A cross-cultural study: Empathy and Role-taking in Brazilian and American children*

Un estudio transcultural: empatía y la toma de perspectiva en niños brasileños y estadounidenses

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RESUMEN

Estudios anteriores mostraron avances en la toma de perspectiva y la empatía a lo largo de la infancia, y sugieren la existencia de relaciones entre estas variables y los aspectos de la cultura. El estudio presentado aquí investigó la relación entre empatía y toma de perspectiva en una muestra compuesta por niños brasileños y estadounidenses, entre 6 y 13 años de edad. En el método, se utilizo el *Índice de Empatía para Niños y Adolescentes - IECA* (Bryant, 1982) y una tarea de toma de perspectiva (Flavell, 1968). Los resultados mostraron que los niños estadounidenses obtuvieron un puntaje más alto en la toma de perspectiva que los participantes brasileños. Por otro lado, los niños brasileños obtuvieron calificaciones más altas en empatía que los estadounidenses. Los resultados se discuten considerando estudios transculturales previos sobre desarrollo social y cognitivo.

Palabras clave
niños; empatía; toma de perspectiva; Estados Unidos de América; Brasil.

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ABSTRACT

Previous studies have showed development in perspective-taking abilities and empathy along childhood, and suggested the existence of relationships between these variables and aspects of culture. The study presented here investigated the relationship between empathy and role-taking in a sample composed by American and Brazilian children, aged 6 to 13. The method involved the administration of the Index of Empathy for Children and Adolescent – IECA (Bryant, 1982) and one Role-taking task. Results showed that American children scored higher in Role-taking than Brazilian participants. On the other hand, Brazilian children scored higher in empathy than American participants. Results are discussed considering previous cross-cultural studies on social and cognitive development.

Keywords
children; empathy; role-taking; United States of America; Brazil.

Introduction

From a developmental perspective, some authors have argued that social development should be studied in a framework in which cognition, affection, and behavior are viewed

as inseparable components of social life (Eisenberg, 2000; Hoffman, 1987; 1991; Kurtz & Eisenberg, 1983; Selman, 1971b). By implication, as children improve in their ability to put themselves into another's shoes, they should coordinate and distinguish different points of view, using more complex patterns of moral reasoning (Vaish, Carpenter, & Tomasello, 2009).

Classical theorists define role taking as a cognitive ability that makes possible to put yourself in other people's shoes, taking their perspectives and understanding of their thoughts and feelings (Flavell, 1968; Selman & Byrne, 1974). Previous studies showed that there are marked gains in Role-taking task performances as children get older (Castle & Richards, 1979; Selman, 1971a; Urberg & Docherty, 1976).

On the other hand, empathy can be conceptualized as a multidimensional construct related to vicarious experiences of other people's feelings and thoughts (Davis, 1983; Eisenberg, 2000; Hoffman, 2000). Although the term empathy has been used in a diversity of meanings (Batson, 2009), most authors agree that empathic experiences involve behavioral, cognitive, and affective components.

According to Hoffman (1991), empathy and role-taking are strictly related because the development of more complex empathic feelings depends on the individual's capacity to differentiate their self from the self of others and imagine the other person's situation beyond here and now. This view has found some empirical support in recent studies (Chambers & Davis, 2012; Davis et al., 2004), and reinforced the assumption that empathy has a central role in social development (Batson et al., 2003; Garaigordobil & Galdeano, 2006; Knafo, Zahn-Waxler, Hulle, Robinson, & Rhee, 2008).

However, empirical evidence concerning the specific relationship between role-taking and empathy during childhood is controversial. Strayer and Roberts (1989) found positive correlations between these two variables in a sample of Anglo-Canadian 6-year-olds, using independent measures. Similarly, Kagan and Knudson (1982) observed that affective role-

taking was positively correlated with empathy in an experimental situation involving stories in which the main characters were children. On the other hand, when the researchers used a situation in which participants had to listen to a tape with an adult voice, no alteration between empathy and role-taking was observed, suggesting that the correlation observed in the former condition might have been mediated by an identification process with the person with whom participants empathized.

Beyond the relationship between cognition and affectivity at the individual level, a further question might yet be proposed: To what extent does culture influence the development of role-taking and empathy?

