~~Writing Rules with Precision~~
~~Writing Rules Precisely~~
WRITING PRECISE RULES

by Mike Selinker

I've redesigned, expanded, adapted, and creative-directed a lot of very big games: Axis & Allies, Dungeons & Dragons, Attack!, Risk, and the like. Their rule sets are often similarly gigantic, which means they need special attention paid to clarity and purpose. Otherwise, I might get a game whose FAQ is longer than other games' entire rulebooks. Here, I'll go into what makes a rule set good, and what makes one not so good.

I play games for a living. Writing rules is what I do for fun. Of all the things I like about being a game designer, the ability to craft something elegant is the one I enjoy most, because it's a difficult thing to do well.

I have a few rules writing maxims that I've never put in one place. They're about what you write when your game has made it out of the development phase and now needs to be played by people who aren't you. If you'd like to try them out, have a go.

I'll also introduce each of the ten maxims with a game rule that deserved some extra attention, but didn't get it.

Use no intermediary terminology

A hexagonal grid has been printed on the board to determine movement. Hereafter, these hexagons will be called "squares."

—*Afrika Korps*

I just made my geometry teacher roll over in his irregular hexahedron. Hexagons can be called many things—hexes, spaces, zones—but they cannot, under any circumstances, be called squares.

Call the thing what it is, and people will remember it just by looking at it. Those things in your dice bag are named by their number of

faces: this is a 12-sider (or d12), that is a 20-sider (or d20). The first designers to use polyhedrals didn't call one the "breaker" and one the "thunderstriker." Placing intermediary names for things in the way of comprehension only obscures comprehension.

My design partner James Ernest and I were required by our publisher to convert a board game written in English to an internationally usable form. So the cards for *Gloria Mundi* were renamed into Latin, a language that everyone fails to speak equally. I went through and picked Latin names you could associate with English terms; for example, the Fish Market became the Piscatorium. But a much harder task was taking phrases such as "At the end of your turn, you may discard one Building card on the table (including the Marketplace) and replace it with the Shock Troops" and turning them into *symbols*. Eventually we cut all the complex cards to avoid requiring too much symbolic translation. The game got worse because of it, and now we're playing the game in English again.[26]

Properly used, symbols can be fine, but one symbol cannot do the work of ten. The excellent game *Bang!* took a cheater's way out that I would not advise. It put on many cards a little book symbol that just meant "See the rulebook." Yuck.

Use real words

2.2401 GUN DUELS: Vs a non-concealed, non-Aerial DEFENDER's declared Defensive First Fire attack on it, a vehicle may attempt to Bounding First Fire (D3.3) its MA (/other-FP, including Passenger FP/SW) at that DEFENDER first, provided the vehicle need not change CA, is not conducting OVR (D7.1), its total Gun Duel DRM (i.e., its total Firer-Based [5.] and Acquisition [6.5] TH DRM for its potential shot) is < that of the DEFENDER, and the DEFENDER's attack is not Reaction Fire (D7.2).

Neither the +1 DRM for a Gyrostabilizer nor the doubling of the lower dr for other ordnance in TH Case C4 (5.35) is included in the Gun Duel DRM calculation. The order of fire for non-ordnance/SW is determined as if it were ordnance [EXC: TH Case A can apply only if this unit/weapon is mounted-on/aboard a vehicle that is changing CA; all such non-turret-mounted fire is considered NT for purposes of TH Case C, and; A.5 applies to any type of FG]. If the ATTACKER's and DEFENDER's total Gun Duel DRM are equal, the lower Final TH (or non-ordnance IFT) DR fires first— and voids the opponent's return shot by eliminating, breaking, stunning, or shocking it. If those two Final DR are equal, both shots are resolved

simultaneously. Any CA change the DEFENDER requires in order to shoot (5.11) is made before the ATTACKER's shot if the DEFENDER's total Gun Duel DRM.

—Advanced Squad Leader

If you're selling a game to English-speaking customers, there's no excuse for writing it in anything but English. *Advanced Squad Leader* is one of the greatest games of all time, but only if you have a Rosetta stone for the damn thing. Since it's my favorite wargame, I understand how to play it, and I also understand I would *never* let a new player try to learn from the rules.

The rule above isn't a bad rule. It's actually a pretty good rule. It says, translated, that when a vehicle is attacked, it gets to return fire beforehand, but under some more limited circumstances and without all the bells and whistles. But the rule writers forgot that most people don't read rule books in order, and so they might not know what "attempt to Bounding First Fire (D3.3) its MA (/other-FP, including Passenger FP/SW)" means. They also believed that a phrase such as "Bounding First Fire" makes a good *verb*.

