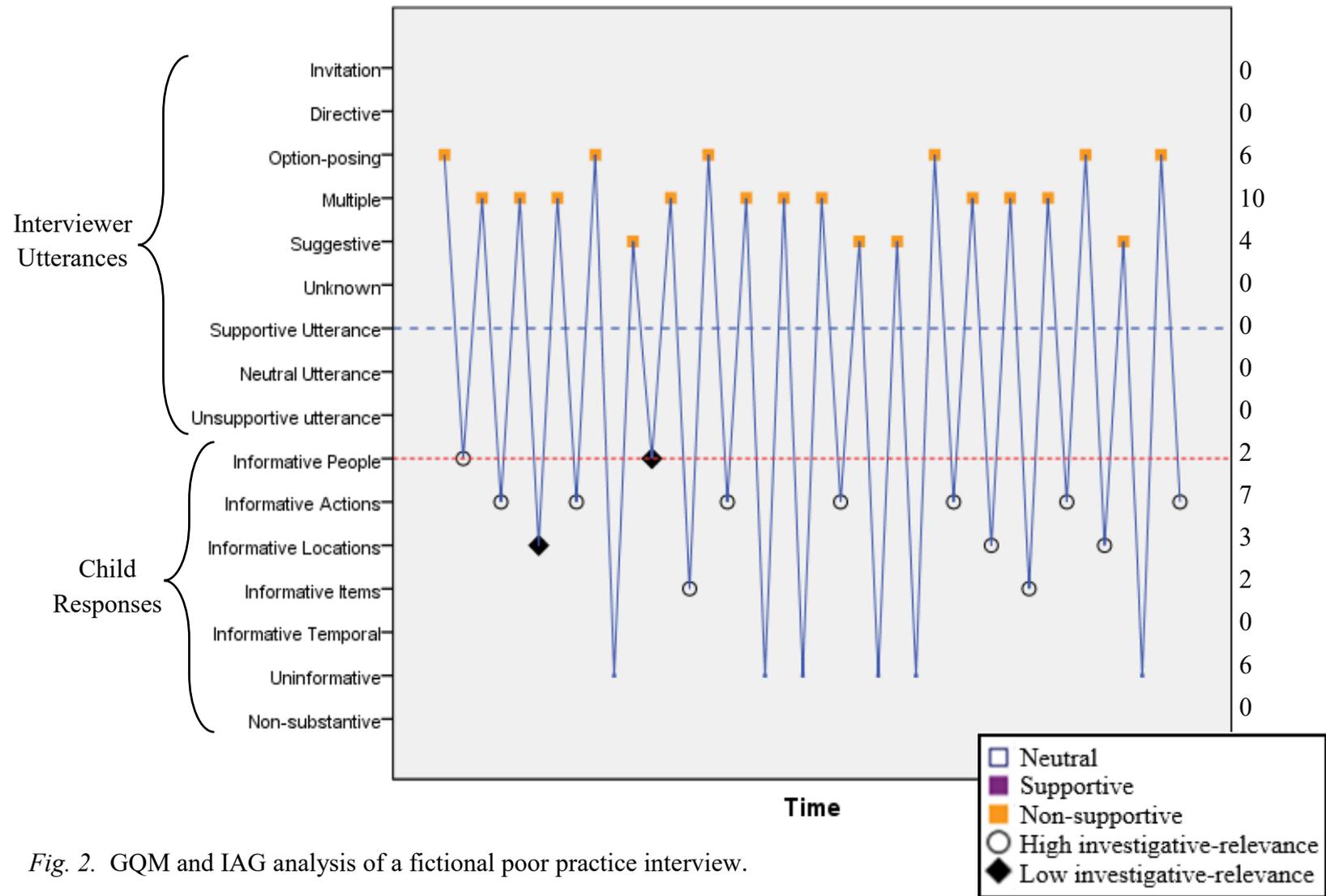


Fig. 2. GQM and IAG analysis of a fictional poor practice interview.

### **3. Results and Discussion**

The GQM/IAG analyses for the two ‘good’ first interviews can be found in Figures 3.1 and 4.1 (Child ‘A’ and Child ‘B’'s interviews respectively) and their corresponding second interviews in Figures 3.2 and 4.2 respectively. The GQM/IAG analyses for the two ‘poor’ first interviews are in Figures 5.1 and 6.1 (Child ‘C’ and Child ‘D’'s interviews respectively) and their corresponding second interviews in Figures 5.2 and 6.2 respectively. Furthermore, please see Appendix B to compare the GQM/IAGs to more traditional analyses (i.e., proportion of question types).

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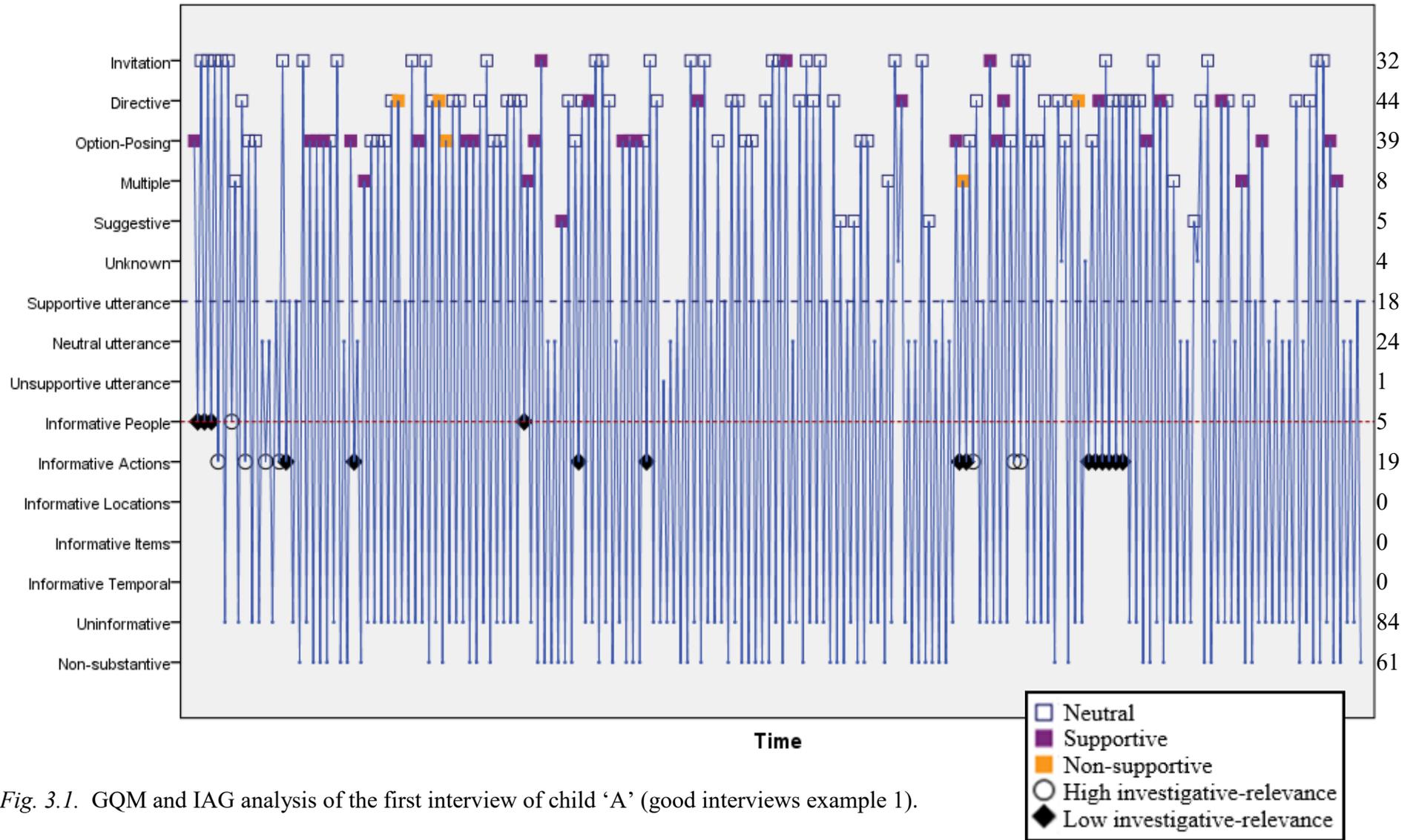


