SurvivAll

Survive through sustainability!

Concept

SurvivAll is top-down 2D survival game in which the player must balance available resource expenditure and game actions. Only a sustainable resource management can lead to long-term survival.
However, hidden information may misguide the player into maximizing its available resources on the short-term without realizing the long-term consequences of that strategy, which could lead to inevitable loss.
Game-Over happens when either the player or the ‘environment’ dies.

Main Mechanics

Board

The game space is a board with N Tiles where Resources have variable spawn/growth rates and quantity caps. The player can move between any two adjacent Tiles by using its Wealth Resource.

Game Variables

Tiles

- 3 different Tiles

Resources

- Wealth - necessary to move
- Environment Health - necessary to survive

Player

- Location - for each location there are 3 possible actions and a maximum of 6 possible moves
- Available Resources

Player Actions

Starting from any Tile, the player may move onto an adjacent Tile.
When entering a new Tile, the player can:

1. if it contains Resources, Exploit

2. if it doesn't contain Resources, Invest
3. leave (without exploiting/investing).

Experimental output

Hypothesis: participants will change their behavior when there is a clear visualization of the damage their cause to the overall health.
We are interested in exploring how the delayed consequence of their actions in a global variable will affect their immediate actions in a egocentric variable.

Furthermore, the behavior of the participants can be modelled in terms of their individuality (impulsiveness, self-gain,...)

Game statistics

All of the Game Variables are logged to enable quantification and analysis of behavior.
MatLAB ® Scripts for visualization of some of these data are made available with this Project.

Action characterization

- Action types, timings and locations
- Speed of Exploit (nClicks in the same Tille / time)
- Extensiveness of the Explore (move)

Tile occupancy

Dynamics of Game Variables

Development Notes

This project was developed in the context of NeuroGameJam 2019, during 24-26 of May in Lisbon, Portugal, an event in which participants were challenged to develop a game that could be useful for purposes of neuroscience research and make it opensource. The theme for this edition was climate change and how people act and interact with their environment seemed interesting to study, and in particular, if they act differently when they know what the consequences of their actions are to the environment versus when they don't. Hence, we have brought from our minds into this world a very simple game that we hope you'll enjoy.

Thank you, and enjoy SurvivAll

Credits

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