Once you have a real word for something, don't use any other word for it. Über-designer Jonathan Tweet has a maxim of his own: "Things are the same, or they are different." If you have called your attack a "salvo," it must always be a "salvo," and never an "attack." If that bothers you, maybe you should have just called it an "attack."

Make no more work than necessary

Fate [the gamemaster] then makes a percentile die roll to determine whether the empty ship will be safe or not. The first roll is a 33. This indicates there is only a 33% chance of the boat remaining safe. Fate then rolls again. The resulting roll of 40 indicates that their ship won't be there upon return. How and when the ship is lost is up to Fate.

—The World of Synnibarr

Yes, I know this is a board and card game design book, and I just quoted an RPG—and not just any RPG, but what some people believe is the worst RPG product ever. (It isn't. But it's close.) The *Synnibarr* rule commits a cardinal sin that bears noting for card games and board games, too: It requires the person administering the game to do more work than she needs to.

Let's say you're "Fate." (Cringe.) You need to know whether the ship is safe. The rules tell you to roll dice to establish the percentage chance of the ship being safe. Then the rules tell you to roll again, and if you roll equal to or under that percentage, the ship is lost. What is the chance the ship is safe? Your first roll will be between 1 and 100. Your second roll will be *the same thing.* So adding up the 1% chance you'll roll equal to or under a 1, and the 2% chance you'll roll equal to or under a 2, and so on up to the 100% you'll roll equal to or under a 100, then divide by 100…and you get 50.5%. In other words, it's a coin flip. So just tell the GM—I'm sorry, Fate—that there's a 50% chance the ship is gone, and she'll have to roll only once.

It's not just bad games that have this problem. When I helped reboot *Axis & Allies*, I looked at every rule to see how much effort the player was required to expend. In the 1986 version, there were two combat sequences: land combat and naval combat. That was just too burdensome. After weeks of rewriting and testing, we got it down to one sequence that included everything from anti-aircraft guns blasting Stukas out of the London sky, to submarines sinking merchant fleets off the coast of Japan. ("Figure 3-3. *Axis & Allies Terms*" below shows more changes from one edition to the next; see if you can figure out why the changes were made.)

Terms from Axis & Allies (1986)	Terms from Axis & Allies (2004)
an action	a phase
a battle	a combat
land (or naval) combat sequence	combat sequence
combat sphere action	combat action
naval combat	sea combat
attack capability or attack factor	attack
defense capability or defense factor	defense
counterattack	defend
enemy-controlled or enemy-occupied	hostile
allied	friendly
naval unit	sea unit

an infantry unit	an infantry
an artillery unit	an artillery
an armor unit	a tank
armor	tanks
plane	air unit
fighter plane	fighter
round of combat	cycle
first shot attack	sneak attack
support attack	bombardment
make a support attack	bombard
National Control Marker (NCM)	control marker
casualty line	casualty zone
I.P.C.	IPC
penalty	IPC loss
toss (a die)	roll
withdraw (a submarine)	submerge
island group	island
country or world power	power
capital territory	capital
take over	capture
item	unit
place on the board	mobilize
multi-player force	multinational force
kill	destroy

Figure 3-3. *Axis & Allies Terms*

Look, administering rules is *work*. When a player is learning a game, she wants the simplest possible set of actions to figure out how to play. Cut out all the rules that require her to learn more.

Add flavor (but not too much flavor)

NATO has rules covering the use of tactical nuclear weapons. To simulate the use of strategic nuclear weapons simply soak the map with lighter fluid

and apply a flame.

—*NATO: Operational Combat in Europe in the 1970's*

Jim Dunnigan felt comfortable writing that rule in 1973. I might not be able to get away with it now. That's something that looks like rules text, meaning a player might actually do it. (I know: only if they're dumb. Some players are dumb.)

Flavor text is usually kept outside the rules, often by italicizing it or boxing it or putting it into word balloons issuing from the mouths of cartoon characters. It's generally short and pithy, and often funny. In trading card games, it's usually found in italics below the card rules. For example, in the cyberpunk TCG *Netrunner*, there was a program card called Sphinx 2.0. I wrote, "What runs on four megs in the morning, two megs in the afternoon, and three megs in the evening?" When I stopped typing that, I knew that all work on that card's flavor text had ceased. I didn't need any more flavor than that, and the rest of the card could be ceded to the all-important rules.

Things get tricky when your flavor commingles with your rules. I once had an editor tell me that flavor and rules were like oil and water; they shouldn't be mixed. That editor was wrong. They're more like a Reese's Peanut Butter Cup; you can put them together, but you'd better know what you're doing first. For example, the game *Hatfields & McCoys* —a true-to-life simulation of Ozark bumpkin infighting—is written entirely in the following style:

> If 'n one o' the other player's Ellies is in the river, all yer Beaus within four spaces gotta mosey on over to her space and stack with her. Any Beaus who gets to her hasta fight while the rest o' the Beaus closeby just stands there a gawkin'.

