Unwritten Rules

Stephen Sniderman

Context

"Unwritten Rules" is the feature article in the first issue of ***The Life of Games*** *(October, 1999), the online journal at www.gamepuzzles.com/tlog/tlog.htm, which I co-edit with Kate Jones, founder of Kadon Gamepuzzles. This article is an attempt to clear the ground for discussing games by challenging the widely held assumption that a game is fundamentally different from other human activities (such as the law or business) because we can know all its rules. Games are thus invoked as a model of a fully describable closed system, but I try to show that a game played by humans cannot be a closed system and therefore cannot be fully described.*

The Rules of a Game

Gaming the Game

Speaking of Games

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Regardless of what game you're playing, you cannot know all the rules.

Whether the ""game"" is tic-tac-toe, chess, baseball, language, etiquette, education, science, religion, law, business, politics or war, the entire set of rules governing the system cannot be spelled out. No matter how hard we try to indicate what is required, allowed, and proscribed, some of the most fundamental principles of playing the game will always elude us. And yet, paradoxically, we can still play the game—some deeper rules are always operating (i.e., affecting the players' behavior) without the players' being aware of them.

What do we mean by a game?

A game is a play activity that consists of an object (a goal or goals that the players are trying to accomplish) and constraints on the players' behavior (what they must do and/or what they may not do in attempting to achieve the game's object). To play a game is to pursue that game's object while adhering (more or less) to its constraints. Some of these constraints (the "recorded rules") are explicitly spelled out and are what we generally understand to be "the rules of the game," but every game is also governed by constraints that are rarely if ever made explicit. Some of these "unrecorded rules" are literally unstatable.

An example with tic-tac-toe

Suppose I challenge you to a game of tic-tac-toe. Could anything be more straightforward? But just to be sure, we review the rules. We'll play on a 3x3 grid, we'll alternate turns, we'll play only in empty squares, I'll play X's, you play O's, I'll play first, and the first player to get three of his/her symbol in a row, column, or diagonal wins the game. Aren't these *all* the rules of tic-tac-toe?

Well, for one thing, nothing has been said about time. Is there a time limit between moves? Normally, we both "understand" that there is, and we both "know" that our moves should be made within a "reasonable" time, say 20 seconds. If one of us takes longer, the other starts to fidget or act bored, may even make not-so-subtle comments, and eventually threaten to quit. Without having stated it, we have accepted a tacit time limit. And because we haven't stated it, it is fairly flexible and very functional.

Is it a rule, or isn't it?

Suppose it is my turn and, no matter what I do, you will win on your next move. Couldn't I prevent that from happening, within the rules stated, by simply refusing to play? Nothing in the

rules forces me to move within a particular amount of time, so I simply do not make my next move. Haven't I followed the rules and avoided losing? And yet, if you've ever played a game, you know that this strategy is almost never employed and would be completely unacceptable. Anybody who seriously resorted to such a tactic would be considered childish, unsportsmanlike, or socially undesirable and would probably not be asked to play in the future. This behavior seems to violate some fundamental but rarely stated principle of the game without any of us ever having to discuss it.

Self-defeating rules

But can't we state the principle it violates? Can't we just make that principle one of the rules of tic-tac-toe and other games? The answer is—yes, of course we can, but we will not eliminate the problem. Suppose we add the following rule: *Players will make their moves within a reasonable amount of time.* Have we solved anything? What is a "reasonable" amount of time? One minute? Five? 30? A million? And who determines what is reasonable—the player whose turn it is or the other player?

Such a rule is actually self-defeating because it calls attention to the fact that we cannot spell out what "reasonable" means.

So why not just specify a time limit for each move? Because we would just create even more perplexing problems for ourselves. For one thing, we would have to indicate when a player's time is running and when it is not. If one player had to answer the phone, for example, would we count that time or wouldn't we? To state the rule fully, we would have to list every life situation that could possibly interrupt a player's turn and state whether it should count against that player's time limit. Obviously, we could never complete such a list.

Practical solutions

A far more practical "solution," the one most of us have used all our lives in "friendly" games, is to say nothing about time limits and rely on our opponent's intuitive understanding of a "reasonable" time for a move and his/her desire to keep the game moving and therefore enjoyable. In other words, we depend on unstated—and probably unstatable—"rules" (really just expectations) when we play a game for fun.

In tournament or professional games, of course, we cannot leave things so loose, and various methods have been employed to solve the time dilemma. Generally, specific time limits are spelled out, as are specific penalties, including forfeit, for exceeding them. Official devices are employed for timing moves—chess clocks, the shot-clock in college and pro basketball, stopwatches in baseball games and tennis tournaments, and so on. But once we move beyond "reasonable" to "official" time, we create a whole new set of problems, problems that can no longer be solved with a simple agreement between or among players.

Rulings versus rules

As any sports fan knows, the difficulties that arise with "official" rules and "officials" to interpret them are often more intractable than those we face in friendly games. Since no set of rules can list every possible situation that might come up during tournament play, someone in charge, rather than the players themselves, must decide if a player has violated a rule (such as exceeding a time limit) and what penalty should be invoked.

Suppose, for instance, that a fire alarm sounds during a chess tournament and players are forced to evacuate the room. Someone in charge of the tournament must determine whether or not the time spent out of the room should be counted against the players whose clocks were running. It is doubtful that the tournament rules will help them. Or suppose the shot clock in an NBA game stops functioning temporarily. When it is fixed, the officials must decide how much time to put on the clock. How could any rule specify the precise amount of time that would be appropriate? Or suppose a professional tennis player complains of cramps. A human being, not a rulebook, must determine whether the player's complaint is legitimate and decide whether to grant the player additional time to recover.

Presumably, the officials' decisions in these situations would be based on the notions of fairness, sportsmanship, and practicality, notions that have never been—and almost certainly cannot be—fully codified and agreed upon. Therefore, no matter how exhaustive and specific we try to make the rules about time limits (or anything else) in a game, we will always have to rely on other people's acceptance of a set of principles that neither they nor we can put into words. That's the nature of any human system—the most important aspects of it are unstatable and unknowable.

