

The Guide to **Simulations/ Games** for education and training

3rd Edition

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Volume 1 — Academic

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Introduction

by Robert E. Horn

This is the third edition of the Guide. Since 1969 we have been monitoring the growth of simulations and games in education and training. The field is flourishing, as readers who compare our three editions will notice. The first edition, which was published in 1971, listed 400 games and simulations. Two years later the second edition appeared with more than 600 listings. In this edition we describe over 1200. These 600 new simulations/games were not all produced in the last two years. The process of thorough coverage of a field does not occur overnight, and it takes many communications, sometimes, to track down a single simulation.

Who Is This Book For?

In the introduction to the first edition David Zuckerman wrote: "This book has been edited for the potential game user, rather than the theoretician or creator. Thus, while people in the latter category may find material of interest to them, they will also find many of their concerns - and ours - have been subordinated to the goals of simplicity and utility". Our intentions with this edition have not changed. Our goal is still to produce the best information for the potential game user.

Simulations/Games

Again, outlining in the first edition definitions we have followed in collecting and writing material for the Guide, Zuckerman wrote: "For our purposes, a game is simply an activity undertaken by a player or players whose actions are constrained by a set of explicit rules particular to that game and by a predetermined end point (non-games, by comparison, are not "played," tend to be constrained by implicit rules of general applicability, and have no easily determined ending).

"The simulations which interest us differ from ordinary games only in that their elements comprise a more or less accurate representation or model of some external reality with which the players interact in much the same way they would interact with the actual reality. *Poker*, for example, is an ordinary game in that it is not a model of some other, non-game activity; *Monopoly*, on the other hand, is a simulation of the real estate business - albeit a poor one. We are aware that such unqualified distinctions do violence to the niceties of taxonomical disputation, for which we apologize."

In general, the Guide contains only those simulations and games having specific

educational purpose. We have omitted literally thousands of pure simulations which are used for research and experimentation and hence have a limited, specialized audience. (We must say, however, that some of these simulations eventually find their way into the pages of the Guide as training materials are developed from them and they are reused by students.) A great number of the computerized simulations which we do not have access to and, hence, do not list, because they are used in policy-making decisions in business, industry and government, could be used for education.

We have not included general exercises like math problems, although we have included in the Language Skills section some attribute exercises, most of which include a game board or other game-like equipment. We have included some puzzles where the educational value seems high, and we have included action mazes (which are a sophisticated form of branching programmed instruction) when we felt that the simulation quality was high. Similarly, we have included in-basket exercises. (See definitions of terms at the end of this introduction.)

We have also for the most part not listed ordinary, non-simulation games. Pure games, when they are included, have a specific educational purpose as they teach mathematics or employ language skills in play.

We have not included sports games nor games where amusement was the sole purpose (card games with the 52 card deck, and so forth). We have not included science experiments kits which are proliferating in the educational marketplace these days. For the most part we have not included simple role playing situations. However, as such role play situations take on the characteristics of being longer and more game-like, or if they are part of a package which includes simulations and games, we have described them. Many simulations and games, of course, include role play as a structural element, and these are listed.

Coverage

The field of simulation gaming extends continuously into new areas, and established fields expand. We found it necessary to break two of our previous sections apart to accommodate this expansion. The Urban/Community Issues section of the second edition has become, in this edition, the Urban section, focusing on large area-wide games with multi-functional government activities, and the Community Issues section, focusing on single issues or clusters of issues, problems, or parts of governments

(continued)

rather than the entire government of an area. The History section also grew enormously, and we decided to split off the military simulations, which represent a whole field in themselves and were included as part of history in previous editions. We include only those military simulations our editor feels are potentially useful in an educational situation. (As many of you know, there is a whole group of people out there who have military war simulation games as a hobby.)

New sections include religion, the legal system, games having to do with the future, computer-based simulations, and what we have called policy games. (Many of these focus on the near future. The games and simulations we classified as policy games are being built to provide information for policy-makers on a relatively large scale and also to be used for education and training purposes, primarily in universities.) The section on computer-based simulations covers subject matters across a whole range of fields, but we felt it was important to put them together since one needs a computer (or one of those powerful pocket calculators) to use them.

