Comments on egusphere-2024-46, by David Crookall, Apr 2024,

Minions of Disruptions™: A Collaborative Adaptation Game for Promoting Climate Action

My apologies for this rather short, and maybe curt, set of comments; I am getting ready to go to EGU24, and wish to send these before I leave.

1	Title: Maybe consider swapping your title and subtitle. The main and immediately meaningful info should, in my view, come first.
430 & 560	"This study diverges …" and Concl. I would very much have liked to have had (more of) this in the introduction. Maybe I was misreading the introduction, but it is only when I got to the end that I suddenly realized (more) clearly what your method was.
54	"two separate datasets to form a dialogue between the designers' intentions and the audience's perception." The word dialogue bothers me. Could you not use 'comparison' or some other more literal term? It may be confused with dialogic teaching methods.
129	Consider using the abbreviation MoD for the game.
60	Consider listing the sections in a numbered list.
67	Games "function as communication vessels that transmit messages". Does this not hark back to the information-deficit model (p.35)? Simulation/games (in my view) are far from being vessels; they are player-co-constructed experiences in which relations and meanings are generated, sometimes quite irrespective of designer-intended messages. Hence the crucial need for debriefing.
75	For the knowledge-action gap in simulation/gaming, you might be interested in an article that I co-wrote years ago: https://doi.org/10.1177/1046878108330364
147	Consider placing this table in an appendix.
150	It would be marvellous to have some photos of groups playing the game.
164	"Occasionally they are invited to share real-life knowledge and experiences,". One thing that many gamers tend to forget is that much/most of what happens in a game, and thus the game experience itself, depends largely on what players themselves bring to the game. Game designers tend to think that it is their design that determines everything in a game. No game would work if players suddenly left all their knowledge and skill behind as they enter the game.

164	Winning. Is MoD then a zero-sum game? If so, what competition arises, and how does this affect outcomes and the messages that people tale away from the game?
167	Debrief. This is crucial for any game. It is one of the main, if not the main, key to learning. It would be most useful to readers to provide more on how the debrief was conducted, what materials were used, the ways in which it helped people learn, what participants thought of the debriefing, etc. For more on debriefing, see my chapter https://www.researchgate.net/publication/374344073_Debriefing_A_Practical_Guide
177	Para. You start the para by outlining the drawbacks of the "most common way to evaluate games". Then you describe your method. Consider inverting the order: first describing your method, then saying how it overcomes common ways. The main point is not so much that your method overcomes drawbacks from other ways (although that is important), it is that your method is able to achieve the analysis and results that you want from your research objectives. This is where, I would have liked to have more about your method – maybe a para or two. This would be most useful to the gaming community as a whole, not just for geo-gaming. Explaining your method in more detail would help other gamers to do their evaluation. A general comment. The evaluation of a particular game is fraught with conundrums. Evaluating a game from a series of game plays is making a leap that should really be justified. We gamers are all convinced that a game works, is valid, is stupendous, etc, based on our experience with running games in general and with a particular run of a game. However, so much depends on the facilitation process and on the debriefing. Little wonder that the gaming community (outside geo-gaming) spends much effort on this. We are, in a word, making a leap of faith by inferring a game's value from our and participants' perception of the play. This raises the question (often debated in gaming circles) of the distinction between a game (the inert materials) and a play (the game brought life by people playing. We tend to speak as if the two are the same. They are manifestly totally different. This is reflected in many facilitators' experience of running the same 'game' (materials) and witnessing very varied play sessions (some highly successful, some a failure). Strictly speaking, instead of saying "this is a good game", we should say "this set of game materials often allow for good game-play experiences". This is partly why your new method of evaluation has great potential and should be explained in more detail.
185	"the gaming experience is received by participants". "received" bothers me. Would it not be more in keeping with a dialogic and/or constructive approach to use a word like

	'seen' or 'experienced' or 'perceived' or 'lived'?
185	"future quantitative studies could be built". Most intriguing; it would be nice if you could elaborate on what is behind the "could be".
229	It would be marvellous if you could place a complete copy of the full "standardised post-game survey that all game participants were asked to fill out". After all, it seems to be a key element on your research findings, and it is also common for researchers to place these types of materials in an appendix. They are as important as the data that they generate. They would also allow a replication study, a standard approach in science.
270	Were these design intentions developed before the game was finalised or once the game had been used several times. I have a slight worry that knowledge of game play results might colour the expression of their intentions.
300	I must admit that I do not understand table 2. What are themes and statements? Also, the data in the table seem to be raw. How do the questions relate to the design intentions? Should the table not be in an appendix?
306	Fig 2. What is the purpose of the graph? My initial inclination was to think that it was to compare in person with online. How do you know the numbers behind the columns? For example, what makes it possible to assign a response (to what question) to an intention?
312	Fig 3. I have similar queries for this, especially about assigning responses to intentions.
334	What do the numbers in the text and in Table3 actually signify? For example, "Climate Science (0.900)"; is this a probability? My apologies, I must be missing something. I think that I would like more explanation of how you obtain these numbers and what they actually indicate.
345	In Fig 4, what do 1 and -1 represent?
360	Table 4. It seems that many elements contributed to each primary objective. Is there any way to highlight which elements contributed the most? Did you manage to 'measure' or get a sense of the holistic or overarching sense that players had of the game (or rather game plays) as a whole. Simulation/games are often said to provide players with a holistic sense of things – a gestalt is what one of our greatest gamers, Dick Duke, would say. See, eg, Duke, R. D. (1988). Gaming/simulation: A gestalt communication form. In D. Crookall & D. Saunders (Eds.), Communication and Simulation: From Two Fields to One Theme. Clevedon, Avon: Multilingual Matters. Also Duke, R. D. (2014). Gaming: The Future's Language. Second Printing. Bielefeld:

368	Table 5. This looks most intriguing. However, it would help me if you could (a) explain in a detailed example how you made the connections, and (b) what it says about how effective the runs of the game were.
372	What do you mean by "highly complex communication"? eg, as opposed to complex comm?
422	What field exactly do you wish to advance? Environmental gaming? Climate simulation? Geo-games? Gaming in general?
426	You assert that collective action etc feature seldom in other climate games. My impression is that many actually do encourage these features, and in any case, it depends considerably on how the game is facilitated and debriefed.
428	You say that "research demonstrates". It would be good to know what research – cite some examples.
505	This is one of the delicate aspects of facilitation. How much it should be controlled by the facilitator and how much by the participants. I see now easy answer, and each play will be different, depending on the needs of the participants (and also on the urges of the facilitator). Some facilitators adopt a very hands-on approach no matter what; others a hands-off, or even no hands, in all circumstances. (I discuss this in my debriefing chapter.)

Overall, I very much liked the ms and the research method, even though I think, indeed am sure, that I did not manage to understand it fully. I think that it will be a great asset to other gamers, in climate games or in general, wishing to assess the effectiveness of play sessions. The connection between play+debriefing sessions and the game materials themselves, with intervening variables such as facilitation style, data collection, etc. is in my view still fraught with problems, and is likely to be for quite some time to come.

Assuming that your ms is accepted for publication — I hope that it will be — I would very much like it to be included in the special issue of GC on the theme of climate and ocean education & communication – see https://oceansclimate.wixsite.com/oceansclimate/gc-special. Let us see what the Editors say.