

A Situationist View on Reciprocity

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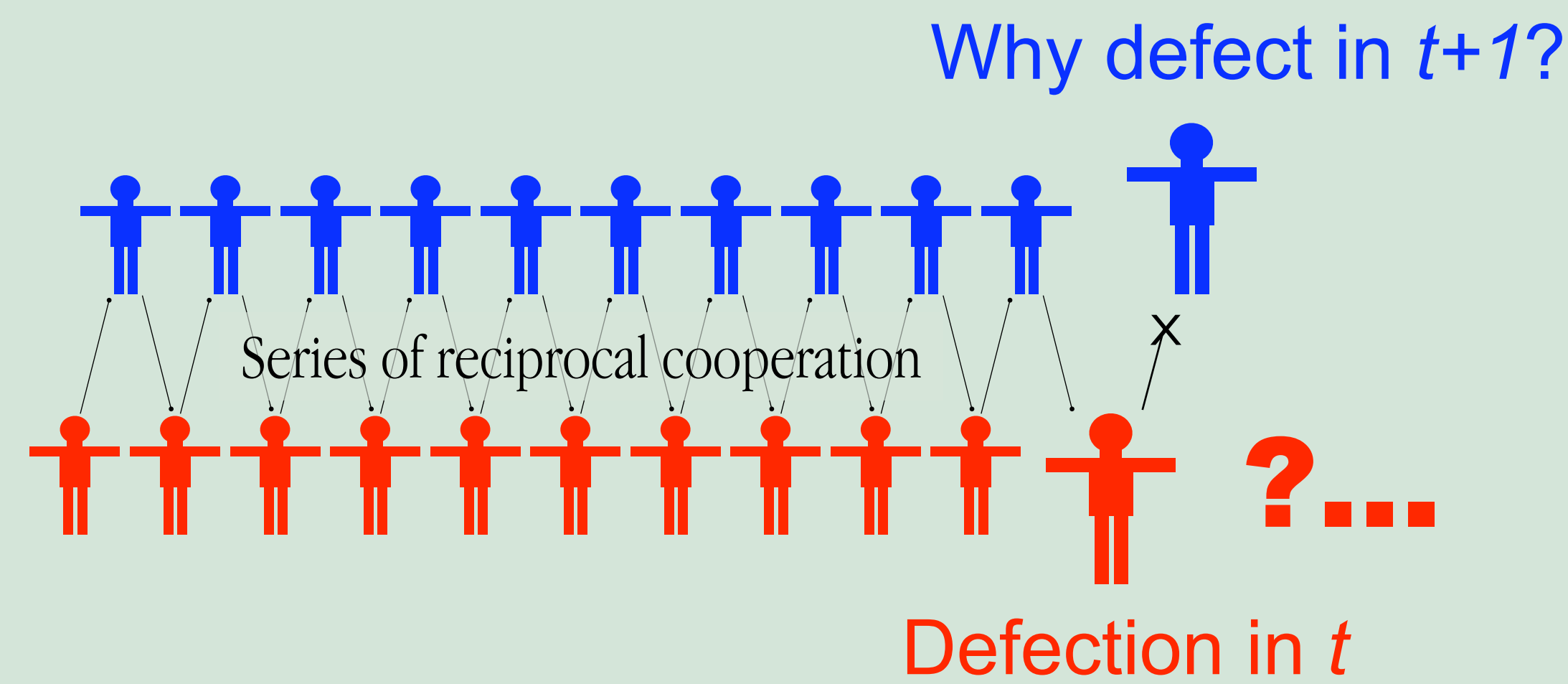
Introduction

The vast majority of human beings regularly express altruistic behaviors toward non-related conspecifics. Social reciprocity and, more generally, mechanisms of social retribution are at the heart of these behaviors. In this work, I deal with the simplest mechanism of social retribution: the repeated exchange of cooperative behaviors between two individuals, called **direct reciprocity**.

The importance of direct reciprocity is beyond doubt in humans, where it plays a role in many aspects of social life, from durable intimate relationships to brief economic interactions. Yet, despite its manifest ubiquity, do we dispose of a good evolutionary theory of direct reciprocity? Do we understand why it can make sense to behave with a partner as a function of her past behavior, in a reciprocal manner?

From a rapid overview of the evolutionary literature, it is tempting to answer affirmatively to this question^{1,2}. However, a more careful consideration of the matter shows that this would be wrong³⁻⁵. Incitations to reciprocate exist when past behaviors convey information about future behaviors, and it is not straightforward to understand why this may happen.

Why reciprocate? The problem of deviants' unpredictability



An example of the difficulty to deal with deviants. Consider a population fixed with reciprocators. When one's partner defects, she deviates from the general rule of behavior, and the appropriate response is unclear³⁻⁵. She might keep on defecting afterward, or go back to reciprocation, or anything else... After all, she is a deviant, and responding appropriately to deviants is a hard job!