Fig. 3.1. GQM and IAG analysis of the first interview of child 'A' (good interviews example 1).

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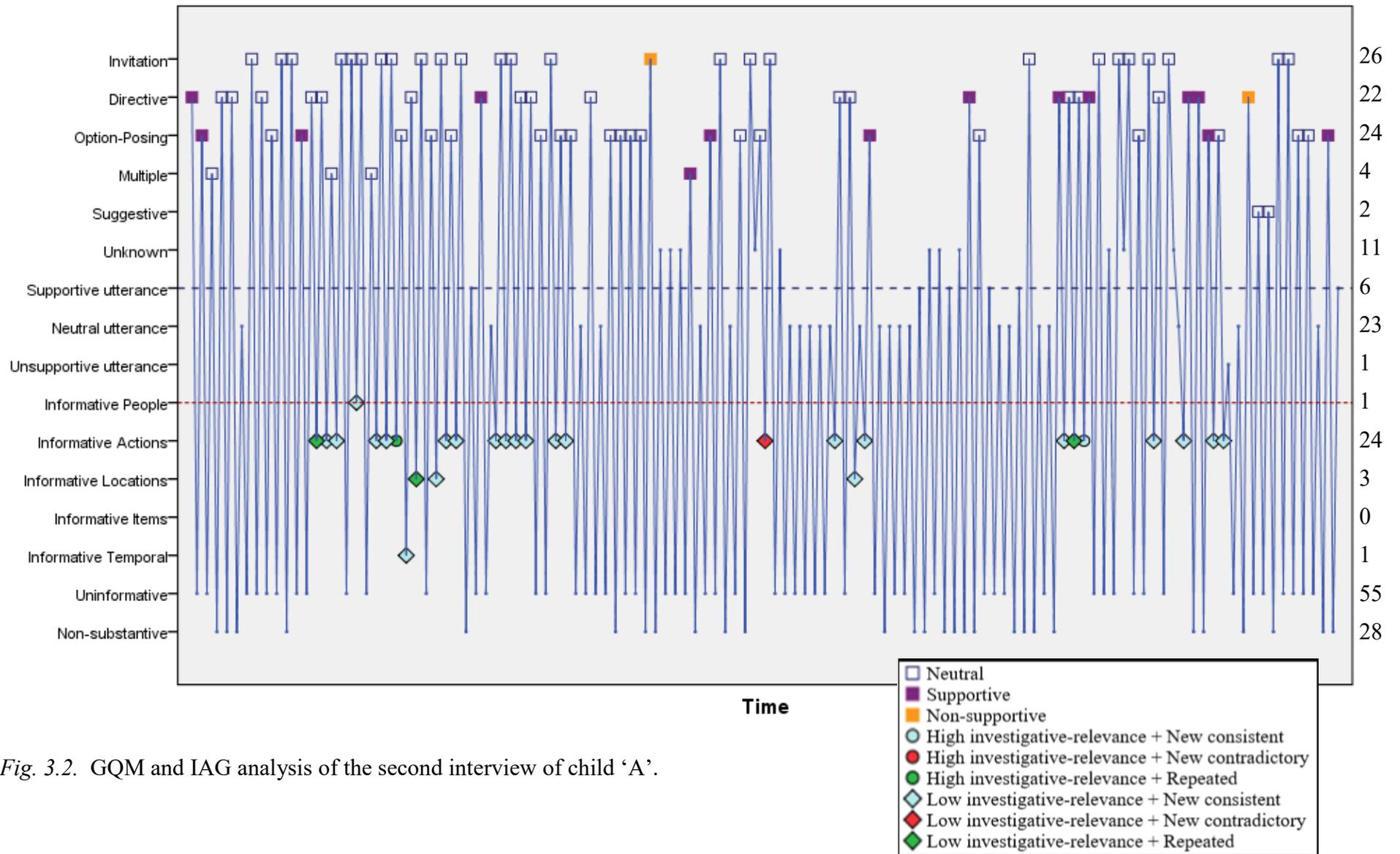


Fig. 3.2. GQM and IAG analysis of the second interview of child 'A'.