It is feasible to suppose that role-taking and empathy are automatic and universal abilities related to social adaptation and to the capacity to interact with peers. Concerning this point, Borke (1973) observed that both American and Chinese 3-5-year-olds showed similar patterns of development of the ability to recognize other people's emotions, despite the cultural differences between these two countries.

However, some authors have emphasized that cultural background produces differences in the way people care and interact to each other. Research in Social Psychology has demonstrated that in more collectivistic countries people tend to be allocentric —concerned with ingroup goals, attached to their relatives and acquaintances, more favorable to cooperation and equality etc—. On the other hand, in individualistic countries people tend to be idiocentric – more concerned with their own goals, more reliant on competition and self-promotion, more detached from ingroups (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988).

Even though a criticism exists for a binary approach to individualism-collectivism (Heinke & Louis, 2009), some authors have described Latin American countries as Simpatia[1], which means that people tend to be more friendly, helpful, socioemotionally-oriented, highly concerned with the social welfare of other people, and inclined to equality, as compared to non-simpatia countries, such

as The United States (Gouveia & Clemente, 2000; Levine, Norenzayan, & Philbrick, 2001; Matsumoto et al., 2008; Rodrigues & Assmar, 1988; Triandis et al., 1988).

Additionally, cross-cultural studies have showed that the rates of helping a stranger were negatively correlated with economic productivity of the country, and that Brazilian adults obtained the highest scores on three measures of helping a stranger (helping a blind person to cross the street; helping a pedestrian who dropped his pen; and helping someone with a hurt leg), as compared to people from other 23 countries. Indeed, participants from the United States occupied the penultimate position in the rank-order of the most helpful persons (Levine et al., 2001).

American and Brazilian cultures have been described as different in aspects such as conformism (Sistrunk, Glement, & Guenther, 1971), as well as ideological and political perspectives on care and education during childhood (Freitas, Sherry, & Tudge, 2008). Also, preschoolers in these two countries exhibit different patterns of engagement in typical daily activities with adults and peers: children from Greensboro (NC-USA) are more prone to engage in complex talking about past and future situations and to request or elicit information to their social world than Brazilian children (Tudge et al., 2006).

Previous studies have showed differences in children's perspective-taking and other sociocognitive abilities, such as Theort of Mind, associated to culture (Lecce & Hughes, 2010; Luk, Xiao, & Cheung, 2012). On the other hand, we have no notice of previous studies simultaneously comparing role-taking and empathy in North and South American children. In fact, very little is known about variations in cognitive abilities related to perspective-taking within Western cultures (Lecce & Hughes, 2010), which is an important point to be addressed because there are evident differences concerning social values (Agudelo de Arango, 1997), affective arousal (Ribeiro, Pompéia, & Bueno, 2005), and interpersonal relationships among Western countries.

Thus, in this study we aimed to verify if Brazilian and American children vary on the development of empathy and role-taking. Furthermore, we were interested in evaluate if these constructs were affected by children's age and gender.

Method

Participants

98 Brazilian children (46 boys and 52 girls), ranging from seven to twelve years-old (M_{age} = 9.31; SD = 1.56), from the city of Petrolina (PE), and 80 American children (41 boys and 39 girls), ranging from six to thirteen years-old (M_{age} = 9.31; SD = 2.06) living in the cities of Everett (MA), Allston (MA), and Somerville (MA) participated in the study. Three age groups were tested: 6-8 year-olds (N = 54), 8.1-10 year-olds (N = 65), and 10.1-13 year-olds (N = 59). Children in both countries came from a range of socioeconomic backgrounds, and grade level varied from kindergarten to 8th grade.

Materials

Children were administered a Role-taking task (RTT) developed by Flavell (1968) and the Index of Empathy for Children and Adolescents (IECA) by Bryant (1982).

Procedures

The RTT consisted of a seven cards sequence illustrating the story of a boy who is chased by a dog, climbs up a tree to escape, and eats a fruit while he is at the top of the tree (Figure 1). Participants are asked to look at the seven cards and to tell the story. Next, the experimenter removes three cards that indicate the reason why the boy climbed the tree (to escape from an angry dog), and even though the image of the dog is showed in the background of the last card, no information suggesting that the boy was escaping

of a dog remains in the four remaining cards. So, the experimenter asks the participant to say how another person (AP) who has just arrived and sees only the four remaining cards would tell the story. Finally, participants are asked: "What would AP, who just arrived here, say if I ask him/her why the boy climbed the tree?"