In *The Celebrant*, Eric Rolfe Greenberg cogently illustrates this little-recognized truth. He depicts the famous incident in baseball lore that got Bonehead Merkle his nickname. With two outs in the bottom of the ninth inning and the score tied, Merkle is on first and a teammate is on third. The next batter hits the ball cleanly into right field for a single, which drives in the apparent game-winning run. Fans pour out onto the field in celebration. Merkle, afraid for his safely, heads directly to the dugout without touching second base. The fielding

team calls for an appeal play at second and attempts to retrieve the ball and touch second for the third out, ending the inning and negating the tie-breaking run.

But where is the ball? No one is sure because the field is swarming with fans. Nevertheless, one of the fielders, holding a ball, touches second base and claims that Merkle has been forced out and that the game is still tied. The question arises, is the ball he retrieved the one that was actually hit? By this time, the umpire has left the field and must be summoned from his dressing room, which he adamantly refuses to leave—until his life is threatened. When he does finally stick his head out, he refuses to change his ruling. Naturally, the losing team appeals to the commissioner of baseball to settle the matter. This worthy stalls as long as he can and finally declares the game null and void and orders that it be replayed.

Greenberg makes it clear that the commissioner's decision is influenced by political and social considerations that have little to do with any rulebook. The game of baseball has spilled over into real life and the depth of the "rules" governing the sport can be glimpsed.

No game is an island

As this example reminds us, no game or sport is played in a vacuum. All play activities exist in a "real-world" context, so to play the game is to immerse yourself in that context, whether you want to or not. In fact, it is impossible to determine where the "game" ends and "real life" begins. As a result, knowing only the recorded rules of a game is never enough to allow you to play the game.

Think of the constraints that do not ordinarily get included as part of the recorded rules of tic-tac-toe but which nevertheless influence the behavior of almost all players. Some of these involve the conventions, "etiquette," or "ethos" of this particular game and may vary from region to region or even family to family.

For example, I would guess that few tic-tac-toe players talk trash to each other (an acceptable and even expected behavior in some games and sports, like basketball).

Similarly, I'm willing to bet that few people play tic-tac-toe for money (in contrast to Poker) or prizes (as is sometimes true with Scrabble) or masters points (as with Tournament Bridge) or glory (as in Central Park chess).

Also, most people, I suspect, would probably allow their opponent, especially an inexperienced player or a young child, the opportunity to "take back" an obviously unwise move.

Playing fair

Other unwritten rules are associated with being "a good sport" and would apply to virtually all games in our culture. For example, you may not attempt to coerce your opponent, through physical force or threats or bribery or blackmail, into putting a symbol on a particular square. You may not attempt to cause your opponent physical, mental, or emotional harm to keep him or her from competing effectively. You may not attempt to distract your opponent while he or she is contemplating the next move. On the other hand, you must make your moves in a "reasonable" time. You must take the game seriously and attempt to win. You must play "fair" at all times.

To understand the difficulty—or, more accurately, the impossibility—of spelling out every rule governing the behavior of tic-tac-toe players, try to imagine programming a computer to "understand" what is meant by the sentences in the previous paragraph. For instance, think about the notion of "distracting" an opponent. What counts and what doesn't? Suppose you are chewing gum or smoking or wearing perfume and your opponent claims to be bothered by the sounds or aromas you are producing. What would we tell Deep Blue about this situation? Can we really list every behavior that qualifies as distracting?

The human factor

Or for that matter, can we ever be sure (in the sense that we could program a computer to determine) that a player is "really" distracted? In his famous match with Boris Spassky in Rejkjavik, Iceland, in 1972, Bobby Fischer claimed to be "distracted" by negative vibes that were emanating from his opponent's camp. Officials could hardly appeal to the recorded rules, as "complete" as those might have been, to determine how to handle Fischer's complaints. They had to use their experience with people, including Fischer and Spassky, their understanding of human psychology, their awareness of the political and social implications of the situation, and their diplomatic skills to arrive at a satisfactory compromise. Which of these notions is programmable?

Even Deep Blue, the most sophisticated chess program ever devised, cannot distinguish between a game played for blood (or money) and one played for fun; cannot recognize when a move should count and when politeness or common sense or common courtesy or compassion or medical emergency dictates that it shouldn't; cannot take into account the emotional needs of its opponent; cannot know when it's appropriate to abandon the game

or suspend play; cannot, in short, understand the social, political, moral, psychological, and philosophical context in which the game occurs.

Unspoken basics

Obviously, our ability to participate in a particular game is dependent on our knowledge of many "rules" which no one has ever spelled out to us. Yet it is easy to overlook this simple fact. In *When Elephants Weep,* the authors tell about a group of scientists who attempted to teach dolphins to play water polo. Although the dolphins were able to learn how to put the ball in the net (and seemed to derive pleasure from doing so), when the trainers tried to get them to stop the other team from "scoring," the dolphins launched an all-out war on the other team's players, using methods that no person steeped in the concepts of sportspeopleship would ever use.

After this experience, the trainers gave up their effort, apparently concluding that their task was hopeless, that dolphins couldn't be taught to play the sport. My guess is that they assumed that all the dolphins needed to be taught were the recorded rules of water polo and the creatures would be able to play the game like adult human beings. These scientists evidently did not realize how much of our knowledge of proper game behavior precedes the learning of the statable constraints of a particular sport.

But suppose these trainers had recognized, after their initial failure, that they had to provide their trainees with some more fundamental "rules" of game playing. Would they ever have been able to teach dolphins all they need to know to play a single "human" game? Are dolphins capable of understanding fairness and sportscreatureship, "time in" vs. "time out," practice vs. competition, winning and losing? And even if they were, how would we go about teaching these concepts to them? Wouldn't we have to teach them much of our culture in order for them to play the game as we do?

