DOI: 10.1111/cdep.12473

Child Development Perspectives

ARTICLE

Development and use of theory of mind in social and cultural context

Bilge Selcuk[1] | **Secil Gonultas**[2] | **Muge Ekerim-Akbulut**[3]

[1]MEF University, Istanbul, Turkey
[2]Bilkent University, Ankara, Turkey
[3]Istanbul 29 Mayis University, Istanbul, Turkey

Correspondence
Bilge Selcuk, Psychology Department, MEF University, Maslak Ayazağa Street No. 4, 34396 Sarıyer/İstanbul 34396, Turkey.
Email: aysebilgeselcuk@gmail.com

Abstract
Theory of mind (ToM) is a key social-cognitive skill that allows individuals to understand and attribute mental states to others; it facilitates relationships and helps individuals navigate the social world. Thus, it is likely influenced by social and cultural contexts. In this article, we review studies that examine the potential ways through which sociocultural context interacts with the development and use of ToM in Western and non-Western societies. First, we summarize findings documenting the link between culture and timing of ToM acquisition. Second, we examine cross-cultural studies on how culture can be related to the sequential development of different dimensions of ToM. Third, we discuss when and how cultural group membership of the targets influences the use of ToM. Finally, we suggest avenues for research so the field can understand more comprehensively the dynamic interactions between sociocultural context and the development and use of ToM.

KEYWORDS
culture, socialization, theory of mind

Theory of mind (ToM) is a critical sociocognitive skill that promotes smooth social interactions. Researchers have long been interested in studying the factors that affect the development of ToM. Among these factors, the role of sociocultural context, particularly individualism and collectivism as dominant cultural values and children's social experiences (e.g., parenting, family environment) associated with these values, come to the fore. Researchers have argued that endorsement of individualist cultural values in industrialized and urbanized Western societies and parents' more frequent reference to others' minds may expose children to unique viewpoints early in development and hence, promote children's ToM (Lillard, 1998). In contrast, collectivist attitudes that place importance on cohesion and communal thinking in non-Western countries with lower levels of industrialization, education, and urbanization might de-emphasize individual perspectives, which can result in children lagging behind their Western peers in their understanding of mental states (Lavelle, 2019).

Several studies have tested these ideas in relation to children's acquisition of false-belief understanding and sequential development of ToM (Lavelle, 2019; Peterson & Slaughter, 2016; Slaughter & Perez-Zapata, 2014), but these have dealt mainly with sociocultural variation in a dichotomous manner by comparing collectivist cultures with individualist ones. Yet considering the rapid pace of globalization and the spread of information between different regions of the world, the cultural realities of contemporary countries fit poorly into this dichotomous categorization of individualism and collectivism (Santos et al., 2017). Rather, individualist and collectivist values seem to coexist in today's societies, and individuals' level of endorsement of these values appears to follow families' dynamic conditions of living, such as their socioeconomic status (SES), place of residence, and the developmental stage of their children (Tamis-LeMonda

Abbreviations: SES, socioeconomic status; ToM, theory of mind.

et al., 2007). Therefore, when investigating the role of sociocultural context in children's development of ToM, it is wise to consider both a country's macro-level adoption of individualist and collectivist values and the micro-level social experiences of children as they relate to their families' social conditions, including SES.

How do sociocultural factors influence the development of ToM? Turkey provides an illuminating example: It is a country that geographically and historically bridges Europe with Asia. It is also a country that, as a result of its rapid industrialization and urbanization, uniquely incorporates Western individualist values and Eastern collectivist values (Sunar, 2002). This coexistence of individualism and collectivism goes hand in hand with variations in families' SES levels, with groups with middle to high SES endorsing Western individualist values and groups with low SES adopting collectivist norms (Kağıtçıbaşı & Ataca, 2005). This, in turn, gives rise to social differences in various aspects of life, ranging from parents' socialization goals to educational practices (Yagmurlu et al., 2009; Yagmurlu, Sanson, et al., 2005).

In this article, we summarize findings from different cultures to explain the dynamic engagement between ToM and sociocultural context. In doing so, we look closely at findings from Turkey as well as the broader literature. Overall, we concentrate on how sociocultural factors involving cultural values and social experiences (e.g., SES, family composition, parenting) might be related to the timing and sequential development of ToM. We also examine how these sociocultural factors can be linked with individuals' use of ToM when mentalizing about people from their own cultural group versus people from other cultural groups.

