

RETURN TO THE PARADISE ISLANDS: FROM CONFRONTATION TO COOPERATION

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ABSTRACT

Simulations and games are designed to provide specific experiences to the participants. Underlying these experiences, however, is a framework that supports the goals of the exercise. A change to any aspect of the framework may require a change to the simulation itself which can change the entire conduct and results of the simulation. This paper describes how a change in the behavior of the participants and a change in technology created two new challenges to an established exercise.

INTRODUCTION

Simulations and games are designed to introduce students to topics and situations in an interactive setting. Interaction is arguably the most important aspect of an experiential exercise. Participants must discover and solve the problem placed before them. But interaction is a two-edged sword. There is a saying in the military that no battle plan ever survives first contact with the enemy. Short, targeted exercises may follow the intended script, but it is unlikely that a long-run simulation will go as originally planned due to the interaction of the participants in the simulation.

When a simulation or game takes only a short time, the designer has the ability to use the lessons learned from the exercise to redefine parameters so that the exercise will run more according to plan the next time it is used. A simulation or game that has been run many times can be tweaked so that it is possible to anticipate most of the likely outcomes. An exercise that has an inherently long time span will also be affected by the interactions of the participants. The problem is that there is no time for the designer to go back to square one, make changes, and restart the exercise. Endogenous or exogenous factors can affect a simulation, and the designer must make changes in real time and attempt to return the exercise to its intended track. Sometimes the shift in the exercise is too extreme or too subtle to permit a return to the originally charted course. When “things change”, the challenge is to adapt to those changes

and manage them so that the exercise can still be meaningful.

BACKGROUND OF THE PARADISE ISLANDS

The Paradise Islands is a semester-long simulation that challenges students to create a viable economic and social structure in a developing third world country. While aspects of the simulation are reminiscent of Buckminster Fuller’s *World Game* (Buckminster Fuller Institute, 2010), the scenario is designed to be able to be completed within a single semester. The exercise is structured so that the entire scope of the problem is too great for any single individual or group to handle. This requires that the task be broken into multiple subtasks, each of which conflicts to some degree with all other tasks. Participants are forced to create personal solutions to their assigned problems and then to modify these personal solutions to create a compromise solution that will be satisfactory to all participants.

Participants are presented with maps, pictures, history, and demographics of a fictional country located in the South Atlantic Ocean. The background material is so rich that some players do not immediately recognize the fictional nature of the country. The instructor can change elements of the background story to focus on specific aspects of the society and its development. Participants are also given a CD-ROM containing information that could bear on the problems faced in the simulation. This CD contains in excess of 26,000 pages of material, so one problem that must be addressed by everyone is identifying information relevant to the perceived situation.

The simulation is designed so that participants in the simulation can be pitted against each other in identifying and developing solutions to the problems presented. The first version of the simulation involved the conflict between economic development and environmental protection (Brozik et al, 2007). The second running of the simulation created a society with a small wealthy class and a large poor class and explored how the two could work together to create a stable, more equitable society (Brozik & Brozik,

2009). These “visits” to the Islands demonstrated that the simulation was robust enough to be used to address various questions concerning economic development and other aspects of the society.

One of the important design aspects of the simulation is to create tension between the various participant groups. Several authors have noted that conflict can be an effective part of decision making and result in better quality decisions (Iwai, 2009, and Roberto, 2001). Players are assigned to groups with specific areas of responsibility and required to develop solutions that are consistent with the group’s mission statement. Within the context of this simulation, the functional groups are given missions that are self-consistent but mutually exclusive. For example, the Environmental Protection Group may be tasked to preserve the marshes and wetlands while the Economic Development Group wants to use these lands to build factories. Sometimes the mission statement for a single group is inherently contradictory, such as assigning the Economic Development Group to be responsible for the development of both industry and protection of the environment. The mission statements do not explicitly identify these inherent conflicts. It is the problem for the participants to discover these difficulties and arrive at a mutually agreeable solution.

