



## Review article

# Are we really measuring empathy? Proposal for a new measurement framework



Michel-Pierre Coll<sup>a,b,\*</sup>, Essi Viding<sup>c</sup>, Markus Rütgen<sup>d</sup>, Giorgia Silani<sup>e</sup>, Claus Lamm<sup>d</sup>,  
Caroline Catmur<sup>f</sup>, Geoffrey Bird<sup>a,b</sup>

<sup>a</sup> Department of Experimental Psychology, University of Oxford, South Parks Road, Oxford OX1 3UD, UK

<sup>b</sup> MRC Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, Psychology and Neuroscience, King's College London, University of London, SE5 8AF, UK

<sup>c</sup> Developmental Risk and Resilience Unit, Division of Psychology and Language Sciences, University College London, 26 Bedford Way, London WC1H 0AP, UK

<sup>d</sup> Social, Cognitive and Affective Neuroscience Unit, Department of Basic Psychological Research and Research Methods, Faculty of Psychology, University of Vienna, Vienna 1010, Austria

<sup>e</sup> Department of Applied Psychology: Health, Development, Enhancement and Intervention, University of Vienna, Vienna 1010, Austria

<sup>f</sup> Department of Psychology, Institute of Psychiatry, Psychology and Neuroscience, King's College, London, SE5 8AF, UK

## ARTICLE INFO

## Keywords:

Empathy  
Affect sharing  
Emotion identification  
Neuroscience  
Model  
Theory  
Definition

## ABSTRACT

Empathy – currently defined as the sharing of another's affective state – has been the focus of much psychological and neuroscientific research in the last decade, much of which has been focused on ascertaining the empathic ability of individuals with various clinical conditions. However, most of this work tends to overlook the fact that empathy is the result of a complex process requiring a number of intermediate processing steps. It is therefore the case that describing an individual or group as 'lacking empathy' lacks specificity. We argue for an alternative measurement framework, in which we explain variance in empathic response in terms of individual differences in the ability to identify another's emotional state ('emotion identification'), and the degree to which identification of another's state causes a corresponding state in the self ('affect sharing'). We describe how existing empathy paradigms need to be modified in order to fit within this measurement framework, and illustrate the utility of this approach with reference to examples from both cognitive neuroscience and clinical psychology.

## 1. Introduction

Empathy is commonly understood to be a complex psychological construct that plays a crucial role in social interaction. As with many complex constructs, several overlapping but distinct definitions of empathy have been suggested (Batson, 2009; Cuff et al., 2016). While there is as yet no consensus as to the precise definition of empathy, most researchers (at least in the field of cognitive neuroscience and psychology) agree that empathy involves the adoption of another's affective state so that both the Empathizer and the empathic target (henceforth 'Target') are in a similar state (Cuff et al., 2016; Decety and Jackson, 2004; de Vignemont and Singer, 2006; de Waal, 2008; Zaki and Ochsner, 2012; Shamay-Tsoory et al., 2009). This notion of sharing the affective state of another forms the core of what we shall refer to as the standard definition of empathy.

Empathy has received considerable research attention in the last decade, with a particular focus on its neural instantiation permitted by

improvements in human functional neuroimaging (Lamm et al., 2016; Shamay-Tsoory, 2011; Singer and Lamm, 2009; Zaki and Ochsner, 2012). Establishing the neural networks underlying empathy can elucidate the relationship between self- and other-related affective experiences, provide information about the functional processes involved in empathy, and suggest interventions to modulate levels of empathy wherever desired.

Despite several leading theoretical models arguing for a multi-factorial structure of empathy (Davis, 1980; Decety and Jackson, 2004; Decety and Meyer, 2008; Preston and de Waal, 2002), there have been surprisingly few efforts to develop exhaustive information processing models to detail the different processing stages involved in producing an empathic response. One consequence of this is that it becomes difficult to determine the locus of any effect that influences the empathic response. Without consideration of the contribution of those processes upon which empathy relies, one cannot be sure that any effect is on empathy *per se*, or on a computational precursor. Here, it will be argued

\* Corresponding author at: Department of Experimental Psychology, University of Oxford, South Parks Road, Oxford OX1 3UD, UK.  
E-mail address: [michel-pierre.coll@ox.ac.uk](mailto:michel-pierre.coll@ox.ac.uk) (M.-P. Coll).

that empathy relies upon, but is distinct from, the ability to identify the emotional state of the Target (Bird and Viding, 2014; Happé et al., 2017). The implication of this distinction between empathy and emotion identification for past and future research will be discussed by showing that failing to distinguish these two constructs could interfere with the correct interpretation and measurement of differences in empathic responses associated with experimental manipulations or clinical conditions. Distinguishing between emotion identification and empathy necessarily requires refinement of at least the standard measurement framework for empathy, and possibly the definition of empathy itself.

## 2. Current issues with the measurement of empathy

Under the standard definition, for empathy to have occurred, the Empathizer must be in a similar affective state to the Target. It therefore necessarily follows that in order to demonstrate an empathic response, the Empathizer must be able to identify the Target's affective state accurately, and identification of the Target's state must cause the Empathizer to share this state. Under the standard definition of empathy therefore, the Empathizer can only be considered empathic if they correctly **identify and share** the Target's emotion. Conversely, in cases where the Empathizer does not identify the Target's state accurately, irrespective of whether the Empathizer shares the state they judge the Target to be in, they cannot fulfil the standard definition of empathy (Bird and Viding, 2014).

