

I Have No Words & I Must Design

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There's a lotta different kinds of games out there. A helluva lot. Cart-based, computer, CD-ROM, network, arcade, PBM, PBEM, mass-market adult, wargames, card games, tabletop RPGs, LARPs, freeforms. And, hell, don't forget paintball, virtual reality, sports, and the horses. It's all gaming.

But do these things have anything at all in common? What is a game? And how can you tell a good one from a bad one?

Well, we can all do the latter: "Good game, Joe," you say, as you leap the net. Or put away the counters. Or reluctantly hand over your Earth Elemental card. Or divvy up the treasure. But that's no better than saying, "Good book," as you turn the last page. It may be true, but it doesn't help you write a better one.

As game designers, we need a way to analyze games, to try to understand them, and to understand what works and what makes them interesting.

We need a critical language. And since this is basically a new form, despite its tremendous growth and staggering diversity, we need to invent one.

What Is a Game, Anyhow?

It's Not a Puzzle.

In *The Art of Computer Game Design*, Chris Crawford contrasts what he call "games" with "puzzles." Puzzles are static; they present the "player" with a logic structure to be solved with the assistance of clues. "Games," by contrast, are not static, but change with the player's actions.

Some puzzles are obviously so; no one would call a crossword a "game." But, according to Crawford, some "games" are really just puzzles -- Lebling & Blank's *Zork*, for instance. The game's sole objective is the solution of puzzles: finding objects and using them in particular ways to cause desired changes in the game-state. There is no opposition, there is no roleplaying, and there are no resources to manage; victory is solely a consequence of puzzle solving.

To be sure, *Zork* is not entirely static; the character moves from setting to setting, allowable actions vary by setting, and inventory changes with action. We must think of a continuum, rather than a dichotomy; if a crossword is 100% puzzle, *Zork* is 90% puzzle and 10% game.

Almost every game has some degree of puzzle-solving; even a pure military strategy game requires players to, e.g., solve the puzzle of making an optimum attack at this point with these units. To eliminate puzzle-solving entirely, you need a game that's almost entirely exploration: *Just Grandma and Me*, a CD-ROM interactive storybook with game-like elements of decision-making and exploration, is a good example. Clicking on screen objects causes entertaining sounds and animations, but there's nothing to 'solve,' in fact, no strategy whatsoever.

A puzzle is static. A game is interactive.

It's Not a Toy.

According to Will Wright, his Sim City is not a game at all, but a toy. Wright offers a ball as an illuminating comparison: It offers many interesting behaviors, which you may explore. You can bounce it, twirl it, throw it, dribble it. And, if you wish, you may use it in a game: soccer, or basketball, or whatever. But the game is not intrinsic in the toy; it is a set of player-defined objectives overlaid on the toy.

Just so Sim City. Like many computer games, it creates a world which the player may manipulate, but unlike a real game, it provides no objective. Oh, you may choose one: to see if you can build a city without slums, perhaps. But Sim City itself has no victory conditions, no goals; it is a software toy.

A toy is interactive. But a game has goals.

It's Not a Story.

Again and again, we hear about story. Interactive literature. Creating a story through roleplay. The idea that games have something to do with stories has such a hold on designers' imagination that it probably can't be expunged. It deserves at least to be challenged.

Stories are inherently linear. However much characters may agonize over the decisions they make, they make them the same way every time we reread the story, and the outcome is always the same. Indeed, this is a strength; the author chose precisely those characters, those events, those decisions, and that outcome, because it made for the strongest story. If the characters did something else, the story wouldn't be as interesting.

Games are inherently non-linear. They depend on decision making. Decisions have to pose real, plausible alternatives, or they aren't real decisions. It must be entirely reasonable for a player to make a decision one way in one game, and a different way in the next. To the degree that you make a game more like a story -- more linear, fewer real options -- you make it less like a game.

Consider: you buy a book, or see a movie, because it has a great story. But how would you react if your gamemaster were to tell you, "I don't want you players to do that, because it will ruin the story"? He may well be right, but that's beside the point. Gaming is NOT about telling stories.

That said, games often, and fruitfully, borrow elements of fiction. Roleplaying games depend on characters; computer adventures and LARPs are often drive by plots. The notion of increasing narrative tension is a useful one for any game that comes to a definite conclusion. But to try to hew too closely to a storyline is to limit players' freedom of action and their ability to make meaningful decisions.

