Seventy-six participants first played a PD game with an anonymous partner and then predicted other participants’ behaviors in the PD game. In addition, they were tested for accuracy in judging socio-metric relations among group members. Among four factors of empathy, two factors reflecting emotional aspects of empathy — self-directed and other-directed emotional responses — were found to have no relations with accuracy in judging other participants’ behavior in the PD or sociometric relations among group members. In contrast, the other two factors reflecting cognitive aspects of empathy — imagination and perspective taking — were found to be related to accuracy in prediction of other participants’ behavior in the PD. Between these two factors, the imagination factor was more strongly related than the perspective taking factor to accuracy in predicting other participants’ behavior in the PD. Implications of these findings are discussed in terms of domain specificities of adaptive tasks that are to be fulfilled by different aspects of empathy.

Key words: Empathy, accuracy in interpersonal perception, prisoner’s dilemma