Sportsmanship 101

To grasp the immensity of the trainers' task, let us look more closely at what we must know and do to play the simplest game in our culture. We must:

1. intuitively understand what is meant by *play* in our culture, recognize how it differs from other activities, and be able to tell when someone is involved in the behaviors associated with play in general and games in particular;

2. intuitively understand what *game/sport* is being played, which behaviors constitute part of that activity and which do not, when the activity is underway, when it is in suspension, and when it is concluded;

3. consciously understand and pursue the *object(s)* of the game (i.e., what we must accomplish to be "successful");

4. consciously understand and follow all (or at least a large majority of) the defining *prescriptions* and *proscriptions* of the game, the "written," statable rules—i.e., what we must and must not do in the course of pursuing the object or objects;

5. consciously understand and follow the *etiquette* of the game— i.e., the unwritten but sometimes stated traditions associated with the game that do not necessarily affect the play itself (e.g., appropriateness of talking, gloating, taunting, celebrating, stalling, replaying a point, giving advice to your opponent or teammates, letting players take back moves, etc.);

6. intuitively understand and follow the *ethos* of that particular game—i.e., the unwritten and rarely expressed assumptions about how to interpret and enforce the "written" rules (e.g., palming in basketball; the strike zone in American and National Leagues; the foot-fault in tennis);

7. intuitively understand and follow the *conventions* of playing any game according to the culture of the participants—i.e., the unwritten and generally unstatable customs related to playing, competing, winning/losing, etc. (e.g., taking the game with the appropriate seriousness, knowing what takes priority over winning and over playing, not faking injury or personal obligation to avoid losing; playing "hard" regardless of the score; not claiming that previous points didn't "count");

8. intuitively understand and respond to the "real-life" *context* in which the game is being played—i.e. the social, cultural, economic, political, and moral consequences of the result (e.g., whether someone's livelihood or self-esteem depends on the outcome).

Going through the motions

Obviously, we are never merely playing a game. Or, to say it another way, we are never playing only one game. We are always conscious of the game's relation to the world in which we live, the world in which that game is one small part.

How much of this context could a non-human "understand?" Is a racehorse "playing the game" of horse racing or merely responding to the urgings of the jockey? Is Deep Blue "playing" chess or merely making moves on a chessboard according to a particular algorithm? Is either trying to win?

If not, they are not playing the game in any meaningful sense. As I see it, to perform the skills and behaviors associated with the game without consciously pursuing the object(s) of the game is not equivalent to playing the game. We might be practicing the game, pretending to play (as with pro wrestlers or actors in a movie about a sport), or exercising our muscles, but there is no game without the attempt, on the part of at least one of the players, to achieve the statable object of that game. (Could dolphins ever be taught to pursue such an object, or would they merely go through the motions of play? And how would we know?)

In addition, it is not possible to pursue the object of the game independent of the key prescriptions and proscriptions. Built into the object(s) of any game is the manner in which it/they must and must not be pursued.

The primary object of a football game, for example, is not to cross your opponents' goal line while carrying a football; it is to score a touchdown. An equipment manager carrying a bag of footballs through the end zone of a football field has not scored a touchdown. These are profoundly different events, and perceiving the difference between them is a key to understanding the game. Thus, not understanding the difference between them is tantamount to not understanding the game of football. Could any non-human ever make this distinction?

"Time in"

Perhaps the single most important "rules" that are literally unstatable, then, are those that define the context of the game and answer the question, "When is the game being played?" None of us can say how we know that we are in fact playing a particular game (rather than, say, just practicing), but we generally have no trouble knowing that we are. That suggests that there are many subtle cues we give and receive about what play activity we are engaged in, what "counts," when time is "in," when the game has started, when play is suspended, and when the game has ended.

Let me offer a personal example. When my buddies and I play tennis, we meet each other at the court at a prearranged time, take out our tennis racquets and some balls, warm up for 15-20 minutes (hitting ground strokes, volleys, overheads, and serves), and eventually someone asks, "Ready?" or perhaps "Ready to play?" If anyone says no, we continue to warm up. If everybody says Yes (or nobody says No), we toss away all but three balls. At this point, I (and presumably the others) understand that the actual game is going to begin with the next serve. There is never a formal announcement that play is about to begin. At most, the server will hold up a ball and the others will nod or wave.

None of us has ever acknowledged that this is our practice, none of us has stated any of these behaviors, as "rules," none of us would be able to say how we arrived at these customs, yet none of us, I assume, would have any doubt when the game has started.

Could I program a computer or teach a dolphin to operate with the same certainty? Could I specify all the variations in our ritual so that non-humans (or non-sports fans) could identify the boundary line between warm-up and play?

On your mark... get set...

Players, fans, and officials of any game or sport develop an acute awareness of the game's "frame" or context, but we would be hard pressed to explain in writing, even after careful thought, exactly what the signs are. After all, even an umpire's yelling of "Play Ball" is not the exact moment the game starts. (And think how confused a new fan of baseball would be when some dignitary threw out "the first pitch"!) We must rely on our intuition, based on our experience with a particular culture, to recognize when a game has begun.

We cannot, in other words, program a computer to understand all the conditions that must be satisfied for humans in a particular culture to say that a game is underway. If the computer is turned on and the software for that game booted up, the computer is, by necessity, playing the game, even if its "opponent" is a two-year-old, a monkey, or an accidental jiggling of the keyboard.

In addition, the computer will go on "playing" until it is turned off, even if its opponent moves on to other activities or drops dead. This phenomenon is the premise of the movie, *Wargames*, in which a supercomputer, WOPR, cannot distinguish between a "game" of Thermonuclear War and the real thing. When told it is involved in an actual battle, not a simulation, WOPR's reply is, "What's the difference?"

By contrast, a human being is constantly noticing if the conditions for playing the game are still being met, continuously monitoring the "frame," the circumstances surrounding play, to determine that the game is still in progress, always aware (if only unconsciously) that the other participants are acting as if the game is "on."