In cases where only a few games in a section were computerized we have placed them in the Computer Games section with cross references. This holds also for the Science section, though there are far more than a few computerized Science games. There are inevitable exceptions to the rule. All the simulations in the Urban section are suitable for use by college students at least, and many are designed for use by advanced students and professionals - people for whom access to a computer is not generally very problematical and who would expect to use computers to deal with deeper levels of complexity in analysis and planning. Most of the advanced level Ecology games require the use of a computer, and these are identified in the section introduction.

Editors

One of the major changes in this edition is, of course, Dave Zuckerman's departure. He was largely responsible for writing the game descriptions in the first two editions of the Guide, so many of his comments remain in this edition as his legacy to the continuing life of the book. However, his career has taken him in other directions, and he had to make the difficult choice to give up editing the Guide this time around. We missed Dave's participation in this year's work, and we wish him well in his new endeavors.

The next major change has been a great increase in the number of user reports. These are short reviews by people who have actually played various simulations and games and who write them up and send them to us. It is obvious that anyone who does this is making a contribution to the field for all of us in sharing his special insights. I have

said elsewhere that game reviewing is one of the most difficult tasks, because while the art of building games is the art of leaving the right things out (to be supplied by learners) it is very hard to review something in which the important things are left out.

And, of course, the biggest change of all has been the service of guest editors each of whom has taken a section and devoted time to making certain that that section has received appropriate coverage. The guest editors were by and large responsible for obtaining user reports, and they have done a magnificent job of summarizing the state-of-the-art of simulation gaming in their particular subject fields.

Supplements and New Reviews

We are planning to supplement the Guide from time to time with new reviews of old games and new reviews of new games. Persons who wish to be reviewers or guest editors should write the Editor-in-Chief. We would very much appreciate receiving reviews of games you have played. Your comments and suggestions on how games can be modified and improved would also be appropriate. We receive a certain number of games and simulations as review copies which we are willing to send to persons who are willing to review them for us. So let us know what you can do to help the Guide become even better next time.

You may notice that we have a new publisher for the Guide, Didactic Systems, Inc.

DSI has asked me to indicate that as this goes to press, everybody knows we are in a period of inflation and prices are going up. In some cases we have not received notice of increased prices in time to make the changes in the Guide listings of games and simulations. Consider the prices given as approximate guides to costs, and do not be surprised if occasionally you find yourself paying more. Also, we cannot be responsible if a particular simulation or game company has gone out of business.

A number of times during the past few years we have had calls from annoyed users wanting to know what had happened to a company we listed as a source for a game. Communications from these understandably annoyed people were balanced, however, by letters congratulating us on the thoroughness, completeness, and accuracy of the Guide.

Reading and Math Levels

Most of the reading and math level indications in the Guide entries are from the Abt Associates report for the Job Corps. These were determined using the SMOG readability scale. Others were supplied by authors or producers of the simulations and games.

The SMOG Readability formula is calculated as follows:

"Select 30 sentences from player materials, preferably 10 from the beginning, 10 from the middle, and 10 from the end. Tally the number

(continued)

of words of three syllables or more occurring in these 30 sentences as a total. Take the square root of the total number of words and add it to 3. The result is an indicator of the entry reading level. Note that the formula cannot be applied for materials under grade 3. (See p. 639, Number 8, Volume 12, Journal of Reading (International Reading Association: Newark, Delaware: 1969)) (Quoted from the Abt Associates Educational Games Report prepared for the Job Corps.)

Credit

The Urban and Community Issues sections of the Guide contain references to "The State-of-the-Art in

Urban Gaming Models" which was a report prepared by Environmetrics, Inc., for the Office of the Secretary for the Environment and Urban Systems, Department of Transportation in 1971.

Appreciations

Finally, I must give a great deal of credit to our editor at Information Resources, Ann Harp, who supervised much of the information collection for the Guide over the past two editions and has done the editorial and production work on it in a brilliant way. Her help again on this edition of the Guide is gratefully acknowledged.

Volume 1: Terms Used

Copyright: appears if a given simulation has been copyrighted. It is generally obtained either from examination of the printed material or is supplied by the publisher or creator.