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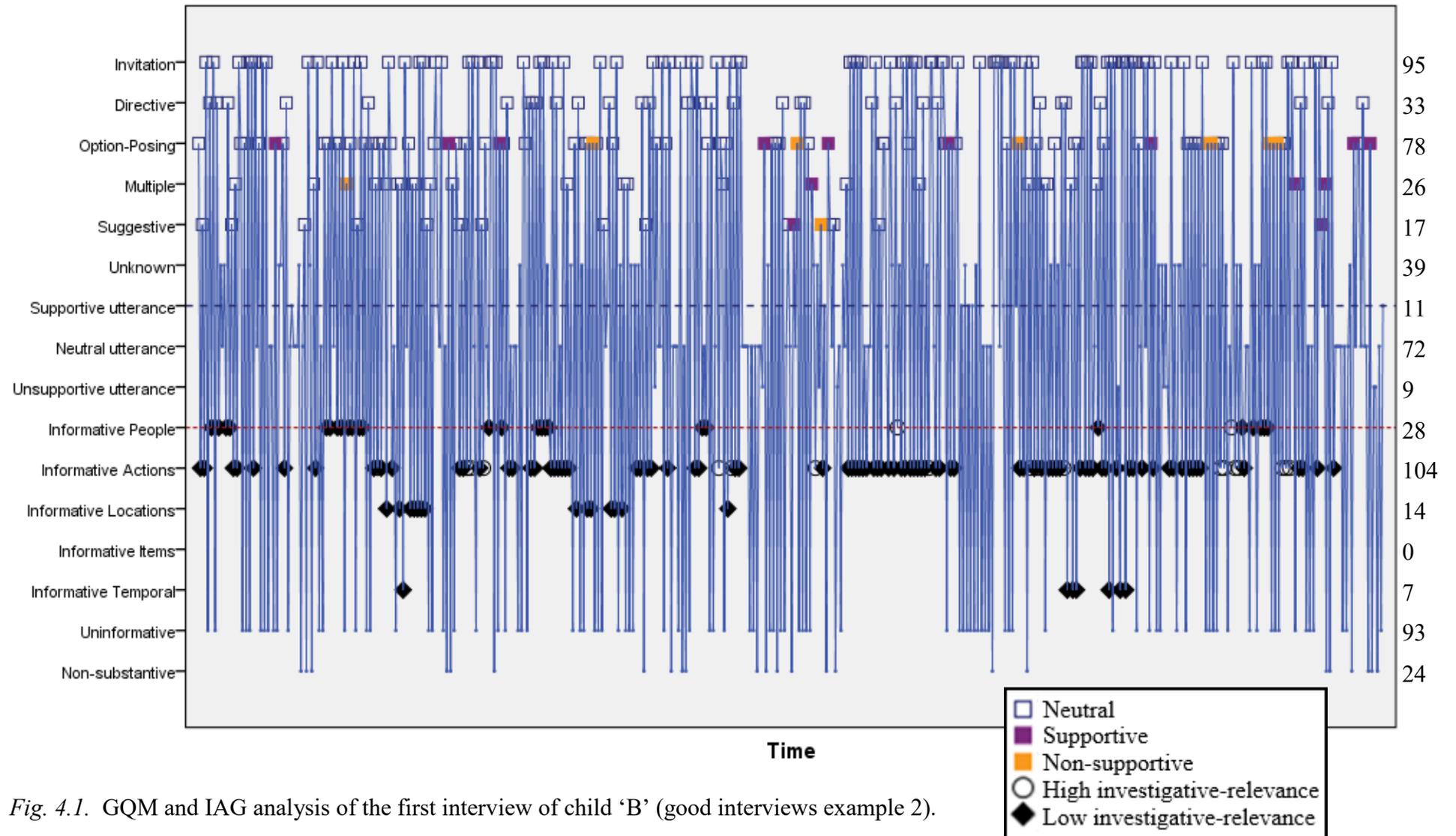


Fig. 4.1. GQM and IAG analysis of the first interview of child 'B' (good interviews example 2).

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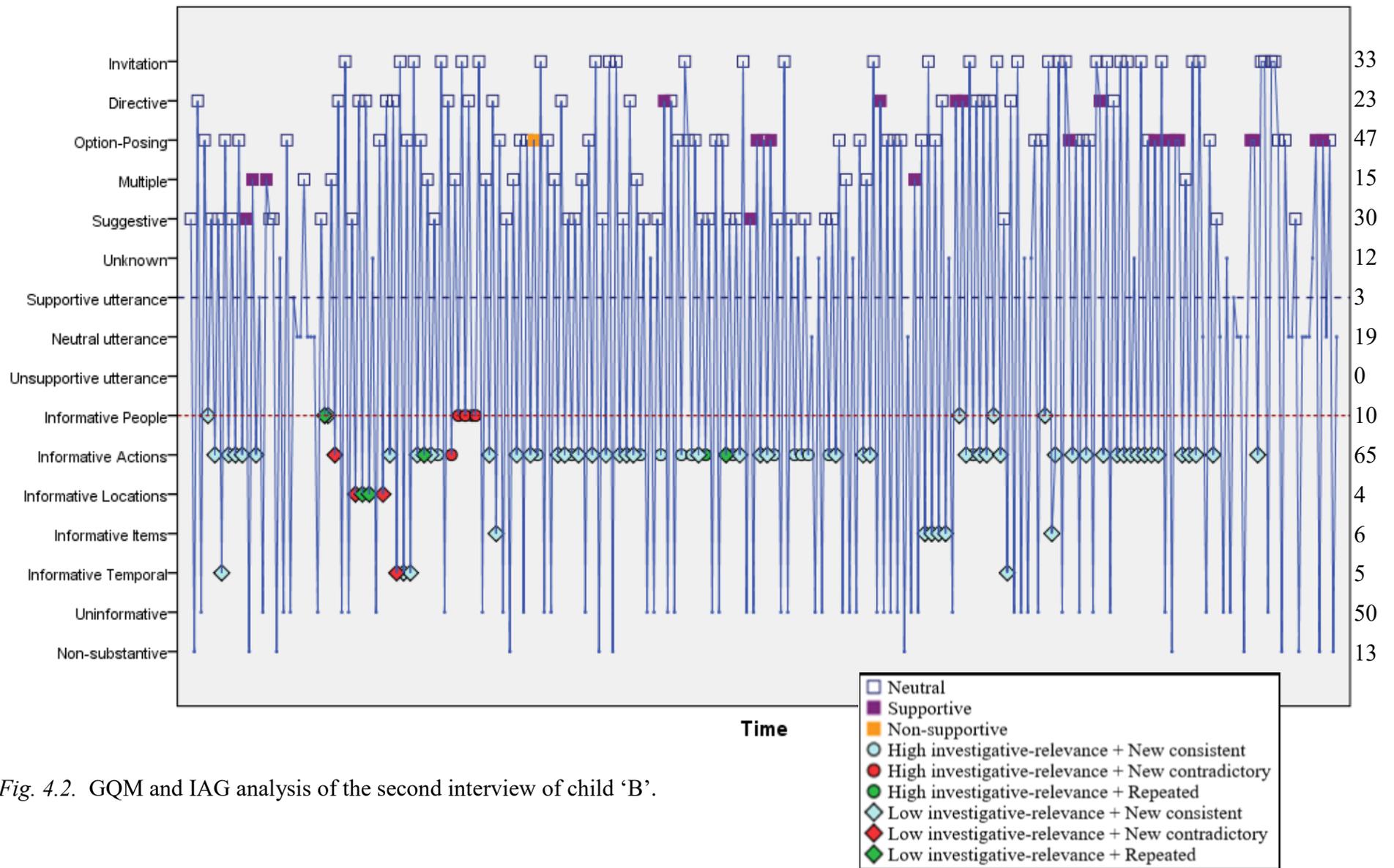


Fig. 4.2. GQM and IAG analysis of the second interview of child 'B'.

