Title: A Game of COVID. Ludification as a Way to Make Sense of a Pandemic

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Abstract:

Many aspects of handling the COVID-19 pandemic in Western countries bear resemblance to game-design patterns like point displays and leader boards, the visible assumption of roles, classic archetypes, collection and hoarding of resources, and spatial awareness. We argue that these patterns emerge as people lack cultural and individual norms and cognitive scripts to handle a pandemic, in contrast to other catastrophic events like wars and major economic crises. Understanding this spontaneous ludification of a serious and complex situation in terms of Johan Huizinga's *homo ludens* can raise awareness for possible failings in dealing with COVID-19. It also has the potential to strengthen people's motivation for cooperative effort.

Keywords: COVID-19, pandemic, homo ludens, ludification, public health

One Sentence Summary: COVID actions resemble game patterns.

Main Text:

With a death toll of hundred thousands, and millions of infected people¹, the SARS-CoV-2 pandemic has a devastating effect on families, communities and nations all around the globe. It has thoroughly shattered personal and professional routines everywhere. With the severity as well as the novelty of this situation, we argue that people are missing heuristics and strategies to cope and thus fall back to patterns of perception and action that are usually associated with games. This results in a spontaneously *ludified*² pandemic in the sense of Johan Huizinga's *homo ludens*.³

COVID-19's devastating potential is sometimes compared to the 1918 flu pandemic (better but problematically also known as Spanish Flu) that has killed tens of millions of people about a hundred years ago.⁴ The 1918 flu pandemic is a haunting but now grossly incomplete collective memory of a ravaging disease. It is distant, and we lack knowledge of everyday-life impact and

details about countermeasures. Consequently, we fall short in drawing specific inferences on how to handle such a threat.

In comparison, major economic crisis is rather frequent (with a recent global recession in 2008 and another one ramping up just now because of the pandemic). While the last global war has ended 75 years ago, war is still a recurrent phenomenon (like, e.g., in Iraq and Afghanistan with US involvement; and with the Yugoslav Wars and the recent war in Ukraine/ Donbass within Europe) and is thus present in our news cycle.

We do not have this experience with regard to the COVID-19 pandemic. Severe diseases so far have been rather delimited geographically (like SARS-1 2002 or Ebola), are not present in Western countries (Malaria), are not contagious in everyday contact (HIV), are seasonal and have vaccines available (H1N1 and other influenza diseases), or are specific to certain treatment of food (EHEC). COVID-19 is global, present in Western countries, very contagious, there is no vaccine yet, and it is here to stay. There is no established cultural norm in North America and Europe to handle such a pandemic. For individuals, there is also no precedent for action. In terms of cognitive psychology, people lack the *scripts*⁵ to accommodate for the shattered daily routines. School, shopping, personal hygiene, travel, work: The *scenes*, speaking again with Tomkins⁵, are so different that appropriate responses are yet to be found.

To understand peoples' behavior in the current situation, we suggest applying the framework of a *homo ludens* as described by Huizinga.³ He proposes game and play as a way to develop cultural techniques and to make sense of the world. We can apply this mode of understanding to COVID-19: There are several pandemic-related phenomena that bear resemblance to patterns and mechanisms found in games. In coping with COVID, several characteristic circumstances can be understood in terms of rather diverse game design elements:

- Points: The use of points that relate in some way to achievements is an easy (and, as *pointification*, often criticized) means of gamification.⁶ Elaborate data sources like that of the

Johns Hopkins Coronavirus Resource Center⁷ are constantly available and provide 24/7 updated repositories for worldwide infection count and death toll. The graphical interfaces even bear resemblances to games like “Plague Inc.” (Fig. 1). As many newspapers have integrated those sources into their web front pages, the daily COVID counts are ubiquitous.

Fig. 1.

COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (top) as well as the interface of the game “Plague Inc.” (bottom).

- Leader boards: The aforementioned points lend themselves to leader boards. Deaths (per capita and in total); reproduction number R and case fatality rate; number of tests per 100,000 citizens: Those are just some of the most prominent statistics that are used to rank nations, states, or even cities and communities.

