Working Group 1
Ontology
“Through a glass, darkly”
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A common language for game design

In planning this workshop it became obvious that we could not get much done unless we all had a common reference point for what we do as wargame designers. Without a common understanding of what we mean by “professional wargaming,” different working group discussions could become incoherent. It is also important for those learning about wargaming to have some idea of what it is they are learning about.

This paper lays out a way to talking about gaming that can form a common basis for the rest of our discussion about professional wargame design.

Unfortunately not everyone comes into this workshop with a common agreement of even the most basic of these terms: “wargaming” or “wargame.” In fact there is a debate about whether it’s even one word or two. When game designers think about professional wargames a wide range of ideas and concepts come to mind. A fundamental reason for this proliferation of meanings is that, as the philosopher Wittgenstein pointed out, the term “game” is itself a term that changes and transforms depending on the user and the intended meaning.

Most gaming terms follow the lead of the word “game.” They are hard to define and mean different things in different contexts, and to different people. It is hard for us to settle on a common set of terms the describe what we do because what we do is both broad in scope and fluid in execution. This makes our task difficult.

Rather than trapping ourselves in a philosophical tangle, we take a pragmatic approach. As professionals involved in the practice of wargaming, we ask: “what do we say when we discuss professional wargames, and what do we mean when we say them?” Surely we mean something when we use the terms, so let’s focus on how we use the term in our discussions and design and fit our definitions to the reality of our usage.

So what do we mean when we say “wargame?” There are a couple of definitions we can use:

- A warfare model or simulation that does not involve the operation of actual forces and in which the flow of events shapes and is shaped by, decisions made by a human player or players – Peter Perla

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• People, in conflict, making decisions, in an artificial environment, where they get to see the outcomes of those decisions – Ed McGrady

• A simulation, by whatever means, of a military operation involving two or more opposing forces, using rules, data, and procedures designed to depict an actual or assumed real life situation – Department of Defense

These definitions lead us to exclude exercises, simulations, and analyses from our discussions. They also emphasize people, decisions, and military activities, which all are good things to have in a wargame.

While these definitions may define "wargaming" they are not complete enough to describe "a wargame." When we think about specific games we think about certain attributes and traits that fit the game into various conceptual bins. As designers these bins have a lot to do with the type or amount of work we have to do. Is it big or small? Does it have a map? Does it have two sides? With any set of professional game designers even those descriptions could conjure up hundreds of possible visions for what a specific “wargame” is.

This is what makes defining wargames hard: because in reality they are a single idea that is constantly being modified by those who design and play them. They are constantly changing, both in the real world as well as in our lexicon. New ideas, new ways of thinking and building games, and new ways of playing them are always being created. This makes definitions hard. And it makes the entire concept of what is or is not a wargame, or how wargames are constructed and played, extremely difficult to define.

Cataloging wargames

While it’s a hard task, we still have to sort it out. In considering the problem from several different perspectives I’ve come to the conclusion that there are three broad categories of words or concepts that we use to define a wargame. These are the "bins" into which most of our terms fall. These three bins are:

2 I've added “in conflict” to my usual definition of game to make it specific to wargames. This definition is also consistent with the use of the term “wargame” to refer to any sort of conflict simulation as opposed to only those involving combat.

3 From the US Naval War College FAQ and other sources: (https://www.usnwc.edu/Research---Gaming/War-Gaming/Documents/About-Us/FAQ-s.aspx). However all sources reference Joint Publication 1 as the source of this definition while neither JP-1 (March 2013) nor JP 1-02 (joint dictionary, March 2015) no longer actually define the term “wargame”.