The hypertext fiction movement is interesting, here. Hypertext is inherently non-linear, so that the traditional narrative is wholly inappropriate to hypertext work. Writers of hypertext fiction are trying to explore the nature of human existence, as does the traditional story, but in a way that permits multiple viewpoints, temporal leaps, and reader construction of the experience. Something -- more than hypertext writers know -- is shared with game design here, and something with traditional narrative; but if hypertext fiction ever becomes artistically successful (nothing I've read is), it will be through the creation of a new narrative form, something that we will be hard-pressed to call "story."

Stories are linear. Games are not.

It Demands Participation.

In a traditional artform, the audience is passive. When you look at a painting, you may imagine things in it, you may see something other than what the artist intended, but your role in constructing the experience is slight: The artist painted. You see. You are passive.

When you go to the movies, or watch TV, or visit the theater, you sit and watch and listen. Again, you do interpret, to a degree; but you are the audience. You are passive. The art is created by others.

When you read a book, most of it goes on in your head, and not on the page; but still. You're receiving the author's words. You're passive.

It's all too, too autocratic: the mighty artist condescends to share his genius with lesser mortals. How can it be that, two hundred years after the Revolution, we still have such aristocratic forms? Surely we need forms in spirit with the times; forms which permit the common man to create his own artistic experience.

Enter the game. Games provide a set of rules; but the players use them to create their own consequences. It's something like the music of John Cage: he wrote themes about which the musicians were expected to improvise. Games are like that; the designer provides the theme, the players the music.

A democratic artform for a democratic age.

Traditional artforms play to a passive audience. Games require active participation.

So What Is a Game?

A game is a form of art in which participants, termed players, make decisions in order to manage resources through game tokens in the pursuit of a goal.

Decision Making

I offer this term in an effort to destroy the inane, and overhyped, word "interactive." The future, we are told, will be interactive. You might as well say, "The future will be fnurplewitz." It would be about as enlightening.

A light switch is interactive. You flick it up, the light turns on. You flick it down, the light turns off. That's interaction. But it's not a lot of fun.

All games are interactive: The game state changes with the players' actions. If it didn't, it wouldn't be a game: It would be a puzzle.

But interaction has no value in itself. Interaction must have purpose.

Suppose we have a product that's interactive. At some point, you are faced with a choice: You may choose to do A, or to do B.

But what makes A better than B? Or is B better than A at some times but not at others? What factors go into the decision? What resources are to be managed? What's the eventual goal?

Aha! Now we're not talking about "interaction." Now we're talking about decision making.

The thing that makes a game a game is the need to make decisions. Consider Chess: it has few of the aspects that make games appealing -- no simulation elements, no roleplaying, and damn little color. What it's got is the need to make decisions. The rules are tightly constrained, the objectives clear, and victory requires you to think several moves ahead. Excellence in decision making is what brings success.

What does a player do in any game? Some things depend on the medium. In some games, he rolls dice. In some games, he chats with his friends. In some games, he whacks at a keyboard. But in every game, he makes decisions.

At every point, he considers the game state. That might be what he sees on the screen. Or it might be what the gamemaster has just told him. Or it might be the arrangement on the pieces on the board. Then, he considers his objectives, and the game tokens and resources available to him. And he considers his opposition, the forces he must struggle against. He tries to decide on the best course of action.

And he makes a decision.

What's key here? Goals. Opposition. Resource management. Information. Well talk about them in half a mo.

What decisions do players make in this game?

Goals

Sim City has no goals. Is it not a game?

No, as it's own designer willingly maintains. It is a toy.

And the only way to stay interested in it for very long is to turn it into a game -- by setting goals, by defining objectives for yourself. Build the grandest possible megalopolis; maximize how much your people love you; build a city that relies solely on mass transit. Whatever goal you've chosen, you've turned it into a game.

Even so, the software doesn't support your goal. It wasn't designed with your goal in mind. And trying to do something with a piece of software that it wasn't intended to do can be awfully frustrating.

Since there's no goal, Sim City soon palls. By contrast, Sid Meier and Bruce Shelley's Civilization, an obviously derivative product, has explicit goals -- and is far more involving and addictive.