SOCIOCULTURAL FACTORS AND TIMING OF ToM ACQUISITION

For decades, researchers studying ToM have examined the age when explicit mental state understanding develops (Ruffman, 2014) and tested children's performance on a range of false-belief tasks, a litmus test of ToM. Broadly speaking, across different cultural groups, most children achieve false-belief understanding at roughly 4–5 years (Callaghan et al., 2005; Kuntoro et al., 2013), while 3-year-olds usually fail to understand that others might have false beliefs. While these results indicate a conceptual change in social understanding that takes place globally during early childhood, the pace of this change appears to be affected by social experiences that are guided by cultural values, norms (e.g., individualism and collectivism; Liu et al., 2008; Mayer & Träuble, 2013), and contextual factors (e.g., SES; Dixson et al., 2018).

To test these ideas, researchers have conducted studies in various countries, including Indonesia (Kuntoro et al., 2013) and Iran (Shahaeian et al., 2011), showing that children in non-Western societies performed comparably to their Western peers on false-belief tasks. However, researchers have also reported slight delays in the age at which children succeed at false-belief tasks in far Eastern cultures such as Japan (Wellman et al., 2001), Hong-Kong (Liu et al., 2008), and Pacific Island countries (e.g., Samoa; Mayer & Träuble, 2013).

Indeed, findings from Turkey on the timing of Turkish children's false-belief acquisition reflect the variation in children's sociocultural experiences. Turkish 48- to 70-month-olds from families with middle to high SES who were exposed to rich educational materials and supportive parent–child interactions that involved inductive reasoning, encouragement of emotional expression, and mental state talk tended to succeed at false-belief tasks at around age 4 (Yagmurlu, Berument, et al., 2005). These children's social experiences in their families were similar to those typically associated with family practices in individualist societies. Hence, these experiences generally advanced the sociocognitive skills of Turkish children from families with middle to high SES in a way that mirrors the experiences of children in Western individualist contexts (Devine & Hughes, 2018; Ruffman et al., 2002).

In contrast, Turkish children from disadvantaged contexts (e.g., families with low SES and childrearing institutions) were at risk of delay in the development of false-belief understanding (Berument, 2013; Selcuk et al., 2018; Sumer-Büyükabacı et al., 2021; Yagmurlu, Berument, et al., 2005). These children's social environments were characterized by high levels of stress, unstable relationships, and authoritarian parenting practices (Selcuk & Yucel, 2017), which probably deprived them of parental mental state talk and the elaborated causal explanations that are crucial for insight into others' minds. The social conditions that result in a delay in children's false-belief acquisition appeared to occur as a function of both caregivers' lack of educational and material resources to support their children and traditional collectivist childrearing practices that failed to prioritize children's awareness of others' unique perspectives (Yagmurlu, Sanson, et al., 2005; Yagmurlu et al., 2009).

Overall, these findings point out how, in a cultural environment where individualist and collectivist values coexist, timing of children's false-belief understanding is associated with children's contextual experiences, particularly families' SES, that promote either Western-style family interactions and educational practices or traditional parenting practices involving hierarchy and deficient inductive reasoning. Moreover, family SES is a multifaceted concept, and additional factors (e.g., lack of age-appropriate storybooks and toys, economic burden, inadequate nutrition) can help explain the link between contextual influences on false-belief understanding besides parenting and educational practices (Devine & Hughes, 2018).

SOCIOCULTURAL FACTORS AND SEQUENTIAL DEVELOPMENT OF ToM CONCEPTS

Researchers (Wellman & Liu, 2004) also developed a battery of tasks to extend ToM beyond classical false-belief assessments that comprehensively evaluates other mentalistic concepts, including diverse desires (people can have different desires for the same thing), diverse beliefs (people can have different beliefs about the same situation where there is no explicit reality), access to knowledge (people can have differential access to knowledge), and hidden emotions (people's real emotions can differ from their displayed emotions) across preschool years and childhood. Researchers have identified important cultural variations in *sequential acquisition* of different ToM concepts. More specifically, two main ToM acquisition sequences emerged: individualist (diverse desire>diverse belief>knowledge access>false-belief>hidden emotion) and collectivist (diverse desire>knowledge access>diverse belief>false-belief>hidden emotion), with the former seen in the United States and Australia and the latter found in China and Iran (see Slaughter & Perez-Zapata, 2014, for a review).