4 In the Art of Wargaming Peter Perla divides games up in multiple ways including the "style" of a game (roughly equivalent to my "type"), instrumentality (rigid or free Kriegsspiel), information limits (how much information is available to players), mode of evaluation, number of players, and geographical scope/level of decision-making. The difference between his schemes and mine is that I am focused on how we talk (vernacular) and he is focused on how to categorize. I therefore place a lot of emphasize on
• **Type.** The most difficult, controversial, and just plain annoying way in which we refer to wargames is according to the "type" of game we are putting on. The best way I can characterize how we discuss these games is that our words focus on where the player attention is directed. Computer games are the clearest example of this category of terms, but these terms include the broadly ill-defined groups of seminar, table-top, and role-playing games. I characterize this group of terms by "where the player attention is directed" because there is no other concept that captures their essence. In addition to being the most ill-defined set of terms it is also the most important because it is the category of terms that are most often used in talking about a game. These terms represent commonly used shorthand amongst designers to tell other designers what kind of game they are putting on. This category is most often used by professionals when they are talking to people not directly involved in gaming.

• **Purpose.** Another category of descriptors tells you about the purpose of the game. This is also a shorthand that can be used to not only tell what the game is for but also how it is constructed and who is playing in it. A "training game" will most likely have a rigid set of activities that pre-determine players choices while a "red teaming game" will likely be played by intelligence personnel in a open, facilitated, setting. These terms simply describe what the goal is, and thus they are common to gaming professionals and non-professionals as well.

• **Attributes.** Finally we get the attributes of the game, how it is controlled and played. These terms cover things like scale, players, game control, and materials. This category is one often used by professionals and hobbyists to characterize a game design.

**Type of game**

When we think of “wargame” our experiences drive what comes to mind. Some think of tabletop board games, while others have been involved in creating large-scale national security simulations. Others think of computer games, or at least computer-assisted games.

All of these game aspects can be summed up as the “type” of game that we put on. Different sponsors, designers, and participants sometimes characterize very different games using the same terms. That is why its is fuzzy.

In examining the way we talk about games we see several characteristics of the game that drive overall descriptors:

- Where the player attention will be directed:
o Seminar games direct the players' attention at the moderator or controller.

o Tabletop games direct the players' attention at some representation of the game world (map, markers, model, etc.).

o Role-playing games direct the players' attention at other players, and into themselves and the roles they take on.

o Computer games direct the players' attention at a computer. The more the players' attention is directed at the computer instead of the game controllers or other players, the more the game becomes a "computer game."

- The number of players and their rank. Games with higher ranked individuals, or large groups of players, tend to be distinct from "normal" games of the same type. As players increase in number or rank the game begins to focus back onto the players themselves. Because of their importance in these games the players become the overall focus of the game.

Another thing that makes defining games difficult is that we are accustomed to thinking of definitions as discrete objects that either apply or do not apply to a word. When applied to games terms are more fluid, and represent a continuous spectrum of attributes that run from irrelevant to the dominant characteristic of the game. The concept of "computer game" is an example. At one end of the spectrum we have games that are entirely paper and pencil and players never even see a computer while they are participating. These are definitely not computer games.

But players could use computers to generate PowerPoint briefs and player generated memos. This may not be a "computer game" but it is a "computer aided game." Or players could use computers to run models that inform player decisions (computer assisted). Players might instead sit at computers and interact with each other over a network (computer network games). Finally the player could be alone in a room and only interacting with a computer. While this last case is definitely a computer game, where in this spectrum does the game stop being something else and become a "computer game?"

This problem of the terms being continuous rather than discrete occurs in every term in this section. Some games could be a mix of seminar game and role-playing game. Some role-playing games may have elements of tabletop games.

This spectrum of possibility is what makes our use of, and definitions of, terms for games so difficult.

**Seminar game**

This is a term used quite loosely to describe any number of different styles of games ranging from large-scale, role-playing games to small, scenario-based discussions.
I propose that “seminar game” refers to games where the players’ attention is focused on a process that directs player discussion in the game. This could be a human moderator, or it could also be a set of questions or topics that the players discuss without active moderation. Seminar games are characterized by the discussion that happens amongst all of the participants.

Seminar games typically revolve around a scenario or game world that is constructed for the players by the game controllers. While it’s typical to use a scenario it is not always the case. The "game world" may in fact be the current circumstances the players find themselves in, or it could be some sort of constructed set of relationships that are independent of a specific scenario.

To the uninitiated some seminar games may look like meetings. And in some cases they actually are meetings where the participants simply discuss a scenario.