"But what about roleplaying games?" you may say. "They have no victory conditions."

No victory conditions, true. But certainly they have goals; lots of them, you get to pick. Rack up the old experience points. Or fulfill the quest your friendly GM has just inflicted on you. Or rebuild the Imperium and stave off civilization's final collapse. Or strive toward spiritual perfection. Whatever.

If, for some reason, your player characters don't have a goal, they'll find one right quick. Otherwise, they'll have nothing better to do but sit around the tavern and grouse about how boring the game is. Until you get pissed off and have a bunch of orcs show up and try to beat their heads in.

Hey, now they've got a goal. Personal survival is a good goal. One of the best.

If you have no goal, your decisions are meaningless. Choice A is as good as Choice B; pick a card, any card. Who cares? What does it matter?

For it to matter, for the game to be meaningful, you need something to strive toward. You need goals.

What are the players' goals? Can the game support a variety of different goals? What facilities exist to allow players to strive toward their various goals?

Opposition

Oh, say the politically correct. Those bad, icky games. They're so competitive. Why can't we have cooperative games?

"Cooperative games" generally seem to be variants of "let's all throw a ball around." Oh golly, how fascinating, I'll stop playing Mortal Kombat for that, you betcha.

But are we really talking about competition?

Yes and no; many players do get a kick out of beating others with their naked minds alone, which is at least better than naked fists. Chess players are particularly obnoxious in this regard. But the real interest is in struggling toward a goal.

The most important word in that sentence is: struggling.

Here's a game. It's called Plucky Little England, and it simulates the situation faced by the United Kingdom after the fall of France in World War II. Your goal: preserve liberty and democracy and defeat the forces of darkness and oppression. You have a choice: A. Surrender. B. Spit in Hitler's eye! Rule Britannia! England never never never shall be slaves!

You chose B? Congratulations! You won!

Now, wasn't that satisfying? Ah, the thrill of victory.

There is no thrill of victory, of course; it was all too easy, wasn't it? There wasn't any struggle.

In a two-player, head-to-head game, your opponent is the opposition, your struggle against him; the game is direct competition. And this is a first-rate way of providing opposition. Nothing is as sneaky and as hard to overcome as a determined human opponent. But direct competition isn't the only way to do it.

Think of fiction. The ur-story, the Standard Model Narrative, works like this: character A has a goal. He faces obstacles B, C, D, and E. He struggles with each, in turn, growing as a person as he does. Ultimately, he overcomes the last and greatest obstacle.

Do these obstacles all need to be The Villain, The Bad Guy, The Opponent, The Foe? No, though a good villain makes for a first rate obstacle. The forces of nature, cantankerous mothers-in-law, crashing hard-drives, and the hero's own feelings of inadequacy can make for good obstacles, too.

Just so in games.

In most RPGs, the "opposition" consists of non-player characters, and you are expected to cooperate with your fellow players. In many computer games, the "opposition" consists of puzzles you must solve. In

LARPs, the "opposition" is often the sheer difficulty of finding the player who has the clue or the widget or the special power you need. In most solitaire games, your "opposition" is really a random element, or a set of semi-random algorithms you are pitted against.

Whatever goals you set your players, you must make the players work to achieve their goals. Setting them against each other is one way to do that, but not the only one. And even when a player has an opponent, putting other obstacles in the game can increase its richness and emotional appeal.

The desire for "cooperative games" is the desire for an end to strife. But there can be none. Life is the struggle for survival and growth. There is no end to strife, not this side of the grave. A game without struggle is a game that's dead.

What provides opposition? What makes the game a struggle?

Managing Resources

Trivial decisions aren't any fun. Remember Plucky Little England?

There wasn't any real decision, was there?

Or consider Robert Harris's *Talisman*. Each turn, you roll the die. The result is the number of spaces you can move. You may move to the left, or to the right, around the track.

Well, this is a little better than a traditional track game; I've got a choice. But 99 times out of a 100, either there's no difference between the two spaces, or one is obviously better than the other. The choice is bogus.

The way to make choices meaningful is to give players resources to manage. "Resources" can be anything: Panzer divisions. Supply points. Cards. Experience points. Knowledge of spells. Ownership of fiefs. The love of a good woman. Favors from the boss. The good will of an NPC. Money. Food. Sex. Fame. Information.

