



**QUEEN'S  
UNIVERSITY  
BELFAST**

## The Interpersonal Coding of Empathy (I.C.E.) scheme

Spencer, C., & McKeown, G. (2017, Aug 16). The Interpersonal Coding of Empathy (I.C.E.) scheme. Unpublished.

### **Document Version:**

Early version, also known as pre-print

### **Queen's University Belfast - Research Portal:**

[Link to publication record in Queen's University Belfast Research Portal](#)

### **Publisher rights**

© 2017 The Authors.

### **General rights**

Copyright for the publications made accessible via the Queen's University Belfast Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

### **Take down policy**

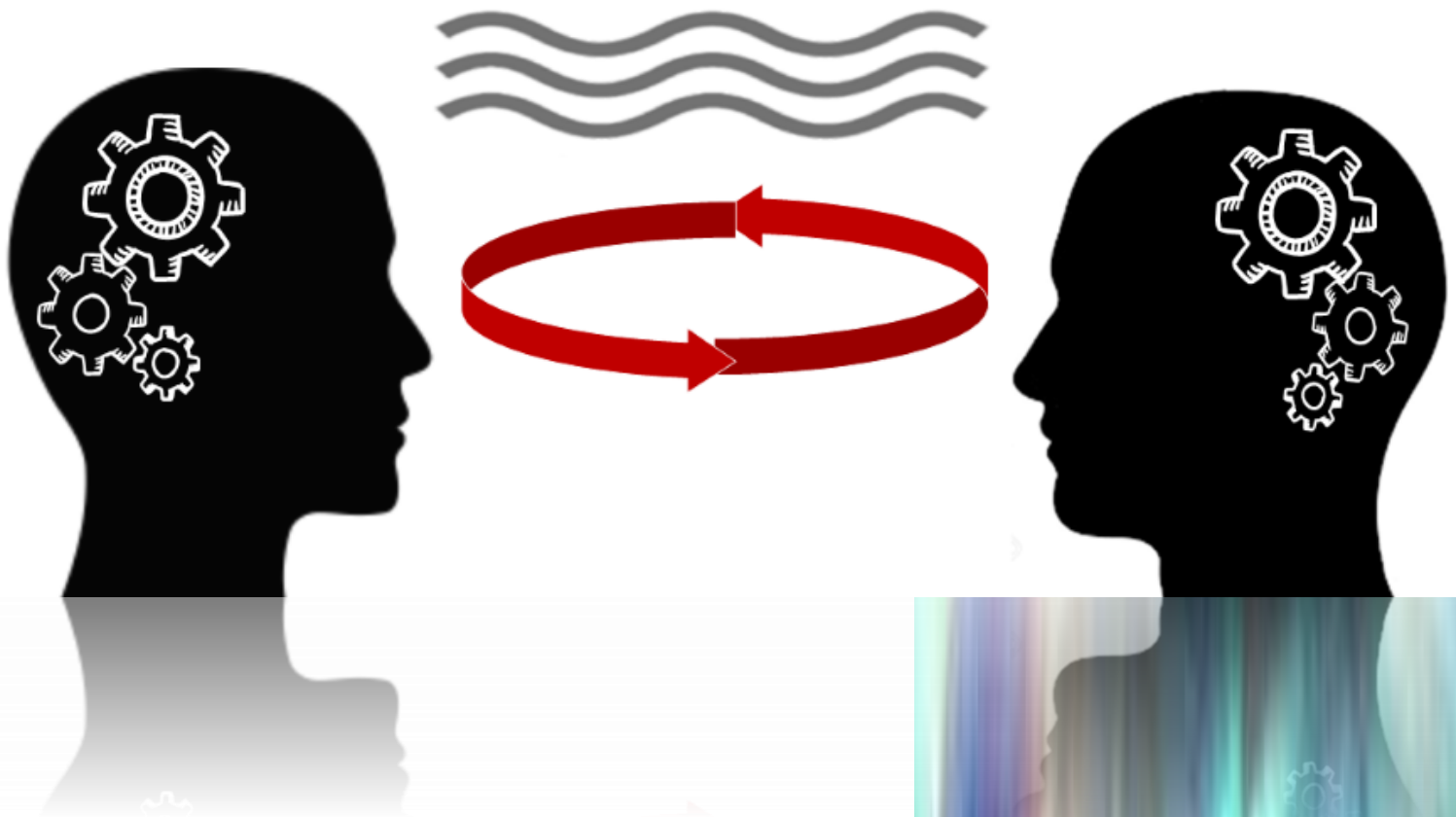
The Research Portal is Queen's institutional repository that provides access to Queen's research output. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact [openaccess@qub.ac.uk](mailto:openaccess@qub.ac.uk).