The continuum of seminar games ranges from a simple meeting with no moderation, to meetings where a scenario is discussed, to complex, adjudicated, games where players and controllers interact over a complex game-world.

Seminar games are very common because they are so easy to assemble, cheap to put on, easy to participate in, and allow for some structure to what would otherwise just be a meeting or conference.

Even within this rather restricted definition there are several sub-types of seminar games:

- **Scenario-based meeting.** Here the controller provides a scenario or game-world, and the players discuss it. This type of game is often derogatively termed a "BOGSAT" (bunch of guys sitting around talking - bunch of guys sitting around a table). The controllers may simply present the scenario then participate in the discussion, or actively manage the discussion as moderators.
- **Task seminar game.** Players as a group are given a scenario or situation and assigned a task. The task usually involves answering a set of questions but it may involve working on a real-world problem. The players are then more or less left alone to figure out for themselves what the answers are. The primary difference between this and a moderated seminar game is the absence active moderation, facilitators may control the game and set it up, but the players do the work of organizing an answer.
- **Moderated seminar game.** In this variant the game controller moderates a discussion about the scenario. Players may or may not take on roles. Often the questions the moderator asks are pre-scripted.
- **Combined seminar games.** Sometimes several seminar games will be run simultaneously with slight variants of the scenario given to each group. This is often
done in concert with a scenario-based futures planning effort, where each group tackles a part of the futures matrix. The individual games may be moderated, or players given specific tasks to work on.

- **Panel seminar games.** In this type of game an audience watches a panel of players work through a scenario. The panelists are typically given roles while a moderator presents scenario-based challenges to the panel. The panel then explains their actions and the moderator leads a discussion of the implications.

Some of the common features of these games include:

- Little or no formalism or mediation between the players and the game moderators. It is rare for there to be formal rules or computer moderation in these sorts of games. The controllers talk directly to the players and there is little or no adjudication.
- Little movement or reorganization on the part of the players. Players remain in one room and do not move between groups or cells. Multiple groups of players in the same game is uncommon.
- The games generally don’t exceed the size of a conference room, perhaps 30-40 people. This is a key distinguishing feature, because as the number of players increases the harder it is for a moderator to facilitate effectively.
- As the games become more like meetings the players and controller actions have less and less effect on the shared game world. The simplest form of this game would have players simply giving their opinions on a topic, with little interaction between the participants much less the scenario. This is commonly what is meant when the term BOGSAT is used derogatively.
- The controller/moderator works cooperatively with the players to achieve the game objective

Some of the objections to this definition could include:

- The narrowness of the definition. As we discussed above “seminar game” can mean almost anything. Here we exclude competitive, adjudicated games, consigning them to tabletop games or the category of “role-playing” games. Because either of those terms is fraught with its own implications many would prefer to have any type of game considered a seminar game even when it may better fit elsewhere.
- The scale restriction. We push large-scale (>30 players) games into their own category simply because they are so different in design, execution, and management than a smaller, seminar, style game.
- The lack of a map or game board. We are advocating a separate category for games where the focus is a map or game board (see tabletop games below). However in seminar games graphical support materials such as maps or other items may be used, but they are not the focus of the game.
- We have not identified all sub-types of seminar game. Fair enough. There are likely many more variants on this type and scale of game than we have identified.
Tabletop games

Like seminar games the term “tabletop” game can mean virtually anything. Sometimes a table isn’t even involved. Here we propose that the term “tabletop games” refers to games with some sort of physical representation of the play (media) that is the focus of the player’s attention. Players interact with this physical representation of the world in order to encode their decisions in the game.

Players in tabletop games interact with the game-world and game mechanics through the physical components of the game while in seminar games this function is performed by the controller and other players. Tabletop games can use markers, charts, boards, or many other different ways of keeping track of the game world.

A board wargame is the prototype of a hobby tabletop game, while a “sand table” game is the prototype for military games. While computer games are also a physical representation of the world common usage demands they have their own category.