For example, in our tennis game, a player will occasionally say, after failing to return a serve, "I wasn't ready." If the others decide that the player is serious in that announcement, the point is usually replayed. How we determine whether or not the player is joking is beyond my understanding (although I'm perfectly capable of making such a determination) and certainly not in my power to express in words.

"Time out"

But there are other reasons, still more difficult to explain, why a particular serve in our game does not "count," i.e., is (usually) replayed. If the players on the receiving team decide that the server's concentration has been "unfairly" disrupted after serving a fault (because, for example, someone from another court has asked us to retrieve their ball or something else has caused "too much" time to elapse), they generally tell the server to "take two," that is, to try his/her first serve again. In effect, they have made a ruling that the server has been inappropriately distracted between the first and second serve and "deserves" a second chance at two serves for that point.

But what exactly is an "unfair" disruption of play according to the etiquette of our game? Can any one of us spell out precisely what situations warrant a second chance and which do not? After all, we are making no effort here to follow the practices of some official tennis game, so we have no rulebook to appeal to, even if we wished to. (Actually, I would feel silly consulting one for such a petty matter.)

I assume that we are all just following a tradition of hackers' tennis that has been passed down over the generations, almost always by imitation rather than by any explicit explanation.

I also assume that our behavior is based on our own notions of "fairness," not on something we could explain in detail.

As a result, I'm not even certain that the other players in my game have the same reasons for telling someone to "take two" as I do, but I have noticed a reasonable consistency over the years.

Occasionally, we facetiously (I assume) debate about whether we should give the opposing player another first serve, but our discussion itself is usually seen as a sufficient distraction to settle the matter in the server's favor. Incidentally, I have never heard the server request a second chance, except in jest (I have assumed), regardless of the circumstances, and some servers will not accept the receiving team's ruling unless it is insisted upon.

Below the surface: Who's the best sport?

A kind of sub-game is going on "underneath" the more obvious one called tennis. Many hackers, myself included, try to one-up each other in politeness and thoughtfulness, so this aspect of our tennis matches can be thought of as a kind of game-within-the-game in which the object is to come off as the best sport.

Of course, no one ever acknowledges this game and no winner is ever announced. My guess is that this practice gives us hackers a chance to feel successful on some level, regardless of the outcome of the match.

Keep in mind that I have never discussed any of these customs with my tennis buddies and probably never will, but I can say that almost every hacker I've ever played tennis with (including those who are fierce competitors and those who are impolite and inconsiderate in other ways) has practiced this non-professional courtesy, and I'm confident that if I played in a friendly game in Oklahoma or Maine or Florida or Arizona, I would see this same tradition being followed.

Yet what chance does a computer, a dolphin, a non-native speaker, or even a non-player have of understanding this game of "Who's the best sport?" It's the kind of thing you have to learn from experience, observation, and inference, not from a set of statable rules.

How can you tell?

Distinguishing between counting and not counting, between "time in" and "time out," is probably the single most basic skill a game player, fan, or official must possess. Without it, a participant or observer could not tell the difference between the preliminaries (such as a warm-up), the breaks in the action (such as a time-out), the aftermath (such as a handshake or a victory lap) and the game itself, could not know when to expend energy and when to relax, could not keep score accurately, could not determine what behavior was affecting the outcome, and so on.

Obviously, we learn to make these distinctions, but we learn them without being aware, for the most part, that we are learning anything. As a result, the process by which we decide that a game is being played is generally hidden from us and therefore seems perfectly natural, not something that has to be learned.

We forget that children, people from other cultures, and adults in our own culture who are unfamiliar with the game cannot automatically tell which actions are part of the game and which are not.

But even if someone understands the notions of play (#1 in our list above), recognizes when a particular game/sport is being played (#2) and is familiar with its object and "official" (written) rules (#3 and #4), such a person would have difficulty participating in the game/sport at any level without a great deal of additional information (or "rules") about the activity.

The outsider

To illustrate this notion, let us imagine a person named Leslie who has taken extensive tennis lessons, memorized an official USTA rule book, and watched professional tennis on television but never actually played a match at any level and never played or watched or read about any other games (which presumably share some of the unstated rules of tennis).

One day, let's suppose further, someone invites Leslie to substitute in one of our doubles games. Even assuming his skills were similar to ours, I would venture to say that Leslie would not have much fun and would make the rest of us very unhappy. He would almost certainly get very confused and frustrated at the way my friends and I play "tennis."

In fact, Leslie might not even recognize it as tennis at all and might conclude that we are playing some bastardized form of the game.

And in a sense, he would be absolutely right.

By the book

For one thing, as Leslie would be dismayed to discover, none of our rules are "official," in the sense that they are written down or formally agreed upon.

We all seem to assume that we are following the most important rules of professional tennis, except where that is not possible. So, for example, when the ATP adopted a tiebreaker rule for deciding a set, most (but not all) of the games I was involved with also adopted that practice.

In general, the only rules we discuss are those we are uncertain about, such as whether it is legal to touch the net during a point or hit the ball before it crosses the net. Otherwise, we have never spelled out the "rules" we are using, have never stated which set of "official" laws we will abide by, have never established an authority to settle disputes, and have never ever consulted a rule book (at least not at the court) to determine the "correct" way to play. When we disagree about the rules, which rarely happens, we use our knowledge of pro tennis to defend our position.

Not by the book

But we certainly don't do everything as they do on the ATP tour. As I have already indicated, we give people a second chance at a first serve according to our own lights, not what we see happening at Wimbledon.

To save money, we do not open a new can of balls every seven games, and when we play indoors (where we have to pay for court time), we switch ends of the court after each set, not after every odd game.

In addition, we never assess penalty points for swearing, racquet abuse, exceeding time limits, or foot-faulting. We might grumble about these violations, especially if we think a player is getting an unfair advantage, but we tolerate them, apparently because we perceive them as too trivial to worry about.