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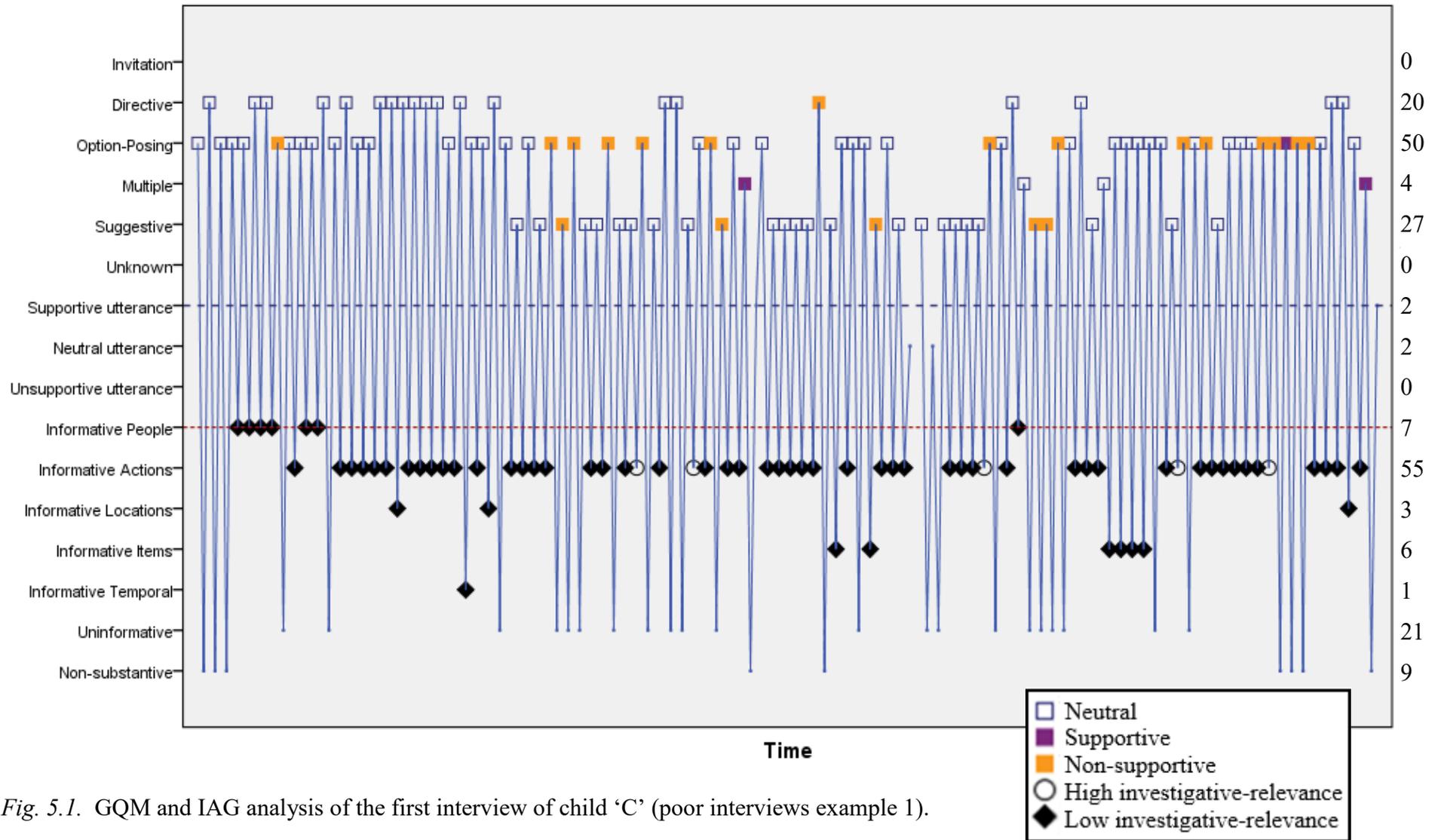


Fig. 5.1. GQM and IAG analysis of the first interview of child 'C' (poor interviews example 1).