Some of the attributes of this type of game include:

- Players may have roles, but the roles may not match either real world constructs or the players’ real-world jobs. For example, a game on Joint Task Force operations may have two or three civilians playing the role of the JTF, while in the real world this role would be played by hundreds of military officers.
- Players interact with the game system, including the game components. Player-to-player interactions occur but within the context of what is happening on the game board.
- It is common to see the game controlled by formalisms or what is known as “rigid Kriegsspiel." These could be rule sets, computer models, or controllers with a set of tables. When professional games use a rigid Kriegsspiel model it is often in the context of a tabletop or computer game.
- The number of players will be determined by the way in which their decisions are encoded in the game. In a board game it is difficult to have more then 20-30 active players, this number can increase dramatically if computer control is implemented.

The variation in tabletop games comes mostly from the role played by the physical components:

- **Professional board game.** This is essentially a hobby board wargame recreated for professional use. It utilizes rigid Kriegsspiel (map, pieces, rules, charts) to allow players to execute the game without a moderator. In most professional board games a moderator helps players with the rules and facilitates play, but the system is sufficiently rigid that the players should be able to execute the game without
assistance. Professional board games that are put on without facilitation are very uncommon.

- **Map game.** Here the players make decisions and see them executed on the map, but all other aspects of play are facilitated by a control cell that directs the action, adjudicates results, and keeps track of information in the game. While players are not involved in making the adjudication, they may be involved in the process of adjudication through various matrix game techniques.\(^5\)

- **Double blind game.** In this game there are two or more maps, with limited information exchanged between them. Only the controllers know what both sides are doing at any point in time. Some types of games require this kind of construct, for example games on deception or submarine warfare.

- **Organizational or conceptual game.** Not all conflict games involve maneuvering forces on a map. The game could deal with logistics, organizational relationships, or computer systems integration. The physical representation here is a map of the system where play is occurring, with pieces marking relationships or the status of system components. For example, the game could involve managing an organization, with the map representing various organizational units and the pieces representing the players’ status and influence within each organizational unit.

As the amount of detail increases in tabletop games the pressure to have the players assume real-world roles and use actual staff processes also increases. Eventually as the size and complexity of the game continues to increase the games begin to merge with mission rehearsals and Command Post Exercises (CPX).

**Professional role-playing games**

Ok, there are no good terms for this type of game. I’m using “professional role playing game” to describe a game where players take on roles, that is actively controlled and may have an active threat. Essentially this is a seminar game where players participate as if they were actors in the game. Player roles may be collective (you are the JTF cell) or individual (you are the JTF Operations Officer).

These roles may be different from their real life jobs, but within DoD the roles are often related to the real-life jobs. The players simulate different organizational groups that must work together, or competitively, to solve the problem posed by the game. This could range

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5 Matrix games involve the players working with controllers to determine the most likely outcome of the player actions. Player reasoning is incorporated into adjudication by the controller as part of the matrix game technique. Like most game concepts there is a spectrum of matrix game techniques ranging from the very rigid to free form. [John Curry and Tim Price. Matrix Games for Modern Wargaming Developments in Professional and Educational Wargames: Innovations in Wargaming Volume 2. Lulu.com. 2014.]
from defeating a military threat to figuring out how to manage personnel across a service. Any physical representation used in the game, whether maps or computer models, is really secondary to the player interactions and decision-making process.

These games also tend to have the widest range of objectives of any game. They can range from social games designed as conference ice-breakers to week-long explorations of a particular command’s ability to conduct real-world operations.

It’s important to note that these games are almost never referred to professionally as "role-playing games" as this has negative connotations. Instead euphemisms are used such as "simulations," "seminar games," "exercises", etc. in order to make the expenditure of resources they require more palatable. With small numbers of players these games blend into my definition of "seminar game."

These games are characterized by:

- An immersive scenario that gives players the detail they need to begin to function in their roles as they would in the real world.
- A focus on interaction between players and player groups, as opposed to interacting with the controller or moderator.
- Few if any "bounds" within the game. Players are free to develop and execute any logical course of action within the bounds of their capabilities.
- Free-Kriegsspiel control with dynamic adjudication designed to keep the game flowing and the players focused on the game issues.
- The potential for active threat players, as well as allied or other country players participating in the game.

