

The following content is provided under a Creative Commons license. Your support will help MIT OpenCourseWare continue to offer high quality educational resources for free. To make a donation, or view additional materials from hundreds of MIT courses, visit MIT OpenCourseWare at ocw.mit.edu.

PROFESSOR: This class is called game design. It is not an intro class. How many of you have taken a CMS class before? OK, about half of you. All right, a number you haven't taken to CMS class before. It's actually a prerequisite, but I can really take as many students as can fit in here. So let me tell you why a prerequisite exists. The prerequisite exists because in a CMS class we typically expect people to do a lot of writing, we expect people to expect their grades to depend on the quality of their writing. We expect people to do all of the reading in class, and to be able to do it before class starts so that you can actually be prepared to have a conversation about that in class.

Different departments even, different humanities departments do things differently. In CMS class, if you've taken any CMS class, none of this should sound surprising. You know, you've probably written way more in other CMS classes than you would [INAUDIBLE] write in this class. You're also expected to present. You're expected to come up in front of the entire class and say, and talk about your project. You should expect that your grades will depend on the quality of your presentation as well.

So, one example-- You might design a perfectly good game. In fact an extremely elegant, beautiful game for the ages like Go or something like that, and you designed in this class, and that's great. But if your grammar is terrible in your rules, even though I can't so read the rules and I can play the game, and it says, wow this is a really beautiful game, but your writing sucks you are going to lose grade [INAUDIBLE] based on that. That's one of the things that you should expect.

There is a writing center over in building 12 I think, they are going to be moving in the summer, but right now they're still in building 12. Definitely take advantage of them. We are looking for concise writing, we are looking for precise writing, but we're not looking for, how should I put it, any more words than is necessary to get a point across. We want things to be fast to read. We want things to be easy for laypeople to read, not necessarily MIT students to read.

You are going to see examples, many, many examples of very poorly written rules in this -- of games that are actually very well made. I actually kind of like this company here, HABA. How many of you have heard of this company HABA? They make little wooden trains-- toys, if you

have any kid siblings, they may have gotten toys from this company. They make games for kids, and not for children under three years. That's the barrier. And the rules are written for, like six different languages, but for kids.

They still expect parents to be able to explain how these games go, but you can imagine a six year-old picking up a game like this and being able to play it just fine. And this is actually a really elegant game and will be taking a look a little bit closer at this later today. That's kind of like where you should be aiming for with the quality of the writing. Try to get your stuff as clearly as possible, as quickly as possible over to as low a reading level as possible.

There are a couple of tips that we have written, and that file is up on Stellar, and I'm handing that sheet out so you can go home and download the PDF yourself, and that's called the Rules Style Guide. Do I have a link for that in here? I don't have a link for that in here. I'll just put it on top of the Stellar announcement page.

The Rules Style Guide is basically a two page document, that just gives you a bunch of tips on when to use bullet points versus numbered bullets for instance. Things that you absolutely should include, like a list components in your game-- so that when I get it as an instructor at the end of the assignment I can actually make sure that everything in your game was provided to me, so that I can actually play the whole thing.

Give players a way to decide who goes first, don't just leave it up to the players, pick a player to go first. Pick something silly like, person who grew up closest to the sea. That's a real rule from [INAUDIBLE], by the way. So, we do encourage inclusive language. It can be a little bit more verbose, but instead of writing-- instead of describing all players as male, we do appreciate it when people say he or she. It's fine to be able to flip between he and she, but, of course, not when you're describing the same player doing certain rule. They're not changing their gender in the middle of the turn.

But the great way to be able to use language to describe player is player B. You can also just say the player, the player, the player. It is a little bit more verbose, but in that particular case there is a sort of higher goal in mind, that's to get across the point that games are for everyone. Especially the game that you're going to be making in this class. There's no particular reason why in this class, you should be making a game just for men to play, just for women to play. And right now it is too easy to fall into the trap that you just generalize that all players are male, and that's just bad. So don't do that. In fact, if you take the effort to do that,

you will see that reflected in your grade. If you take the effort to use inclusive language.

Let's see, what else. Attendance you have to attend every single class. If you are sick, and especially sick with something contagious, or sick to the point where you can't move, say you broke something, and you really should be resting that's fine to the email that before class starts. Now you know, if there was an accident or something and you had trouble getting to email that's fine, you can email us after. It would be nice to be able get some evidence from your doctor, but if push comes to shove I'm not going to be too much of a stickler on that.

Things that I don't give automatic absences include being hauled away for a job interview, being stuck in an airport because you planed your spring break flight back too late or something like that. You have three free absences basically. You have three absences where you don't have to provide any excuse-- you don't have to tell me this is why you were gone. And that's what I expect. Now you can miss about three classes and I'm still quite satisfied that you've gotten everything that you need from this class.

Illnesses are one of the few things that are really out of control, and can hit people for an extended period of time, and that wasn't necessarily your fault. Whereas something like being stuck in an airport usually only you for class, so it's not that bad. How many of are seniors on the job interview track? Save those three for things like job interviews, because you're going to need that. And you don't have to ask for permission or anything-- Just go for your job interviews and realize that you have three of those.

If you do miss more than three classes, and it was not due to illnesses, then you may well get a reduction in your grades. I have students drop by a full letter grade. So they would have gotten a B, they got a C based on absences alone. All of the assignments, told them that they were going to be B average, but their attendance was poor. and as a result of that. Usually missing four classes doesn't drop you a full letter grade, but it really depends on how close you were to the tip off, like a B-minus and a C-plus before your attendance into account. There's a little bit more detail in the syllabus about how grades are computed.