In one study, preschool children from collectivist countries displayed a later understanding of diverse belief in sequence than did children from individualist countries (Shahaeian et al., 2011; Wellman et al., 2006). This finding has been attributed primarily to children's low levels of exposure to different beliefs because collectivist societies value mutual agreement, group harmony, and cohesion, which requires believing in the same thing or acting in the same way. Likewise, these children's earlier achievement of knowledge access was thought to be the result of collectivist cultures' emphasis on knowing the ways to gain knowledge. This is important both for attaining educational success—a significant parental goal—and for sustaining harmony within the group (Shahaeian et al., 2011). Similarly, in another study (Kuntoro et al., 2013), *pemulung* 3- to 7-year-olds in Jakarta were slower in gaining knowledge access than middle-class Jakartan and Australian peers, documenting the possible role of SES-related factors and cultural values.

Researchers have sought to understand how the coexistence of individualist and collectivist cultural norms in Turkey affected children's acquisition of ToM (Selcuk et al., 2018). In a study of Turkish 34- to 80-month-olds from major cities, 62% had a collectivist ToM acquisition pattern. This proportion was lower than the proportion of Chinese and Iranian children (75%–85%) who displayed a collectivist pattern, probably pointing to the reduced impact of collectivism in Turkey on children's ToM acquisition sequence. Moreover, in a comparison of children who passed tests of diverse belief but not of knowledge access (individualist sequence) with children who passed tests of knowledge access but not of diverse belief (collectivist sequence), children who lived in crowded households with multiple adults were at a significant advantage in passing tests of diverse belief compared with their peers living in nuclear families.

Crowded households and children's supervision by multiple adults are common features of collectivist societies. Although adults in these societies are expected to teach children interdependent actions by promoting shared viewpoints and understating diverse ideas (Lavelle, 2019), data from Turkey have not confirmed this expectation. Because of generational differences in endorsement of individualist and collectivist values in Turkey, with older generations prioritizing more collectivist ideals such as relatedness and respect for authority more than younger generations (Sunar, 2002), children in these crowded households were probably exposed to rich discussions that highlighted diverse opinions. Therefore, although crowded households were usually linked with collectivist lifestyles, within the unique context of Turkey as a melting pot of multiple cultural norms, children's exposure to and interaction with several adults who spoke of their own minds may have enhanced their acquisition of diverse belief.

In line with these arguments supporting the importance of rich social interaction for an earlier understanding of diverse belief, in another study (Etel & Yagmurlu, 2015), researchers found an individualist ToM acquisition pattern in Turkish 3- to 5-year-olds living in childrearing institutions. Although the children were at risk for overall delayed development of sociocognitive skills because they lived in a disadvantaged context without consistent caregiving (e.g., frequent changes in caregivers; Selcuk & Yucel, 2017), their frequent and rich peer relationships helped them figure out diversity in subjective beliefs. Together, these results suggest that within the cultural composition of Turkey, ongoing social interactions with adults and children steer Turkish children's ToM acquisition sequence toward that of their Western peers. This in turn highlights the interaction in children of macro-level cultural factors with micro-level social experiences in driving ToM development.

Parental talk also plays a role in the interaction between cultural norms and children's social experiences in influencing the sequence of ToM development (Taumoepeau et al., 2019). If children's acquisition of knowledge access before diverse belief in collectivist societies is the result of the importance given to children's acquisition of new knowledge (a characteristic that is highly valued by Turkish parents in comparison to Western mothers; Durgel et al., 2009), then mothers from collectivist cultures should have more didactic and repetition-oriented talk than mothers from individualist backgrounds. Supporting this idea, mothers in Eastern Turkey (66% with a college degree or higher) were more repetitive and less elaborative when reminiscing with their 41- to 62-month-olds about the past and discussing expectations about the future than were mothers in

Western Turkey (91% with a college degree or higher; Sahin-Acar & Leichtman, 2015). Furthermore, this difference paralleled the differences in mothers' cultural self-construal, with mothers in eastern Turkey endorsing lower individuation/autonomy than mothers in western Turkey.