If the game has more than one 'resource,' decisions suddenly become more complex. If I do this, I get money and experience, but will Lisa still love me? If I steal the food, I get to eat, but I might get caught and have my hand cut off. If I declare against the Valois, Edward Plantagenet will grant me the Duchy of Gascony, but the Pope may excommunicate me, imperilling my immortal soul.

These are not just complex decisions; these are interesting ones. Interesting decisions make for interesting games.

The resources in question have to have a game role; if 'your immortal soul' has no meaning, neither does excommunication. (Unless it reduces the loyalty of your peasants, or makes it difficult to recruit armies, or... but these are game roles, n'est-ce pas?) Ultimately, 'managing resources' means managing game elements in pursuit of your goal. A 'resource' that has no game role has nothing to contribute to success or failure, and is ultimately void.

What resources does the player manage? Is there enough diversity in them to require tradeoffs in making decisions? Do they make those decisions interesting?

Game Tokens

You effect actions in the game through your game tokens. A game token is any entity you may manipulate directly.

In a boardgame, it is your pieces. In a cardgame, it is your cards. In a roleplaying game, it is your character. In a sports game, it is you yourself.

What is the difference between "resources" and "tokens?" Resources are things you must manage efficiently to achieve your goals; tokens are your means of managing them. In a board wargame, combat strength is a resource; your counters are tokens. In a roleplaying game, money is a resource; you use it through your character.

Why is this important? Because if you don't have game tokens, you wind up with a system that operates without much player input. Will Wright and Fred Haslam's Sim Earth is a good example. In Sim Earth, you set some parameters, and sit back to watch the game play out itself. You've got very little to do, no tokens to manipulate, no resources to manage. Just a few parameters to twiddle with. This is mildly interesting, but not very.

To give a player a sense that he controls his destiny, that he is playing a game, you need game tokens. The fewer the tokens, the more detailed they must be; it is no coincidence that roleplaying games, which give the player a single token, also have exceptionally detailed rules for what that token can do.

What are the players' tokens? What are these tokens' abilities? What resources do they use? What makes them interesting?

Information

I've had more than one conversation with a computer game designer in which he tells me about all the fascinating things his game simulates -- while I sit there saying, "Really? What do you know. I didn't realize that."

Say you've got a computer wargame in which weather affects movement and defense. If you don't tell the player that weather has an effect, what good is it? It won't affect the player's behavior; it won't affect his decisions.

Or maybe you tell him weather has an effect, but the player has no way of telling whether it's raining or snowing or what at any given time. Again, what good is that?

Or maybe he can tell, and he does know, but he has no idea what effect weather has -- maybe it cuts everyone's movement in half, or maybe it slows movement across fields to a crawl but does nothing to units moving along roads. This is better, but not a whole lot.

The interface must provide the player with relevant information. And he must have enough information to be able to make a sensible decision.

That isn't to say a player must know everything; hiding information can be very useful. It's quite reasonable to say, "you don't know just how strong your units are until they enter combat," but in this case, the player must have some idea of the range of possibilities. It's reasonable to say, "you don't know what card you'll get if you draw to an inside straight," but only if the player has some idea what the odds are. If I might draw the Queen of Hearts and might draw Death and might draw the Battleship Potemkin, I have absolutely no basis on which to make a decision.

More than that, the interface must not provide too much information, especially in a time-dependent game. If weather, supply state, the mood of my commanders, the fatigue of the troops, and what Tokyo Rose said on the radio last night can all affect the outcome of my next decision, and I have to decide some time in the next five seconds, and it would take me five minutes to find all the relevant information by pulling down menus and looking at screens, the information is still irrelevant. I may have access to it, but I can't reasonably act on it.

Or let's talk about computer adventures; they often display information failure. "Oh, to get through the Gate of Thanatos, you need a hatpin to pick the lock. You can find the hatpin on the floor of the Library. It's about three pixels by two pixels, and you can see it, if your vision is good, between the twelfth and thirteenth floorboards, about three inches from the top of the screen. What, you missed it?"

Yeah, I missed it. In an adventure, it shouldn't be ridiculously difficult to find what you need, nor should victory be impossible just because you made a wrong decision three hours and thirty-eight decision points ago. Nor should the solutions to puzzles be arbitrary or absurd.