Under the standard definition then, empathy is a state one enters into as a consequence of at least two processes (emotion identification and affect sharing): and empathy is just one possible outcome of these two processes (for example, any inaccuracy of emotion identification will result in a non-matching state). How then, should one conceptualize individual differences in empathy? If empathy refers to the outcome of two processes, and, if either of these processes is not functioning perfectly the outcome does not meet the definition of empathy, then what does it mean to be less empathic? It is true that the affective state which arises as a consequence of these two processes can be more or less like the state of the other. However, any state deviating from the matching state does not meet the definition of empathy. Under the standard 'matching state' definition therefore, empathy is binary – it either occurs or does not. This definition is incompatible with the common understanding of empathy, in which it is acknowledged that there can be varying degrees of empathy and that individuals or groups can be more or less empathic. Despite this, we shall continue to use the term empathic response to refer to the outcome of the emotion identification and affect sharing processes as it is the term most commonly used in the literature.

As can be seen then, to describe an individual or group as 'less empathic' is problematic when empathy is defined as a state. However, even if this problem is overlooked, the fact that empathy is the product of two processes means that one can be 'less empathic' either because one has misidentified the Target's state, or because even though the Target's state has been correctly identified, one does not share the Target's state. This is an unsatisfactory situation as, according to current usage, the notion of 'impaired empathy' conflates two processes: the identification of the Target's state, and the sharing of the Target's state. These processes contribute independent variance to the empathic response and can be independently affected in clinical conditions. Furthermore, it is likely that a clinical group characterized by reduced empathy due to poor emotion identification will need a different intervention than a group also characterized by reduced empathy, but where this is due to reduced affect sharing.

It seems that there are two possible solutions to this problem: The first is that we continue to use the standard definition of empathy as the outcome of two processes but we do not refer to individual or group differences in empathy; rather we specify whether any individual differences, experimental manipulations, or clinical conditions impact emotion identification, affect sharing or both. This solution has the

benefit of keeping the standard definition of empathy, but dissociates the concept of empathy from measurement of the processes giving rise to the empathic response. The second solution is to redefine empathy such that rather than the outcome of a process it becomes the process of affect sharing itself; however, it would be measured not as the degree to which the Empathizer's state matches that of the Target, but rather the degree to which the Empathizer's state matches that identified in the Target (which may deviate from the Target's actual state). This solution has the benefit that it becomes meaningful to discuss individual differences in empathy (because empathy is no longer binary), and individual differences in empathy are directly related to the measurement of a single process rather than a conflation of two processes. A drawback of the new definition is that it deviates both from the long tradition of existing work on empathy using the standard definition, and from the popular understanding of empathy. While either approach is logically coherent, it should be noted that the implications for the measurement of empathy that are outlined below are the same whichever option is chosen. The first solution is relatively easy to implement and the section "*Implications for paradigms used in basic and clinical studies of empathy*" will describe how this can be done within existing empathy paradigms. The second solution is more radical and therefore we have not pursued it further here, but note that adoption of this definition may be worthy of consideration by the field in future.

## 3. Defining and measuring emotion identification and affect sharing

We consider emotion identification to be the process of attributing an emotion to an individual (note that this need not be a conscious attribution) which is agnostic as to the method by which the attribution is made – it can be based on observable perceptual cues, but also includes identification of an individual's state based on contextual information or inferential reasoning. As such, it encompasses the stages of emotion perception, recognition and categorization (see Schirmer and Adolphs, 2017 for a definition of these concepts). The accuracy of emotion identification is therefore defined as the degree to which the Empathizer's judgement of the state of the Target matches the Target's actual state (Fig. 1- top panel). Specific methods for measuring emotion identification are outlined below, but it is immediately apparent that an individual may vary in their ability to identify another's emotion depending on the cues available to them and on the context the Target is in. For example, an Empathizer with a specific problem with the recognition of emotional facial expressions may be very inaccurate in identifying the Target's state when the Target's facial expression is the only information the Empathizer has to make their judgement, but be much more accurate if they know the situation the Target is in and have been in a similar situation. The processes contributing to emotion identification will also be recruited to explain and predict behaviour without necessarily evoking an emotional response, but here we are interested in their role in producing an empathic response.

Affect sharing describes the process whereby identification of another's state causes that state to be instantiated in the self. Individual differences in affect sharing would be described by differences in the function mapping the state elicited in the Empathizer as a result of their judgement of the Target's emotional state (not the Target's actual state; see Figs. and 2). For example, if the affect sharing function can be described as a simple ratio (note that more complicated functions are possible, and even probable – see Fig. 2), then an individual with a ratio of 2:1 (emotion identified in the other: emotion elicited in the self), would be described as having a greater degree of affect sharing than an individual for whom the ratio is 3:1. This is because, given that they both identify the same state in the Target, the state elicited in the former individual will be greater than the state elicited in the latter individual. Affect sharing may be described as more or less accurate on the basis of the degree of correspondence between the state of the Target identified by the Empathizer and the empathic response elicited

Download English Version:

<https://daneshyari.com/en/article/5043422>

Download Persian Version:

<https://daneshyari.com/article/5043422>

[Daneshyari.com](https://daneshyari.com)