Researchers have also reported differences related to SES in parent–child conversations in Turkey, particularly in the types of questions 3- to 5-year-olds asked when they talked with their mothers (Ünlütabak et al., 2019). Children from backgrounds of middle SES (mothers' education levels ranged from university to postgraduate school) asked more information- and explanation-seeking questions about unknown items than did same-aged children from groups with low SES (mothers' education levels ranged from primary to secondary school), which probably influenced the content of talk children received. Although these findings do not speak directly to the link between sociocultural factors and mothers' mental state talk, they suggest that as a function of the differences in cultural norms and sociodemographic factors, mother–child conversations vary, which might affect the sequential development of children's representations of others' minds.

In summary, studies from Turkey show that children's insight into other people's mental states develops in a sequential fashion that reflects the dynamic interaction between cultural values and differences in children's social experiences. Children's diverging experiences within the same society can be related to distinct ToM sequences. Therefore, both the cultural norms and the social context (e.g., parents' socialization goals, family SES, parent–child conversations) that are informed by these cultural norms (Nacak et al., 2011) should be studied in tandem for a deeper understanding of the link between sociocultural influences and the sequential development of ToM concepts.

CULTURAL GROUP MEMBERSHIP AND THE USE OF ToM

As discussed previously, people in individualist societies are likely to be exposed to more elaborative maternal talk (Sahin-Acar & Leichtman, 2015) and are more motivated to consider individualized perspectives (Lavelle, 2019) than people in collectivist countries. Thus, it is plausible to expect that people in individualist societies can easily individuate and attribute mental states to others regardless of their characteristics. However, studies conducted in both individualist and collectivist societies have documented that the use of ToM can be susceptible to the characteristics of the other, that is, the one whose mind is to be inferred. Cultural group membership (i.e., being from the same culture or another culture) can be one of these characteristics. Cultural similarity with the target may make individuals attribute mental states more *accurately* and more *frequently* (to those who are culturally similar) in both individualist and collectivist societies. Thus, factors like cultural group membership may come to the fore in understanding how individuals accurately and frequently mentalize about those who are culturally similar versus those who are culturally dissimilar. Relatedly, affective evaluations of others' cultural groups, such as prejudice (i.e., negative attitudes toward individuals due to group membership) and threat perception (i.e., threats to societies' resources, welfare, and values), may lead to lower ToM accuracy in intergroup contexts.

Research on ToM and cultural group membership provides some support for these arguments in both collectivist and individualist cultures. Children can evaluate the mental states of agents in relation to their group membership (see Rhodes & Wellman, 2017, for a review). For example, in a study on the frequency of mental state use, 5- to 6-year-olds in northern England attributed more mental states (e.g., desires, emotions, intentions) to culturally similar agents than to culturally dissimilar agents in a geographically based intergroup context (McLoughlin & Over, 2017); in addition, 6-year-olds used more diverse mental state terms while describing their own cultural group than when describing other cultural groups. In a study that used a minimal group paradigm, U.S. 4- to 10-year-olds' ToM accuracy was influenced by group membership in a morally relevant false-belief understanding task (embedding salient moral information into a prototypic false-belief scenario): Children had better ToM accuracy for their own group members than for other group members (Glidden et al., 2021).

Moreover, in another study, Turkish 9- to 13-year-olds had better ToM accuracy for Turkish characters depicted in the Strange Stories task (understanding the concepts of double bluffs, persuasion, white lies, and misunderstanding) than for Syrian or Northern European characters in the task (Gonultas et al., 2020). Adolescents with higher levels of prejudice and threat perception toward Syrians were less likely to attribute mental states to Syrian characters in the stories. This is an important intergroup context because more than three million refugees currently reside in Turkey, where high rates of prejudicial attitudes and discriminatory behaviors are observed toward Syrian refugees (Yitmen & Verkuyten, 2018). The intergroup context in Turkey can be reflected in many societies that receive migrants and refugees due to conflicts and wars (e.g., migrations from Afghanistan, Ukraine, and Syria), economic-societal crises (e.g., migrations from Venezuela), and climate change (e.g., migrations from Pakistan; Migration Policy Institute, 2022). These are likely to escalate in the future, which may lead to further increases in migration and global mobility across the world. Relatedly, interactions between people from different social groups are likely to rise, which makes it

important to examine factors involved in mentalizing people from different social groups.