Yet some of the people I play with are fanatical about the height of the net. They use a tape measure to make sure the middle of the net is exactly 36 inches high and raise or lower it as needed. They even bring "doubles sticks" to raise the net to the appropriate height at the sides. Wouldn't our "inconsistency" drive Leslie crazy?

Obviously, one of the most crucial (and rarely stated) meta-rules of games that someone like Leslie (or a computer or a dolphin) would not understand is that we can play them any way we wish, as long as we have (apparent) agreement among the participants. If we want to play tennis with a racquetball or without a net, what's to stop us?

Tradition-bound

And yet, in my experience, few people choose to play games or sports in innovative ways. Although they are willing to eliminate "trivial" or inessential rules, most people evidently want to feel connected to the tradition of "real" games (i.e., professional sports), even when the rules of the pro version are inappropriate for the local circumstances.

So, for instance, almost all junior high school basketball hoops are 10 feet high, just as they are for the Chicago Bulls, even though the kids are two or three feet shorter than players in the NBA. I guess we like to create the illusion for ourselves that these youngsters are playing the same game as Michael Jordan.

House rules

Even if Leslie finally figured out exactly how our "rules" differed from the ATP's, he would undoubtedly still be very uncomfortable in our doubles game. For one thing, we play a relatively "casual" game.

We often talk to each other between points, jokingly insult one another, compliment a particularly good shot, ask what the score is, predict what is going to happen next, and so on. Between games, we might exchange personal information or tell jokes.

None of this, of course, happens in professional level tennis, at least not the matches shown on television.

My guess is that Leslie would be disconcerted by our apparent lack of decorum. He would probably perceive us as being remarkably uninterested in the outcome of the game, when in fact we play to win almost as "seriously" as the pros. If he was used to silence between points and games, his concentration might be seriously upset.

Banter protocols

Perhaps he would eventually be able to shrug off our casualness as a trivial idiosyncrasy that doesn't affect the game in any significant way, but it is doubtful that he would be able to participate in the banter. In that case, our "rules" would accommodate his silence. No one is required by our etiquette to talk if s/he doesn't want to, although we (at least I) tend to prefer those with "personality." The game is just not as much fun (for me) with duds or robots.

If Leslie did start to talk, though, he might find himself violating other aspects of our etiquette. Certain subjects are taboo, or at least frowned upon or rarely mentioned. Business, for example, is almost never discussed between points and rarely between games. (Perhaps this is merely because the people I play with don't share work experience.)

More significantly, politics and religion are strictly avoided. At most, someone will make a passing comment about the president or some interesting current event, but I can't remember a single remark about abortion or gun control or any other such controversial topic, even when I have played with other academics. It's as if we do not want to acknowledge that we might have serious disagreements outside the tennis court.

Would Leslie recognize that we are limiting our comments to certain topics? Until I wrote these last sentences, I had never articulated this "rule" even to myself (though I've been playing for over 40 years).

Our own language

Leslie would almost certainly have more difficulty getting used to our line-calling practices. Since we don't have officials, we (like most hackers, I assume) have devised a fairly elaborate system for deciding if a ball is in or out.

Keep in mind that we have never discussed this system, never written it down, never spelled it out in any way, yet our entire game depends on each player's following a fairly rigid, if unstatable, set of behaviors. (I'm willing to bet that is generally the case with most amateurs, including those in tournaments, which rarely have official line-callers.)

First, we sometimes use hand signals to indicate "in" (a palm down) or "out" (a finger point), and sometimes, when we think the call is obvious, we say nothing at all. As far as I can tell, we use hand signals only when the ball is not returnable and say "out" when a player has hit the ball back and we wish to indicate that the point is over.

Second, we have a set of "rules" governing which player makes which call. Generally, players on the team about to hit the ball are expected to call the lines, even if a player from the opposing team is closer to the ball when it hits near the line. For example, on a serve, the partner of the player receiving the ball is supposed to announce an out ball.

Of course, there are exceptions (which I can only hint at). Sometimes, for example, the player that hit the ball (or his/her partner) has an unobstructed view of the situation and makes the call. Sometimes, more than one player makes the call. Occasionally two players disagree and a discussion ensues.

To settle a disputed line call, some players like to look for the impression (called a "spot") the ball has left on the playing surface. If they cannot find a spot, they generally assume the ball hit the line (and the point is awarded to the hitter).

Fuzzy boundaries

For the most part, in keeping with the game of "Who's the best sport?", players try to appear calm, rational, polite, and objective about line-calling, but occasionally someone will get upset over another's call, and a new game, whose rules are even harder to describe, breaks out. In this game ["I'm Right and You're Wrong"], the object is to get the other player to back down and agree with your perception.

What players under these circumstances are allowed or not allowed to say depends partly on the social rules that are in operation—the power relations among the players off the court—so once again we see the fuzziness of the boundary between game and non-game.

In most cases, the desire to continue play or to win the sportsmanship game ends an argument fairly quickly (but I remember once when a player and his grandson argued for over 15 minutes about a particular line call). Usually, when an impasse is reached, players will agree to take the point over.

As should be clear by now, I would never get all our practices down on paper, no matter how long I stayed at it. In fact, I haven't even finished explaining our system for calling lines, or the "rules" related to the length of time it's appropriate to debate a particular line call.

In addition, in my attempt to codify our game for "outsiders" (those who have never seen us, or other hackers, play), I have found myself distorting the reality for the sake of convenience. In many cases, I ignored what I knew to be clear exceptions to avoid getting bogged down in impossibly complicated nuances that I'm only dimly aware of.

For instance, one friend, John, and I always discussed controversial issues when we played singles but never when we played doubles! I also ignored the fact that the various groups I play tennis with do not play by identical rules (e.g., normally we spin a racket to determine which team serves first, but when we play at Nazim's house, the player who opens a can of balls serves the first game); only hinted at the effect a change in circumstances (outdoor vs. indoor, free vs. fee) can have on our game; and oversimplified the modifications in our game over the years.