Figure 1
Illustrations used in the Role-taking task (RTT).
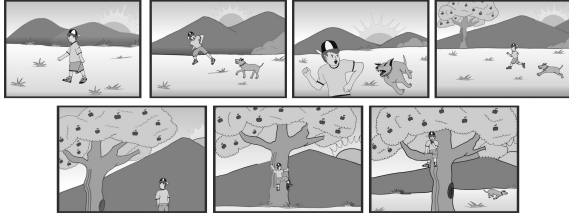
Source: own work.

The children's responses to the RTT were scored according to the following system: participants receives 1 point when they say that the AP would tell a story equivalent to their own version and that the boy had climbed the tree because of the dog; when participants said that the AP would tell a different story from their own version (e.g., "a boy who was hungry saw an apple tree and climbed up it to eat an apple"), but also that the boy climbed the tree because he was being chased by an angry dog, they were credited with 2 points; and finally, when participants said that the AP would tell a different story from their own version and that the AP would give a different reason for the boy climbing up the tree, responses were credited with 3 points.

According to Selman (1971b), each of these categories of response indicates a different level of role-taking: at first level, children cannot differentiate their own perspective from that of other people, and consider that everyone will always perceive the world like themselves; at the second level, children are able to understand that people might have different perspectives, but they cannot coordinate these different points-of-view very well and tend to mix their own perspective with other people's point of view; at the third level, children are able to distinguish and correctly coordinate their own perspective with others' perspectives.

The *Index of Empathy for Children and Adolescent* (IECA) is a self-evaluative scale composed of 22 sentences describing behaviors, feelings, and thoughts. The respondent is asked to say "yes" if a given sentence describes him/her well or 'no' if the sentence does not describe him/her very well. Half of the items were designed in the inverse direction of the scale, and measure a factor named lack of empathy – LE (e.g., *"People who kiss and hug in public are silly"*; *"Boys who cry because they are happy are silly"*) and the remaining items evaluate a factor called the tendency to be empathic – TE (e.g., *"It makes me sad to see a girl who can't find anyone to play with"*; *"I really like to watch people open presents, even when I don't get a present myself"*). Each "yes" response for TE items or "no" response for LE items was scored 1 point, and all items were summed up to obtain the empathy index.

In Brazil, participants were administered the Portuguese version translated and validated by Koller, Camino and Ribeiro (2002), and in The United States participants were administered the original version of the IECA (Bryant, 1982).

The tasks were administered individually, during school hours, in two different orders, and the total time to administer the tasks was around twenty minutes.

Results

A 2 x 2 x 3 Multiple Analysis of Variance was conducted to determine the effects of gender (boys, girls), country (Brazil, USA), and age (6-8-years, 8.1-10-years, 10.1-13-years) on the scores of Empathy and Role-Taking. A significant main effect of gender on the scores of Empathy [$F (1, 176) = 22.08$, $p < 0.001$, $\eta^2 = 0.99$] was observed: girls scored higher than boys in the Bryant's Scale.

Country yielded a main effect on the scores of Empathy [$F (1, 176) = 30.68$, $p < 0.001$, $\eta^2 = 1.00$], and Role-taking [$F (1, 176) = 49.35$, $p < 0.001$, $\eta^2 = 1.00$]. As shown in Table 1, Brazilian children scored higher than American children in Empathy, while American participants scored

higher than their Brazilian counterparts in the Role-taking task.

TABLE 1
Means and standard deviations in Role-taking and Empathy by country and gender

		Role-taking	Empathy
Brazil	Boys	2.02 (.61)	11.37 (2.98)
	Girls	2.27 (.49)	13.02 (2.27)
	Total	2.15 (.56)	12.24 (2.74)
USA	Boys	2.83 (.44)	9.00 (3.20)
	Girls	2.64 (.62)	10.87 (2.90)
	Total	2.74 (.54)	9.91 (3.18)

Source: own work

Age yielded a main effect on Empathy [F (2, 175) = 5.61, p = 0.004, η^2 = 0.86] and Role-taking [F (2, 175) = 5.83, p = 0.004, η^2 = 0.89] scores (Table 2). Post-hoc Tukey Honestly Significant Difference (HSD) tests showed that 6-8-year-olds scored lower than 8.1-10-year-olds (p = 0.041) and lower than 10.1-13-year-olds (p = 0.005) in Role-taking task, and that there were no significant differences between 8.1-10-year-olds and 10.1-13-year-olds (p = 0.676). Furthermore, Tukey test showed that the only significant difference in Empathy were between 6-8-year-olds and 8.1-10-year-olds (p < 0.001) scores.