In a recent study, young Turkish adults attributed more accurate mental states to Turkish characters than to Syrian and Norwegian characters (Ekerim-Akbulut et al., 2020). Extending previous literature, this study also found that lower levels of perceived similarity and higher levels of prejudice toward Syrians led to less accurate mental state attribution to Syrian characters depicted in the Strange Stories task. Similarly, in a study of Chilean and Australian adults, both groups performed better in attributing accurate mental states to people from their own cultural group than to people from different cultural groups in the Strange Stories task (Perez-Zapata et al., 2016).

Some studies have documented either higher ToM accuracy for targets from different cultural groups or no difference. In one (Sudo & Farrar, 2020), U.S. 5-year-olds with high levels of group affiliation were less likely to succeed at the first-order false-belief understanding task when the characters were from different cultural groups than when the characters were from their own cultural group. The authors suggest that higher levels of affiliation could impair children's understanding that cultural group members can have a false belief that differs from their own. In another study (Witt et al., 2022), German 4-year-olds performed equally in the first-order false-belief task regardless of whether the characters were from their own cultural group or from different cultural groups (created through accent manipulation). In yet another study (Gonultas & Mulvey, 2022), while Turkish 10- to 13-year-olds' ToM accuracy was better for Turkish individuals than for Syrian individuals, 14- to 18-year-olds' ToM performance did not differ across Turkish and Syrian characters (via the Strange Stories Task). The authors suggest that older adolescents may have more opportunities for contact with Syrian peers than do younger adolescents, through face-to-face interactions or social media. This discrepancy between older adolescents (Gonultas & Mulvey, 2022) and younger adults (Ekerim-Akbulut et al., 2020) could be the result of methodological differences. In one study (Ekerim-Akbulut et al., 2020), researchers used eight mindreading stories and eight control stories to account for participants' general reasoning ability. In the other (Gonultas & Mulvey, 2022), researchers used only two mindreading stories without including any control stories. In addition, the latter study (Gonultas & Mulvey, 2022) did not include intergroup-related factors, such as threat perception and perceived similarity, that can relate differently to ToM accuracy in older adolescents compared to younger adults.

Taken together, these mixed results can be explained by many factors, including the saliency of cultural group membership (with some groups being targets of prejudice and discrimination and others being more neutral), intergroup-related factors, type of ToM assessments, and family factors. Researchers should consider other factors to understand how, when, and in which ways cultural group membership is related to the use of ToM.

CONCLUSION AND LOOKING AHEAD

Overall, sociocultural factors involving adoption of cultural norms and children's social experiences that are guided by these norms appear to influence the timing and sequential development of mental state understanding in different social and cultural contexts. These contexts may not fit into the dichotomous categorization of individualism and collectivism. As such, both universal (e.g., the timing of false-belief understanding) and socioculturally specific (e.g., the mixture of ToM sequences) findings are reported with respect to children's developmental timing and progression of ToM. Researchers might benefit from delving into the mechanisms through which cultural values accompanied by distinct socialization experiences relate to the timing, development, and use of ToM. This is especially important considering the possibility that the influence of within-culture differences may sometimes outweigh that of between-culture differences. Thus, parents' own endorsement of cultural values, parenting goals and practices, mental state talk, and reminiscing, as well as SES-related factors, should all be considered as researchers seek to understand universal and culture/context-specific aspects of mental state understanding.

Furthermore, the studies we reviewed indicate that accurate understanding is *not sufficient but necessary* (Astington, 2004) while mentalizing about individuals' own cultural group versus other cultural groups. Thus, the social and cultural background of the target should be considered in measuring ToM in a contextualized way. The effect of cultural group membership on ToM is not limited to contexts such as Turkey. Rather, it can be extended to and studied in many social contexts, such as mentalizing about people from different racial or ethnic backgrounds across different regions of the United States and Europe, as well as considering possible within-country differences in terms of acceptance and tolerance of diversity. In short, researchers need to consider both within-culture variability and between-culture variability in examining the development and use of ToM in social and cultural contexts; this is especially important given the increase in globalization and exchanges between people from different social groups via global mobility and online interactions.