These games are almost always unique in their objectives and execution. General categories include:

- **Large-Scale, Role-Playing Game (LSRPG).** This is the generic form of this type of game. If the game is large enough, the players important enough, or it is televised, it might get its own separate category.
- **Public policy game.** These games are focused on teaching key leaders and the public about a policy issue. They often involve senior government officials, sitting or retired, and may involve active media play. Examples of this kind of game include *Dark Winter*[^6] or *The Climate Change Wargame*[^7].
- **Computer moderated RPG.** These games use various tools, primarily computers, to organize and structure play. Often computer models are used as ways to calculate the results of player actions and changes in the economic, social, or political environment. IDA’s *SENSE (Strategic Economic Needs and Security Exercise)*

[^6]: http://www.upmchealthsecurity.org/our-work/events/2001_dark-winter/about.html
game is an example of this type of large-scale game, where players run their organizations through the model, and the model adjudicates the flow of outcomes in the game while players are working and interacting with each other.\(^8\)

- **National Security Decision Making game (NSDM).** Another variant of these games occurs when players play different agencies or interests within the US government, or other countries or organizations. This variant focuses on the processes through which governments formulate policies and actions within an international context.

- **Event games.** When the rank and importance of the players, or the importance of the game, exceeds an undefined but reasonable threshold for professional role-playing games it moves into this category. We call these event games because these games are singular events that attract considerable resources and attention. The primary examples of these games are the Title X games run by the services as well as other games that include senior leaders or address their issues. Title X games are the “capstone” of DoD professional wargaming and assume an importance that moves them beyond other games. Likewise games designed to address issues at the 3 star or above, Cabinet, or other senior leader positions also fall into this category. The issues involved, the constraints on game time and scenario scope, as well as the need for careful control and moderation make these sorts of games qualitatively different than other games.

**Computer games**

In our definition “computer games” refers to games where the sole focus of the players is the computer. It does not refer to games that simply use computers as part of the overall game process. If the player only interacts with a computer, even if other people are part of network play, then the game is a computer game. If the player also interacts with a controller or other players directly the game falls into one of the other categories.

Computer games can range from multiplayer economic and social simulations to single-player training games. While the full spectrum of professional or “serious” computer games is beyond the scope of this paper, we include the term here for completeness.

**Purpose**

The objective or purpose of the game is the primary external attribute because it determines all of the other aspects of the game. In the following list of potential categories I have included the name of the objective, followed by the focus of play, then an overall description:

\(^8\) [www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA371409](http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA371409)
• **Organizational or social.** Focus: Group dynamics. Games can be used to generate social cohesion in groups, as an “ice breaker” for groups that need to work together or as a way for different organizational elements to improve their social relationships.

• **Training.** Focus: Individual or group instruction. Training games are often a subset unto themselves because of the need to incorporate and achieve specific training objectives. In most games there is no “right way” to achieve the result, in training games there often is a “right way” to do things and this can color and shape the overall design.

• **Process.** Focus: Organizational actions and activities. Process games are designed to examine how an activity is or should be done. Often these games are designed to bring different organizations together to rehearse or plan an activity. An example might be to understand how the manpower recruitment and training process needs to adapt to new goals or organizational arrangements.

• **Analytic.** Focus: Understanding issues. Analytic games are typically used to examine a topic from different points of view or identify issues that can be included in subsequent analysis or exercises. This is the largest and most common purpose for gaming within the Defense Department, and it has several different subtypes:
  
  o **Resource and requirements.** Here the game is designed to examine either shortfalls in resources and capabilities, or to assist in setting future requirements.
  
  o **Scenario development.** Formal scenarios include both the situation as well as perspective courses of action.
  
  o **Systems development.** Games can be used to identify how potential future systems will be integrated with existing capabilities or operational concepts.
  
  o **Planning.** Games can be used to explore various planning courses of action (COA’s). In doctrine publications games are suggested as tools to allow staffs to examine and evaluate different COAs.
  
  o **Strategy development.** These games examine how an organization should interact with other actors. Strategy games range from ones designed to understand how to “sell” various courses of action within the bureaucracy to those focused on how adversaries and allies will react to our actions.
  
  o **Deterrence.** A variant of the strategy games is a game specifically designed to understand how our actions will either escalate or de-escalate a situation with a potential adversary.
  
  o **Economic.** Games can also be used to focus on how economic competition will be shaped by various decisions the players make. This is usually in the context of international competition, vice business competition.