Age Level: refers to the target population for whom the game or simulation is intended. It is usually obtained from the author or publisher. We have noted a tendency of authors and publishers to overextend the boundaries of this data, so we caution the user to be somewhat skeptical of the extremes reported.

Number of Players: indicates how many players and what size groups play the simulation or game.

Playing Time: refers to the length of time it usually takes to play the game and, where possible, the number and length of playing periods required. For example: 5 fifty minute periods. This information is generally supplied by the creator or producer.

Supplementary Materials: refers to additional materials participants need to make game play practicable. Occasionally these are provided free by the producer; generally they must be purchased from the producer or elsewhere.

Special Equipment: refers to equipment like computers, calculators, overhead projectors, and so forth, needed to play the game. This information is generally obtained from the producer or creator.

Preparation Time: refers to the amount of time it will take the average instructor to get ready to play the game for the first time, including familiarization with the game rules. This data has been supplied by authors or producers.

Description: outlines how the game is played, what happens first, what next, and so on. There are several sources for this information: the creator or producer of the game, a guest editor or reviewer, or the editor-in-chief. The source is indicated by an appropriate reference at the end of the description. Editors are indicated by their initials.

Roles: refer to who it is that the participants play in a simulation (for example: top managers of a corporation, colonizers, bankers, state legislators).

Objectives: outline the players' and teams' objectives during play, within their roles. Objectives should be distinguished from purposes, which are described below.

Decisions: are the major decisions that the players must make during the course of the game or simulation.

Purposes: is a term for the educative or training purposes of the game as distinct from the objectives of players during play. In this category are the general or major concepts and the overall focus or goals of the simulation or game.

User Report: refers to information supplied by a person who has used the game for one or more actual plays. The user's name and affiliation are indicated.

Editor's Comment: refers to editorial comments made by the editor-in-chief or the section editor regarding various aspects of the simulation or game. These comments may be based on inspection of game materials or upon observation of actual play.

Cost: indicates the publisher's price as indicated to us. Readers should be aware that due to the current inflation prices at the time they order simulations may be higher than the level listed in the entries. Neither the editors nor the publisher of the Guide can assume responsibility for the current accuracy of the prices listed, but all price changes supplied to us are being incorporated into the Guide up to publication.

Producer: is the source - publisher, organization, or author - from whom the simulation or game may be obtained.

Volume 1: Definitions

Within many of the descriptions are certain terms which may be unfamiliar to some readers. A number of these are defined below.

Action maze: a description of an incident followed by a list of alternative actions. The learner must choose one of the alternative actions, and each choice directs the learner to a new page giving him the results of his actions and a new set of alternatives.

Algorithm: a specific procedure for solving a particular type of problem. Algorithms are usually used in those kinds of problems that are well formulated and have exact solutions. The procedure is typically automatic and works in generally the same way every time. This is to distinguish it from types of poorly formulated problems for which there is no specific detailed procedure for solution.

Assigned role positions: the role specifications detail to some degree what kind of person inhabits the role (e.g., laborer with grudge against management, etc.).

Case study: presents a description of a situation occurring in the real world which is then focused around a particular problem. The term also refers to a type of teaching which presents detailed descriptions of such problems and then asks students to analyze the problem and come up with solutions. Many simulation/games have their origins in careful case studies of particular situations.

Crisis game: a form of simulation which typically presents an international relations or domestic conflict where violence or some other form of crisis is about to take place. Students in different teams are called upon to react this situation as if they were the actual actors (policy makers or other figures) in these real-life situations.

Decision rules: propositions, usually in an 'if then' form, which give the criteria on the basis of which decisions are to be made.

Deterministic: game situations or outcomes in which chance plays no part in determining. In these kinds of systems it is possible to determine in advance how every part of the system will behave in each situation.

Free form role play: refers to a simulation in which no specific roles are assigned. The players are free to pretend to be whomever they wish.

Game: an activity carried out by individuals who may cooperate or compete in seeking to achieve specific objectives and who follow particular rules and operate within particular constraints.

Game theory: a group of theoretical models which mathematicians and others have studied to determine whether or not optimum strategies can be made. Game theory often influences the construction of a simulation/game.

