Natural Hazards
and Earth System
Sciences

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Discussions

Interactive comment on "HAZAGORA: will you survive the next disaster? – a serious game to raise awareness about geohazards and disaster risk reduction" *by* S. Mossoux et al.

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In general, I find this work interesting and with great potential. But, in my opinion the text is not always clear. I'll point to some cases I noticed. The weakest part of the paper is the presentation of results, more details should be added and some statements lack clear data support. I'll make specific remarks below. Nevertheless, the discussion on sections 5 and 6 is good.

Please explain this sentence better: "At the beginning of the game, players are informed of the presence of water wells, food markets and sectors defining hazard im-

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pacts but no information is given about their utility on the island" (page: 5214) What is meant by no information is given about their utility?

Section two would benefit of having a clear turn sequence summary. It seems that the sequence is: get income, feed the households, invest/build new Can you present more details about the mechanics of the income?

Placing new settlements apparently have restrictions (because of the last sentence in 2.2.), but those are note clearly described.

Have you considered an alternative to playing a video clip to show the hazard? Was this necessary? It might break the flow of the game. How does the game master decide when is time for a hazard?

"It should be noticed that other impacts than the ones defined within the Haz- agora guidelines can be proposed by the players and implemented if they correspond to a potential and realistic impact." (page 5215) How is this managed? Can player suggest changes during gameplay? Is it discussed in the beginning? Is it incorporated in the game rules (e.g. there is a game action that changes the outcomes?)

You mention huts and people. But, it is not clear in figure 1 that you have huts and families as separate game elements.

Figure 3.b is not clear to me.

How and who acquires community cards. Who can decide to use them?

It could be interesting to compute the Resilience index at the end of each turn to promote awareness of the progression. Or at least to have a track of capacity points and vunerability points

In my opinion the paper present just a few details regarding gameplay to understand the concept. I got an idea on how the game works, but I'm guessing a lot of details. It would be nice to know a few more details to fully understand the gameplay (to recreate

it, for example).

Section 4 present interesting studies. But, the description lacks some details.

"Classification of the players regarding of their age, background and experience cannot be made" (page 5219) Can you explain this a bit better. It is not clear to me why the classification (you mean analysis?) of players by age, background/experience cannot be made... do you mean that it was inconclusive? You did not found any effect?

Furthermore, why do you state that "strategies adopted during the game (1) are influenced by personal desire to take risk or no"? (page 5219) How do you sustain this affirmation? This was based on observation? Did you perform a risk-taking assessment to the subjects?

A note. It would be interesting to see more details regarding changes in the strategies of players during gameplay or across games (if played more than once). For example, if they start playing a fast-growth fatalist strategy will they move towards a more protectionist strategy (or vice versa). It seems that they change to a fatalist strategy in the last turns of the game. But this is due to a "end of the world effect" where the action no longer have "long-term effects". You can try to avoid this be having some uncertainty on the end of the game (e.g. avoid a fixed number of turns).

It would important to check the resilience evolution of other game sessions. It is not clear why only one session (of the 9 session) is presented. That particular one is a bit based due to the fact that the lumberjack was lucky and did not suffer from hazards.

In session 4.3 you refer to Belgium students, while in most of the paper (and in the images) they are referred as European players. You should stick to the last. Always refer to European players.

In section 5, you refer to five types of strategies (fatalist, protectionist, spatial, individual or collective strategies) stating that they were observed once or repetitively. You should clearly state the number of occurrences of each strategy.

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"Real life experience and impacts experienced during the game may influence the players' strategies. These people usually adopt more protectionist strategies with a good access to resources" (page 5226). You should present some data to sustain these affirmations. The wording "may" makes the affirmation weak as well. What do you mean by those people it not totally clear. It seems you refer to people that have experienced (more) hazards, in the game or in real life.

It would be interesting if you could compare the experience of real and game hazards. For example, how someone that witnessed 2 real-life hazards compares to someone that suffered 2 game hazards. Regarding the limitation of the need for a game master I have a suggestion. You can give the game master resources and goals and turn him/her into a player playing against the other players. This would engage the game master in the game as well and not just as a facilitator. If so, you could have students peers to take this role. You could still have an expert/teacher to mediate the discussions, but the gameplay would be more autonomous. You can see the Descent boardgame series (http://boardgamegeek.com/boardgame/17226/descent-journeys-dark) for inspiration.

Finally check the references. Some appear incomplete. In particular this one

Pereira, G., Prada, R., and Paiva, A.: Disaster prevention social awareness – the Stop Dis- asters! case study, available at: http://gaips.inesc-id.pt/gaips/component/gaips/publications/ showPublicationPdf?pid=367&format=raw (last access 1 January 2015), 2014.âĂÍ

Replace it by:

Pereira, G., Prada, R., and Paiva, A.: "Disaster Prevention Social Awareness The Stop Disasters! Case Study" in Proceedings of VS-GAMES'2014 - 6th International Conference on Games and Virtual Worlds for Serious Applications, pg. 115-122, IEEE, Msida, Malta, September 2014.

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