FUNDING INFORMATION

Authors state no funding involved.

ORCID

Bilge Selcuk https://orcid.org/0000-0001-9992-5174
Secil Gonultas https://orcid.org/0000-0002-6002-9820

REFERENCES

Astington, J. W. (2004). Sometimes necessary, never sufficient: False-belief understanding and social competence. In B. Repacholi & V. Slaughter (Eds.), *Individual differences in theory of mind* (pp. 24–49). Psychology Press.

Berument, S. K. (2013). Environmental enrichment and caregiver training to support the development of birth to 6-year-olds in Turkish orphanages. *Infant Mental Health Journal*, *34*(3), 189–201. https://doi.org/10.1002/imhj

Callaghan, T., Rochat, P., Lillard, A., Claux, M. L., Odden, H., Itakura, S., Tapanya, S., & Singh, S. (2005). Synchrony in the onset of mental-state reasoning evidence from five cultures. *Psychological Science*, *16*(5), 378–384. https://doi.org/10.1111/j.0956-7976.2005.01544.x

Devine, R. T., & Hughes, C. (2018). Family correlates of false belief understanding in early childhood: A meta-analysis. *Child Development*, *89*(3), 971–987. https://doi.org/10.1111/cdev.12682

Dixson, H. G., Komugabe-Dixson, A. F., Dixson, B. J., & Low, J. (2018). Scaling theory of mind in a small-scale society: A case study from Vanuatu. *Child Development*, *89*(6), 2157–2175. https://doi.org/10.1111/cdev.12919

Durgel, E. S., Leyendecker, B., Yagmurlu, B., & Harwood, R. (2009). Sociocultural influences on German and Turkish immigrant mothers' long-term socialization goals. *Journal of Cross-Cultural Psychology*, *40*(5), 834–852. https://doi.org/10.1177/0022022109 3392

Ekerim-Akbulut, M., Selcuk, B., Slaughter, V., Hunter, J. A., & Ruffman, T. (2020). In two minds: Similarity, threat, and prejudice contribute to worse mindreading of outgroups compared with an ingroup. *Journal of Cross-Cultural Psychology*, *51*(1), 25–48. https://doi.org/10.1177/0022022119883699

Etel, E., & Yagmurlu, B. (2015). Social competence, theory of mind, and executive function in institution-reared Turkish children. *International Journal of Behavioral Development*, *39*(6), 519–529. https://doi.org/10.1177/0165025414556095

Glidden, J., D'Esterre, A., & Killen, M. (2021). Morally-relevant theory of mind mediates the relationship between group membership and moral judgments. *Cognitive Development*, *57*(January–March), 100976. https://doi.org/10.1016/j.cogdev.2020.100976

Gonultas, S., & Mulvey, K. L. (2022). Theory of mind as a correlate of bystanders' reasoning about intergroup bullying of Syrian refugee youth. *Frontiers in Psychology*, *13*, 815639. https://doi.org/10.3389/fpsyg.2022.815639

Gonultas, S., Selcuk, B., Slaughter, V., Hunter, J. A., & Ruffman, T. (2020). The capricious nature of theory of mind: Does mental state understanding depend on the characteristics of the target? *Child Development*, *91*(2), 1–19. https://doi.org/10.1111/cdev.13223

Kağıtçıbaşı, C., & Ataca, B. (2005). Value of children and family change: A three-decade portrait from Turkey. *Applied Psychology*, *54*(3), 317–337. https://doi.org/10.1111/j.1464-0597.2005.00213.x

Kuntoro, I., Saraswati, L., Peterson, C., & Slaughter, V. (2013). Micro-cultural influences on theory of mind development: A comparative study of middle-class and pemulung children in Jakarta, Indonesia. *International Journal of Behavioral Development*, *37*(3), 266–273. https://doi.org/10.1177/0165025413478258

Lavelle, J. S. (2019). The impact of culture on mindreading. *Synthese*, *198*, 1–24. https://doi.org/10.1007/s11229-019-02466-5

Lillard, A. (1998). Ethnopsychologies: Cultural variations in theories of mind. *Psychological Bulletin*, *123*(1), 3–32. https://doi.org/10.1037/0033-2909.123.1.3