In-basket: a technique in which a participant is typically given the papers on a particular decision maker's desk at the close of a particular day. He is told he must take over the

person's job and make the decisions on the basis of what is presented to him in the various reports, letters, memos, etc. on his desk. The method is used for both instruction and evaluation of managers in business and government.

Kriegspiel: a German word referring to "war games."

Limited role play: specific roles are assigned, but the personality characteristics of the role are not specified (e.g., laborer, sea captain, father).

Model: a method of representing the important relationships of a process in some other form, frequently symbolic or mathematical.

Non-simulation games: a competitive learning situation in which the participants' success is determined by some degree of subject matter comprehension.

Non-zero sum games: one in which the winner's gain is not necessarily at the cost of the loser, in other words, in which all players may win points, (e.g., bridge).

Planning exercise: a non-game simulation in which participants focus on a problem or issue requiring solution.

Probabilistic: game situations or outcomes which are largely determined by chance.

Qualitative outcomes: those game outcomes which may not be given a numerical value: points, dollars, first and second, etc.

Quantitative outcomes: those game outcomes which may be given a numerical value: points, dollars, first and second, etc.

Role play: refers to a simple exercise of taking the part of another person or oneself in a given game or simulation. In play one acts as if one were on stage, within the "rules of the game."

Scenario: is all of the necessary background information provided before the start of play in a game or simulation.

Simulation: a method of representing reality, the essence of the physical or social system interaction. Simulations attempt to replicate essential aspects of reality so it may be better understood and/or controlled.

Specific function games: business games which cover one or a few specific functions performed in a company, such as the marketing function, the purchasing function, etc.

Stochastic game: involves a randomly determined sequence.

Zero sum: a phrase describing a quantitative game in which points won by one player must be lost by another or others: e.g., poker.

Community Decision: Budgets and TaxesPlaying Data:

Copyright: 1972
 Age level: intermediate and secondary
 Number of players: 6 to 100's
 Playing Time: 2-6 class periods
 Preparation time: 15 minutes
 Supplementary materials: posters, marking pens,
 paper and pens
 Packaging: including: 6 game cards, instructor's
 booklet, a wall chart and a Master Card

Description: Community Decisions is a three round game "designed to help players anticipate, understand, and deal with conflicts that often arise as methods are proposed to deal with community problems." There are six interest groups which are sincerely concerned with improving the community. At the same time the players "must decide how willing they are to improve the community when facts of the varied self-interests are also taken into account." In basic play in each round, each interest group receives a card describing the group role, the community problem, and group interests. After discussion, the group makes a decision for action by selecting one of the alternatives on their card. Players must deal with these socio-political concepts: conflicts of value, conflicts of interest, and consensus. A public hearing is simulated, discussion of proposed budgets are carried on, and research is prepared on the budget requirements and need. Scoring of the groups is based on their decision. (WHR)

Cost: \$4.95

Producer: Education Ventures, Inc., 209 Court Street,
 Middletown, Conn. 06457

Community Decisions Games See Page 501**Community Disputes**

Armand Lauffer, University of Michigan

Playing Data:

Copyright: 1973
 Age level: grade 9 - graduate school, community groups,
 political organizations
 Number of Players: 6 to 30 in 3 to 15 teams
 Playing Time: 2 to 6 hours in periods of 2 hours or
 more
 Preparation Time: 1 1/2 hours

Roles: A wide variety, some selected from those included in the kits, others designed by participants. Roles available for protagonists, neutrals, mediators, or those with an interest in conflict resolution.

Objectives: To bargain effectively for their constituents.

Decisions: What issues to push, how much satisfaction is riding on each, to use power at the negotiations table, or to use it in the community in direct confrontation or in cooperation and public relations, whether to try to use one's time at the bargaining table or in informal negotiations.

Purposes: To train people in the negotiations process needed to resolve community based disputes, to teach them how to design games, to help participants in a real conflict understand the implications of that conflict, and structure their interactions to resolve it.