Thus, as I've tried to show, the "casual" game of tennis that my buddies and I play is really based on an enormously complex set of "rules"—assumptions, traditions, and conventions—that govern our behavior on the court (whether we are consciously aware of it or not).

My contention is that no one could ever "fully" describe those rules or those governing the players of any other game.

The infinite-regress trap

It is time to see exactly why a complete listing of a game's rules is impossible. There are several reasons:

1. Game rules, like any rules, must be stated in some language, and all language is subject to interpretation. But the rules for interpreting any language would also have to be stated in some language, and these rules would likewise have to be interpreted. We are trapped in an infinite regress. Thus, the question "What are the rules?" can never be answered fully.

2. Each individual player could have his or her own personal conception of a game which would differ (if only slightly) from all other players' versions, and each player's understanding of that game's rules could change over time. No finite list of rules could include an infinite number of possible variations.

3. Since any two players could be playing the same game with different interpretations, there would have to be a set of meta-rules for reconciling these differences when they surface.

Of course, these meta-rules are, in effect, the rules to another game and are therefore subject to the same interpretive variations as the rules of any other game. Again, we run into an infinite regression. There is no bottom line, no point when we can accurately say, "These are the ultimate meta-rules for settling disputes."

Thus, the questions, "How do we settle disputes about the rules themselves, about whether a player has violated a rule, and about the appropriate penalties for a rule violation?" can never have a final answer.

4. Even if two players agree on certain rules and how to interpret them, disputes about what actually occurred (such as whether a ball landed on the back line or just beyond it) can still arise, and the players will need to abide by meta-rules in settling these disputes as well. These meta-rules, like those in #3 above, are also part of an infinite regression, so the question "How do we settle disputes about what really happened?" has no ultimate resolution either.

5. Since there are various "levels" of rules, "higher" rules (such as a real-world crisis) might have to take precedence over "lower" rules (such as time constraints); there must be a set of meta-rules for determining when this is appropriate. As with the other meta-rules we've looked at, there is no "final" set for ending disputes, so the question, "When is it appropriate to suspend certain rules?" cannot be given a full answer.

6. Since all games begin and end and may be interrupted by "outside" events (such as a TV ad), we must have a set of meta-rules for determining when the constraints apply and when they don't. Again, these meta-rules are susceptible to interpretation and dispute, leading to yet another unendable regression.

"Simons" often take advantage of this fact by tricking players into thinking play hasn't begun and then saying something like, "Before we start, say hi to your neighbor. Ah, I didn't say 'Simon says.'" Therefore, the question, "When do the rules apply?" cannot be fully answered.

We can see now why it is impossible to spell out a complete set of rules for any game. Now we need to ask why we have no trouble playing a wide variety of games.

If we can't know all the rules, how can we play any game at all?

> *Is it because participants rarely have to deal with "meta-rules" and so the infinite-regress problem almost never comes up?*

To me, this is not a plausible explanation. There are simply too many occasions we can name—in virtually every game ever played—in which meta-rule questions arise. When a player accidentally rolls the dice off the table, argues a call, gives (or refuses to give) an opponent a handicap, calls for a do-over, takes a mulligan, asks for a director's ruling, warns an opponent about an unwise move, or encourages the other team to play faster, the players are facing situations that are not (and could not be) completely covered in the recorded rules. Meta-rules (and even meta-meta-rules) are an integral part of all rule-governed activities.

> *Is it because players don't take games seriously so it doesn't matter that they can't know all the rules?*

Again, this doesn't work for me because it is clearly not true in all cases. Obviously, some players (myself included) care deeply about the game and the outcome.

Many of us are playing for high stakes—money, prestige, a trophy, pride, self-esteem, ego satisfaction, a feeling of control, etc. In fact, it's probably pretty rare for players to have no emotional involvement in the game they are playing. After all, why play unless the results "matter" in some important way?

My guess is that almost all players almost all of the time take almost all games very "seriously."

> *Is it because players mistakenly believe that there is a "bottom line," that the rules are clear, complete, and "final," and that somebody somewhere knows all of them?*

This is getting closer to sounding right, but is still a half-truth at best. Having the misconception that a game's rules are solid and statable can provide a player with a sense of confidence in the "reality" of a game, but my realization that no one can know (let alone state) the rules of our doubles game has not dampened my enthusiasm for tennis one iota. In fact, my recognition that games, like languages, can exist only because of an unspoken, almost mystical, agreement among the participants actually enhances my appreciation of them.

Although my attitude may be idiosyncratic, I seriously doubt that anyone else's enjoyment of a game (or willingness or ability to play it) would be diminished by realizing that we can't list all its rules.

"It's only a game"

I believe we can go on playing games wholeheartedly even when we are aware of the incompleteness of their rules. Why? Because, on a gut level, we cannot distinguish between something fanciful—like a movie or a joke or a dream or a game—and something "real."

Games feel like any life-event, so we can be immersed in them even though we may know intellectually that they are artificial constructions. Therefore, it makes no difference to us (emotionally) that a list of rules governing them cannot be completed, just as we can be profoundly affected by a joke or piece of fiction or nightmare that is not logical, realistic, or "complete."

We can suspend disbelief and rationality (even when some part of our brain is telling us it's only a story or it's only a dream) and respond deeply to creations of the imagination—our own or others'.

We can do this because we have the wonderful (and perhaps unique) capacity to operate on the "as if" level; we can play a game *as if* we know all its rules, *as if* there is an ultimate set of meta-rules, *as if* all potential disputes can be settled. We can imagine a game in the abstract and in a vacuum and can project that Platonic ideal onto the one that must be played in the world of social and political reality.

In other words, we can operate on (at least) two distinct levels of cognition at once. We can play any game as if it had an autonomous existence, even though we know perfectly well that the players create the game each time they agree to play and that any player at any time can destroy the game by quitting, by arguing, by stalling, or by any number of other spoilsport tactics.

