



# Universidad Autónoma de Baja California.

## A social simulation tool for Personality

Antonio Rodríguez-Días & Manuel Castañón-Puga  
IMOX Research Group  
Universidad Autónoma de Baja California  
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# INTRODUCTION



- Tijuana city is located in the border with USA and more than 10,000 persons cross the border every day. It has the most dynamic border crossing activity in the world.
- A lot of people from other regions and countries come to Tijuana to try to cross to USA illegally, but they fail and stay in the region.
- We want to contribute with Social Research using Social Simulation tools.



# SOCIAL ZONE PROBLEMS



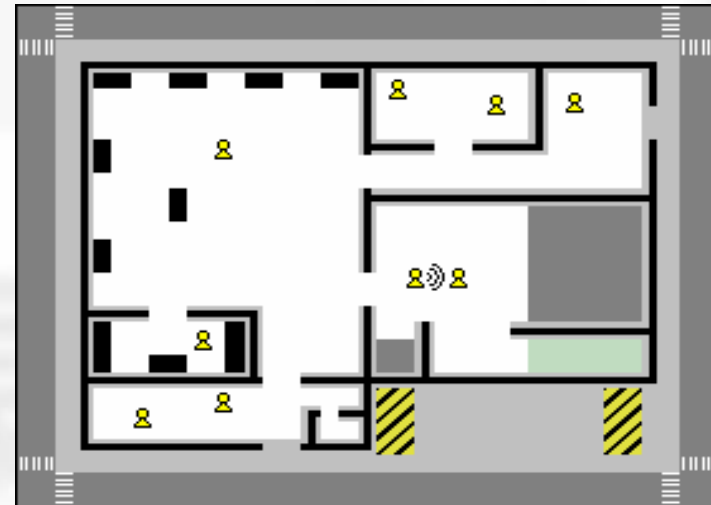
- High population grow rate
- Low socioeconomic status
- Immigration and frequent border crossing
- Overcrowded living conditions
- Multicultural traditions
- Ethnical communities
- Violence and narco-traffic
- Presence of tuberculosis, diabetes mellitus, lymphoma, cancer, and AIDS



# A SOCIAL SIMULATION TOOL



- Specifications
  - Simple and scalable
  - Distributed Architecture
  - Object/Agent Oriented
  - Personality and Behavior
  - Coupled to other systems
  - Generate a minimal data



# PERSONALITY AND BEHAVIOUR BASED ON CATHEXIS FLUX



- Cathexis flux is the competition between different activities and its motivations.
- Different configurations express a different personalities.
- We use this model to construct a virtual person behavior.