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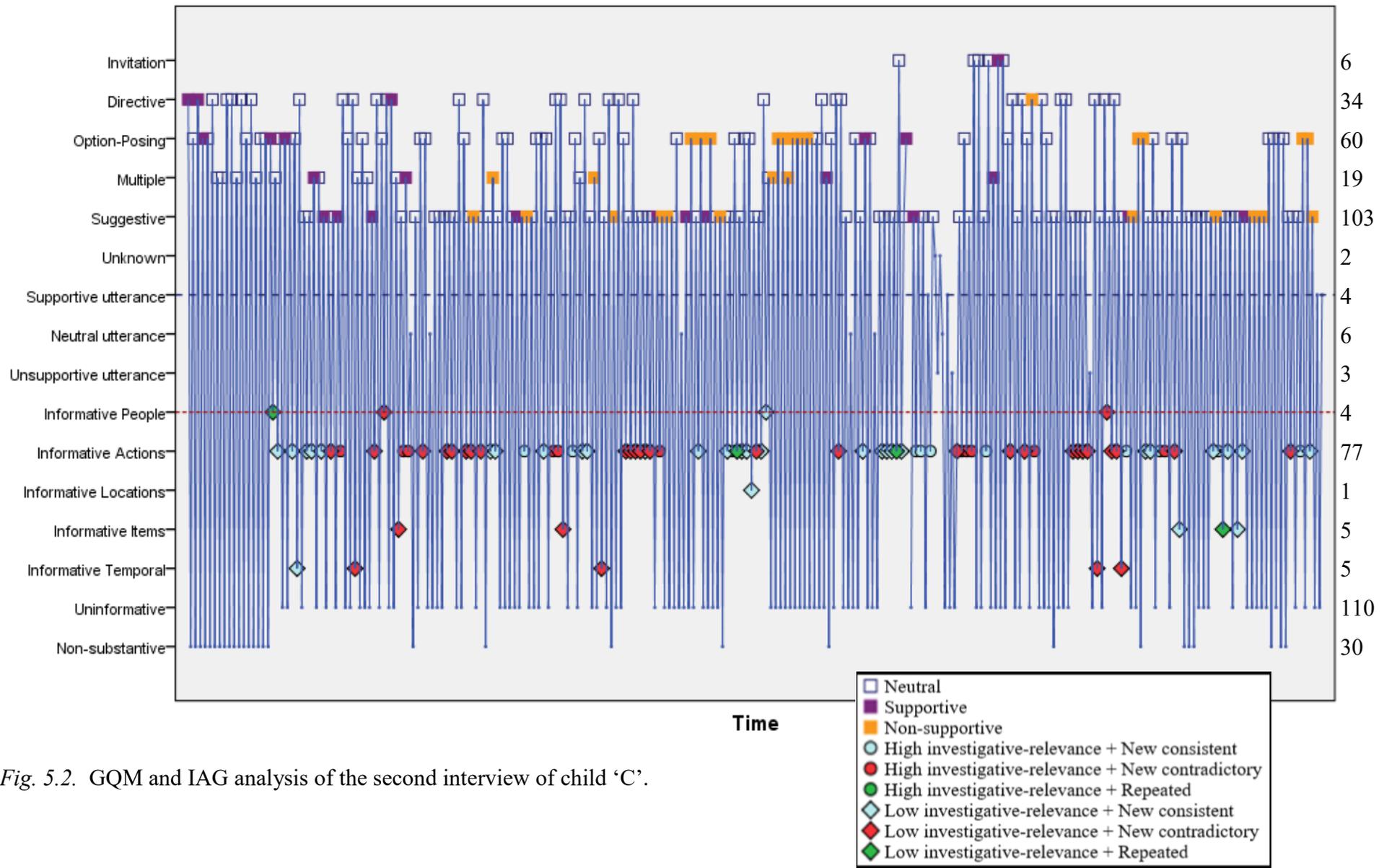


Fig. 5.2. GQM and IAG analysis of the second interview of child 'C'.

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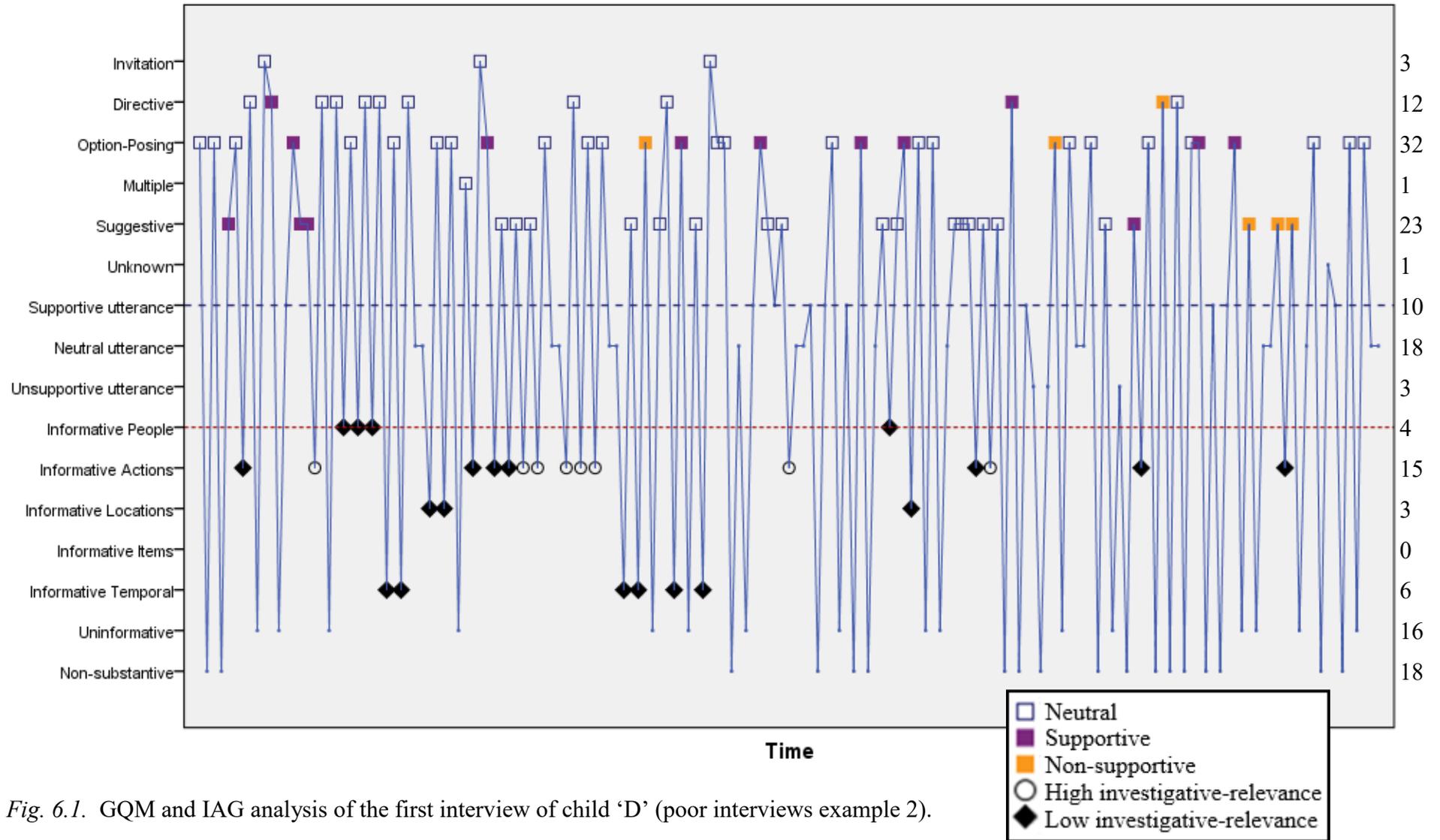


Fig. 6.1. GQM and IAG analysis of the first interview of child 'D' (poor interviews example 2).