Or consider freeforms. In a freeform, a player is often given a goal, and achieving it requires him to find out several things -- call them Facts A, B, and C. The freeform's designer had better make damn sure that A, B, and C are out there somewhere -- known to other characters, or on a card that's circulating in the game -- whatever, they have to be there. Otherwise, the player has no chance of achieving his goal, and that's no fun.

Given the decisions players are required to make, what information do they need? Does the game provide the information as and when needed? Will reasonable players be able to figure out what information they need, and how to find it?

Other Things That Strengthen Games

Diplomacy

Achieving a goal is meaningless if it comes without work, if there is no opposition; but that doesn't mean all decisions must be zero-sum. Whenever multiple players are involved, games are strengthened if they permit, and encourage, diplomacy.

Games permit diplomacy if players can assist each other -- perhaps directly, perhaps by combining against a mutual foe. Not all multiplayer games do this; in Charles B. Darrow's Monopoly, for instance, there's no effective way either to help or hinder anyone else. There's no point in saying, "Let's all get Joe," or "Here, you're a novice, I'll help you out, you can scratch my back later," because there's no way to do it.

Some games permit diplomacy, but not much. In Lawrence Harris's Axis & Allies, players can help each other to a limited degree, but everyone is permanently Axis or permanently Allied, so diplomacy is never a key element to the game.

One way to encourage diplomacy is by providing non-exclusive goals. If you're looking for the Ark of the Covenant, and I want to kill Nazis, and the Nazis have got the Ark, we can work something out. Maybe our alliance will end when the French Resistance gets the Ark, and we wind up on opposite sides, but actually, such twists are what make games fun.

But games can encourage diplomacy even when players are directly opposed. The diplomatic game par excellence is, of course, Calhammer's Diplomacy, in which victory more often goes to the best diplomat

than to the best strategist. The key to the game is the Support order, which allows one player's armies to assist another in an attack, encouraging alliance.

Alliances never last, to be sure; Russia and Austria may ally to wipe out Turkey, but only one of them can win. Eventually, one will stab the other in the back.

Fine. It's the need to find allies, retain them, and persuade your enemies to change their stripes that makes sure you'll keep on talking. If alliances get set in stone, diplomacy comes to an end.

Computer games are almost inherently solitaire, and to the degree they permit diplomacy with NPC computer opponents, they generally don't make it interesting. Network games are, or ought to be, inherently diplomatic; and as network games become more prevalent, we can expect most developers from the computer design community to miss this point entirely. As an example, when the planners of interactive TV networks talk about games, they almost exclusively talk about the possibility of downloading cart-based (Nintendo, Sega) games over cable. They're doing so for a business reason: billions are spent annually on cart-based games, and they'd like a piece of the action. They don't seem to realize that networks permit a wholly different kind of gaming, which has the potential to make billions in its own right -- and that this is the real business opportunity.

How can players help or hinder each other? What incentives do they have to do so? What resources can they trade?

Color

Monopoly is a game about real estate development. Right?

Well, no, obviously not. A real estate developer would laugh at the notion. A game about real estate development needs rules for construction loans and real estate syndication and union work rules and the bribery of municipal inspectors. Monopoly has nothing to do with real estate development. You could take the same rules and change the board and pieces and cards and make it into a game about space exploration, say. Except that your game would have as much to do with space exploration as Monopoly has to do with real estate development.

Monopoly isn't really about anything. But it has the color of a real estate game: named properties, little plastic houses and hotels, play money. And that's a big part of its appeal.

Color counts for a lot: as a simulation of World War II, Lawrence Harris's *Axis & Allies* is a pathetic effort. Ah, but the color! Millions of little plastic airplanes and battleships and tanks! Thundering dice! The world at war! The game works almost solely because of its color.

Or consider Chadwick's *Space 1899*. The rules do nothing to evoke the Burroughsian wonders, the pulp action thrills, the Kiplingesque Victorian charms to be gained from the game's setting. Despite a clean system and a detailed world, it is curiously colorless, and suffers for it.

Pageantry and detail and sense of place can greatly add to a game's emotional appeal.

This has almost nothing to do with the game qua game; the original Nova edition of *Axis & Allies* was virtually identical to the Milton Bradley edition. Except that it had a godawful garish paper map, some of the ugliest counters I've ever seen, and a truly amateurish box. I looked at it once, put it away, and never looked at it again.