Editor's Comment: This simulation for both individual and team play has aspects of both conflict and cooperation and involves strategic thinking, rapid thinking, deception, role playing, coalition formation, bargaining, and compromising; formal and informal negotiation

skills are useful. Players begin with variable access to coercive power and compete to gain satisfaction points and to build up their power or influence. During play chance events may result in the rise and fall of power to oneself or opponents in the negotiation process. Players who cannot resolve conflicts of interest may have to select danger cards, and the longer the issue remains unresolved the greater the danger until, in some instances, the issue fades away.

Community Disputes is a highly flexible game that illustrates the relationship between formal and informal negotiations, the skilled use of coercion, public relations, and cooperation within the community which surrounds the dispute. It can be redesigned to deal with any community based dispute. (D.Z.)

Editor's Comment: The central feature of the game, in fact, is the design process. Three complete constructs are included in the kit. One is a pure game, dealing with a totally abstract conflict. It literally compels players to put "substance on the bare bones," fleshing out the frame. The second construct is not a game at all, but rather a game design exercise. It includes more than a half dozen forms which lead participants through the process of designing a: scenario; player roles; rules; and facilitating mechanisms. A third component of the kit is fully fleshed-out simulation of a confrontation between clients and policy makers and a human service agency. It is based on case analyses of a welfare rights confrontation. (A.L. and T.M.)

Cost: \$85.00

Producer: Robert Wesner, Gamed Simulations, Inc., Box 1747, FDR Station, New York, N.Y. 10022

Community X

A.C.L. Zelmer and Amy Zelmer, University of Alberta

Playing Data:

Copyright: 1971
 Age Level: graduate school, continuing education, community groups
 Number of Players: 12 to 60
 Playing Time: 3 hours or more in time periods of 3 hours
 Preparation Time: 2 to 6 hours

Roles: Individuals in the community. Both the informal and formal power structures of the community are represented but these are not teams in usual sense.

Objectives: To live as a member of the community and to reach decisions affecting the community.

Decisions: Depends upon the issues introduced into play but would involve government consultation with the public; public vs. private enterprise; restricted vs. un-restricted development or growth.

Purposes: To provide a setting to demonstrate the formal and informal decision making and communication channels within the community.

Editor's Comment: This game for both individuals and teams has aspects of both conflict and cooperation and involves strategic thinking and coalition formation; skills of leadership, decision making, and inter-personal communication will be useful. As each player represents an individual in the community, the players do not begin with equal resources. Role characteristics are specified as to financial constraints, age, sex, and position in the community power structure; other

personality characteristics are "filled-in" by the player involved.

Designed for a rural or semi-rural setting (a small city of about 12,000 people, Community X may nevertheless "be modified easily to include local problems for examination."

An evaluation of Community X formed the basis of a thesis available through inter-library loan from the University of Alberta: Bryden, Bernard, "Simulation as a Community Development Technique," Edmonton, the University of Alberta, 1972.

The 16 mm. film "Community X" can be borrowed by anyone in Canada for a service charge from: Educational Media Division, Department of Extension, University of Alberta, Edmonton, Canada. (DZ)

Cost: \$2.00 for microfiche copy of "Operational Guide to Community X: A Decision Making Simulation."

Producer: A.C.L. Zelmer, P.O. Box 8268, Station F, Edmonton, Alberta, Canada T6H 4P1.

COMPACTS: Community Planning and Action Simulation

Armand Lauffer, University of Michigan

Playing Data:

Copyright: 1973

Age Level: grade 10 - graduate school, management, community and professional associations interested in community organization

Prerequisite Skills: understanding of community dynamics

Number of Players: 20 to 60

Playing Time: 2 1/2 hours to 3 days in time periods of 2 or 2 1/2 hours or in blocks of days

Preparation Time: 2 hours

Roles: Players represent funders and allocating agencies, social welfare agency administrators, community organizers, consumers of agency services, and community influentials. Teams represent coalitions of the above.

Objectives: To plan services, maintain existing ones, submit proposals for new programs, to maximize personal resources.

Decisions: What new programs to design, which existing services to maintain or drop, who to form coalitions with, what kinds of resources to concert.

Purposes: To prepare people to plan and to coordinate social services at the community level and to engage them in the planning process. It may be used for purposes as diverse as introduction to the social service system at the secondary school level, and proposal writing and grantsmanship at the professional level.