Plagiarism is usually not so much of a problem when it comes to the group projects, because you're going to be writing a lot of your rules, and everyone is keeping an eye on what's actually being handed in for your assignments. Keep in mind that I certainly don't want you to be copying wholesale from somebody else's rules. That's more than plagiarism. That might be copyright infringement.

But when it comes to your own writing, there is actually a one page personal report for every time you hand in a team assignment. We are expecting you to keep a journal of every team meeting. A personal journal about how the team meeting went, what decisions you made, you can write down things like, wow, only half the team turned up and that meeting wasn't really useful. These are all useful things to keep in mind. You get to choose what you are what you want to write down your one page report.

Again I'm looking for something that's well-written, reflective would be very nice. Based on the experience of doing this team assignment, what will I do differently next time. Or what went well that I want to make sure that I do again? Those things are very good to put down in your one page report. Write those on your own, don't go into it like a group writing session. You can compare notes that's fine. But when it comes down to writing it, I want you to write it on your own.

How many grad students in here? One? OK, so grad students, if you're signing up for 608, that's no additional work. If you're signing up for 864, which gives you grad credit, then there is additional work. That largely involves checking out the games one week in advance, making sure that they're all punched, making sure all the pieces are in there, and making sure you know the rules. You don't necessarily have to learn the rules by reading the rules, you can't do it by watching play videos on YouTube. However it takes to learn the game, you it in class and you teach your classmates how to play this game, so everyone can get started a little bit faster. And make sure that all of the pieces are inside.

That being said, everyone should be looking at the rules of these games when they're in class. You will see in the class schedule, I actually have all the games that we're going to be playing listed so that if the name of the game escapes you, you'll be able to Google it and look it up later. And you should be look at the rules because you want to see how the rules are written-- how good rules are written, how bad rules are written. And you're going to again see a lot of really bad rules. And you want to understand how certain things are conveyed.

Maybe there's a really elegant game mechanic that you want to try to use a version of that in your own game, but you are having difficulty explaining it. Well, look at the rules of how other board games do it, and see whether they do a better job of it. Look at videos-- I'm one of the few people who definitely learn the games better by watching a video of somebody who's actually played it, or talking to somebody who's actually played it and having them shown to me. I have trouble parsing rules myself, but that's why I can really appreciate well written rules

when I see one. So make sure that you are looking at the rules.

As I briefly mentioned earlier, all the assignments in this class are team projects. There is again, that one page individual report that you hand in, usually the week after the assignment, and that one you write yourself, but it's all based on that team project. Which means you're going to be working on teams typically of three to four people. I do not recommend teams of five people in this class, simply because once you hit five you get into to certain communication overheads that makes it kind of counterproductive, so you can probably get about the same amount of work done with four people. Sometimes of all five people are living in the same living group you might be able to make it work. It's still really hard to schedule a meeting with five people all at once.

Class does end at 4 o'clock. Usually that last hour is game playing time, which means you might be able to take a set amount of time to meet up with your team. It's even better if the hour between 4 and 5 o'clock is all free for every single member of your team, but that's not going to be the case for every single team-- for every single project. And you can switch teams between projects. Assignment one can be with a completely different group of people from assignment and two, that's fine.

We're going to team formation, I think the schedule has it on Monday, yeah, because I'm not sure if this is the entire class yet. So on Monday we'll actually go a little bit more into brainstorming, talking a little bit about what projects you want to do, assembling teams around that, and then you're off to the races. You've only got three weeks to finish this first game. Is it three weeks? Yep, exactly three weeks, actually less than that because you start on the Monday and then hand in on that third Wednesday. So a very short amount of time, but that's OK because this is supposed to be very quick and dirty first assignment, get it out of the way and get into the groove of things.

We're going to spend most of this month just talking about the discipline of making games. What is iterative design, what is rapid prototyping, what is game testing, why is it important and why you're going to be doing this over, and over, and over, and over, and over again all semester long. That's the one thing that I want you to walk away from class with, is being better at iterative design. Who here is familiar with-- has practiced some sort of iterative design from any discipline? How many of you are from an engineering background where you practiced that. OK, just to get a sense which sort of project kind of work that you came from--

AUDIENCE: [INAUDIBLE]

PROFESSOR: [INAUDIBLE]?

AUDIENCE: [INAUDIBLE]

PROFESSOR: Yeah, creative video games.

AUDIENCE: Building a robot that is [INAUDIBLE] competition.

PROFESSOR: OK, yeah. Others?

AUDIENCE: Software development.

PROFESSOR: Software development

AUDIENCE: Creating the [INAUDIBLE].

PROFESSOR: Right, Yeah. I'll just leave the computer game design classes, very relevant experience here. This class is, of course, a good prerequisite for getting into CMS.611 which is our creating video games class. That class is about teamwork, is a lot more about obviously software because it's a video games class. That's going to be in the fall, so if you're interested after this class is over, you might want to check that one out, and you can talk to the students around here who've done it before.

By the way, for those people who've actually been in classes with me I haven't gotten contacts, I'm just blind right now. My glasses snapped in half, and I have a three-year-old, things are happening. Actually I was playing StarCraft and then [INAUDIBLE]

The final thing that I want to talk about all the way at the end of the syllabus, is this thing called a change log. Some of you have done CMS.611 recently will find this quite familiar. This is again one per group, not one for person, but you hand this at the same time as you hand in each assignment. And what I want you to do, is that you end up every time you have a design meeting, whether you meet in class, or you might outside of class on a weekend, even online or something, every time you make changes to your game write down why those changes written down in this format.