Liu, D., Wellman, H. M., Tardif, T., & Sabbagh, M. A. (2008). Theory of mind development in Chinese children: A meta-analysis of false-belief understanding across cultures and languages. *Developmental Psychology*, *44*(2), 523–531. https://doi.org/10.1037/0012-1649.44.2.523

Mayer, A., & Träuble, B. E. (2013). Synchrony in the onset of mental state understanding across cultures? A study among children in Samoa. *International Journal of Behavioral Development*, *37*(1), 21–28. https://doi.org/10.1177/0165025412454030

McLoughlin, N., & Over, H. (2017). Young children are more likely to spontaneously attribute mental states to members of their own group. *Psychological Science*, *28*(10), 1503–1509. https://doi.org/10.1177/0956797617710724

Migration Policy Institute. (2022). *Top statistics on global migration and migrants*. https://www.migrationpolicy.org/article/top-statistics-global-migration-migrants

Nacak, M., Yagmurlu, B., Durgel, E., & van de Vijver, F. (2011). Parenting in metropole and Anatolia samples: The role of residence and education in beliefs and behaviors. *Turkish Journal of Psychology*, *26*, 85–100. https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Nacak%2C+M.%2C+Yagmurlu%2C+B.%2C+Durgel%2C+E.%2C+%26+van+de+Vijver%2C+F.+%282011%29.++Parenting+in+metropole+and+Anatolia+samples%3A+The+role+of+residence+and+education+in+-beliefs+and+behaviors.+Tur

Perez-Zapata, D., Slaughter, V., & Henry, J. D. (2016). Cultural effects on mindreading. *Cognition*, *146*(January), 410–414. https://doi.org/10.1016/j.cognition.2015.10.018

Peterson, C. C., & Slaughter, V. (2016). Culture and the sequence of developmental milestones toward theory of mind mastery. In V. Slaughter & M. de Rosnay (Eds.), *Theory of mind development in context* (pp. 47–62). Routledge.

Rhodes, M., & Wellman, H. (2017). Moral learning as intuitive theory revision. *Cognition*, *167*(October), 191–200. https://doi.org/10.1016/j.cognition.2016.08.013

Ruffman, T. (2014). To belief or not belief: Children's theory of mind. *Developmental Review*, *34*(3), 265–293. https://doi.org/10.1016/j.dr.2014.04.001

Ruffman, T., Slade, L., & Crowe, E. (2002). The relation between children's and mothers' mental state language and theory-of-mind understanding. *Child Development*, *73*(3), 734–751. https://doi.org/10.1111/1467-8624.00435

Sahin-Acar, B., & Leichtman, M. D. (2015). Mother-child memory conversations and self-construal in Eastern Turkey, Western Turkey and the USA. *Memory*, *23*(1), 69–82. https://doi.org/10.1080/09658211.2014.935437

Santos, H. C., Varnum, M. E., & Grossmann, I. (2017). Global increases in individualism. *Psychological Science*, *28*(9), 1228–1239. https://doi.org/10.1177/0956797617700622

Selcuk, B., Brink, K. A., Ekerim, M., & Wellman, H. M. (2018). Sequence of theory-of-mind acquisition in Turkish children from diverse social backgrounds. *Infant and Child Development*, *27*(4), e2098. https://doi.org/10.1002/icd.2098

Selcuk, B., & Yucel, M. (2017). The role of institutionalization in theory of mind. In V. Slaughter & M. de Rosnay (Eds.), *Theory of mind development in context* (pp. 89–105). Routledge.

Shahaeian, A., Peterson, C. C., Slaughter, V., & Wellman, H. M. (2011). Culture and the sequence of steps in theory of mind development. *Developmental Psychology*, *47*(5), 1239–1247. https://doi.org/10.1037/a0023899

Slaughter, V., & Perez-Zapata, D. (2014). Cultural variations in the development of mind reading. *Child Development Perspectives*, *8*(4), 237–241. https://doi.org/10.1111/cdep.12091

Sudo, M., & Farrar, J. (2020). Theory of mind understanding, but whose mind? Affiliation with the target is related to children's false belief performance. *Cognitive Development*, *54*(April–June), 100869. https://doi.org/10.1016/j.cogdev.2020.100869

Sumer-Büyükabacı, Ö., Kisbu-Sakarya, Y., Etel, E., & Selcuk, B. (2021). Developmental change in early language and cognitive skills of institution-reared children as compared to their parent-reared peers. *Children and Youth Services Review*, *121*(February), 105857. https://doi.org/10.1016/j.childyouth.2020.105857

Sunar, D. (2002). Change and continuity in the Turkish middle class family. In E. Ozdalga & R. Liljestrom (Eds.), *Autonomy and*

dependence in family: Turkey and Sweden in critical perspective (pp. 217–238). Swedish Research Institute.