The course is designed to accommodate 20-25 students. With this number of participants it is fairly easy to develop six to eight different functional groups. Exhibit 1 lists several of the groups that can be formed with a brief description of their responsibilities. The mission statements given to the groups are detailed enough so that each group is sent in a different direction to develop a plan that addresses the needs of its constituents. Exhibits 2 and 3 present the mission statements for two groups that are inherently working at odds with each other. Each mission statement sounds reasonable and is internally consistent, but when they are taken together there are basic conflicts of interest between the groups.

The functional groups work alone for the first half of the term to gather the relevant information and construct a plan. Each group is encouraged to work independently so that it can gather information that directly bears on its goal and create specific plans to address the identified problems. Each group’s mission statement is sufficiently comprehensive that the group will be kept busy without diverting its attention to the actions of the other groups.

At midterm, each group presents its recommendations to all the other groups. This is the point where all students realize that there are internal conflicts and that their personal “best” solutions will not be adopted. The groups are at odds with each other, yet each individual group has invested itself in its particular set of solutions. This inherent conflict between the groups is one of the key aspects of the simulation. Students must learn to cooperate to resolve their conflicts. The second half of the term is spent developing a compromise solution acceptable to all groups and preparing a presentation that is given to a panel of outside

“experts” who judge the plan on its merits. That is what is supposed to happen. Sometimes things change.

THE THIRD VOYAGE

The frequency of conducting a semester-long simulation can be problematic due to constraints posed by the host institution. This simulation is designed to be taught as a cross-disciplinary occasional course offered through the Honors College. The instructors must be released from a more traditional discipline-specific course, and when there is a shortage of personnel this is difficult to do. The Paradise Islands was originally scheduled to be offered every three or four years in order to provide time for the instructors to work in their own specialized fields. The course came to the attention of members of the senior administration, who felt that the course directly addressed the institutional goal of stimulating “critical thinking”, and they made it possible to offer the course more frequently. The addition of an International Business major also gave the course a ready clientele. The problem is that enrollments have not yet stabilized, and so class sizes can vary. For the third offering of the simulation, the class size was only 13 students, roughly half the size of the previous classes. It is possible to adapt exercises for very large groups (Brozik et al, 2008), but in this case it was necessary to restructure the simulation on a small scale.

The initial approach was to reduce the number of functional groups to five. In this manner most groups had three members, which is considered the optimal group size for this exercise. Each group was given its mission statement and began to gather the information needed to formulate its plan. So far, so good. As the term progressed, an unexpected dynamic formed between the groups. It turned out that many of the students were friends and had already shared other classes. They were predisposed to cooperation rather than conflict. It was virtually impossible to start an argument between groups with conflicting mission statements. Everyone was nice to everyone else, and The Paradise Islands became Mr. Rogers’ Neighborhood.

A major piece of the underlying structure of the simulation had vanished because the participants chose not to behave in the manner postulated and previously demonstrated. Though the participants were not aware of it, they had changed the simulation in a fundamental manner. There was no time to redesign the exercise and start again. In order for the rest of the term to be successful, it was necessary to modify the approach to reach the group consensus.

Cooperation had replaced conflict, so the cooperative nature of the exercise needed to be stressed. Since the small size of the class had caused the problem, it would also be the solution. The five functional groups that were supposed to work against each other were merged into a single large “supergroup”. The task of this supergroup was to combine all the mission statements and develop a list of “initiatives” that would address the issues that the func-

tional groups had discovered. Though different in total, there were aspects of each of the original mission statements that led to overlapping concerns. Eight “combined initiatives” were identified, and these became the core of the final proposal (Exhibit 4).

The size of the supergroup created another problem. Small groups are typically able to exchange information in a somewhat efficient manner. When there are only three or four members in a group, one of them will take the lead and act as the information nexus. The supergroup that was formed contained people from five different functional groups, and these people were disposed to be deferential to each other.

The functional groups had been discouraged from communicating with each other, and while they did share information, there was no organization to their actions. The formation of the supergroup required that each member have access to the information gathered by every other member, but there was no mechanism to do so. Initial attempts to have the supergroup create an information nexus failed. While each participant could have been an effective facilitator in a small group, in the supergroup no one wanted to step out in front. The reason may have been fear or not wanting to look like you wanted to boss around your friends. Some individuals did exchange information with others if they knew who had the proper information, but these exchanges were few. The net effect was that there was no real intragroup communication.