# RUNNING HEAD: Mapping Repeated Interviews

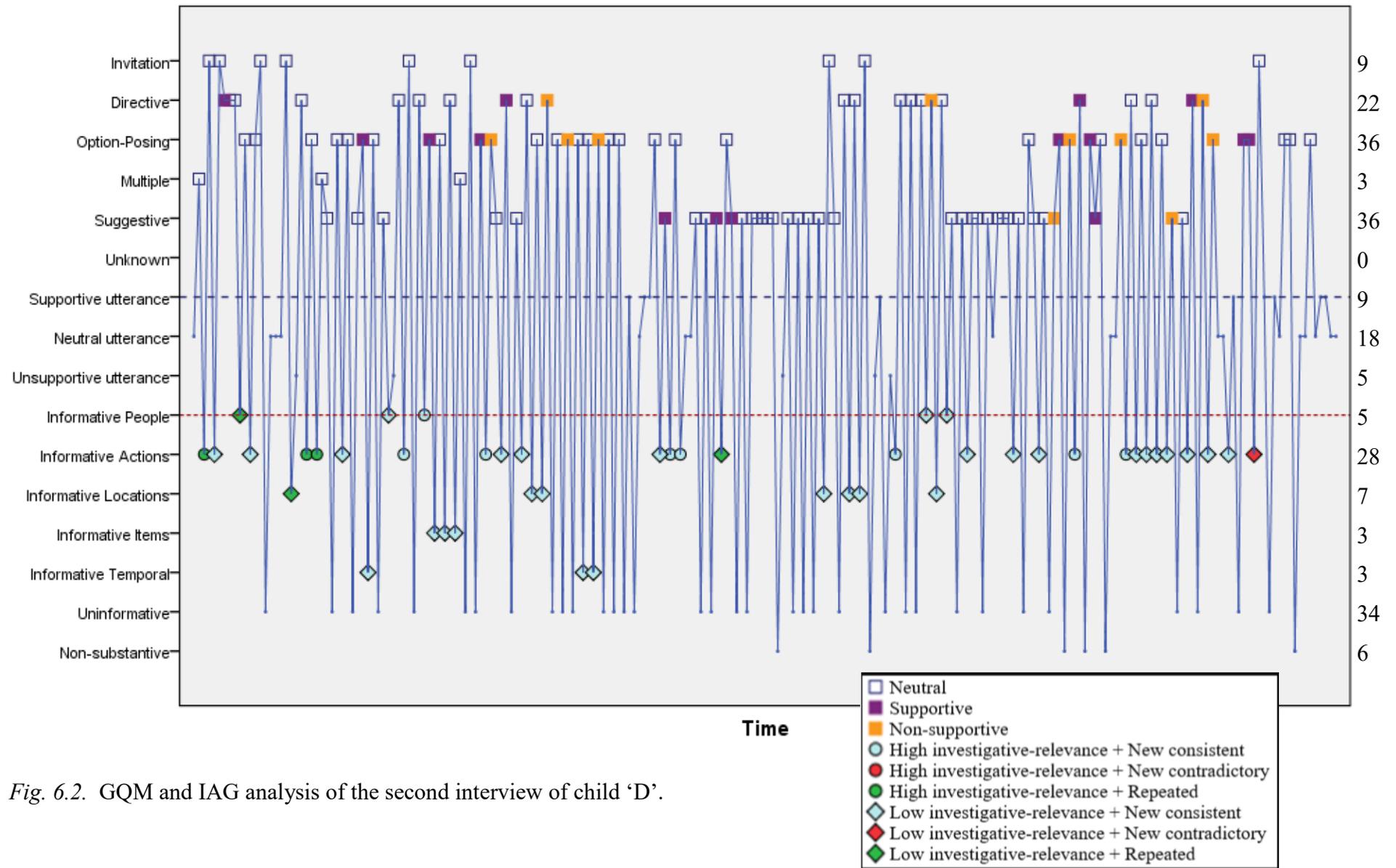


Fig. 6.2. GQM and IAG analysis of the second interview of child 'D'.

From the GQMs and IAGs, it is possible to see that interviewers in the ‘good’ interviews used invitations frequently and throughout the interviews, returning to them often after having asked directive, option-posing, and multiple questions, as recommended in the phased approach described by interviewing guidelines (e.g., Scottish Executive, 2011) and as predicted in our hypothesis. Invitations in the ‘poor’ interviews were used erratically, with some solely used at the beginning (Figures 6.1 and 6.2), some in the middle (Figure 5.2) and some interviewers never using invitations (Figure 5.1). Suggestive questions were used frequently and throughout. However, these were also used in the ‘good’ interviews quite often, for one child during the first halves of their interviews (Figures 4.1 and 4.2) and for the other during the second halves (Figures 3.1 and 3.2). Those interviewers that used a high percentage of invitations and a low percentage of suggestive questions (e.g., the ‘good’ interview examples) also introduced option-posing questions early on in the interview and used them regularly throughout. The ‘poor’ interviews used option-posing questions from the beginning and used very few alternative question types, other than suggestive ones. Thus, the GQM/IAG analysis of the interviews revealed all of the interviews conducted to have flaws, finding poor practice (that does not fit with the phased approach recommended in interviewing guidelines) which may have had a detrimental effect on subsequent testimony (Lamb *et al.*, 2011; Ministry of Justice, 2011; the Scottish Executive, 2011).

Regarding whether second interviews were conducted in a more biased way than first, this appeared to depend on the quality of the first interview. For the ‘good’ first interviews, interviewers’ first set of questions in the second interview were more likely to include closed questions than in their first interviews. For the ‘poor’ first interviews, however, the reverse appeared to be true; these interviewers’ first set of questions in the second interview were more likely to include directive questions and invitations than in their first interviews. The interviewers in the ‘good’ sample, therefore, show some indications of conducting their

second interviews less well than their first, whereas the second interviews in the ‘poor’ group began better than the first. This suggests that confirmation bias may be affecting interview quality for the ‘good’ interviews and that investigators may be investigating their theories in an inappropriate manner. As the Scottish Executive guidance (2011) suggests, these interviewers may in the second interview be particularly focusing in on topics that fit their perceptions of how the event took place. This depicts one of the benefits of the GQM. This form of confirmation bias may not have been identified through analysing the proportions of each question type used. Comparing solely the proportions of closed questions used in these first and second interviews may not have identified a difference, but examining the timing of the question usage indicates a reduction in interview quality.

Socially supportive utterances were not provided very often, and the majority of interviewers’ questions and utterances were neutral (i.e., neither supportive nor unsupportive). The ‘good’ interviews included more supportive comments towards the end of the interview, which may encourage the child to come back for a second interview. Conversely, in the ‘poor’ interviews there were more non-supportive comments, mainly in the second half of the interview. Interviewers were mostly successfully avoiding using inappropriate supportive techniques, such as selectively encouraging children by praising their recall of a particular subject or event, and so avoided risking obtaining inaccurate evidence through providing praise only for things the interviewer wanted to hear (Garven *et al.*, 2000). On the other hand, such neutral interviewing might prevent the possible positive effects of supportive interviewing.