- Roles: Apart from the protective effect, a mask, and especially the type of mask, signifies a certain role (cloth face mask vs. N95 vs. face shield) and is associated with the right to access certain areas. At the same time, masks disguise the bearer, which might contribute to a feeling of deindividuation.⁸ The strong emotional reactions to mandatory mask usage, in any case, might signify that face coverings have a profound impact on self-awareness.
- Collecting resources: Some people are hoarders in games. Having too much wool or ore on one's hand is rarely a winning strategy in *Settlers of Catan*, but for some players, it might create an illusion of competence and preparedness.⁹ Likewise, a stockpile of toilet paper will probably not affect one's chance of surviving COVID-19. In both cases, hoarding probably is a means of maintaining self-efficacy in a complex situation by affecting the belief "[...] how long they will persevere in the face of difficulties".¹⁰
- Archetypes: Story-rich games often employ archetypes^{11,12} like the *hero*, the *old wise man*, and the *villain*. With COVID-19, rituals like *Clap for Carers* indicate archetypical exaggeration: Instead of addressing the real obstacles, like a lack of personal protection equipment (PPE) or bad staff ratios, the personnel's struggle is romanticized as heroic. In addition, media depictions sometimes reduce key players to some stereotypical quality (e.g., immunologist Anthony Fauci is depicted as wise counselor or US President Donald Trump is portrayed as villain). In doing so, a complex pandemic runs the danger of being reduced to a personified good-vs-evil scenario, comparable to a campaign in the role-playing game *Dungeons & Dragons*. (Fig. 2)

Fig. 2.

Reception of mask usage by the Instagram artist @allwitnobevity. This kind of alignment chart refers to the Pen & Paper role playing game *Dungeons & Dragons*.

- Location-based gaming: COVID-19 apps have been released in about 50 countries so far.¹³ The idea of location-aware human behavior, with perks and dangers communicated by a spatially-aware smartphone, took the world by storm in 2016 with Pokémon Go.¹⁴ COVID-19 has made us spatially aware, and smartphone apps with lock-screen notifications and simple, traffic light rating indications have become constant companions for many, especially younger people.

These game mechanics are not isolated, but rather in constant dynamic interaction. For example, information obtained from COVID 'leaderboards' might influence compliance with preventive measures such as social distancing. Fear is one major aspect regarding this compliance¹⁵, and

fear might be amplified by yellow and red alerts cast by a COVID app. Hoarding might be a possible consequence. Likewise, falling infection numbers and good outcome rankings might tempt people to switch from game to play mode, and to ignore possible dangers while having fun (again).

All these phenomena are compatible with the idea that COVID-19 can be considered a game—albeit a very serious one. This should not be taken as an indication that (most) people underestimate the dangers. Falling back on patterns of perception and action from game- and playful contexts might just be a sign that, in the absence of established societal standards for dealing with a pandemic in North America and Europe, rather generic established patterns—game design patterns—are applied.

One could ask if game design patterns are, in a moral sense, the right way to frame a devastating pandemic. Our rebuttal would be: What would be the right way to frame such a devastating event? If ludification has the potential to enhance people's understanding of a situation and to motivate them to protect themselves as well as the people around them, we should give it a try.

The present pandemic is an enormous challenge for every public health decision maker. Exploiting the natural tendency of applying game patterns in order to make sense of the world is a promising angle for low-cost and low-threshold health policies. Fighting COVID-19 is not only a game of medicine, but also of successful communication, of perception and evaluation of knowledge, and of compliance and trust.

There is one very broad distinction regarding games: Some can be played cooperative, and some can be played confrontational. If we would try to deliberately take up existing ludic elements and would attempt to gamify the handling of COVID-19, we should have at look a co-op games, board, and video games alike. We could evaluate which game design elements motivate people to work together in order to achieve a common goal. There is one very famous board game that can only be mastered when players engage in cooperation. It is called: Pandemic.

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