• **Futures.** Focus: Support to futures planning exercises. A game that is often combined with a scenario planning exercise, that examines possible futures.  

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9 Naval War College.
• **Strategic planning.** Organizational adaptation. Similar to futures games, games can be designed to examine how an organization should change or adapt to new circumstances.

• **Education.** Focus: Player learning. Education games are designed to convey a particular set of ideas or issues to the players, but through unstructured play and without a specific intended process as would be the case for a training game.

• **Research.** Focus: Academic or social science research. Games can be used to gather opinions of those involved, or as actual tools for researchers seeking insight into certain behaviors (for example, inter-group communications, anthropological or social science data collection, etc.). Research games are designed as instruments of scientific or social science research.

• **Predictive.** Focus: Prediction of future actions or circumstances. Can games be used in predictive ways in order to understand how future events will unfold? Your guess is as good as anyone else’s.

• **Red teaming.** Focus: Hypothesis testing. Games can be used as part of a red teaming exercise where groups seek to understand where the weaknesses are and how to modify the plan to protect against those weaknesses. Note that gaming is being used here in support of red-teaming, the two are connected but not the same activity.

That is the range of objectives I can come up with for games. These categories are often divided into "inductive" games, or games where players engage in open-ended exploration of issues and "deductive" games where game play evaluates a specific issue or hypothesis. Analytic games would include many games whose purpose it to explore possible decision spaces while research games would clearly fall into the deductive group with their formal hypothesis and research methodologies.

**Attributes**

Attributes refer to the internal aspects of the game. By “internal” we mean “within the game design and execution.” These are the attributes that define the game play: what players will do, and how they will do it. Because of that they are integral to the game design process. These attributes are often part of the overall definition of the game design process and thus will be a reflection of each designer’s way of working.

We can divide these up into any number of categories, but here are some that I have either heard mention on the phone calls, or conjured up myself:

• **Control.** How does the game move the players through time? A host of possibilities present themselves including:
− **Process or rules.** In this case the game system controls the game and relies on the competitive space produced between the players to ensure compliance with the rules. A rules based game is rigid Kriegsspiel.

− **Controlled.** I’m using this to mean that there is an active controller, a “Dungeon Master” for lack of a better term, who embodies the game structure and is in control of all aspects of the game not controlled by the players. A controlled game is synonymous with “free Kriegsspiel.”

− **Moderated.** A moderator is less of a game implementer than an asker of questions. This is a “controller lite” who presents the players with a scenario, then asks a series of pre-scripted questions of the players.

− **Shared narrative.** In this type of game players work cooperatively to decide how the game moves forward without any one, dominant, controller. The matrix game technique is an example of this type of game.

**Scale.** Game scale refers to the dimensional scope of the play. It could reference ground scale, size of units being represented, level or rank of decision-makers, or time period covered. The typical way of talking about scale is by level of warfare: “strategic, operational, tactical.” Scale may also be described in terms of the geographical range of the game as “global, theater, regional, national, battlefield, etc.” Professional and hobby games often refer to the game scale in describing a game. This works as a shorthand to define many other things, often including the way the game will be played and controlled. For example a “tactical” game will often have some sort of physical representation of units and a map while a “strategic” game will often be a seminar game.

**Opposition.** One attribute of the game that makes a big difference in the player experience is how the opposition is played. The more “active” or “live” the opposition is the greater the challenge for players and the less players feel like they are being manipulated by the game system.

− **Active threat (red).** In this game there are two (or more) sides and each side is responsible for a full set of decisions. Each side’s decision affects the other side.

− **Hybrid threat.** Here control and the adversary are mixed, with control exerting a strong hand in the threat’s actions. This is often done to ensure game objectives are achieved or because a full, two-sided, game would be unnecessary. Hybrid threats can also be used when the number of players is limited, or a real two-sided game would be too costly.