The GQM/IAG was also used in the present study to help clarify the direction of the relationship between support and informativeness based on Teoh and Lamb’s (2013) study that found a positive relationship between how supportive the interviewers’ utterances were and how informative the interviewees were. In the majority of the current study’s interviews

(five of eight), support was only provided after the child had provided some information. In the remaining three interviews, support appeared to be provided fairly evenly (from before the child provided information to the end of the interview). This suggests that most of the interviewers were supportive in response to the child disclosing, rather than the child disclosing in response to being supported. Ahern *et al.* (2014) found interviewers not to respond to children's reluctance with support, even when they had received specific training to encourage them to do so. Children who are reluctant to disclose often respond to support with cooperation (Ahern *et al.*, 2014) and so if interviewers are only providing support to those who are already cooperating by providing information, they may be missing the key opportunities for support to have a beneficial effect on interview outcomes.

Coding 'social support' is, however, rather subjective. Although the coding in the present study was designed to try to avoid subjectivity as much as possible, the inter-rater reliability was lowest for this aspect of the coding (95.4%). This coding was further hampered by being based purely on written transcripts. Both tone of voice and non-verbal behaviours can clarify the intention behind an utterance, and have been found to have significant effects on children's emotive perceptions of an interviewer (Almerigogna *et al.*, 2008). Although studying verbal supportive behaviours, as in the current study, is important as a first step, future studies should try to use original video-recorded interviews (where they are available) to examine social support both verbally and non-verbally.

Children's disclosure patterns across the interviews appear to be fairly similar; as can be seen in the GQMs/IAGs, they disclosed information regarding 'actions' throughout both 'poor' and 'good' interviews. In most cases, the children disclosed information of high investigative-relevance earlier in the second interviews than they did in the first. In second interviews, children generally provided new consistent information throughout, whereas repeated information was mainly mentioned at the beginning of the interview. Children's

reporting of contradictory information varied, with two children providing very little contradictory information (Figures 3.2 and 6.2), one providing quite a lot of contradictory information throughout (Figure 5.2), and one including a section of contradictory information near the beginning of their second interview (Figure 4.2). Finally, all four children provided quite a large number of uninformative responses and they did this throughout both their first and second interviews. This corroborates the importance of maintaining support throughout the interview. Children do not provide all the high investigative-relevant information solely at the beginning and are likely to need support for each disclosure, wherever they occur within the interview. Thus, although the maintenance of rapport throughout interviews has been found to be a challenging task for interviewers (Walsh & Bull, 2012), this study indicates it is key for continuing the interview and possibly obtaining (further) information of high investigative-relevance from child victims/witnesses.

The findings of the present study should, however, be interpreted with caution. They are based on a small sample and there may be key aspects of the cases included here that are not representative of other cases (e.g., age, gender, abuse type and frequency, victim-perpetrator relationship, timing of interviews, disclosure history, and case progression). Research including a larger, more representative sample (possibly obtained via police forces and including cases with various legal outcomes) would be beneficial to test the present study's conclusions.

### **3.1. Implications for Practice and Conclusions**

The use of analyses that provide a visual map of both interviewer and interviewee utterances are capable of providing us with more detail about the quality of the interviews and any interviewing or disclosure patterns. Although the GQM alone can help an expert witness to evaluate the quality of an interview and the ensuing testimony, the addition of the

IAG can provide much more clarity about where in the interview (and importantly, after what kind of questioning) the child's disclosures occurred. This form of evaluation would also be useful for interviews with adults and suspects to determine the likely accuracy of obtained testimony. The use of the GQM and IAG together may also be beneficial for training; the interviewer can see the results of their use of different question types (i.e., their effects on informativeness) which may increase motivation and understanding of the use of best practice techniques.

The present study has introduced a new form of analysis and demonstrated how it can be used as an important method of determining the quality of an interview. Furthermore, by using the GQM and IAG in combination to analyse multiple child interviews, it has been found that confirmation bias may negatively affect second interviews (in particular if the first interview has been conducted fairly well). This analysis has also determined that children steadily disclose across second interviews and that therefore rapport-maintenance is likely to be a vital skill for interviewers who conduct multiple interviews. However, currently, supportive verbal comments appear to be made infrequently and mainly in response to the child revealing information rather than as a tool to encourage the disclosure of information.

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## Appendix A: Example Coding Sheet (First Quarter of Child 'A' Interview One)

### Explanation of Variables:

- **Time:** Each utterance was entered into the sheet as one row. The rows were set out in chronological order, with time indicating that order.
- **Int\_Phase:** This indicated the phase of the interview the utterance was made in (rapport-building or substantive).
- **Utterance\_Type:** For an interviewer utterance, the type of question (invitation, directive, option-posing, suggestive, multiple, or unknown) or non-question utterance (supportive, neutral, or unsupportive) was coded here. For an interviewee utterance, the type of response was coded here; informative (separated by people, actions, locations, items, or temporal details) or otherwise (separated into uninformative or non-substantive details).
- **Support\_InvestRelevance:** For an interviewer question, the support provided (Supportive, neutral, non-supportive) was coded here. For an interviewee informative response, investigative-relevance (high or low) was coded here only for first interviews. For second interviews, the interviewee's informative response was coded for investigative-relevance, consistency, and novelty (high investigative-relevance and new consistent, high investigative-relevance and new contradictory, high investigative-relevance and repeated, low investigative-relevance and new consistent, low investigative-relevance and new contradictory, or low investigative-relevance and repeated).