Editor's Comment: Individual and team play has aspects of both conflict and cooperation and involves strategic thinking, rapid thinking, coalition formation, role playing, deception, bargaining, and compromising; the ability to write proposals, fiscal management skills, and systematic, organized, and analytic thinking are useful.

Resources such as money and credit, political influence, social standing, legitimacy and legality, professional expertise, and personal energy are unequally divided. Players without access to some of these resources must form coalitions with others in order to concert their resources to solve community problems.

Win criteria vary for each player. All can maximize individual resources. Coalitions tend to win, thus the whole community can score better on social indicators if it organizes itself properly. Chance influences play through news events, unanticipated consequences cards, and outright chance cards.

The game may be replayed repeatedly by engaging players in a redesign process. New issue cards and forms can be created.

Compacts is not simply a training device; it can be used to plan social services at the local level.

The message of the game experience is that people must get into the political process. It is not just caring that counts; it is how you use available resources and attract new ones. Man appears as having, generally, a hidden agenda, and often presenting his personal concerns in the guise of professional or community interests. The question participants face is not just one of winning or losing, therefore, but of how they play the game. (D.Z.)

Compacts has been used extensively by government agencies for both planning and training purposes. It has provided the frame around which a large number of other games have been designed, each for specific purposes and target populations. They include The Rehabilitation Planning Game, Turn-On, Honest ABE (Adult Basic Education), The Community Mental Health Catchman Area Game, P.O.P. (Proposals Or Perish). (A.L. and T.M.)

Cost: \$85.00

Producer: Robert Wesner, Gamed Simulations, Inc., Box 1747, FDR Station, New York, N.Y. 10022

COMPASS: Community Priority Assessment

R. G. Klietsch, Instructional Simulations, Inc.

Playing Data:

Copyright: 1968

Age Level: grade 7 - graduate school, management

Number of Players: 23 to 48 in 10 to 15 community groups

Playing Time: 4 hours to 2 days in periods of 20 to 30 minutes as stated in calendar

Preparation Time: 1 to 2 hours

Supplementary Material: optional use of community readings

Special Equipment: tape recorder

Roles: Players are community residents. Teams are community organizations and associations.

Objectives: For players, to seek to have their criteria employed in the assessment of community needs, hence, applied to the selection of model cities projects; and to have those alternative projects, programs, and concerns recognized and endorsed by various community groups, and, ultimately, the city council. For teams, to review proposals; develop, endorse, and apply various priority criteria; estimate likely benefits and costs to the community and recommend to other groups a course of action.

Decisions: Alternatives to be supported, e.g., project proposals; priority criteria to be employed, plus their rationale; present alternative processing routes to the city council; endorsement procedures; stand-by alternatives; "Proposal package" to be submitted to the O.E.O.

Purposes: To facilitate procedures involving multiple values and value-resolution in a planning context, and more particularly, with the establishment of priorities and priority factors; to enable persons to work at the priority level under multiple constraints - economic, political, social, cultural, and community-based; to illustrate the obstacles and paths to community effectiveness in priority establishment and the selection of shared goals; to have participants "learn by doing" the implications of community program work, especially community planning tasks and community development/rehabilitation.

Editor's Comment: This simulation for individual and/or team play has aspects of both conflict and cooperation. It involves strategic thinking, bargaining, and compromising and may include coalition formation depending upon the participants' choices.

(continued)

whatever, to a new society site. Another, "Costs of Living" steps students through the economic consequences of different clear goals that they choose. (REH)

Roles: Themselves as young adults.

Objectives: To learn about many career opportunities and how to approach them.

Comment: This is an excellent series of exercises. As many of the exercises suggest, high school students would profit greatly if they were permitted to observe and evaluate the large variety of jobs available to them in the community. Only a couple of the exercises or activities in this book resemble simulations or role play exercises.