We give you the sample format, we expect you to stick to it. You can tweak it, but we expect to see at least this much detail. What are the actions do in your games, what are the goals of the

player, or players of course. What are the problems that your team is noticing after having played through this game? Turn takes too long, no one knows what to do, game takes too long, games over too quickly, game seems too random and out of our control. All those things, write down in problems. These should be useful for you as it is for us.

If somebody misses a design meeting, you should be able to keep this on a Google Doc or some publicly shared document, and you can look at this, oh that's what happened last week. Oh, you change the wind condition to half what it was. OK I guess that's what we're working with now, why did you do that? And it says, Oh, because the game was taking too long or something. I expect to see that coming with your final assignment-- with each assignment as well. Any questions so far?

There's going to be a bunch of guest lectures but we haven't labeled them in here because we haven't quite scheduled them just yet. The readings are the same, the games are the same. Some changes might happen to the schedule on Stellar. I will obviously make announcements on Stellar, I'll make announcements in class, I'll try to update the document on Stellar with schedule changes. But, for the most part, assignments are not going to change, just some readings may get rearranged.

I have to point out something about reading. So, here are books that we're referencing in class. There's a few individual essays, but you're not going to have to read every single one of these back to back. For tabletop, this is actually available as a free PDF from the publisher, and the link of that is on Stellar. So, you don't have to buy the book you just download the PDF, scroll down to the reading and just read that. We have one reading from his book, but I actually recommend this book.

How many of you have heard of the New Games Movement?

AUDIENCE: New Games?

PROFESSOR: New Games. It's from the '60s, so new is relative. The New Games Movement was something that-- OK, how many of you played with a parachute in gym class when you were in elementary school? OK, you were part of the New Games Movement. This was basically an activist group of game designers in the '60s, heavily influenced by the Whole Earth Catalog if you've heard of that-- Stewart Brand, yeah. Basically typical counterculture, but in the games side of things was very specifically about making games that feature different kinds of cooperative play. If they were competitive they were sort of light hearted competitive, and

we're still trying to develop a sense of community.

The parachute type games are very much about taking military hardware and turning them into peacetime fun activities. The parachute is something that used to drop soldiers right? It's a really neat book. You can see the title of a Playful [INAUDIBLE] Home. It could be some sort of New Age writing, but it's actually a pretty nice treatise on a particular kind of game design, which is how do you make games to bring people together, which is a perfectly fine goal when if you want to be a game designer. So, check that out.

The Design of Everyday Things, you should graduate from MIT without having read this book. If you design anything mechanical engineer, software, anything that's meant to be used by a human being. Maybe some of you will work but robots might be able to skip this, but I would suggest not, I think you can read this too, and get a lot about usability, accessibility, how to make good user interfaces. We have two readings from here, these are PDFs that are up on our Stellar site. Let me leave these two follow-ups for last.

The Oxford History of Board Games-- we actually have a lot of readings of it from here because it's relevant to our final assignment. And what it is, is a surprisingly readable list of traditional board games that maybe you've heard about 10% of these. It's a really interesting analysis, and the reason why I prescribe this book is two reasons. One, you need this background knowledge to be able to execute assignment three.

Second reason, is that it's a good example of what game historical analysis looks like. So, if you're ever interested in going to academia and doing this sort of writing, you at least now have a sample of what that looks like. It's not as dry and stodgy as you think, it is about game play after all. But we do have a lot of readings, this book is available on reserve in the library. We're going to try to get more scans of this up on Stellar. I'm not entirely sure what I'm legally allowed to put that many scans up on Stellar.

The hard copy itself is there. I don't think you can even buy this book anymore. This book has been out of print for a long time, so I'm going to try and increase access to this, but the best I can do right now is that it's on reserve in Hayden Library I believe.

Finally, these three books, you might be familiar if you've ever taken any of the game lab classes-- Game Design Workshop, Challenges for Game Designers, and Rules of Play. The reading for today is actually chapter one from Challenges for Game Designers. All of these books are available online, through MIT Libraries web portal. The trick is you need to be on a

MIT subnet. How many of you live on campus? OK, you're not going to have a problem. Just got our Stellar site, there is this thing called the books 24/7 link on the Stellar, you click on that first before you read any book, that basically does some authentication to make sure that you're actually an MIT student, and have a browser with cookies it should work just fine. And then you click the book as you want to read, you'll get a table of contents, you jump to the chapter, [INAUDIBLE] reading of this book [INAUDIBLE].

However, if you're not on the MIT campus, I think you have a browser with cookies you're still fine. But, you might have better luck by actually being on MIT subnet. You do exactly the same steps that I said. You go to Stellar, you click on the books 24/7 link, it authenticates you, and then you can read the book-- you can even print it out. But, if you do have trouble reading it for any reason, please let me know because we're going to have a lot of reading from these three books over the entire semester, so let's try to fix that for you as quickly as possible, and then you won't have any trouble with that. It's free, but it's a bit of a hassle.

That's basically it for the formalities. Again, any questions about how the class is organized, how grades are assigned? It is a project based class, which means your grades are going to be heavily dependent on the performance of your teammates, so get along with your teammates. Try to do good work, but it's-- your grade is not going to be determined by how fun your game is. This may be coming as a surprise to some of you.

