Afterimage: an introduction of the work of *BetaReserve* for the 7th session of OCAT Biennale Online Forum Series "*Mediatization of Attention*"

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Liu Xinyi: Thanks for the introduction, I'm sorry I couldn't join the online sharing, so I'll just add a bit to the text version. How to understand things that have media potential, both major and minor, and imagine their implication on social psychology and collective behavior has always been a major thread for me.

Over the past years, those of us who have joined in the journey of self-rendering WeChat and Instagram from social tools of a liaison nature into mirror images of the art world. Today's mobility restrictions, various reluctant closures and shutdowns due to force majeure have further prioritized PR campaigns on social media across the board over exhibitions and the works themselves. In tandem with this, the industry is also demanding that practitioners become more attuned to the pool of spectacle within the screen and swim butterfly in it. Only to look back and realize that the audience that knows all about it - to take selfies and post them, thus taking the expectation of viewing and the perception of participation in art back into their own hands.

While the dopamine of our generation is certainly worthy of analysis, what makes me wonder more is what kind of connection we intend to make with the viewer apart from trying to achieve the best possible documentation with all the work we put into the gallery space? If the significance of the exhibition site continues to diminish, will the medium of art journalism take us back to the age of television?

I ponder that perhaps *BetaReserve* needs to embrace a non-specialist gaze. Although my dream is about having the viewer to land on a sliver of untamed land, for now I'm just yearn for the 'ores' and 'gas wells' on the ground could meet up with people who know a few thing about their origins. Beyond that, I wish to take up a little extra of their time, try placing yourselves in the middle of its fan-shaped envelope and imagine being a 'base' in the museum. Perhaps, during their home stay, they could continue to see the exhibition in the interface of the StarCraft series.

The StarCraft series in particular is one of the Real-time Strategy Games released by the American gaming company Blizzard Entertainment for the PC platform. What makes the RTS games distinctive in comparison to chess, simulation and role-playing in the video game world is the introduction of economic variables into the rules of war games, equivalent of having economic resources scattered across the board of a game of chess. The player has to constantly scout the enemy's tracks and the location of resources in an imperfect information dynamic (or fog of war).

The base camp, commonly known as the "base", is the most important building unit in the StarCraft series. Setting up a "base" is the first step towards resource extraction and management. During the course of the game, players need to expand and defend their base camp's resource control, and seek to disrupt and suppress the economic activities of

the enemy's base camp. In the case of a rivalry, economic advantage mostly defines the course of the game.

It is said that the StarCraft series is the best of its kind in terms of game challenge, balance and computer compatibility, and there have been continuous attempts to use it for artificial intelligence research since 2009. The closest to us occurred between 2016-2019, when Blizzard Entertainment forms phased partnership with DeepMind, the artificial intelligence company of Alphabet Holdings (Alphabet Inc.), through an interface agreement (StarCraft II API) provided by Blizzard Entertainment and StarCraft II became the company's benchmark for deep neural network and reinforcement learning through a DeepMind-developed machine learning protocol (PySC2)[1], thereby giving birth to AlphaStar[2].

By the end of 2018 and early 2019, the team invited two professional StarCraft II players to London to compete. The new program, AlphaStar, delivered on expectations and reenacted the match between the famous Go player Lee Sedol and Ke Jie's defeated by AlphaGo (also nicknamed Alpha Dog by the Chinese netizens)[3]. Due to the fairness controversy, the later modified AlphaStar also has records of being defeated by human players[4]. But the most amusing part for me is that, regardless of the changes happened on the "players", the game is still a competition between the two sides within the rules of the game for better economic efficiency and conversion. In short, it is about which side can collect more 'ore' and 'gas' in a high intensity confrontation.

The work of *BetaReserve* is modeled after the ore veins and gas wells of Starcraft II. Despite the fact that new units have been added and updated since the game came out, the status of ore and gas as "natural resources" has not changed at all, much like raw minerals and fossil energies in the commodities trade. They are also, I am afraid, the most passive elements of the game's setting: they can be selected and interfered with, but they cannot be moved or regenerated. The same set of ores can even be mined by rival players at the same time, giving it a touch of realism. An overview of the game's map makes it easy to notice that the resources are essentially in the form of "mining field". The most commonly seen combination of eight pieces of ore veins and two sets of gas wells are placed side by side in small, enclosed flat plots of land with a fan-like appearance.

Yet before AlphaStar was created, DeepMind developed an open source reinforcement learning protocol (PySC2) that included visual recognition and action strategies for ores in

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[1] https://www.deepmind.com/blog/deepmind-and-blizzard-open-starcraft-ii-as-an-ai-research-environment
https://develop.battle.net/documentation/starcraft-2

[2] https://www.deepmind.com/blog/alphastar-mastering-the-real-time-strategy-game-starcraft-ii

[3] https://www.youtube.com/watch?v=FWbVseLiopw
https://www.youtube.com/watch?v=cUTMhmVh1qs

[4] https://starcraft2.com/en-us/ladder/grandmaster/2
https://en.wikipedia.org/wiki/AlphaStar_(software)

decomposed mini-scenes[5]. It is not difficult to presume that such smart recognition would have been largely matured in projects other than AlphaStar, as the drive to combine computer vision and machine learning encompasses the vision of deploying automated decision-making to a wide variety of tasks[6]. Given that DeepMind has validated that their tireless AI agents can match the top human players in StarCraft II scenarios, then with even curiosity alone, developers all over the world were able to use DeepMind and Blizzard Entertainment's open source protocols, learned resource management and gaming strategies to make all sorts of intelligent agents even smarter. In theoretical terms, the "mining field" in the game might has the chance to travel as well.

In a flashback to over 20 years ago, StarCraft I's explosive popularity may also relevant to its triangular game setting and default state of nature laws, which strikes a particular chord with East Asian consumers who have not long been thawed. While the geopolitics of the West Coast of the Pacific returning today, other smart technologies that care nothing for the imagination are already flourishing in the anti-epidemic scenarios. I could only stealthily hope that the afterimage of the "mining field" still had some hot or cool medium value for us to speculate on the economic and diplomatic games of a smart society would go.

I suppose the "application scenario" of *BetaReserve* is the very feedback mechanism of contemporary art. Having the opportunity to send this 'code' through the validation procedures of the OCAT Biennale was a brilliant experience in commissioning. The only uncertainty was, if the museum was equipped with an AI curator, don't let it get anywhere near this work.

—Translated by DeepL and revised by Liu Xinyi

[5] https://github.com/llSourcell/A-Guide-to-DeepMinds-StarCraft-AI-Environment/blob/master/A%20Guide%20to%20DeepMind's%20StarCraft%20AI%20Environment.ipynb

[6] https://www.deepmind.com/blog/alphastar-mastering-the-real-time-strategy-game-starcraft-ii