Similarly, we can play any game as if it is important (and genuinely feel that it is), even though we know that it is not very high on our list of life priorities. We can play any game as if it transcended our culture, even though we recognize that players can have "unfair" (dis)advantages as a result of their upbringing. We can play any game as if it transcended morality (so we might intentionally and unashamedly foul or foot an opponent) even though we know that players can cheat or violate the rules in inappropriate ways.

Suspension of disbelief

Without this ability to operate in the conditional universe of "Suppose..." and "What if ...," game playing would be impossible, as would drama and fiction and, I suspect, language itself. We must be able to behave as if a game were not "merely" play, even though we are fully aware it is nothing else.

Like an actor, we must be able to take on a role but never give up our sense of self. We must be "in" the game to enjoy it but never so far in that we forget who we are. It is a delicate balance fraught with danger, which is perhaps why so many people (especially adults) shy away from games.

Non-human game players?

It is also, I believe, one more reason that computers (at least as they are today) will never play a game in the same sense that humans do. Computers have no conditional, no ability to create temporary self-delusions, no play mode, no sense of "as if." To a computer (we must assume), a chess move is just another calculation, no different from finding the square root of pi.

To a human, a chess move is (usually) part of a carefully designed pretense, a system of orchestrated assumptions, an artificial structure that can bring stimulation, competition, camaraderie, fun, and a variety of other good feelings. In general, the chess-playing human voluntarily accepts a particular challenge that involves a specific goal and specific constraints and which s/he can abandon at any time. The chess-playing computer, on the other hand, does not choose to start and cannot stop on its own. The human is aware of the voluntary and "non-serious," conditional nature of the activity, but the machine is not (and probably can never be).

What about animals? Does any non-human creature have the ability to suppose, to imagine something that doesn't exist except as an agreement among participants? If not, they will never play a game as we do. They will either take it too seriously or not seriously enough and, therefore, like any spoilsport, undermine the enjoyment of the game for any human participants or observers (as was the case with the water-polo-playing dolphins).

But even if animals (or computers) could think in the conditional, they still might not be able to play games as we do. They would also have to be able to trust other players to function in basically the same way. To play a game (or use a system) meaningfully without knowing all the rules requires the faith that others understand the game/system as you do or at least will behave in ways that seem consistent with such an understanding. Without that faith, a player would inevitably end up being the spoilsport.

Meta-rules in other arenas

By way of analogy, consider our (or any other) monetary system. Most people recognize that the currency we use has no inherent worth and that it gains its value from mutual (if tacit) agreement among its users, which means its value is subjective, symbolic, and subject to change.

Few people believe that there is an objective, stable method for determining how much milk a dollar should buy. Most of us understand that there are no "rules" or meta-rules we can refer to that would settle a dispute about the value of a dollar bill and that its purchasing power is dependent on consensus, on other people's willingness to give us this much milk for this many dollars. And yet we can still use the coin of the realm and, for the most part, get our money's worth (by our own standards).

The system works even though no one can explain it fully and even though we all know it could collapse at any moment if people stopped trusting each other or the system itself.

The same is true with another currency—language. Even though words have no inherent meaning and no one has been able to list all the rules governing the construction of sentences, we can still communicate reasonably effectively for most purposes.

We all know that anyone at any time can choose to destroy the process by acting on Humpty Dumpty's premise that words can mean whatever we want them to mean. We know that there is no rulebook, no authority, no indisputable arbiter we can appeal to in such a case (since they would all have to use more words to settle the dispute).

Like any game, communication is dependent on the participants' willingness to operate as if there were universal agreement about meanings and grammatical rules.

We need to remember, though, that games are not analogous to these two currencies in at least one crucial way. Both money and language, after all, serve obvious, vital functions in the world, whereas the value of games is not nearly as apparent. We can easily understand why people would almost always try to go along with a monetary or linguistic system, since they believe that both can benefit them and the community significantly. In addition, most people recognize that destroying either system could ultimately threaten their own well-being.

Rule-preserving meta-rules

But games? The common perception is that no one gets hurt if a game is spoiled. So why would anyone continue to submit to an arbitrary (and incomplete) set of rules that was causing him or her to lose face, patience, and/or money? Why do people continue to play "by the rules" when they are losing the game?

Since losing is undesirable, we need to explain why so few players take advantage of the fact that the rules are incomplete and therefore infinitely challengeable. We need to understand why people almost always play as if the rules were not only complete but knowable and statable, and rarely allow themselves to play the meta-game of arguing about the rules and the meta-rules, ad infinitum.

One possible answer, of course, is that players don't realize that this "strategy" exists, but I think that all of us have witnessed many examples of the kind of behavior I'm talking about. Almost everyone has seen images of managers and players, nose to nose with an umpire, arguing a call or an interpretation of the rules, and even non-sports fans have probably seen TV ads based on John McEnroe's antics on the court, so I have to assume that virtually everyone realizes that this option is theoretically available to any player.

So what are the real "meta-rules" that keep most of us from playing this particular meta-game? Here are a few of them:

1. A game is supposed to be for fun, and, playing the game itself is more fun than playing the meta-game of arguing. Except for young boys in the front yards of America (who will argue endlessly about a single play), most players have learned that the meta-game is boring, repetitive, and fruitless, often ending in a stand-off;

2. A game is supposed to test certain skills, and these do not usually include the skills of debate, sophistry, and intimidation tested by the meta-game;

3. A game is supposed to be for camaraderie, and arguing about the rules leads to antagonism rather than a spirit of friendly competition;

4. Players are supposed to be good sports (whatever that is), and rule challengers are perceived as poor sports or even spoilsports;

5. The "ideal" game, the game we all want to play, works fine as it is and does not include a discussion of rules or meta-rules;

6. A set of rules that has been tested is better than one that has not, so if it's not broken, don't fix it;

7. Doing things as others have done them in the past allows us to feel connected to our ancestors, our culture, and our traditions;

8. Following the rules that others follow allows us to compare ourselves to a wide spectrum of players, not just our immediate opponent(s);

9. Challenging long-standing traditions is inherently unwise because it creates the impression that nothing is sacred and could, if carried far enough, lead to anarchy.