Fun is one of those things that is really elusive, even if you know what you're trying to design for, you might not get there. Especially in the constraints of doing three projects in one semester. As someone who has designed a lot of games, both in MIT and outside, I fully acknowledge that you might be perfectly disciplined and do everything that I tell you and still end up with a very unfun game. So I'm not going to grade you on the quality that.

I am going to grade you on your ability to listen to feedback, from feedback that provided, feedback that you're getting from the testers, your ability to do things like regular testing sessions, the ability to stick to the discipline of iterative design. If your game is mostly not playable until the last week, and then suddenly you pull some sort of marathon effort to try to get everything working together in that last week, you should expect a good grade. That's not what I'm trying to teach here. You should be constantly iterating on these games every single week. And if you do that you should count on a fairly reasonable, fairly good grade. This is a B-average class though. So, typically when I grade that's how it ends up. I'm not actually

grading on a curve, It is possible to have an A-average class if everybody does incredibly well, but typically, in the past couple of years it'll always be B-average.

Let me start with the easy question. What are people playing nowadays? What are people in this class playing, maybe not right now with this instant, but--

AUDIENCE: You mean like computer games? [INAUDIBLE]

PROFESSOR: Any games, board games, card games, computer games,

AUDIENCE: *League of Legends.*

PROFESSOR: *League of Legends.*

AUDIENCE: I got a lot of people on [INAUDIBLE]

AUDIENCE: [INAUDIBLE]

PROFESSOR: *On Ascension?*

AUDIENCE: I was going to say *Dominion.*

PROFESSOR: OK

AUDIENCE: You should learn [INAUDIBLE]. *Settlers of Catan.* Yeah.

AUDIENCE: *Settlers.*

AUDIENCE: [INAUDIBLE] So when you--

PROFESSOR: *Adventure Quest?*

AUDIENCE: [INAUDIBLE]

PROFESSOR: Wait, wait hold on. What's *Adventure Quest?* I haven't heard this one.

AUDIENCE: It's this online game. Yeah. Always--

[INTERPOSING VOICES]

PROFESSOR: It's like--

AUDIENCE: I guess like, it's a lot of-0

[INTERPOSING VOICES]

- PROFESSOR:** So it's an adventure game. [INAUDIBLE] Cool. OK. So we've got [INAUDIBLE] *Adventure Quest*. That one I just [INAUDIBLE] to be trail.
- AUDIENCE:** *Smash* [INAUDIBLE].
- PROFESSOR:** Wait, hold on which version of Smash?
- AUDIENCE:** I like *Melee*.
- AUDIENCE:** [INAUDIBLE] to play *Brawl*.
- PROFESSOR:** So *Melee* is GameCube right?
- AUDIENCE:** Yeah. That was the first one I ever played. Liars Poker.
- PROFESSOR:** What? Liars Poker? All right.
- AUDIENCE:** Normal Poker.
- PROFESSOR:** Wait hold on. What's normal poker?
- AUDIENCE:** I guess Texas hold'em.
- PROFESSOR:** Texas hold'em poker. OK, all right.
- AUDIENCE:** Innovation?
- PROFESSOR:** The card game Innovation? Actually made locally.
- AUDIENCE:** [INAUDIBLE]
- PROFESSOR:** Yeah.
- AUDIENCE:** Alien [INAUDIBLE].
- PROFESSOR:** Alien [INAUDIBLE]. I'm just not familiar with this one. This is--
- AUDIENCE:** It's an out of print board game, Euro style. [INAUDIBLE] *Empire Builder*, but you already have that on one of the [INAUDIBLE] that you own.

PROFESSOR: I'm not saying, what games do I have.

[INTERPOSING VOICES]

AUDIENCE: I know, but I want that game, so I'm [INAUDIBLE]

PROFESSOR: Why won't you try it out?

AUDIENCE: *Zombie Apocalypse.*

PROFESSOR: *Zombie Apocalypse.*

AUDIENCE: Oh yeah. Munchkin? [INAUDIBLE] One day I'll be able to add Nymph to this list.

PROFESSOR: What's Nymph?

AUDIENCE: The board game that came out on Kickstarter [INAUDIBLE]. It's going to be delivered sometime this month. That's one of the most exciting.

PROFESSOR: I missed something after *Zombie Apocalypse*.

AUDIENCE: Munchkin. RoboRally.

PROFESSOR: RoboRally, wow. How did people get exposed to RoboRally, just out of curiosity?

AUDIENCE: I saw it at an internship. They just had a bunch of board games on the wall.

PROFESSOR: OK

AUDIENCE: My brother played it somewhere, and then I bought it for my [INAUDIBLE].

PROFESSOR: Very MIT-ish game, it's a game about programming

[LAUGHTER]

PROFESSOR: Programming and robots beating each other up.

AUDIENCE: Cards Against Humanity.

AUDIENCE: Hex Hex.

PROFESSOR: I know Hex one, but what type of Hex?

AUDIENCE: Hex Hex is a game where someone casts a hex, and then everyone has a certain number of cards that just tell you what to do with the hex, like pass it left, and pass it right. And then whoever has the hex in front of them has to deal with hex as one of their cards. If they can't then they're hexed, and then they chance to play cards that say, play one hex.

PROFESSOR: I hope that's a hexagon involved in there.

AUDIENCE: Yes.