That's completely comprehensible, once you get yourself a hankerin'… I mean, once you get into the right mindset. But you have to be there. It wouldn't be a good style for simulating the Battle of Thermopylae.

Make Your Text No Smarter Than Your Reader

The battlefield is usually produced by placing separate terrain features on a flat board or cloth representing flat good going such as pasture, open arable fields, steppe grassland or smooth desert. Alternatively, the player

can provide permanent terrain boards or blocks incorporating equivalent features. The battlefield is now notionally bisected twice at right angles to its edge to produce 4 equal quarters.

—De Bellis Antiquitatis

"Notionally bisected twice at right angles to its edge to produce 4 equal quarters"? Did *DBA's* authors believe that if they'd said "cut into fourths," people would cut it into four triangles? The added specificity makes the game read like James's game *Pontifuse*, whose rules section begins:

> To Begin: Create a playing field as follows: From any point in the upper left-hand (northwest) quadrant of a sheet of paper, proceed one inch east and create a three-inch line bearing due south three inches. Duplicate this line one inch farther east. These are the "Lines of Versailles." Then, from the terminus of the second Line of Versailles, proceed 1.41 inches northeast and create a three-inch line bearing due west. Duplicate this line one inch farther north. These are the "Lines of the Commonwealth."

But you see, the thing is that James is kidding, because *Pontifuse* is an "alternate rules set" for the game tic-tac-toe.

There are books that tell you what words are at what reading levels. The Flesch-Kincaid Grade Level Formula is as complicated as the NFL quarterback rating, but if you learn it, you can apply it to your own text. The formula is:

$$\text{grade level} = 0.39 \, (\text{words/sentences}) + 11.8 \, (\text{syllables/words}) - 15.59$$

That'll tell you the grade level of the text you're writing. For example, that *De Bellis Antiquitatis* paragraph has a grade level of 13.22, meaning you'd need to be at least a sophomore in college to have a chance of understanding it.

You don't need a reading score test to know that obfuscation for obfuscation's sake is a bad idea. Write what people can read, and they might even play your game.

Discard rules that can't be written

> Destroy two target nonblack creatures unless either one is a color the other isn't.

—Magic: The Gathering

That's the rules text from the *Magic* card Dead Ringers. It's about the only way it could have been written given the constraints of *Magic*'s rules. Here's why: Cards in *Magic* have one or more colors (white, blue, black, red, green). The key bit in there is "one or more." So Dracoplasm is a blue and red creature, and Horned Kavu is a green and red creature. Are they both red cards? Sure. But they're not both blue cards, and so when both are present, they're invulnerable to an effect like the one Dead Ringers has, because Dracoplasm is blue and Horned Kavu isn't. Of course, if either of them is black…

At this point, you're probably asking whether the developers of that *Magic* set ever thought, "Seriously, this is gonna make peoples' heads hurt." They did. One response to that might have been to throw out the card entirely. They didn't take that opportunity. And now James keeps a copy of Dead Ringers in his wallet to whip out at cocktail parties.

The rules you select should be chosen not on the basis of whether you like how they play, but whether you can *explain* how they play. If you can't, find some other way to play.

Take a breath

> Three important rules about industrial complexes have already been stated: (1) newly purchased units you bought at the beginning of your turn in Action 1 can be placed only in territories with industrial complexes that you have owned since the beginning of your turn; (2) newly purchased industrial complexes can be placed only in territories that you have owned since the beginning of your turn; and (3) original industrial complexes (those that you started the game with) have unlimited production—that is, you can place any number of newly purchased units on a territory with an original complex; and that new industrial complexes (those that you purchased and placed or captured during the game) have limited production per turn—that is, the number of newly purchased items that can be placed in a territory with a new complex is EQUAL to the income value of that territory.
>
> —*Axis & Allies* (1984)

That's *one* sentence. *A&A* designer Larry Harris is a genius, but that's not something I'd ever like to read again. While doing the reboot, I read that sentence over and over, and then decided that our new version of it would be fewer than 147 words.

When you write your rules, keep in mind how much your reader can read in one swoop. There's a reason why the sections of this essay are so short. I've trained myself to break up major passages into smaller sections.

It's not just comprehension that's at stake. Players often need to find a rule in a hurry, and giant blocks of text impede their ability to do so. Subheads, illustrations, occasional use of boldface, and well-timed page breaks will keep your readers on track.