TABLE 2
Means (standard deviations) in Role-taking and Empathy by children's age

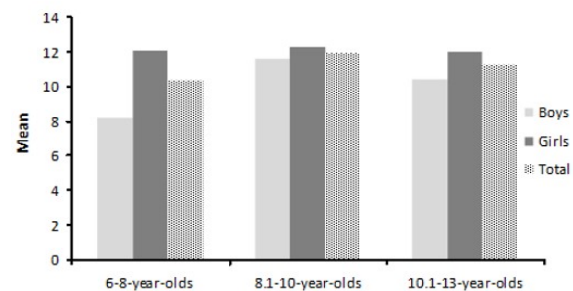|	Empathy	Role-taking
6-8 years	10.33 (3.86)	2.22 (0.66)
8.1-10 years	11.89 (2.99)	2.46 (0.61)
10.1-13 years	11.22 (2.40)	2.54 (0.56)

Source: own work.

The MANOVA also yielded a significant Country x Gender interaction on Role-taking scores [F (1,176) = 5.06, p = 0.026, η^2 = 0.61]

and a Gender x Age interaction on Empathy scores [F (1,176) = 5.70, p = 0.004, η^2 = 0.85]. Follow-up Analyses of Variance indicated that American boys scored higher than Brazilian boys [F (1,85) = 48.48, p < 0.001, η^2 = 1.00] and American girls scored higher than Brazilian girls [F (1,89) = 10.07, p = 0.002, η^2 = 0.88] in the Role-taking task. Furthermore, the difference between boys and girls in Role-taking is significant for Brazilian children (p = 0.029), but not for American participants (p = 0.123).

The results of ANOVA also showed that the differences in the scores of Empathy related to age were significant for boys [F (1,84) = 8.63, p < 0.001, η^2 = 0.96] but not for girls. Tukey test indicated that 6-8-year-old boys scored lower than 8.1-10-year-old boys (p < 0.001) and lower than 10.1-13.-year-old boys (p = 0.027) in the empathy scale. Finally, there were no significant differences between 8.1-10-year-old boys and 10.1-13-year-old boys in Bryant's Scale scores (Figure 2).

Figure 2
Means in Bryant's Scale by age and gender.

Source: own work

To test the quality of relationship between Role-taking and Empathy, we conducted simple Pearson's correlation test which indicated that scores in the Bryant Scale and in the Role-taking task were negatively correlated (r = -0.20; p = 0.006). Finally, Role-taking and Age were positively correlated (r = 0.18; p = 0.015). When Brazilian and American samples were tested separately, no correlation between role-taking and empathy was found.

Discussion

Results provided some evidence in accordance with previous studies concerning the development of role-taking and empathy, and with Hoffman's (2000) and Davis' (1983) assumptions. More specifically, we observed that role-taking and empathy scores increased as the children get older. The age groups comparisons indicated that between 6 and 8 years of age the ability to take the perspective of others tends to develop at a faster pace, being practically consolidated around 10 years (especially for girls), while empathy does not seem to have changed significantly after 8 years of age.

According to Flavell (1968) and Selman (1971a), it would be expected that around 10 years of age children already exhibited a full capacity to differentiate their perspectives from other people and coordinate different points of view, ensuring their success in the Role-taking task (RTT) used here. In fact, only 7.3% (n = 13) of children failed (their responses were classified as level 1) in RTT, indicating that it might have been easy for most participants. Also, it is possible that children develop this ability earlier than predicted in theory, especially in this kind of task in which role-taking is evaluated through a perceptual stimulus. In further studies would be more appropriate to combine the use of perceptual role-taking tasks with another one that also evaluates social role-taking (Selman & Byrne, 1974), to obtain a more detailed assessment of this sociocognitive skill.

