

# *Brochure*

## B.A.R. G.A.M.E.

# Better Arithmetic Reasoning Generated by Acknowledging Minority Experiences

<http://www.bargame.info/>

## Group 7

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Demo 1

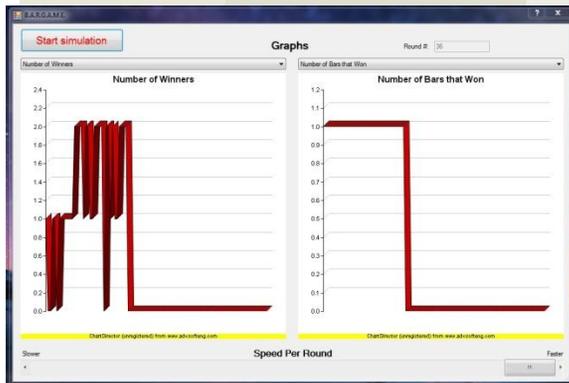
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Better Arithmetic Reasoning  
Generated by Acknowledging  
Minority

## Determine your needs and personalize a simulation.

- Easily simulate variable populations on the fly.
- View different statistics via a intuitive GUI that holds two graphs simultaneously to compare and contrast values on demand.
- Graphs update in real time to view change over time.
- Effortlessly access data from previous simulations.
- Utilizes more real-world parameters for YOU to control!
- No training required to use this simulation software.
- Help files are available at any time for your convenience.



Running Simulation Graph Window

### SYSTEM REQUIREMENTS (MIN.)

Display Resolution	800 x 600
CPU	1 GHz
Size on Disk	1 GB
RAM	512 MB
Operating System	Windows XP

### SYSTEM REQUIREMENTS (RECOMMENDED)

Display Resolution	1024 x 768
CPU	2 GHz
Size on Disk	1 GB
RAM	1 GB
Operating System	Windows 7

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For more information visit us at:  
<http://www.bargame.info/>



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v2.0

## Financial Objectives. Accurate Simulations.



## SIMULATION FEATURES

- Multiple Bars
- Population Capacity
- Bar Capacity (Static/Percent Based)
- Multiple Graph Options
- Real-time Graph Update

## V2.0 FEATURES:

- Revised GUI for easier use
- Mortality Population Variable
- Groups Population Variable
- Worst Score Dropping Population Variable
- Simulation Output saved to File
- New separate Data Interpreter application.
- More graph options!

## GRAPHICAL USER INTERFACE

A user-friendly interface has been implemented to not require any special training.

The interface features a special help button that may be used to access a help file at any time to answer any questions. The help file includes a description of every entry field to help you accurately input your parameters.

While simulating, you can view two different graphs which update automatically as the simulation progresses to view change over time.

Our simulation application can be applied to many fields and Stakeholders ranging from Amusement Parks to Restaurants. A particularly useful quality of our software is its adaptability to perform simulations of financial markets.

# Comprehensive Simulation Services

## THE EL FAROL PROBLEM

Introduced in 1994 by W. Brian Arthur, it is a problem in game theory based on a bar located in Santa Fe, New Mexico.

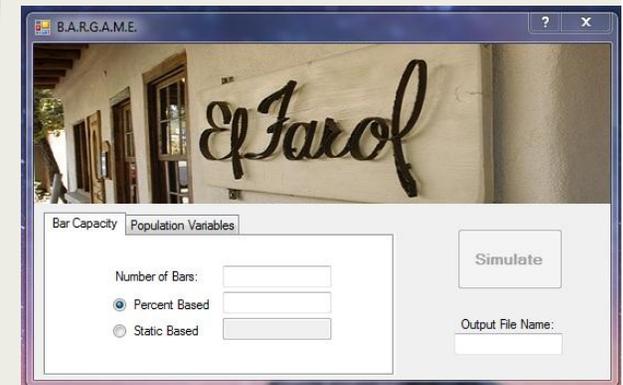
The Problem States:

- There is a finite amount of people in town who wish to go to the bar. However, the bar is small, and it's not fun to go if it's too crowded. Thus:
  - If less people go to the bar, collectively they'll all have a better time than if they stayed at home.
  - If more people go to the bar, collectively they'll all have a worse time than if they stayed at home.

## OUR APPROACH

To give a more real-world feel to our simulation application, we have added the following features:

- Multiple Bars possible  
This allows a user to determine how many bars are in the town which is more realistic if applied to a financial model.
- Real-time Graph Updates to GUI  
For the convenience of the user.
- Large number of Rounds possible  
Gives more flexibility to the user in simulation.
- Modifiable Bar Capacity  
This allows user to set a variable threshold of the bars
- Multiple Graphs Options/Real Time Update4  
Allows user to choose what data he/she would like to be displayed in the GUI and updated in real time to observe its change in time.



*Initial GUI user screen.  
GUI now includes a tabbed menu  
for easy to understand navigation!*

## V2.0 SPECIFICS

- Mortality Option for Agents  
Simulates Agents aging.
- Groups Option for Agents  
Simulate Agents with a "group mentality" algorithm.
- Worst Score Dropping Option for Agents  
Lets Agents "smartly" drop poorly performing Strategies.

- Output Saved to File  
Completed simulations have their data saved to file for later use.
- New separate Data Interpreter Application that takes in previous output and can reconstruct any graph available in the main Application



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