Around the middle of the term, the students were given the assignment to compile the information they needed to address their assigned initiatives and were given a long weekend to do so. At the next class meeting it was revealed that no one had really accomplished anything. A long discussion began about how to create an information system that would provide efficient information exchange. After several minutes, someone said the magic word, “Facebook”. One student who took notes on her computer immediately logged on to Facebook, created a Closed Group, and invited everyone else to join (Exhibit 5). The entire process took about five minutes and was completed before the conversation was over. From that point, a number of communication threads began, and everyone got all the information necessary.

The use of Facebook facilitated communications, but Facebook as an information nexus was not a “perfect” solution to the information flow problem because the site does not permit file transfer. A total of 183 postings and over 600 comments to those postings were generated during a six week period, and an undetermined number of file transfers occurred between the participants using traditional email and other accounts. The key observation here was that when the participants recognized their communications problems, they created a solution that was “outside the box” from the instructors’ viewpoint. This introduced a technological factor that was not in the original design of the simulation. Designers must be aware that changes in technology can have unexpected changes in the conduct of

a simulation, especially exercises that have proven effective through time. Age can bring surprises in addition to maturity.

The remainder of the simulation ran as planned. The students created the final document, the “Plan for the Development of The Paradise Islands”. This plan addressed the eight combined initiatives and demonstrated how they fit together to create economic development and improve social and living conditions. The plan was presented to a panel of five outside senior faculty and administrators, and during the question and answer session the students demonstrated that they had indeed developed the plan themselves and mastered the material.

LESSONS LEARNED

A game or simulation is usually designed to meet the needs of a target group, and this design includes assumptions about group size and behavior. When the actual size of the group differs significantly from the design size, careful monitoring is needed to identify any changes this creates in the conduct of the exercise. Group size will also affect group behavior, and the dynamics of a large group and small group are different. These behavioral differences can also affect the conduct of the exercise and should be monitored. Exogenous factors, like technology, can also induce changes in the behavior of the participants and the exercise. All these concerns should be considered important, and the instructor should be ready to make changes to the simulation in real time to assure the effectiveness of the exercise. There is no way to predict exactly what will happen, so the instructor must be vigilant for any changes and willing to modify the exercise to account for them.

The old adage that “people will be people” is not always correct. Simulations and games are often designed assuming that the participants will exhibit specific types of behavior, like risk avoidance or profit maximization. While such assumptions may prove true most of the time, the occasional lapse in group expectations can endanger the success of a simulation that has already proven successful. Any exercise must be monitored closely to identify if any of the underlying behavioral assumptions have not obtained, and if so the simulation must be modified to accommodate the new reality of the situation. This is crucial in the conduct of a lengthy simulation, but even shorter exercises may require real-time adjustments. Failure to do so can lead to failure of the exercise.

A second adage which claims “you cannot teach an old dog new tricks” is also incorrect. In order to monitor the information flow, one of the instructors had to join Facebook and became involved with answering questions and posting information. This was a new trick for that old dog, and while he did not do it with any degree of elegance or finesse, he did learn to do the trick. It remains to be seen whether or not he will remember the trick.

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The Paradise Islands - Functional Groups Exhibit 1

- Council of Mayors - Elected to serve the people and enhance the quality of life for those who live in, work in, or visit The Paradise Islands.
- Community Action Partnership - Committed to enhance the quality of life for all citizens by developing educational, cultural, and leisure opportunities while preserving the physical and capital resources.
- Department of Public Services - Tasked to develop electrical power sources and grid systems and control the use of fossil fuels and water and sanitation systems.
- Economic Development Commissions - Responsible for the growth and development of both the people and natural resources on The Paradise Islands.
- Independent Farmers and Fishers Coalition - Dedicated to land reform to protect small property owners, development of financial resources for small farmers and fishermen, and creation of foreign markets for agricultural/aquacultural products.
- Interfaith Council - Pledged to achieve a social system that supports individual rights through land reform, legislative action, and economic development.
- Ministry of Agriculture and Fisheries - Dedicated to the protection and enhancement of agriculture, timbering, and fishing.
- Ministry of Environmental Protection - Responsible for the management of programs to protect, preserve, and enhance water and land resources while preventing degradation of natural beauty and existing flora and fauna.
- Ministry of Public Health - Committed to maintaining public health.
- Tourism Bureau - Tasked to promote tourism by developing environmentally safe activities.