Concerning empathy, Hoffman (2000) states that between 6 and 12 years of age children develop from a stage in which they empathize through immediate information to another one during which the empathic distress can be activated by different kinds of situational cues and generalized for situations beyond the here-and-now. Even though there are conceptual divergences in the way Bryant (1982) and Hoffman (2000) define empathy, both authors propose that empathy develops as children get older. Results indicated a significant increase in empathy scores between 6 and 10 years paralleled

by an improvement in the performances in the Role-taking task.

On the other hand, the negative correlation between empathy and role-taking is contrary to Bryant's (1982), Davis' (1983), and Hoffman's assumption that these constructs develop in parallel during childhood.

Although weak, the correlation observed might suggest that the higher the ability to take the perspective of other people, the less compassionate children would be, and vice versa. One possible explanation for this result is that a higher capacity of role-taking might have led children to want to describe themselves as less "emotional" and more "objective", once that the agreement with some of the items of IECA (e.g., "See a girl who is crying makes me feel like crying") could be interpreted as a sign of "immaturity." Thus, children with more role-taking capacity might be influenced by an effect of the social desirability.

Another possibility is that empathy and role-taking influence each other in a negative way during childhood and early adolescence, in the sense that high role-taking skill predisposes children to experience empathic distress, producing an avoidant behavior to taking others' perspective in order to prevent suffering in the self. This hypothesis is based on previous studies (Davis, 1983; Escrivá, Navarro, & García, 2004) that found negative correlations between the ability of perspective taking and personal distress in adults.

It remains yet possible that the negative correlation between Empathy and Role-taking has occurred by influence of non-controlled variables and that the result observed here does not reflect a real relationship between these two variables. The fact that no correlation between empathy and role-taking was observed when children were divided by country and tested as two independent samples reinforces this last assumption.

The three hypotheses mentioned above need to be further explored in future studies, in which the mutual influence of role-taking and empathy between childhood and adolescence can be

tested systematically, and controlled by age, sex, socioeconomic level, and other variables.

The differences in empathy related to nationality and gender are in accordance to cross-cultural studies (Gouveia & Clemente, 2000; Levine et al., 2001) that indicate that people in collectivist countries tend to be more emotionally-oriented, as well as with other research showing that women tend to describe themselves as more empathic and sensitive than men (Lozano & Etxebarria, 2007; Sampaio, Guimarães, Camino, Formiga, & Menezes 2011).

The differences in role-taking scores related to children's countries indicate that some factors of the socio-cultural context in the USA might stimulate the early development of perspective-taking abilities. As Lecce and Hughes (2010) suggest, a parenting model in which independence is highly motivated might favor the development of socio-cognitive abilities related to the comprehension of other people's mind. Literature has showed that this model is aligned with cultures in which people tend to be idiocentric, such as in the USA (Triandis et al., 1988) where mothers assume an active role in their children's development, stimulating environmental exploration, personal choice, self-reliance, and autonomy, since their first years of life (Bornstein et al., 1998; Hsu & Lavelli, 2005).

Conversely, a model in which frequency and proximity of social contacts are emphasized might favor an "emotional connectedness" among people and a sense of belonging that might be related to the higher empathy scores among Brazilian children. Concerning to this point, it is important to mention that displays of emotions are very common in Brazilian culture, and people tend to establish interpersonal relationships based on familiarity and affection. For instance, it is very common to call close friends "brothers", and teachers or parents' friends "uncle" and "aunt". Perception of such "emotional connectedness" might lead children to try to conform to cultural practices of their social environment, and demonstrate emotional sensibility to other people's situation when answering the items of the Bryant's (1982) scale.

Results observed here indicated that the effects of culture on social development and its influence on how people recognize and express their affection can be observed in early childhood. However, it is necessary to conduct further research in order to test whether the cross-cultural differences observed here are consistent, as well as whether there are variations in socio-cognitive and emotional development within Western societies. In this sense it is important that future research uses diverse methods to evaluate empathy and role-taking (e.g. naturalistic observations, experimental situations) in order to overcome some limitations of the method used here.

Acknowledgement

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Notes

* Research article.
1 Because there is no exact translation of the word Simpatia in English, we opted to leave it in Brazilian-Portuguese.