### **Open Access**

This research has been made openly available by Queen's academics and its Open Research team. We would love to hear how access to this research benefits you. – Share your feedback with us: <http://go.qub.ac.uk/oa-feedback>

# Interpersonal Coding of Empathy Scheme

(Spencer, Main & McKeown, in preparation)





**This is an excerpt from the Interpersonal Coding of Empathy Scheme which is currently in preparation for publication.**

**The scheme has been validated by independent coders, and we have used it to operationalise empathic behaviour in a number of experiments. We are currently preparing our results for publication, to provide a citable empathic behaviour coding tool.**

**The current document is an excerpt. It includes our operationalisation of empathic behaviour, as well as a description of the two ways in which this operationalisation can be used to code empathic behaviour.**

**\*\*\*\*\* The full coding scheme also includes specific step-by-step instructions for the coding process, as well as set-up instructions, and inter-coder reliability R code \*\*\*\*\***

**Our coding scheme is open-source.**

**We hope it may be useful to researchers examining interpersonal empathic behaviour in social interactions. We would be happy for the scheme to be validated on other datasets, as well as to have feedback on the scheme's layout. Please email Christine at [cspencer03@qub.ac.uk](mailto:cspencer03@qub.ac.uk) for the full version of the coding scheme.**

# Interpersonal Coding of Empathy Scheme

*(Spencer, Main & McKeown, in preparation)*

## What does interpersonal empathic behaviour involve?

People are continuously empathising with each other.

We engage in empathic behaviour to varying degrees whenever we interact with others.

We empathise with others in many settings, from sad and serious situations, to everyday conversations.

Behaving empathically towards another person involves understanding their cognitive state (what they are *thinking*) and their emotional state (how they are *feeling*).

Importantly, behaving empathically also involves responding towards that person *in an appropriate way* in the current context.

### **In this coding scheme, empathic behaviour is defined as:**

The degree to which a person actively demonstrates an understanding of the thoughts and feelings of his or her partner, through the display of emotionally appropriate behaviours, nonverbal cues and engagement.

To help you more fully understand what empathic behaviour involves, we have described five specific important empathic behaviours in more detail below:

### 1) Cognitive attunement

Strong empathic behaviour requires a high degree of cognitive attunement, which is **the behavioural expression of cognitive empathy**. It refers to the degree to which a person demonstrates an understanding of what is going on in the mind of another person.

Being cognitively attuned to another person involves understanding what that person is attempting to communicate or imply.

A person demonstrating strong cognitive attunement will have a strong sense of what their partner is trying to say, sometimes even before they say it. They might also really understand their attitudes and viewpoint towards particular topics, and sense what information they will find interesting. This is sometimes referred to as being “on the same wavelength”, or “on the same page” as someone else. Sometimes it can result in two people saying the same thing at the same time, having the same viewpoint, or finishing each other’s sentences.

Cognitive attunement therefore involves an implicit gauging of another person’s mental representation of the world, the boundaries of their knowledge on a given topic, as well as their interests and social attitudes.

Sophisticated cognitive attunement is involved in **perspective-taking** and **mentalising** the experience of another. Strong cognitive attunement allows people to become more empathically “aligned” with each other, by making them feel as though they are “on the same page”, which is critical for the establishment of social bonds, rapport and an emotional connection.

### 2) Emotional attunement

Strong empathic behaviour requires a high degree of emotional attunement, which is the **behavioural expression of reactive affective empathy**. It refers to the degree to which a person demonstrates an understanding of the emotional state of another person.

Being emotionally attuned to another person involves being sensitive to the emotional nonverbal and verbal cues that they are signalling from multiple channels. It involves continuously gauging their emotional state in an ever-changing dynamic emotional context.

Importantly, sophisticated emotional attunement behaviour involves responding in a way which is **appropriate to the emotional context**. Therefore, it is not always required for a person to feel the exact same emotion as the person they are empathising with. It may be more empathic to react in a way which is helpful and appropriate in the context, to demonstrate an acknowledgment and valuing of the other person’s emotions.

In sum, being attuned to another person’s emotional state involves picking up on how they seem to be feeling from how they are acting and what they are saying, and being responsive to their feelings.

### 3) Engagement

Strong empathic behaviour requires a high degree of engagement, which refers to the **degree to which a person displays genuine interest, alertness and engagement** during the interaction.