Go easy on the eyes

Some Treasure cards also have a NOTORIETY value and a FAME value or FAME price…The six cards labeled "P1" to "P6" in red are TREASURES WITHIN TREASURES cards (or "T-W-T" cards) that contain other treasures. The CHEST (P1) is an item, but the REMAINS OF THIEF and MOULDY SKELETON are exchanged for items, while TOADSTOOL CIRCLE, CRYPT OF THE KNIGHT and ENCHANTED MEADOW are "Site cards"—places where treasures are located.

—*Magic Realm*

At some point, *Magic Realm*'s designers decided to put all the items and locations in all-caps. And all the spell effects. And all the values. And all the actions. And all the encounter headings. And just about everything else. And so they made the rulebook as irritating as a paragraph that begins most of its sentences with "And."

Reading is harder than you think. Your eyes don't stay still; they dart about, catching little bits here and there until, in a split second, you command them to focus. Having all these emphasized phrases is like trying to watch six TVs at once. You lose any sense of meaning when everything in the paragraph is designated as THE MOST IMPORTANT THING. If it would annoy you in an email, don't do it in your rules.

It's not just all-caps. In games I revise, I take a hard look at any term whose first letter is capitalized. For the game *Balance of Power*, I lowercased just about everything the designer uppercased. The term "Bonus Action" doesn't need its capitalization; if you're taking a "bonus action," you know what it is without the extra emphasis. But I did keep the capitalization on the names of the pieces: Noble, King, and General. That's because it did matter to me whether you understood the term

"General action" was not the same thing as a "general action"—that is, any old action at all.

Get your final version playtested

> During Step 2 of your turn, you may perform these actions in order to manage your holdings. These actions are: build, sprawl, remodel, reorganize, and gamble. You may perform any of these actions in any order, and all of the actions other than gamble may be performed multiple times.
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> —*Lords of Vegas*

When James finished the final design draft of the rules for *Lords of Vegas*, we thought we had a tight set of rules. Then they went to editing, and after a lot of back and forth with Mayfair, we settled on a ready-to-print version.

We somehow missed the problem with the above rules paragraph, though. It's fairly subtle, but it's also fairly disastrous.

The rules say, "you may perform these actions in order to manage your casinos." The phrase "in order to" means "so that you may"—at least that's what the people preparing the rules all thought. But "in order" also means "in the following sequence," and so after the game was released we heard from players who first built, then sprawled, then remodeled, then reorganized, then gambled. If you miss that third sentence, you're going to play the game very differently than we intended.

When you're done, get your game in the hands of a great editor. Ask Miranda Horner to help. Ask Michelle Nephew. Or Gwendolyn Kestrel, or Kim Mohan, or Sue Cook, or Darla Kennerud, or Tanis O'Connor, or any one of a dozen more brilliant game editors I can recommend.[27] They'll help you avoid a dawizard[28] that will haunt you forever. If you ever want to win an award for best rules, remember that editors like chocolate.

Also, note that the header doesn't say "Playtest your final version." By "get it playtested," I mean you should get someone who has never seen your game to play it straight from the rules. If they screw it up, you don't have a final version anymore.

The most pathetic cry for help you'll ever see is the word "final" in the file name of a rules draft. This means two things: (1) it isn't, and (2)

the designer knows it isn't but really doesn't want you to notice. Sorry, designer. It's final when it's in the box.

Fix it in the FAQ

Q: Why is the Underground Lake on the upper floor?
A: See, it's a special kind of levitating lake, and... All right, it's a misprint.
—FAQ for *Betrayal at House on the Hill*

Hey, if a game with my name listed as lead developer has a colossal proofreading error like this, you can forgive yourself a typo or two. Just clean it up online and in the reprint, and try not to make a habit of it. Otherwise, on this book's next printing, your game might make this list.

Endnotes

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26 See also the great game *Race for the Galaxy*, where my friend Wei-Hwa Huang laid out the cards in bizarre symbols I'm sure he completely understood. This does not mean that I do. That said, I have not asked him whether he understands *Gloria Mundi's* symbols.

27 They're really busy, and some of them have noncompete agreements that say they can't work on your game. But maybe one of them has a friend you could ask.

28 A dawizard is the ultimate taboo in game editing. In a 16-page section of the 1994 *D&D* supplement *Encyclopedia Magica, Volume 1,* an editor haplessly and globally replaced all occurrences of "mage" with "wizard," leading to such epic passages as "The user may look into the ball, con- centrate on any place or object, and cause the iwizard of the place or object to appear." and "The tower can absorb 200 points of dawizard before collaps- ing. Dawizard sustained is cumulative, and the fortress cannot be repaired (although a wish restores 10 points of dawizard sustained)." I glee- fully used this story to terrify my young editors into straightening up and flying right. I never said I was a nice creative dir- ector, just a good one.