Tamis-LeMonda, C. S., Adolph, K. E., Dimitropoulou, K. A., & Zack, E. (2007). "No! Don't! Stop!": Mothers' words for impending danger. *Parenting: Science and Practice*, *7*(1), 1–25. https://doi.org/10.1080/15295190709336774

Taumoepeau, M., Sadeghi, S., & Nobilo, A. (2019). Cross-cultural differences in children's theory of mind in Iran and New Zealand: The role of caregiver mental state talk. *Cognitive Development*, *51*(July–September), 32–45. https://doi.org/10.1016/j.cogdev.2019.05.004

Ünlütabak, B., Nicolopoulou, A., & Aksu-Koç, A. (2019). Questions asked by Turkish preschoolers from middle-SES and low-SES families. *Cognitive Development*, *52*(October–December), 100802. https://doi.org/10.1016/j.cogdev.2019.100802

Wellman, H. M., Cross, D., & Watson, J. (2001). Meta-analysis of theory-of-mind development: The truth about false belief. *Child Development*, *72*(3), 655–684. https://doi.org/10.1111/1467-8624.00304

Wellman, H. M., Fang, F., Liu, D., Zhu, L., & Liu, G. (2006). Scaling of theory-of-mind understandings in Chinese children. *Psychological Science*, *17*(12), 1075–1081. https://doi.org/10.1111/j.1467-9280.2006.01830.x

Wellman, H. M., & Liu, D. (2004). Scaling of theory-of-mind tasks. *Child Development*, *75*(2), 523–541. https://doi.org/10.1111/j.1467-8624.2004.00691.x

Witt, S., Seehagen, S., & Zmyj, N. (2022). The influence of group membership on false-belief attribution in preschool children. *Journal of Experimental Child Psychology*, *222*(October), 105467. https://doi.org/10.1016/j.jecp.2022.105467

Yagmurlu, B., Berument, S. K., & Celimli, S. (2005). The role of institution and home contexts in theory of mind development. *Journal of Applied Developmental Psychology*, *26*(5), 521–537. https://doi.org/10.1016/j.appdev.2005.06.004

Yagmurlu, B., Citlak, B., Dost, A., & Leyendecker, B. (2009). Child socialization goals of Turkish mothers: An investigation of education related within culture variation. *Turkish Journal of Psychology*, *24*, 1–15. https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Child+socialization+-goals+of+Turkish+mothers%3A+An+investigation+of+education+related+within+culture+variation.+Turkish+Journal+of+-Psychology%2C+24%2C+1-15&btnG=

Yagmurlu, B., Sanson, A., & Köymen, S. B. (2005). Effects of parenting and child temperament on the development of prosocial behavior: The mediating role of theory of mind. *Turkish Journal of Psychology*, *20*(55), 1–20. https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Yagmurlu%2C+B.%2C+Sanson%2C+A.%2C+%26+K%C3%B6ymen%2C+S.+B.+%282005b%29.+Effects+of+parenting+and+child+temperament+on+the+development+of+prosocial+behavior%3A+The+mediating+role+of+theory+of+mind.+T

Yitmen, Ş., & Verkuyten, M. (2018). Positive and negative behavioural intentions towards refugees in Turkey: The roles of national identification, threat, and humanitarian concern. *Journal of Community & Applied Social Psychology*, *28*(4), 230–243. https://doi.org/10.1002/casp.2354

How to cite this article: Selcuk, B., Gonultas, S., & Ekerim-Akbulut, M. (2023). Development and use of theory of mind in social and cultural context. *Child Development Perspectives*, *17*, 39–45. https://doi.org/10.1111/cdep.12473