Consistency is not obligate

Behavior in t $\xrightarrow{\text{informs about}}$ Behavior in $t+1$

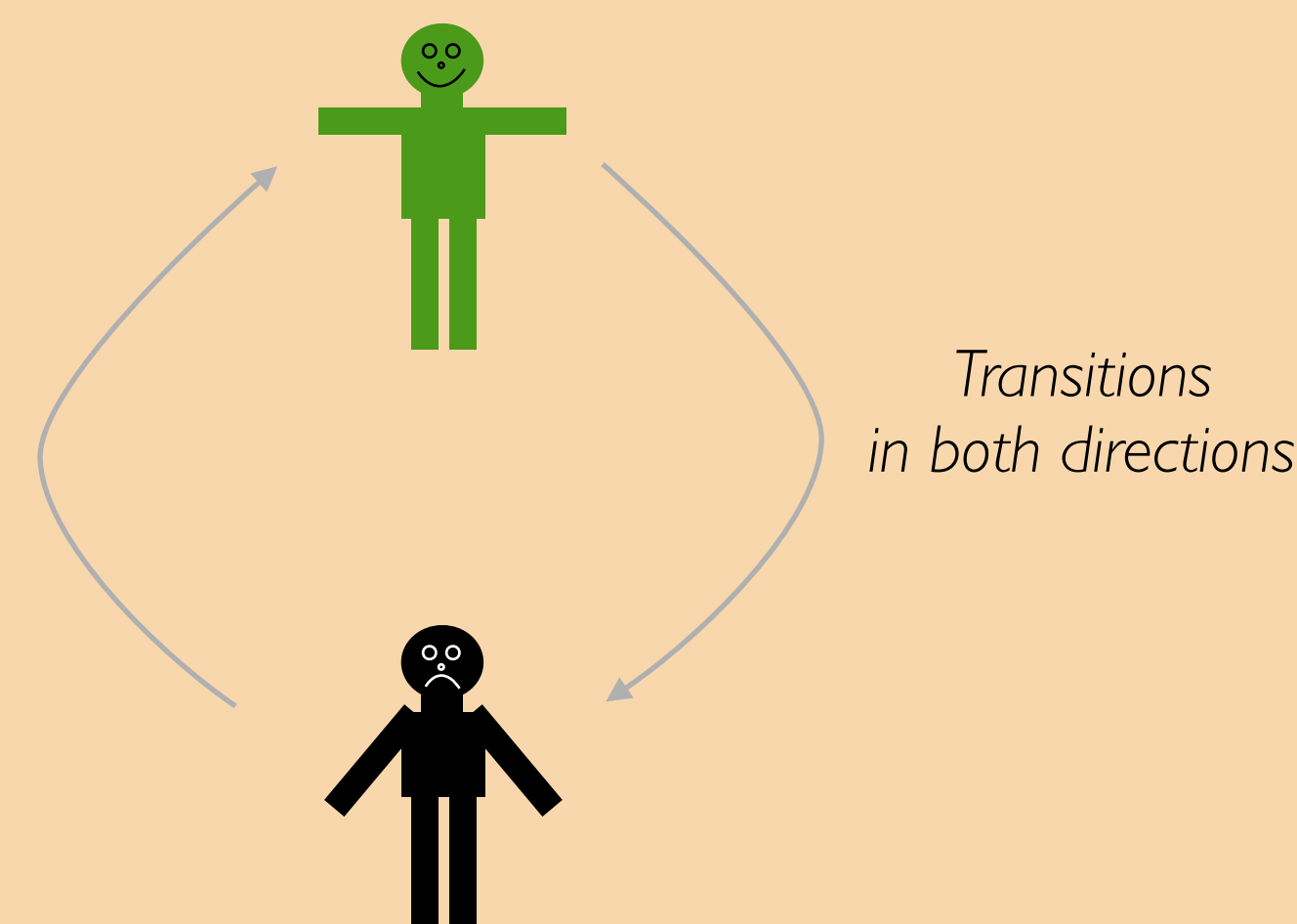
Underlying source of consistency:
hard-wired personality traits?

Traditional (yet implicit) solutions to the problem of deviants' unpredictability assume that the consistency of social behavior is obligate, owing to psychological constraints^{1,2}. However this is not a reasonable assumption, because social behavior is precisely made to be plastic⁶. What may then explain the consistency of social behavior, and found the incitation to reciprocate?

In what follows, I suggest that a partner's behavior does not chiefly inform one about general characteristics of this partner, but first of all about her *situation with regard to one*. And this is just what we need for reciprocity to make sense.