Yet the Milton Bradley edition, with all the little plastic pieces, still gets pulled out now and again... Same game. Far better color.

How does the game evoke the ethos and atmosphere and pageantry of its setting? What can you do to make it more colorful?

Simulation

Many games simulate nothing. The oriental folk-game Go, say; little stones on a grid. It's abstract to perfection. Or John Horton Conway's Life; despite the evocative name, it's merely an exploration of a mathematical space.

Nothing wrong with that. But.

But color adds to a game's appeal. And simulation is a way of providing color.

Suppose I think, for some reason, that a game on Waterloo would have great commercial appeal. I could, if I wanted, take Monopoly, change "Park Place" to "Quatre Bras" and the hotels to plastic soldiers, and call it Waterloo. It would work.

But wouldn't it be better to simulate the battle? To have little battalions maneuvering over the field? To hear the thunder of guns?

Or take Star Wars: The Roleplaying Game, which I designed. I could have taken Gygax & Arneson's Dungeons & Dragons and changed it around, calling swords blasters and the like. But instead, I set out to simulate the movies, to encourage the players to attempt far-fetched cinematic stunts, to use the system itself to reflect something about the atmosphere and ethos of the films.

Simulation has other value, too. For one, it improves character identification. A Waterloo based on Monopoly would do nothing to make players think like Wellington and Napoleon; Kevin Zucker's Napoleon's Last Battles does much better, forcing players to think about the strategic problems those men faced.

And it can allow insight into a situation that mere narrative cannot. It allows players to explore different outcomes -- in the fashion of a software toy -- and thereby come to a gut understanding of the simulation's subject. Having played at least a dozen different games on Waterloo, I understand the battle, and why things happened the way they did, and the nature of Napoleonic warfare, far better than if I had merely read a dozen books on the subject.

Simulating something almost always is more complicated than simply exploiting a theme for color. And it is not, therefore, for every game. But when the technique is used, it can be quite powerful.

How can elements of simulation strengthen the game?

Variety of Encounter

"You just got lucky."

Words of contempt; you won through the vagaries of chance. A game that permits this is obviously inferior to ones where victory goes to the skilled and smart and strong. Right?

Not necessarily.

"Random elements" in a game are never wholly random. They are random within a range of possibilities. When, in a board wargame, I make an attack, I can look at the Combat Results Table. I know what outcomes are possible, and my chances of achieving what I want to achieve. I take a calculated risk. And over the whole game, I make dozens or hundreds of die-rolls; given so much reliance on randomness, the "random element" regresses to a mean. Except in rare cases, my victory or defeat will be based on my excellence as a strategist, not on my luck with the dice.

Randomness can be useful. It's one way of providing variety of encounter.

And what does that mean?

It means that the same old thing all over again is fucking boring. It means that players like to encounter the unexpected. It means that the game has to allow lots of different things to happen, so there's always something a little different for the players to encounter.

In a game like Chess, that "something different" is the ever-changing implications of the positions of the pieces. In a game like Richard Garfield's *Magic: The Gathering*, it's the sheer variety of cards, and the random order in which they appear, and the interesting ways in which they can be combined. In Arneson & Gyax's *Dungeons & Dragons*, it's the staggering variety of monsters, spells, etc., etc., coupled with the gamemaster's ingenuity in throwing new situations at his players.

If a game has inadequate variety, it rapidly palls. That's why no one plays graphic adventures more than once; there's enough variety for a single game, but it's the same thing all over again the next time you play. That's why *Patience*, the solitaire cardgame, becomes dull pretty fast; you're doing the same things over and over, and reshuffling the cards isn't enough to rekindle your interest, after a time.

What things do the players encounter in this game? Are there enough things for them to explore and discover? What provides variety? How can we increase the variety of encounter?

Position Identification

"Character identification" is a common theme of fiction. Writers want readers to like their protagonists, to identify with them, to care what happens to them. Character identification lends emotional power to a story.

The same is true in games. To the degree you encourage players to care about "the side," to identify with their position in the game, you increase the game's emotional impact.

The extreme case is sports; in sports, your "position" is you. You're out there on the baseball diamond, and winning or losing matters, and you feel it deeply when you strike out, or smash the ball out of the park. It's important to you.