For all these reasons, a player who argues about rules risks disapproval, sanctions, and even ostracism, so the vast majority of us choose to "leave well enough alone." Most people avoid and frown on the meta-game of arguing with rules and meta-rules because, without necessarily being aware of their reasons, they perceive it as a threat to pleasure, continuity, and stability. Thus, most games continue to be played "as they always have been." For the same reasons, many people are suspicious of new games.

To return to our central question, then, we can play a game even though we can't know all its rules because, for a variety of reasons, we tacitly conspire with our fellow players to act as if we know them all.

The big picture

In this way, games are no different from every system we use. In an important sense, all rule-governed systems—including law, politics, war, morality, education, economics, and language—are games, as many people have noted. Therefore, virtually all of the lessons we learn from "non-serious" games are directly transferable to the "real" world. What are those lessons? What follows from the acknowledgment that no human system has a completable set of "rules?" Let us spell out some of the implications.

1. Power and authority are arbitrary, not inevitable, depend on consensus (or at least acquiescence), and have no "divine" right to exist.

2. Rules for any system are not handed down from above, can exist only through the agreement of the participants, are always open to negotiation among the "players," and are continually evolving. As Robert McConville reminds us, if a game survives, "the rules for playing the game are constantly being changed as they are passed from tribe to tribe and generation to generation" (*The History of Board Games,* p. 8).

3. The most powerful rules, the ones least likely to be violated, are those that are not stated explicitly, those that people have to infer or intuit. To state a rule is to invite players to break it, but to leave a rule unstated is to make its violation almost literally "unthinkable."

4. We cannot accurately predict how any rule, stated or unstated, will be interpreted or enforced, so no rule, simply by its existence, will necessarily produce or prevent a desired behavior.

5. We cannot accurately predict or control what customs, norms, conventions, traditions, or expectations will evolve for a particular game or system of rules.

6. No set of rules is inherently superior to any other. In order to judge a set of rules, we must employ a set of meta-rules, which themselves would have to be judged by a set of meta-meta-rules, and so on ad infinitum.

7. An infinite number of sets of rules will "work," will allow us, individually or collectively, to function successfully (or at least to our own satisfaction).

8. The longer a system is followed and the more people who attempt to follow it, the more complex the recorded rules will become, and the more sets of meta-rules and meta-meta-rules, etc., will be recorded. Consider any legal system, religion, or professional sport as prime examples.

9. Every person operates according to an unlimited number of sets of rules, so it is almost inevitable that some of these sets (such as religion and business) will come in conflict with each other, which means that every person is also operating according to an unlimited number of sets of meta-rules for reconciling such conflicts, and an unlimited number of sets of meta-meta-rules and so on.

10. As humans, we have little choice but to act as though some of these sets of rules were absolute and indisputable. Otherwise, we would be trapped in an infinite regression and utterly unable to make meaningful choices.

11. Paradoxically, we cannot live according to any set of rules (because we can never know them all and because they will inevitably conflict with other sets we are trying to live by), so in order to continue to perceive ourselves as faithfully following a "complete" set of rules, we must learn to rationalize our deviations from it (or feel a great deal of guilt).

12. It is reasonable to say we are playing a game/living by a system even though we are not following all its rules. For this reason, following some of the rules in a system creates the expectation (in ourselves and others) that we will follow all the rules, including the unstated and the unstatable ones.

13. No one can tell for sure if someone (including oneself) is "really" playing a game/living by a system because it is not possible for anyone to follow all the rules in a game or system. Therefore, we can pretend to be playing any game/living by any system without others being able to detect that we are pretending. We can also pretend to be pretending and so on, and no one will be able to tell the difference.

14. No two people can possibly follow the same set of rules in exactly the same way.

Obviously, the recognition that we cannot know all the rules in a system can have a profound effect on how we approach the world. It can make us want to curl up in a corner with our thumb in our mouth or to go out and make sweeping changes in our most important institutions. It can destroy us or free us, depending on how we feel about a world in which there are no absolutes, no bottom lines, no final list of rules, a world in which all systems are "equal" and all meaning relational. Some (including myself) are comfortable with, even invigorated by, this notion, but others (perhaps a large majority) are enormously disturbed by it.

Today Parcheesi, tomorrow the world

Of course, there is nothing new about the relativist claim, but, to my knowledge, no one has applied the concept to games, those obviously artificial constructs. The argument has raged about more "important" human systems, like law and religion and language, so emotions, desires, and values always tend to cloud the issues. People understandably want to believe

that their beloved institutions are sacred, unchanging, and right, but (almost) no one feels that way about games.

So I have chosen to examine the reality of rules and meta-rules in this non-volatile, "safe" context of games, hoping I would not scare away those who tend to shun a relativistic argument. My goal has been to show convincingly that we cannot know all the rules but we can still play the game, so that I could suggest, through analogy, that

> *We can go on using (and revering) any system even if we acknowledge that it is as artificial, arbitrary, challengeable, and "incomplete" as any game.*

> *Any system, no matter how long it has been around and no matter how complex its list of rules and meta-rules, is viable only as long as there are individuals who support it.*

Conclusions

If my efforts have been successful, if people take away valuable lessons about "life" from this analysis of games, it will demonstrate, ironically, that games can indeed serve at least one vital social function: as abstractions of "real-world" situations, they can provide an analog to other, more "important" and more complicated, aspects of life and thus can help us see what otherwise might be invisible. If for no other reason, games should not be dismissed as trivial forms of entertainment. If we remember to use them wisely, they could be a profoundly important aspect of our culture. As the young would say, **GAMES RULE!**