**Peoples' Progressive Party Mission Statement
Exhibit 2**



*People's
Progressive
Party*



Mission Statement

The People's Progressive Party strives to improve the lives of the citizens of The Paradise Islands by actively pursuing legislative reform. The citizenry of the country deserve a government that addresses their basic needs in a proactive manner that reflects principles of social justice for all. The People's Progressive Party works to:

Assure individual freedom and civil rights;

Commit to non-violence and peaceful resolution of all disputes at local, national, and international levels;

Ensure individual welfare through programs of national health care and free education for all citizens;

Promote prosperity and a clean environment through the development of alternate and renewable energy resources;

Target economic programs that create a level playing field and reward those who successfully compete in the marketplace;

Reform existing laws that convey undue advantage to privileged classes; and

Monitor all levels of political action to guarantee that all citizens are receiving just and fair treatment by public officials.

**Cultural Preservation League Mission Statement
Exhibit 3**



The Paradise Islands Cultural Preservation League

Mission Statement



The Paradise Islands Cultural Preservation League believes that the unique character of The Paradise Islands is built upon the achievements of the settlers and visionaries that created a vibrant and dynamic society. Our future is firmly rooted in our past, and in order to maintain a stable society and achieve social order, the League pledges itself to:

Honor the sacrifices made by our country's founders and the structure of the society that they created;

Obey the law and uphold the Constitution of The Paradise Islands;

Protect the rights of all citizens;

Promote social justice through a program of legislation that will guarantee all citizens due process and property rights;

Challenge those who would seek to weaken the fabric of our social structure;

Defend the right of home rule and resist unwarranted intrusion by extraterritorial parties; and

Maintain the social integrity and national security of The Paradise Islands.

Combined Initiatives Exhibit 4

Energy - Development of energy sources and distribution of the energy produced.

Water - Development and distribution of fresh water and creation of sanitation systems.

Transportation - Creation of a system of highways and public transportation.

Public Facilities - Design and locating public buildings that could be used for education, medical services, and municipal governance.

Education - Creation of an integrated educational system and providing access to all citizens.

Land Reform - Development of a system of contracts and incentives to make land more available to poorer individuals.

Agricultural Expansion - Identification of exportable products and development of a marketing plan.

External Development - Attracting foreign investment.

Screen Shot of Facebook Page Exhibit 5

The screenshot shows a Facebook interface for a group named "Paradise Islands 2010", which is a closed group. The top navigation bar includes the Facebook logo, a search bar, and links for Home, Profile, Find Friends, and Account. On the left sidebar, there are navigation options like Welcome, News Feed, Messages, Events, Friends, and a section for the group "Paradise Islands..." with options to create a group or see all. The main content area displays three posts:

- The first post, from 16 hours ago, states: "Public facilities first year cost is \$1.5 mil." It includes options to Like, Comment, and Subscribe.
- The second post, from 10 minutes ago, states: "Transportation will need \$10 mil. This includes labor for one year, twenty bailey bridges, and the machines." It includes options to Like and a comment box.
- The third post, from about an hour ago, states: "I developed an excel spreadsheet to calculated all of the transportation costs. It has several formulas, and includes calculations for labor costs. Let me know if you would like me to send it to you. Please include your e-mail address. Thanks." It includes options to Like, Comment, and Subscribe.

On the right sidebar, there are sections for "Members (14)" with a "See All" link, "Chat with Group", "Add Friends to Group", "Leave Group", and "Docs (10)" with a "See All" link. The docs listed are "List of Graphics" (Updated on Wednesday), "Order of Initiatives" (Updated on Tuesday), and "Agricultural Expansion Outline" (Updated on Tuesday).