So important that fistfights and bitter words are not uncommon, in every sport. So important that we've invented a whole cultural tradition of "sportsmanship" to try to prevent these unpleasant feelings from coming to the fore.

Roleplaying games are one step abstracted; your character isn't you, but you invest a lot of time and energy in it. It's your sole token and the sum total of your position in the game. Bitter words, and even fistfights, are not unknown among roleplayers, though rather rarer than in sports.

Getting players to identify with their game position is straightforward when a player has a single token; it's harder when he controls many. Few people feel much sadness at the loss of a knight in Chess or an infantry division in a wargame. But even here, a game's emotional power is improved if the player can be made to feel identification with "the side."

One way to do that is to make clear the player's point of view. Point of view confusion is a common failing of boardgame designers. For instance, Richard Berg's Campaigns for North Africa claims to be an extraordinary realistic simulation of the Axis campaign in Africa. Yet you, as player, spend a great deal of time worrying about the locations of individual pilots and how much water is available to individual battalions. Rommel's staff might worry about such things, but Rommel assuredly did not. Who are you supposed to be? The accuracy of the simulation is, in a sense, undermined, not supported, by the level of detail.

What can you do to make the player care about his position? Is there a single game token that's more important than others to the player, and what can be done to strengthen identification with it? If not, what is the overall emotional appeal of the position, and what can be done to strengthen that appeal? Who "is" the player in the game? What is his point of view?

Roleplaying

HeroQuest has been termed a "roleplaying boardgame." And, as in a roleplaying game, each player controls a single character which, in HeroQuest's case, is a single plastic figure on the board. If you are a single character, are you not "playing a role?" And is the characterization of this game as a "roleplaying" game therefore justified?

No, to both questions.

The questions belie confusion between "position identification" and "roleplaying." I may identify closely with a game token without feeling that I am playing a role.

Roleplaying occurs when, in some sense, you take on the persona of your position. Different players, and different games, may do this in different ways: perhaps you try to speak in the language and rhythm of your character. Perhaps you talk as if you are feeling the emotions your character talks. Perhaps you talk as you normally do, but you give serious consideration to "what my character would do in this case" as opposed to "what I want to do next."

Roleplaying is most common in, naturally, roleplaying games. But it can occur in other environments, as well; I, for one, can't get through a game of Vincent Tsao's Junta without talking in a phony Spanish accent somewhere along the line. The game makes me think enough like a big man in a corrupt banana republic that I start to play the role.

Roleplaying is a powerful technique for a whole slew of reasons. It improves position identification; if you think like your character, you're identifying with him closely. It improves the game's color, because the players become partly responsible for maintaining the willing suspense of disbelief, the feeling that the game world is alive and colorful and consistent. And it is an excellent method of socialization.

Indeed, the connection with socialization is key: roleplaying is a form of performance. In a roleplaying game, roleplayers perform for the amusement of their friends. If there aren't any friends, there's no point to it.

Which is why "computer roleplaying games", so-called, are nothing of the kind. They have no more connection with roleplaying than does HeroQuest. That is, they have the trappings of roleplaying:

characters, equipment, stories. But there is no mechanism for players to ham it up, to characterize themselves by their actions, to roleplay in any meaningful sense.

This is intrinsic in the technology. Computer games are solitaire; solitaire gamers have, by definition, no audience. Therefore, computer games cannot involve roleplaying.

Add a network, and you can have a roleplaying game. Hence the popularity of MUDs.

How can players be induced to roleplay? What sorts of roles does the system permit or encourage?

Socializing

Historically, games have mainly been used as a way to socialize. For players of Bridge, Poker, and Charades, the game is secondary to the socialization that goes on over the table.

One oddity of the present is that the most commercially successful games are all solitary in nature: card games, disk-based computer games, CD-ROM games. Once upon a time, our image of gamers was some people sitting around a table and playing cards; now, it's a solitary adolescent, twitching a joystick before a flickering screen.

Yet, at the same time, we see the development of roleplaying, in both tabletop and live-action form, which depend utterly on socialization. And we see that the most successful mass-market boardgames, like Trivial Pursuit and Pictionary are played almost exclusively in social settings.

I have to believe that the solitary nature of most computer games is a temporary aberration, a consequence of the technology, and that as networks spread and their bandwidth increases, the historical norm will reassert itself.

