

Response to reviews

October 31, 2017

1 Comments from editor

Remember that it is possible to put material into an on-line appendix which is not page-limited if there are things you feel require more space to display.

This is probably the most important change to the manuscript. We have moved most of the figures to a supplementary materials document which not only allows for them to be presented in a clearer way but also allows for all cases (variety of population sizes) to be included.

2 Comments from first referee

It's not easy to solve, so I can only point out the problems, and ask you to do what is possible to fix them. One possibility would be to put all figures in a downloadable Appendix, or some other online resource; and maybe remove some of the figures from the paper, in order to make more room for the others.

Thank you for acknowledging the difficulty we're presented with. We feel that having opted to put most of the figures in supplementary materials we arrive at a more concise paper with much clearer plots (as they have more space).

We have also endeavoured to clear up the plots that have remained in the paper (for example by removing cluttering labelling).

font in the Appendix could be reduced (for example to the same size of the font in the references)

This has been done.

When you speak about evolutionary computation applied to the IPD, you could add some words about reference [21], that is otherwise only cited for GTFT. The basic idea of the publication was to create an EA able to adapt its behavior by building a model of

the opponent 'online', during the game, and then exploiting the opponent's weaknesses. It's unpractical to use in your experiments (reported computational time is considerable, the technique is tailored for 1vs1 games as it can only model one opponent), but it could be interesting for the reader.

Thank you for pointing this out, we have included these details in our discussion.

- capitalization of words in the title is not consistent; why is "Emergence" with a capital "E", but "iterated" does not have a capital "I"?

We have fixed this.

- page 1 – Recently, some strategies...can manipulate some... -> remove 'some'
- page 2 – The strongest resistors specifically evolve or have -> possess
– Some work has looked -> A few works looked... – http link should be put in a footnote, and using (if you are writing in Latex)
- page 4 – ...to analytical results in some cases -> a few selected cases
- page 5 – The difference is that CS will defect after the handshake if the opponent defects while handshake will not. -> last Handshake should be capitalized, to separate the player from the strategy – Tables II -> Table II
- page 8 – This will be explored further in the next section, looking not only at $x=1$ and $x=N-1$ but also consider $x=N/2$. -> considering...
- page 10 – processes -> processes – TABLE VI: replace 'some' with 'a few selected'

All of these have been addressed.

- page 3 – why did you present TF1, TF2, TF3 in reverse ordering?

We were not too sure what happened here, looking at our version the ordering was correct. We will specifically inspect the proofs upon submission.

- Using this it is a known results -> I could not understand what you mean here
- These are no longer a good match which highlights the weakness of assuming a given interaction between two IPD strategies can be summarised with a set of utilities as shown in (1). -> this phrase is also not clear

We have addressed both of these comment by rephrasing.