

# Evolutionary games and social kinds

Jia Li (李嘉)

Kyoto University

While social kinds are usually thought of conventional or socially constructed and thus excluded from the realm of realism, some philosophers have been advancing realist programs about social categories, institutions, or structures (e.g., Guala 2016; Haslanger 2012). In addition to these programs, evolutionary game theory, if adopted appropriately, has the potential to shed new light on realist positions about social kinds.

David Lewis is the first to adopt game theory in philosophy (Lewis 2002). He argues that the equilibria of games can be seen as solutions to coordination problems, which can explain the emergence of conventions and even languages. He starts from an observation that there is no good explanation for many conventions like driving on the right side in the United States. Because there is no difference between both sides, it is unclear why the right side emerged as a convention. Lewis models this question into a coordination game which reflects a coordination problem faced by drivers because any individual decision on the side is interdependent. Each driver needs to make a choice according to the choices of others, and all drivers need some kind of coordination to reach an equilibrium in the sense of game theory. This equilibrium obtained after repeated coordination games is the convention of driving on the right side.

In the last few decades, biologists borrowed game theory from economics to study evolution and devised evolutionary game theory, which was further adopted in

economics, social sciences, and even philosophy. In the presentation, I will follow Lewis and try to adopt evolutionary game theory to model some social kind. I will argue that some social kind can be a cluster kind, which implies a weak realist position on social kinds (Boyd 1991; Millikan 1999; Bird 2018). (講演時の使用言語：英語)

#### References

- Bird, Alexander. 2018. "The Metaphysics of Natural Kinds." *Synthese* 195 (4): 1397–1426.
- Boyd, Richard. 1991. "Realism, Anti-Foundationalism and the Enthusiasm for Natural Kinds." *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 61 (1/2): 127–48.
- Guala, Francesco. 2016. *Understanding Institutions: The Science and Philosophy of Living Together*. Princeton, NJ: Princeton University Press.
- Haslanger, Sally. 2012. *Resisting Reality: Social Construction and Social Critique*. New York, NY: Oxford University Press.
- Lewis, David. 2002. *Convention: A Philosophical Study*. Blackwell Publishing Limited.
- Millikan, Ruth Garrett. 1999. "Historical Kinds and the "Special Sciences"." *Philosophical Studies* 95 (1/2): 45–65.