When designing any game, it is worthwhile to think about the game's social uses, and how the system encourages or discourages socialization. For instance, almost every network has online versions of classic games like poker and bridge. And in almost every case, those games have failed to attract much useage.

The exception: America Online, which permits real-time chat between players. Their version of network bridge allows for table talk. And it has been quite popular.

Or as another example, many tabletop roleplaying games spend far too much effort worrying about "realism" and far too little about the game's use by players. Of what use is a combat system that is extraordinarily realistic, if playing out a single combat round takes fifteen minutes, and a whole battle takes four hours? They're not spending their time socializing and talking and hamming it up; they're spending time rolling dice and looking things up on charts. What's the point in that?

How can the game better encourage socialization?

Narrative Tension

Nebula-award winning author Pat Murphy says that the key element of plot is "rising tension." That is, a story should become more gripping as it proceeds, until its ultimate climactic resolution.

Suppose you're a Yankees fan. Of course, you want to see the Yankees win. But if you go to a game at the ballpark, do you really want to see them develop a 7 point lead in the first inning and wind up winning 21 to 2? Yes, you want them to win, but this doesn't make for a very interesting game. What would make you rise from your seat in excitement and joy is to see them pull out from behind in the last few seconds of the game with a smash homerun with bases loaded. Tension makes for fun games.

Ideally, a game should be tense all the way through, but especially so at the end. The toughest problems, the greatest obstacles, should be saved for last. You can't always ensure this, especially in directly-competitive games: a chess game between a grandmaster and a rank beginner is not going to involve much tension. But, especially in solitaire computer games, it should be possible to ensure that every stage of the game involves a set of challenges, and that the player's job is done only at the end.

In fact, one of the most common game failures is anticlimax. The period of maximum tension is not the resolution, but somewhere mid-way through the game. After a while, the opposition is on the run, or the player's position is unassailable. In most cases, this is because the designer never considered the need for narrative tension.

What can be done to make the game tense?

They're All Alike Under the Dice. Or Phosphors. Or What Have You.

We're now equipped to answer the questions I posed at the beginning of this article.

Do all the myriad forms of gaming have anything in common? Most assuredly. All involve decision making, managing resources in pursuit of a goal; that's true whether we're talking about Chess or Seventh Guest, Mario Brothers or Vampire, Roulette or Magic: The Gathering. It's a universal; it's what defines a game.

How can you tell a good game from a bad one? The test is still in the playing; but we now have some terms to use to analyze a game's appeal. Chess involves complex and difficult decisions; Magic has enormous variety of encounter; Roulette has an extremely compelling goal (money--the real stuff). More detailed analysis is possible, to be sure, and is left as an exercise for the reader.

Is the analytical theory presented here hermetic and complete? Assuredly not; there are games that defy many, though not all, of its conclusions (e.g., Candyland, which involves no decision making whatsoever). And no doubt there are aspects to the appeal of games it overlooks.

It is to be considered a work in progress: a first stab at codifying the intellectual analysis of the art of game design. Others are welcome, even encouraged, to build on its structure -- or to propound alternative theories in its defiance.

If we are to produce works worthy to be termed "art," we must start to think about what it takes to do so, to set ourselves goals beyond the merely commercial. For we are embarked on a voyage of revolutionary import: the democratic transformation of the arts. Properly addressed, the voyage will lend grandeur to our civilization; improperly, it will create merely another mediocrity of the TV age, another form wholly devoid of intellectual merit.

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Orthographical Note: In normal practice, the names of traditional games, e.g., chess, go, poker, are uncapitalized, as is usual with common nouns. The names of proprietary games are written with Initial Caps. This usage is inconsistent with the thesis that games are an artform, and that each game, regardless of its origins, must be viewed as an oeuvre. I capitalize all game names, throughout the article.

We capitalize Beowulf, though it is the product of folk tradition rather than a definite author, just as we capitalize One Hundred Years of Solitude. In the same fashion, I capitalize Chess, though it is the product of folk tradition rather than a definite designer, just as I capitalize Dungeons & Dragons. It may seem odd, at first, to see Chess treated as a title, but I have done so for particular reasons.

I have also, whenever possible, attempted to mention a game's designer upon its first mention. When I have omitted a name, it is because I do not know it.

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