Strong empathic behaviour is therefore usually evident when a person maintains appropriate eye contact and appears highly attentive to the other person. The person will also usually signal their interest in the conversation by engaging in encouraging back-channelling whilst listening.

### 4) Nonverbal expressivity

This refers to **the degree to which an interactant is emotionally and nonverbally expressive**.

People make use of different facial expressions, gestures and tones of speech to communicate effectively with others. Strong empathic behaviour **usually** involves exhibiting a relatively high degree of nonverbal expression from multiple channels. However, it is important to note that being highly expressive is not always empathically appropriate in some contexts.

### 5) Being an empathic conversational partner

This refers to **the degree to which a person takes an empathically appropriate role in the conversation**.

Strong empathic behaviour involves taking an involved and active role in a conversation **without dominating**. When a person is an active and equal player in a conversation, he or she appears engaged and interested in what the other person is saying. An empathic conversational partner will take an active speaking role when required, and engage in attentive, empathic listening when appropriate. He or she will demonstrate “effort” in the conversation, responding to and acknowledging his or her partner’s contribution.

When a person is **not** being an empathic conversational partner, he or she may appear to either dominate the conversation by taking over, or by sitting back and appearing disinterested in what his or her partner is saying. An unempathic conversational partner will either make too little “effort” in the conversation, or take over without responding or acknowledging his or her partner’s contribution.

This coding scheme can be used to rate a person's empathic behaviour in 2 ways:

- 1) **Coding Type 1:** Continuous intensity scoring
- 2) **Coding Type 2:** Categorical annotation

### ***Coding Type 1: Continuous intensity scoring***

In Coding Type 1, it is recommended that a minimum of three coders rate how empathically each interactant is behaving towards their partner on a slider scale marked from 0 (“not very empathically”) to 100 (“highly empathically”). The slider has an accuracy level of 3 decimal places. Coding is performed every 10 seconds. Each coder's values for each 10-second period are totalled to obtain an estimate for the interactant's empathic behaviour score across the whole interaction. Finally, the coders' scores are averaged to obtain a mean score for the interactant's empathic behaviour over the whole interaction. The consistency of the coders' ratings is assessed by the examination of the intra-class correlation coefficient. Coding Type 1 is less time and resource-intensive than Coding Type 2, yielding a higher degree of inter-coder reliability. This method should be selected if the aim is to obtain highly precise empathic intensity scores for a period of time, to examine the pattern of empathic behaviour an interactant displays over time, or to quantify the degree of association between two interactants' empathic intensity levels over time. Continuous scores are obtained at a high degree of accuracy (to 3 decimal places), making the data suitable for regression analysis.

### ***Coding Type 2: Categorical annotation***

In Coding Type 2, it is recommended that a minimum of three coders annotate the onset and offset of three levels of empathic behaviour (“low”, “moderate” and “high”) for each interactant across the whole interaction. This task is performed using annotation software, which yields duration values (in seconds) to indicate how long each interactant displayed each level of empathic behaviour during the interaction. The consistency of the coders' onset and offset times is assessed using Krippendorff's alpha. The duration values for low, moderate and high empathic behaviour can be transformed by multiplying the values by 1, 2 and 3, respectively. These transformed scores are then totalled to compute an overall empathic intensity score for each interactant in each one-minute clip. Finally, all three coders' scores are averaged to obtain a finalised empathic behaviour score for the entire interaction. Coding Type 2 is a more involved process, which requires a period in which coders must be trained to use annotation software. All coders are required to annotate a sample of the video material before re-grouping to discuss discrepancies in empathic behaviour interpretation. Annotation then re-commences. This method yields lower inter-coder reliability than Coding Type 1, due to the difficulty of achieving agreement on the exact onset and offset times of a level of empathic behaviour which, in reality, changes in a continuous rather than discrete fashion. However, this type of coding is very useful for quantifying the amount of time two interactants spend in empathic “alignment”. It can also be very usefully combined with micro-level annotation of nonverbal behaviours in order to identify the specific behaviours which are consistently present during strong empathic behaviour.

### ***Which coding type should I use?***

The decision on which coding type to use should be based on the type of research question you are addressing, and the type of analysis you will be performing.

Note: Both types of coding outlined here are associated with pros and cons. In order to achieve a mid-ground between the two coding task types, coding can be performed with a moveable joystick to obtain continuous estimates of empathic behaviour intensity over longer swathes of time.



# **CODER INSTRUCTIONS:**

Please email Christine at  
[cspencer03@qub.ac.uk](mailto:cspencer03@qub.ac.uk) for access to  
the full coding and set-up instructions  
and inter-coder reliability R code