PROFESSOR: OK [INAUDIBLE]

[LAUGHTER]

AUDIENCE: We didn't play [INAUDIBLE]

PROFESSOR: [INAUDIBLE] Same people that did Innovation. [INAUDIBLE] There's a game called We Didn't Playtest This At All, and We Didn't Playtest This Either, right?

AUDIENCE: I want to try those. Air Baron.

PROFESSOR: What?

AUDIENCE: Air Baron.

PROFESSOR: Care Bear?

[LAUGHTER]

AUDIENCE: A-I-R, air, as in the sky, baron, as in not a noble or the lords of a baron.

PROFESSOR: Oh, Air Baron.

AUDIENCE: Yes.

PROFESSOR: We should make a game called Air Bear.

[LAUGHTER]

PROFESSOR: This is digital?

AUDIENCE: No, Avalon Hill, 1997.

PROFESSOR: Oh, OK.

AUDIENCE: Yeah. Yeah.

PROFESSOR: This is like a Mafia like game right?

AUDIENCE: Yeah, love that game. Cout.

PROFESSOR: Clue?

AUDIENCE: Cout. C-O-U-T.

PROFESSOR: C-O

AUDIENCE: U-T

PROFESSOR: Oh yeah.

AUDIENCE: [INAUDIBLE] It's kind of like Mafia, except instead of having night and day papers, what they have is people take turns. They have two different roles, and your role lets you take actions. So what you do is you lie about what role you have in order to take actions that you wouldn't have access to. Overall that mechanics are, you make money, and then you pay money to kill other people. When you kill someone they lose one of their roles. The way you lose rolls is killing someone, or by lying and being caught, or by challenge someone and being wrong. Like Mascarade.

PROFESSOR: [INAUDIBLE] Say what?

AUDIENCE: It's like Mascarade.

PROFESSOR: OK, Yeah. Actually, we could add Mascarade to this here as well. So far I asked a couple of people to describe the games that have come out. And you can see it's not really all that difficult to say this is what's interesting about the game, it's kind of like this game then it's got these changes. That's a normal way of communicating. You're going to have to do that multiple times this semester for your own games. But, often what happens is that when students come up and talk about their game, they just start from step one-- Well, this game is a card game that has 52 cards, and is going to be played with four players, and it's like, can you like, cut to the chase and a little bit faster? The way that you just. The way you just described, you know it's kind of like Mafia but you make these changes.

We will want those details especially when it's written, or when we're actually sitting down to play. But when you're coming up here and talking about your own game, give us those elevated pitches that you just did. If you think of this game as a little bit like chess, but with different pieces or something like that. And then you cut in, and then you can go into greater detail about what your game is.

When you give a presentation though, usually what I'm listening for isn't so much, what is your game right now, because I can actually read that. What was your game before it became the thing that is now? Because I don't necessarily always see that. I'll see various play tests, but I may not necessarily get to every single thing. I want to know how you made the decisions that you did in order to end up with what you finally submitted. And I'll get all the details that I need from the final submission when I actually read it. So when you give your presentations, talk about the history of your game, three week history of your game, or the four week history of the game.

So, these are the games that people have been playing. A lot of board games, couple of digital games although I think I'm seeing-- how many of you are playing these games digitally? Any of these board games playing in digitally?

AUDIENCE: [INAUDIBLE]

PROFESSOR: Yeah. On the phone, yeah?

AUDIENCE: I think we [INAUDIBLE] Dominion web application.

PROFESSOR: Web app?

[INTERPOSING VOICES]

PROFESSOR: Your hand was up, yes?

AUDIENCE: Ascension, I think it's on the iPhone now.

PROFESSOR: Yeah, a lot of these games actually do have iPhone and iOS [INAUDIBLE], Android mode.

AUDIENCE: [INAUDIBLE] not fun at all.

PROFESSOR: Oh, because you don't-- yeah. Why?

AUDIENCE: More fun to yell at people.

PROFESSOR: Because it's more fun to yell at people? It's more fun to guilt people into giving you trades that are beneficial to you.

We often refer to that as over the table talk. Or, the over the table interaction. That's something that when you're designing a board game or a card game, or even a live action game, I want to say that you're allowed to design live action games in this class. Games where you're not actually sitting down, but you're actually moving around. Mafia kind of sits in a gray area.

AUDIENCE: I think Risk is the perfect example of that. Because video Risk is an entirely different than board Risk because you can't cheat. Cheating is an integral part of Risk.

PROFESSOR: Describe the tactics of cheating in--

AUDIENCE: You hide cards in your shoe. You move people's armies to places that they weren't on before.

PROFESSOR: That one I've seen.

AUDIENCE: [INAUDIBLE] people to your places.

PROFESSOR: But not like re-rolls, right? Because those are hard to get away with.

AUDIENCE: Monopoly is the worst game ever.

PROFESSOR: Because of the cheating, or because of the way how the game is made?

AUDIENCE: Because cheating. And because it takes like 12 hours to play.

[INTERPOSING VOICES]

AUDIENCE: --you get the best game, right? Play Riskopoly.

PROFESSOR: [INAUDIBLE].

[INTERPOSING VOICES]

PROFESSOR: I think that's it. Well, OK. So let's briefly talk about Monopoly then. How many people here like playing Monopoly? OK.

AUDIENCE: [INAUDIBLE].

PROFESSOR: How many play Monopoly regularly, like with families?

AUDIENCE: [INAUDIBLE].

PROFESSOR: What are the good things about Monopoly? What do people like about Monopoly?

AUDIENCE: Making bank.

PROFESSOR: OK. All right. There's this real sense of progression there, right?