A Game Theoretic Model Infinitely Repeated Prisoner's Dilemma with two situations

Situation 1 : cooperation is beneficial ($b > c$)

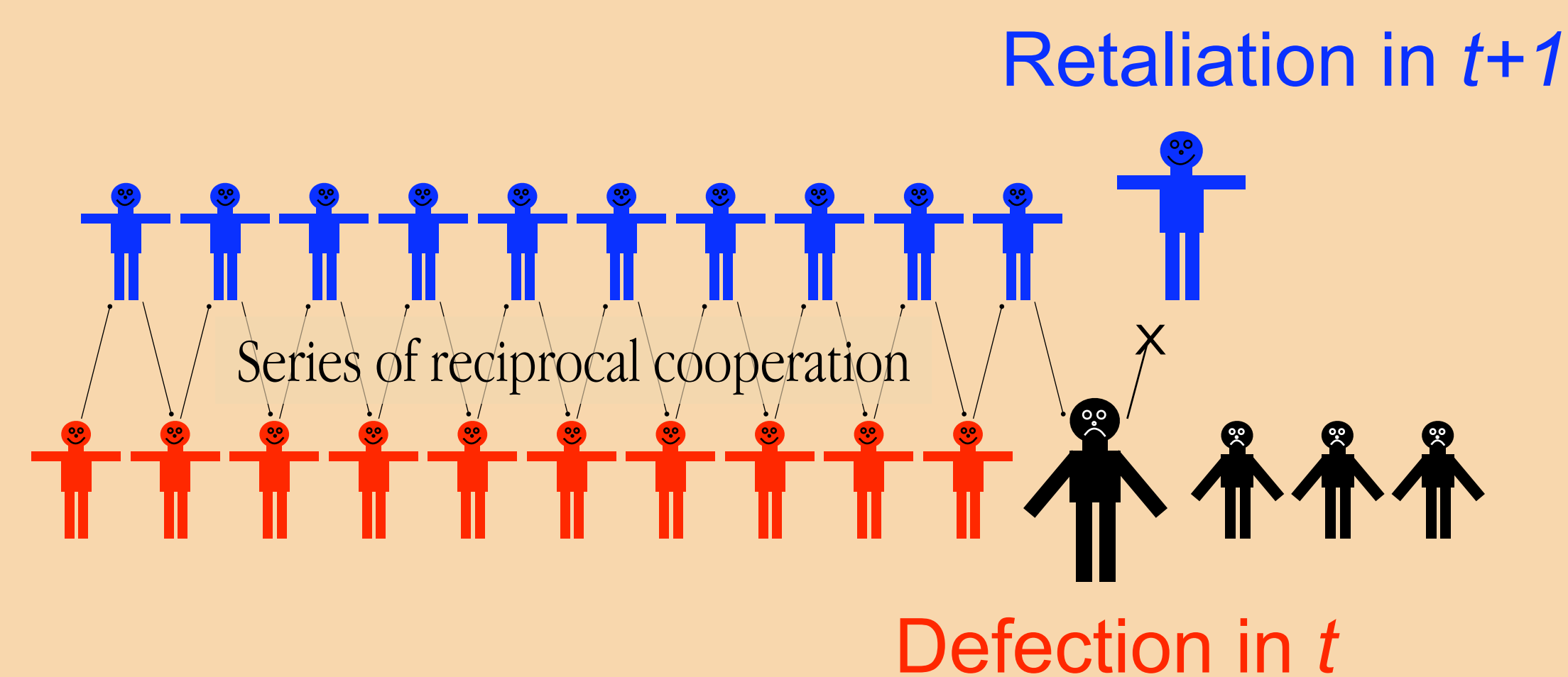


Situation 2 : cooperation is not beneficial ($b < c$)

Each individual can be in either of two situations vis-à-vis each of his partners. When in situation 1 only is reciprocate cooperation beneficial.

Results

Situational inertia underlies reciprocity



Social behavior signals one's situation. When one's partner defects, the most likely interpretation is that she does not benefit from reciprocal cooperation anymore, and this is likely to last. The appropriate response is to defect because, unlike mutants, situational variants are predictable.

Conclusion and Discussion

► The inertia of social situations underlies the consistency of social behavior, and founds the incitation to reciprocate.

► Because defection is always interpreted as signaling one's "uncooperative" situation, it is not reasonable to defect while actually benefiting from cooperation. This, in turn, guarantees the reliability of social behavior as a source of information about one's situation.

▼ Situation in an interaction may partly inform about situation in other interactions as well:

Example: One's behavior with regard to a social norm informs about one's situation with regard to the social group (e.g. degree of involvement). This may be relevant information for partner choice in pairwise interactions too.