This is a do-it-yourself teacher book. A curriculum kit, based on the book and having the same name, is available from Educational Design, Inc., 47 West 13th Street, N.Y., N.Y. 10011, for \$35. (REH)

Cost: \$3.50

Producer: Games Central, 55-D Wheeler St., Cambridge, Massachusetts 02138

The Family Game

Author Unknown

Playing Data

Age Level: families

Prerequisite Skills: reading, grade 9; math, grade 1

Number of Players: 3-4

Playing Time: 30 to 45 minutes

Description: This is a board game for parents and children of the same family to play together, responding to personal questions about their roles in that family. (EGCR)

Cost: \$7.00

Producer: Dynamic Design Industries, 1433 North Central Park, Anaheim, Calif. 92802

Female Images: A Life Skills Exercise

Dr. Ronald G. Klietsch and Professor Amy Zelmer, Instructional Simulations, Inc., and University of Alberta

Playing Data

Copyright: 1971

Age Level: grade 8-adult

Prerequisite Skills: reading at 8th grade level

Number of Players: 4 to 8

Playing Time: 2 to 3 hours

Preparation Time: 1-1/2 hours

Description: Female Images employs the workings of a group of 4 to 8 jointly performing the life skills exercise, which consists of five basic steps. First, the concept of identity is presented as a stimulus and is explored for meaning among kindred terms, such as personality, role, self, and self-image. Second, during the evocation step, participants relate the dimensions of identity to their own ideas and examine components of identities in graphic form. All information is retained by the participant and is not examined

by the exercise leader or other persons. Third, a subjective and objective inquiry is made into criteria women use in selecting, maintaining, and even changing or modifying an identity. The model of identity deals with female identities in terms of managers, pace-setters, stylizers, and facilitators, plus many associated identity forms. Fourth, a problem-solving exercise is used to examine options in identity-presentation and problem alternatives. Last, an evaluation is made and appraisal activities are undertaken. (AH)

Comment: The only element of simulation in this exercise is the final one which involves the person in role-playing a chosen image in a short problem solving or role-playing kind of situation. The overall exercise is interesting in that it assumes that identities can be matters of choice rather than tradition. Although this may sound like a strong female liberation position, in actuality, most of the exercise material more or less strongly favors traditional female images. (REH)

Cost: \$25.00 Purchase price plus postage and handling

Producer: Instructional Simulations, Inc., 2147 University Ave., St. Paul, Minn. 55114

Flight 109

Dale D. Simmons, Oregon State University

Playing Data

Copyright: 1973

Age Level: college, adult

Number of Players: groups of eight

Playing Time: about 1 hour plus debriefing

Description: Flight 109 involves life and death decision making on a plane flight which must jettison a number of its passengers in order to reach its destination. Players play themselves as passengers. They begin by fantasizing being on a plane together. Then, in small groups they are informed about the crisis and asked to write and discuss their feelings and reasons for living. Passengers then vote by secret ballot for the five among them who will survive. Following the vote, a debriefing period takes place in order for the participants to share their feelings about role-playing, the stress they experienced both as passenger-victims and decision makers, and the ethical principles involved in their choice. Although Flight 109 may be taken lightly by some of its participants, it will be an anxiety-producing but meaningful experience for others. (TM)

Comment: This simulation presents something of a dilemma for this reviewer. Its objective clearly is to present some kind of simulation of psychological stress so that an individual can observe his own adjustment to it. The author admits that some players take it quite lightheartedly and others get very serious about it. It's clear that this simulation, if played at all, should be played only by someone who has considerable experience in helping and counseling people in periods of psychological stress. It would seem that some form of informed consent would be needed before an individual played a simulation such as this. We have enough stresses in our society (a number of them in college classes). The playing material for this simulation is three page ditto. (REH)

Cost: Unknown

Producer: Dale D. Simmons, Psychology Dept., Oregon State University, Corvallis, Oregon 97331

like a basic industry in that its income is solely a function of employees hired and distance to a terminal.

The government sector locates MS, parks, terminals, and communication links (equivalent to utility lines). Utilities are required on two sides of a parcel for industrial or commercial development and on only one side for residential development. The government may use its zoning power to influence the pattern of growth. The demand for MS and parks is based upon population size, while the demand for new terminals is generated by players wishing to develop new industrial and commercial clusters.

Natural disasters take place every fourth round, and teams lose money in proportion to the total age of their assets and as the result of chance (generated by a dice roll). Owners of R's are penalized (deduction of income) if the residences are not located within a certain distance of PG, MS, and parks.