AUDIENCE: I like putting four houses on one property.

PROFESSOR: That's kind of like the real estate version of making bank. Sure.

AUDIENCE: When you have a long row of properties all in a row and somebody's like heading into them. And you're like, OK, you're not going to get through here without [INAUDIBLE].

PROFESSOR: Those little plastic bits mean everything when-- OK.

AUDIENCE: It's family friendly. So people like it. The reason people like is that a little kid can just win. Can do really well and win [INAUDIBLE].

PROFESSOR: That's kind of like a minimum age where they get the basic strategy, and then past that point, it's kind of like anyone's game.

AUDIENCE: Anecdote. I played with my family once. The first and last time I'll ever play with them. My sister, she's a year younger than me, and for some reason always has it out for me. And so she was about to go bankrupt and my dad made a deal with her, basically. So any time you make a profit, you give me two thirds of it and I'll make sure you never go out. I was like, now I'm playing against two people. I don't know what I'm supposed to do anymore.

PROFESSOR: That situation has been described as king-making, where a player who isn't going to win decides who's going to win. And it can be sucky if they're not the person who--

AUDIENCE: Basically.

AUDIENCE: I actually really like-- kind of what he said, but in a different way, that it seems like anyone can win. But the more you know about the game, the more you actually start to understand not anyone can win.

And in any game where you're rolling a thousand times, there's very little luck involved.

PROFESSOR: It all averages out.

AUDIENCE: So yeah, it does allow you to implement a lot of strategy, even though just about anyone can play it and understand the rules [INAUDIBLE].

PROFESSOR: How many of you play Monopoly with sort of over-the-table bargaining?

AUDIENCE: All the time.

PROFESSOR: All the time?

AUDIENCE: Yep.

PROFESSOR: Who doesn't? Like only the rules? Only the things that--

AUDIENCE: I do only the rules.

PROFESSOR: You do only the rules. But do the other people around the table also do only the rules, or will they play--

AUDIENCE: [INAUDIBLE].

PROFESSOR: Things like, I was going to give you money, things like that.

AUDIENCE: They always make me offers that I don't want. I'm just like, skip it.

PROFESSOR: There is something that a lot of people do in Monopoly and that's put money in Free Parking.

AUDIENCE: Yep. Have to.

PROFESSOR: Never do that. Never do that. Game gets four times longer. Never do that because the game is designed to-- the rules of the game at least was designed to suck money out of the system. There are inflows-- things like the collect \$200. Things like the certain Community Chest and Chance cards. But the game is also designed to take money out so that people go bankrupt.

By saying, I'm now losing this money, but I'm now putting it on this square. And if anybody happens to land on free parking, they get all this money. That money hasn't actually been sucked out of the system. It's just waiting to be redistributed to somebody else. And that

means people take a very long time to go bankrupt.

And if everyone's complaining about how long the game takes, you might want to check if you're actually playing with that rule. And if you are and you read the rules, it's not there. It's not there at all.

It's the sort of thing though that does make it a lot easier for somebody who is about to go bankrupt to get back into the game. So now we're back to this whole family-friendly thing, which is-- if you are not that great at playing this game, or maybe even taking it that seriously, you still stand a chance.

There's a couple of other things about Monopoly. It's a decent game if you're not at the table all the time. Say, at Thanksgiving or something, and somebody is watching the game or making sure that the turkey doesn't catch on fire, or something. That needs to stand up and check, and then come back to the game.

Everything that you need to know about the game is right there in front of you at the moment of time when you need to make your decision. There's very little-- I don't think there's any hidden information, except for the amount of money that people have. And that's usually fairly easy to just see. Some people get very secretive, but most people don't.

Monopoly is an incredibly successful game. I don't think this is a contentious issue. It makes a lot of money. A lot of copies get sold and bought. And there was some ambivalence here about whether it was a good game or not. Why does that game do well, do so commercially well?

AUDIENCE: Because it's easy and well-known.

PROFESSOR: Is it easy?

AUDIENCE: Sorry, easy to pick up. Not necessarily easy to win. You can take 10, 15 minutes to explain it, and then you play a game.

PROFESSOR: 10, 15 minutes to explain if you already know the rules.

AUDIENCE: If one person knows. Just explaining to another person.

PROFESSOR: But chances are somebody does know the rules. Somebody in that room probably has played Monopoly.

AUDIENCE: Because it's so well-known.

PROFESSOR: Because it's so well-known.

[INTERPOSING VOICES]

AUDIENCE: It's sort of like the classic that-- it's an old game [INAUDIBLE] other games. Also, it's easy to play because you don't make decisions, really.

PROFESSOR: Yeah.

AUDIENCE: It's easy to play without making a decision. Like, roll the dice and move. Roll the dice and move.

PROFESSOR: If you can afford to buy it, buy it. That's the decision-making. It's not a decision. It's strategy.

AUDIENCE: I hate it when people make long decisions, like do I buy it, for like 15 minutes.

PROFESSOR: And it's like, no. If you can afford it, buy it. All right.

So there's a lot to do in the game, though. You roll the dice. You pull cards out. You move your little dog. You can make bargains with people over the table. You pick your little houses and you put the down and you turn into hotels. So there's a lot of busy work that you get to do without having to make a single decision. So you feel very active while you're doing it.

Any other ideas about why it might be popular? We already talked about how well-known it is.

AUDIENCE: They sell different versions of the same game. If you want one that's Star Wars-themed, [INAUDIBLE].