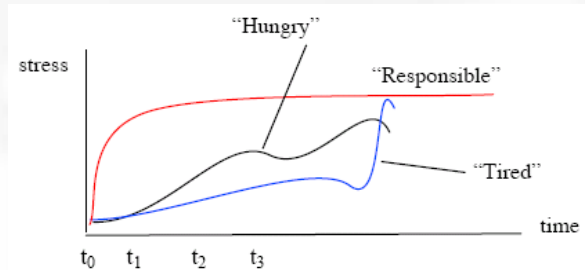


Figure 5: Stress functions of VP<sub>1</sub>

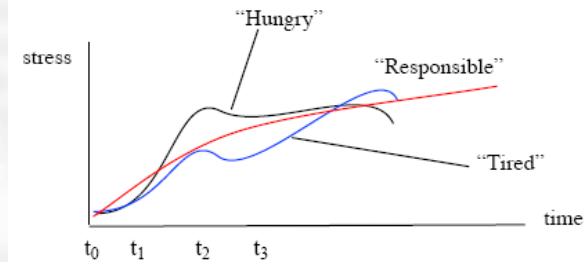


Figure 6: Stress functions of VP<sub>2</sub>

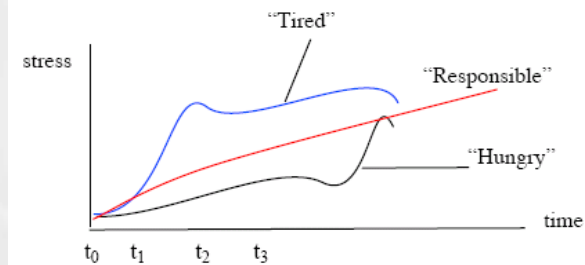
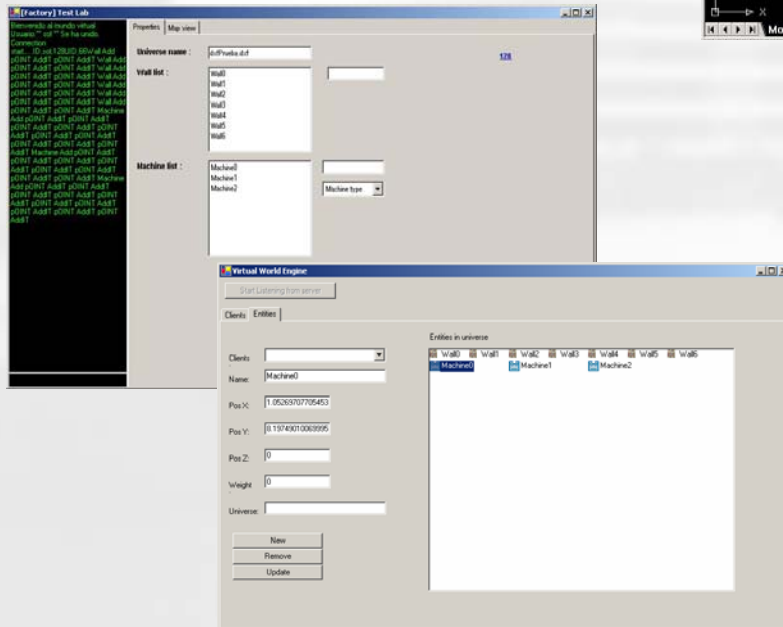
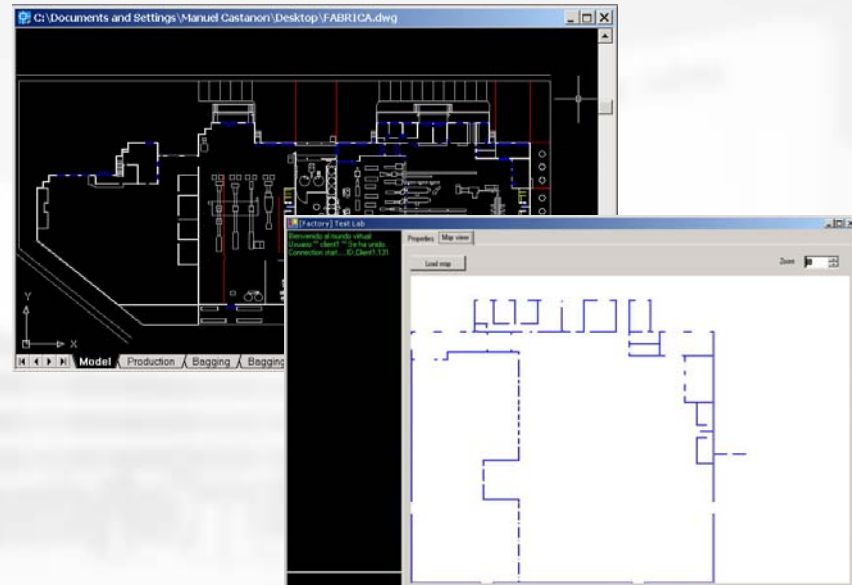


Figure 7: Stress functions of VP<sub>3</sub>

# PROTOTIPES



- From simple CAD drawing file type we can import into a client application, walls and objects positions.