Taxes must be collected to pay for the construction and upkeep of the government services. Revenues are raised by imposing a tax per developed parcel. For simplicity, all developed parcels have the same assessed value. (The State-of-the-Art in Urban Gaming Models.)

Roles: Speculators, financiers, developers, planners, and environmental administrators.

Objectives: Self-defined.

Decisions: Resource allocation decisions regarding urban infra-structure layout and investment, land use development, and community planning.

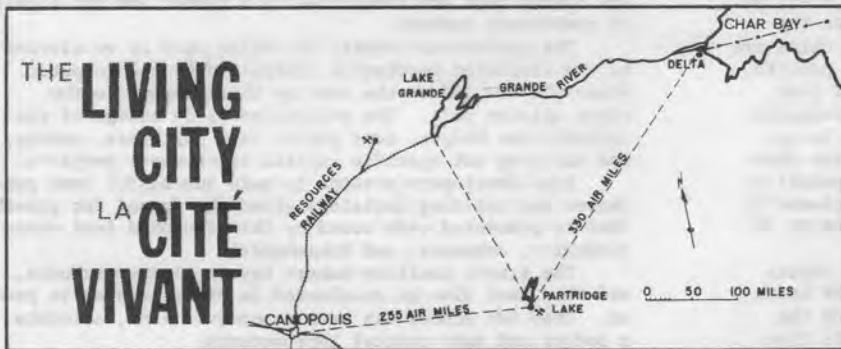
Purposes: An instructional and demonstrational system highlighting basic relationships in the urban development process, elementary principles in logical decision making, and introductory gaming simulation procedures and methodology.

Cost: \$11.25 for book: Instructional Planning Systems A Gaming-Simulation Approach to Urban Problems.

Producer: Cambridge University Press: Bentley House, 200 Euston Road, London N.W. 1, England, and 52 East 57th Street, New York, N.Y. 10022.

The Living City/La Cite Vivante

Amy Elliott Zelmer and A.C. Lynn Zelmer, International Communications Institute



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Playing Data

Copyright: 1972

Age Level: college, graduate school, community groups

Number of Players: 18 or more in teams of about 20

Playing Time: 8 to 10 hours in 2 hour periods

Preparation Time: about 8 hours for the first time

Special Equipment: video equipment, VTR playback for tape essential, access to cable system useful for large groups

Roles: Special interest groups, citizens.

Decisions: Where to locate industrial and residential areas, type of housing and transportation system, type of education system, long range plans, vote in a plebescite at the end of each round on each topic.

Purposes: To introduce to some of the factors which need to be considered in community planning, to increase the appreciation for the complexity of the issues, and to show that citizens should have a voice in planning their community and not leave it to the experts.

Editor's Comment: This simulation is interactive, with elements of cooperation and conflict. Play involves strategic thinking, role playing, and compromise.

The game can be played in organized groups or by individuals linked by cable (or broadcast) TV. All printed materials are available in both French and English.

The printed materials include a report on the first experience with the game. "The Living City was designed specifically for the 1972 annual convention of the Community Planning Association of Canada. The simulation involves participants in both the physical and human aspects of citizen participation in planning; and was designed to accommodate up to 5000 participants, in groups of 20 and as individuals, scattered across a large metropolitan city. The participants were to be linked by cable television and telephone "hot-line." Participants could be either professionals or interested private citizens. The simulation was also designed so that it could be replayed by individual groups of 12-20 participants." (GLcC)

Cost: Unknown at present.

Producer: International Communications Institute, 3604 26th Ave., S.W., Calgary, Alberta, Canada; or Community Planning Association of Canada, 425 Gloucester St., Ottawa, Ontario, K1R 5E9, Canada.

LOC-1

Dr. Barry Kibel

Playing Data

Copyright: 1969

Number of Players: 2 to 7

Description: This game is played by two to seven people on a 10 by 10 grid playing board that represents an undeveloped area of land. The game director predetermines the land value to each of the 100 parcels of land before the play, but he does not reveal these values to the players. The values are usually arrayed in a pattern that reflects clustering and linear extensions of land values.

Each player begins the game with five establishments that may be located on the board and 50 units of financial resources. It costs 15 units to locate or relocate an establishment and 5 units to maintain it

(continued)