PROFESSOR: Trivially reskinable. I have Monopoly Singapore somewhere. It's where I'm from. They just renamed all the properties. All the amounts of money are exactly the same as your standard Monopoly.

I think there are some more clever versions of Monopoly out there where you add in a few new rules. But you're right, you can easily sell somebody who has a monopoly a different copy of Monopoly.

But is that person buying a new copy of Monopoly? If you already have a copy of Monopoly, are you buying yourself a new copy of Monopoly?

AUDIENCE: I guess you're buying yourself a new skin of Monopoly.

PROFESSOR: Are you? Does anyone actually pay money for that?

AUDIENCE: No.

PROFESSOR: I think you get it.

AUDIENCE: They're good gifts.

PROFESSOR: They're a good gift. That's the dirty, little secret about all these Parker Brothers, Hasbro. Maybe it's not dirty. It's the reality. The majority of board games, these super, mega, ultra perennial favorites are not bought by the people who are playing them. They are bought by somebody else or given as a gift. Which means you can expect that they usually sell most of the copies at Christmas. And people might get them for their birthdays. And that's the difference between a game that shows up in Target and Wal-Mart and a game that shows up in a speciality board game store.

You walk into a specialty board game store, which is probably under threat by companies like Amazon, and you're buying a game for yourself. You're buying special dice because your role playing game, game player or miniatures. And right next to that are the board games. And you say, hey, this will be fun for my next gathering, either at some friend's house or at my own place, or something like that. I want to play this game.

You buy a Monopoly and it's usually not for your own collection. It's usually for somebody else. So you give Monopoly to somebody else who already has it. And it's fine because you just gave them the Star Wars version and they didn't have that. That's how they're successful.

I guess what I'm trying to say is not necessarily-- it doesn't necessarily have anything to do with how well the game is designed. There are a couple of nice things that Monopoly does. We talked about how it's relatively easy to learn. The fact that it's been around makes it very easy to teach. It's very friendly to people who are playing on some sort of [INAUDIBLE] schedule. But that's not the reason that [INAUDIBLE] game.

AUDIENCE: So I think a lot of it comes from like the snowball effect. Everyone knows about [INAUDIBLE].

If we assume that's true, how do you then make a commercially successful board game?

PROFESSOR: How much marketing money do you have? I mean, we've got Blokus here. That's probably one of the more successful recent entries. And there's a couple of ways to be able to get a large number of families to buy a board game.

If you're living in Germany, there is a big conference called the Essen Spiel, I believe. I might be mangling the language here in the town of Essen.

There are smaller conferences in places like Leipzig. But what they are-- in addition to the vendors bringing all of their old and the new board games saying like, this is what we have on sale. We have tons and tons and tons of families going there trying to decide what they're buying for Christmas.

And in Germany, that is kind of like an annual tradition for families to buy a Christmas game. Built on top of that, there is this thing-- I'm going to mangle all the German in here.

AUDIENCE: BoardGameGeek.

PROFESSOR: The [NON-ENGLISH]

AUDIENCE: [INAUDIBLE].

PROFESSOR: Oh. Yeah, OK. Basically, game of the year award that is awarded, I believe, at Essen, they definitely do a big thing. I'm not exactly sure how the timing lines up. But definitely, the game that happens to be awarded game of the year is going to be the biggest mover at a convention like-- convention is not the right word I am looking for. Its more like a trade fair. That's probably a good example.

And just lots and lots of families will go there. They will buy a lot of the game of the year because a bunch of board game critics said, this is the best new game that came out this past year. And then, all that money gets circulated back into marketing. You see more ads. You see the awards sticker on the side of the boxes. More families buy it. And that just snowballs on top of each other, right?

So winning sort of similar things in the US I believe there are--

AUDIENCE: BoardGameGeek.

AUDIENCE: ABC News.

PROFESSOR: BoardGameGeek.

AUDIENCE: Yeah, they have their own con [INAUDIBLE].

PROFESSOR: Yeah. But not that many families. I mean, I'm thinking more like ABC News doing a top 10 hot toys for this Christmas kind of thing. That's the sort of thing that bumps you up from a game that you buy for yourself to a game you start buying for other people, which multiplies how many copies actually get sold. So that's one way. That's usually one way that it happens.

That's not to say that a game that-- what's called an enthusiast board game. A game that's basically sold to people who are buying it for themselves can't be commercially successful. It just means that you need to make enough money that you made a profit on it.

And a lot of these games-- I think of all the games that I've got today, let's see. This is probably-- let me see if this won any awards [INAUDIBLE]. This is probably the sort of game that you would buy for families. This is Set. And of course, missing it's original box. But you have played Set, right? OK.

So this probably fits into the category of a game that somebody in the room has probably played once and can teach everybody else how to play.

Who's played Blokus before today? Yep. OK.

How many people played with your family? Before you came to-- how many of you played before you came to MIT? OK. High school?

AUDIENCE: Middle school.

PROFESSOR: Middle school? Yeah. So I think the reason for it-- this is Mattel. So they certainly know their marketing. But I think the reason why this got popular was again, one of those top 10 toys to buy that Christmas when it was released. And that's why Blokus really took off.

It's a well-designed game. You don't get on those lists without being a well-designed game. But that's not the reason why these games are successful. That's kind of the bare minimum to even be considered [INAUDIBLE].

So if you're in this class thinking that you're going to make a lot of money as a board game designer, I know people in Hasbro I can get you in touch with. And I think they're probably going to say don't expect that.