	 Time	 Int_Phase	 Utterance_Type	 Support_InvestRelevance
1	91.00	Substantive	Option-Posing	Supportive
2	92.00	Substantive	Informative People	Low investigation relevance
3	93.00	Substantive	Invitation	Neutral
4	94.00	Substantive	Informative People	Low investigation relevance
5	95.00	Substantive	Invitation	Neutral
6	96.00	Substantive	Informative People	Low investigation relevance
7	97.00	Substantive	Invitation	Neutral
8	98.00	Substantive	Informative Actions	High investigation relevance
9	99.00	Substantive	Invitation	Neutral
10	100.00	Substantive	Uninformative	.
11	101.00	Substantive	Invitation	Neutral
12	102.00	Substantive	Informative People	High investigation relevance
13	103.00	Substantive	Multiple	Neutral
14	104.00	Substantive	Uninformative	.
15	105.00	Substantive	Directive	Neutral
16	106.00	Substantive	Informative Actions	High investigation relevance
17	107.00	Substantive	Option-Posing	Neutral
18	108.00	Substantive	Uninformative	.
19	109.00	Substantive	Option-Posing	Neutral
20	110.00	Substantive	Uninformative	.
21	111.00	Substantive	Neutral utterance	.
22	112.00	Substantive	Informative Actions	High investigation relevance
23	113.00	Substantive	Neutral utterance	.
24	114.00	Substantive	Uninformative	.
25	115.00	Substantive	Supportive utterance	.
26	116.00	Substantive	Informative Actions	High investigation relevance
27	117.00	Substantive	Invitation	Neutral
28	118.00	Substantive	Informative Actions	Low investigation relevance
29	119.00	Substantive	Supportive utterance	.
30	120.00	Substantive	Uninformative	.
31	121.00	Substantive	Supportive utterance	.
32	122.00	Substantive	Non-substantive	.
33	123.00	Substantive	Invitation	Neutral
34	124.00	Substantive	Uninformative	.
35	125.00	Substantive	Option-Posing	Supportive
36	126.00	Substantive	Non-substantive	.
37	127.00	Substantive	Option-Posing	Supportive
38	128.00	Substantive	Non-substantive	.
39	129.00	Substantive	Option-Posing	Supportive
40	130.00	Substantive	Non-substantive	.
41	131.00	Substantive	Option-Posing	Neutral
42	132.00	Substantive	Uninformative	.
43	133.00	Substantive	Invitation	Neutral
44	134.00	Substantive	Non-substantive	.

45	135.00	Substantive	Neutral utterance	.
46	136.00	Substantive	Non-substantive	.
47	137.00	Substantive	Option-Posing	Supportive
48	138.00	Substantive	Informative Actions	Low investigation relevance
49	139.00	Substantive	Neutral utterance	.
50	140.00	Substantive	Non-substantive	.
51	141.00	Substantive	Multiple	Supportive
52	142.00	Substantive	Uninformative	.
53	143.00	Substantive	Option-Posing	Neutral
54	144.00	Substantive	Uninformative	.
55	145.00	Substantive	Option-Posing	Neutral
56	146.00	Substantive	Uninformative	.
57	147.00	Substantive	Option-Posing	Neutral
58	148.00	Substantive	Uninformative	.
59	149.00	Substantive	Directive	Neutral
60	150.00	Substantive	Uninformative	.
61	151.00	Substantive	Directive	Non-supportive
62	152.00	Substantive	Uninformative	.
63	153.00	Substantive	Supportive utterance	.
64	154.00	Substantive	Uninformative	.
67	157.00	Substantive	Option-Posing	Supportive
68	158.00	Substantive	Uninformative	.
69	159.00	Substantive	Invitation	Neutral
70	160.00	Substantive	Non-substantive	.
71	161.00	Substantive	Directive	Neutral
72	162.00	Substantive	Uninformative	.
73	163.00	Substantive	Directive	Non-supportive
74	164.00	Substantive	Non-substantive	.
75	165.00	Substantive	Option-Posing	Non-supportive
76	166.00	Substantive	Uninformative	.
77	167.00	Substantive	Directive	Neutral
78	168.00	Substantive	Uninformative	.
79	169.00	Substantive	Directive	Neutral
80	170.00	Substantive	Uninformative	.
81	171.00	Substantive	Option-Posing	Supportive
82	172.00	Substantive	Non-substantive	.
83	173.00	Substantive	Option-Posing	Supportive
84	174.00	Substantive	Non-substantive	.
85	175.00	Substantive	Directive	Neutral
86	176.00	Substantive	Uninformative	.

## Appendix B: Tables comparing Question Proportions

Table 1.

*Number and Percentage of Question Types by Interview Quality*

Question Type	Good Interviews		Poor Interviews	
	<i>N</i>	Percentage	<i>N</i>	Percentage
Invitation	186	27.80	18	3.58
Directive	122	18.24	88	17.50
Option-Posing	188	28.10	178	35.39
Multiple	53	7.92	27	5.37
Suggestive	54	8.07	189	37.57
Unknown	66	9.87	3	0.60
Total Questions	669	100.00	503	100.00

Table 2.

*Number and Percentage of Question Types by Interview Number and Quality and Percentage Difference in Question Types from Second to First Interview*

Question Type	First Interview		Second Interview		Percentage Difference
	<i>N</i>	Percentage	<i>N</i>	Percentage	
<b>Good Interviews</b>					
Invitation	127	30.24	59	23.69	-6.54
Directive	77	18.33	45	18.07	-0.26
Option-posing	117	27.86	71	28.51	0.66
Multiple	34	8.10	19	7.63	-0.46
Suggestive	22	5.24	32	12.85	7.61
Unknown	43	10.24	23	9.24	-1.00
Total Questions	420	100.00	249	100.00	
<b>Poor Interviews</b>					
Invitation	3	1.73	15	4.55	2.81
Directive	32	18.50	56	16.97	-1.53
Option-posing	82	47.40	96	29.09	-18.31
Multiple	5	2.89	22	6.67	3.78
Suggestive	50	28.90	139	42.12	13.22
Unknown	1	0.58	2	0.61	0.03
Total Questions	173	100.00	330	100.00	

Table 3.

*Child Response Type by Interview Quality*

Response Type	Good Interviews		Poor Interviews	
	<i>N</i>	Percentage	<i>N</i>	Percentage
Informative	296	42.05	238	49.38
People	44		20	
Actions	212		175	
Locations	21		14	
Items	6		14	
Temporal	13		15	
Uninformative	282	40.06	181	37.55
Non-substantive	126	17.90	63	13.07
Total Responses	704	100.00	482	100.00

Table 4.

*Child Informativeness by Question Type*

Question Type	Informative		Uninformative		Non-substantive	
	<i>N</i>	Percentage	<i>N</i>	Percentage	<i>N</i>	Percentage
Invitation	69	43.95	67	42.68	21	13.38
Directive	97	48.99	72	36.36	29	14.65
Option-Posing	155	47.69	121	37.23	49	15.08
Multiple	39	54.17	25	34.72	8	11.11
Suggestive	127	59.07	70	32.56	18	8.38
Unknown	18	36.73	26	53.06	5	10.20
Total Questions	505	49.70	381	37.50	130	12.80

*Note.* This table refers to number of informative responses, not number of details provided per response.