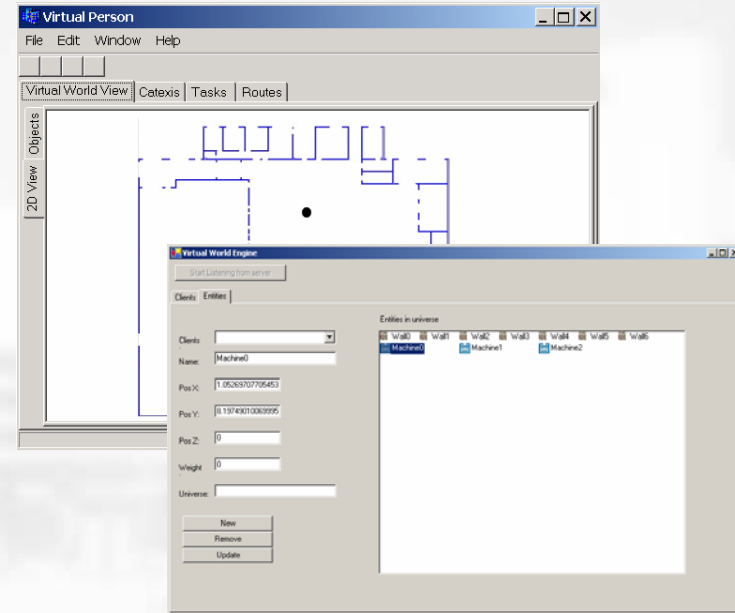
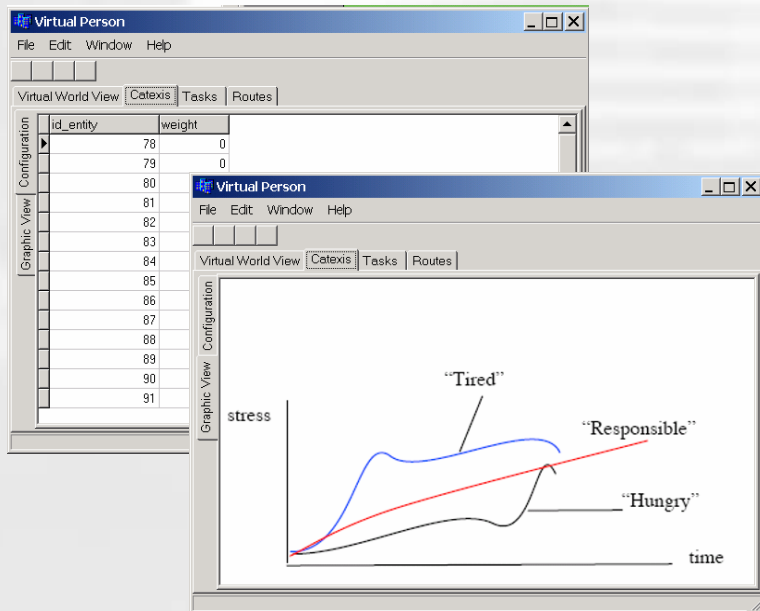


- From client application we can send and configure a virtual world server application walls and objects

# PROTOTIPES



- From a client application we can configure and put a virtual person into the virtual world and can do actions and interact with it

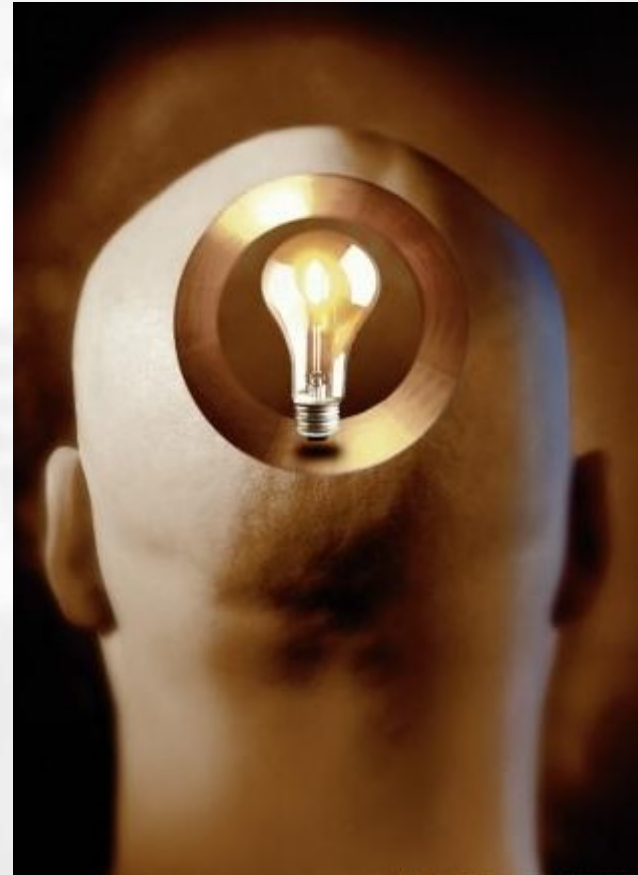


- We can specify cathexis behavior for different actions

# CONCLUSION



- We are constructing a simple simulator as a tool to social research with minimal specification.
- We want to introduce different behaviors using simple psychological models concepts like cathexis flux. Different personalities emerge from different configurations.
- We are working on a tuberculosis disease case of study.



## FUTURE WORK



- Scale to a more complex and standardized simulator.
- Improve other psychological models.
- Test with a selected case of study



# CONTACT



Manuel Castañón Puga  
Antonio Rodríguez Díaz

Universidad Autónoma de Baja California

[puga@uabc.mx](mailto:puga@uabc.mx)  
[ardiaz@uabc.mx](mailto:ardiaz@uabc.mx)