You might be able to have a decent living working in a large company like Hasbro or Mattel, which I think is the same company, yeah. But it's probably not because of the quality of the games that you're designing, but more about your ability to design a game based on a spec that was handed to you. Based on a requirement. It's like, we need a Star Wars Risk game by Christmas. Design it in two months, or something like that. And you execute that well and you will get a good career in a place like Hasbro.

If you're designing for yourself, you should feel very happy if you manage to make your initial investment back. A lot of people who are sort of hobbyist game designers who make incredibly good games don't make back the money that they initially invested into it. And that's fine if you know-- if you went into that business knowing that. Because for some people, it's just good enough to be able to have a game with your name on it being played by a whole bunch of people who appreciate it. That's fine.

More likely, a lot of people are going into careers, I'm assuming, that are not game design. Some of you are. But some of you will go into a career that might benefit from some of the design practices that you're going to learn in this class. Not just iterative design. Although, we've already talked about how that's relevant to a number of engineering disciplines. But also, things like you want to teach people a new system that you've designed, or a new system that's been put into practice.

You want to create some sort of team building exercise. You want to communicate to someone how complex a certain system is that's relevant to you through your work and your discipline. There's a bunch of things that games can do to communicate ideas that might be relevant in whatever career you end up in.

Even here in MIT, I'm the Creative Director of the MIT Game Lab. There's a bunch of different labs here in MIT who are using games for a variety of different purposes.

Eyewire. Anyone heard of that one? Yep.

AUDIENCE: I was in [INAUDIBLE] class.

PROFESSOR: Yeah. Over in the [INAUDIBLE] Institute right across the street where the train tracks run under the building, they've got a game that's basically massively multiplayer, massively single player really, and you solve the puzzle which is kind of like [INAUDIBLE]. It's kind of like paint by numbers. You're clicking and you're coloring a field. What you're really doing is you're

identifying neurons from scanning tunneling microscopes. These are neurons from a mouse retina. And you're basically doing all of the pattern recognition that computers have a tremendously difficult time to do, but humans actually are pretty good at. And then, you're accumulating all of that data.

It's a fairly nice, very clicky Minesweeper-ish kind of feel to this game. It's like you're just clicking things so that you find-- they meet a nice contiguous space. It's a 3D game, So there's some sort of like mental hoops that your brain gets through. And kind of nice build, puzzle feeling.

But what you're really doing is you're providing Sebastian Seung's lab with a ton of data about how a mouse's eye is wired, which is amazing. And I think they've got a couple of papers. So try it. It's real fun.

Anyone here from systems, systems dynamics? No?

Engineering. I their parent group is the AeroAstro department.

[BACKGROUND NOISE]

PROFESSOR: OK. Do you think that's a kid out there?

AUDIENCE: I wonder if they're walking away or not.

PROFESSOR: Just like a three-year-old or something, that's fine. But I hope it's not someone who's hurt.

But a lot of system dynamics folks on campus, engineering systems design for instance, will use games to try to teach clients about certain engineering practices. So there's a group here that has a game called Space Tug--

AUDIENCE: Space Tug Skirmish?

PROFESSOR: Yeah, skirmish.

AUDIENCE: I've played that. My roommate worked there last summer.

PROFESSOR: Yeah. At UROP?

AUDIENCE: Yeah.

PROFESSOR: And I think they're still looking for more UROPs because they've turned their board game into a digital game and they need to keep working on it.

AUDIENCE: [INAUDIBLE].

PROFESSOR: Yeah. It's kind of got a-- I was going to say a Magic: The Gathering feel, but that's not really true anymore, the way how the game has evolved. But it's primarily a card game about building satellites, launching them into space. And then realizing that by the time you launch something into space, it's kind of obsolete.

And the question is, how do you design a satellite so that it can adapt to changing circumstances? That's what they are teaching people from NASA, from the military about. And they decided that games are the way to do it. It started with a board game. They're going to digital game.

It's a very large group here on campus called the Scheller Teacher Education Program. And they design games for K-12 to freshmen undergraduate-level science, math, language. How to better address some problems in curriculum, in sub-standard classroom curriculum. So they've done MMOs. They've done puzzle games. They've done a lot of stuff on Flash because it's very easy to get Flash running in a school. It's very much harder to get a whole school [INAUDIBLE] to download a piece of software and install it across all the computers.

All these places have UROPs. My lab has UROPs. So if you're interested in any of these things, you should definitely check them out. You can ask me for more leads. There are a lot of different.

And finally, back to AeroAstro. There is a group that works with zero gravity satellites. [INAUDIBLE] talking about. They're satellites. They work in zero gravity.

AUDIENCE: SPHERES?

PROFESSOR: SPHERES, yeah. These little compressed, I think, carbon dioxide propelled SPHERES. They look like gigantic dice, actually. And they spin around in space. And they'll run C code. And they have a high school programming competition, kind of like the FIRST robotics tournaments. Think of that in zero gravity. So they have you accomplish things. It's a pretty cool high school education thing to connect high school kids to space, basically.

I know they are looking for UROPs. So if you're interested in that, you should definitely talk to

me about that. I'll give you the contact information.

So I've been yammering for about an hour. Let's take a break. Stretch. I'll start distributing some of these games. So we have one more discussion topic before we go into game planning.

Some people should probably distribute [INAUDIBLE] as well.

AUDIENCE: Where's the nearest [INAUDIBLE]?

PROFESSOR: Bathrooms are out to the right.

[INTERPOSING VOICES]