− **Scenario-based game.** Here the “threat” is the scenario, or the different organizational components playing, and there is no active opposition. A classic example of this type of game is an emergency response game, where the disaster is the “threat” and the adversaries are the different agencies who will show up to deal with it.

**Physical implementation.** Amateur game designers talk about game design while professionals talk about logistics. Game execution is the “logistics” of game design, and often occupies designer’s thoughts during the initial stages of specifying a game.
- **Venue.** How big is the venue, does it accommodate the various cells or breakout groups that will be needed, how will players get their basic needs met (food, drink, restrooms, e-mail)?
- **Materials.** What objects will provide the players information about the game world? How will the players see their decisions executed?
  - Maps, boards, cards, dice
  - Injects of written, verbal, or electronic (video) communications
  - Through a computer interface or model
  - Live action role players
- **Player roles.** What role do the players take on in the game? Will they play a formal role that they have to represent to other players? Or will they work as teams?
  - Role-play. Players assume a formal, artificial, role in the game that is different from the one they have in real life. The classic example of this is Dungeons and Dragons.
  - Team play. Players work as a team, with, or without, a leader.
  - Real play. Players do not assume a role and play who they are in real life. Many organizational or social games have players be themselves.
  - Abstract play. Players do not take on a defined role other than "player in a game". Many board games, or games examining technical issues, use this device as players are focused on the problem presented in the game not the social interactions surrounding it.
- **Players.** Who are the players? This matters a lot. If I tell you the President will play in your game the design will be very different than if your players are an elementary school class.
  - Real world participants. The players are doing what they would do in real life.
  - Students. Players are naive with respect to the game subject.
  - Experts. Here the focus of the game is to extract knowledge from those with expertise in the field.
  - Actors. The players have some familiarity with the material, but are not precisely aligned with the game roles. They are often acting out roles that they do not perform in real life, or have limited knowledge of. An example might be military action officers from an office in the Pentagon who are assigned to participate in a JTF game. All of them might have some familiarity with JTF operations, enough to "act" the part, but only a few might know those operations in detail.
- **Analysis.** Data collection and analysis can be an important component of professional games. This can be accomplished several ways, some good, some not so good:
  - **Player reporting.** Game controllers provide players worksheets, computers, or other means with which to record their thoughts during or after the game.
  - **Controller observations.** During the game controllers develop their own perceptions of the key issues and challenges identified by the players. They may also have identified issues and insights during the design phase.
- **Independent observers.** The most comprehensive way to record game results is to have observers that are independent of control recording game play and player decisions. It is important that the observers not only record what happens, but why.
- **Automated collection.** There are various tools that can be used to automate data collection including recording player interactions with computer programs, video taping game play, and transcription of player discussions.

**Putting it together**

We can put together our terms and begin to form sentences that describe the games we want to put on. For example: “A tabletop training game to explore tactical options using simple rules” or “a strategic professional role-playing game using participants in their real world roles that will explore how to defeat a threat country”. While the specific terminology may not be exactly the terminology you use, the idea is to develop a typology for gaming that closely follows how we as professional designers actually talk about games. Sometimes we have to invent terms because our language is so muddled, as was the case for professional role-playing games. In other cases, especially where we have hobby models, we can be fairly clear what we are talking about.

The most important question is what my typology says about gaming. Here are my takeaways:

- Defining games, types of games, and game components is difficult because games are so many different things in the real world. Games also operate on a continuous scale, with elements of various types of games intermixing according to the needs of the designer, and players. With such a diverse set of objects it becomes difficult to develop a terminology that encompasses everything.
- When game designers talk about games they talk about what they are going to do, and what the players will do. This seems like a logical start in developing a typology of games.
- When we look at the diversity of terms we see that they break down into purpose or objectives, attributes, and types of games. For professional games the number of different types of games is limited, but often the boundaries between the types of games are not well defined. Even something as potentially clear as objectives can become complicated due to the sheer number of possible objectives for a game.
- We made some choices, you would probably make other choices, I think the key thing to do is ask whether you are talking about an attribute, objective, or type of game when you think about your terminology. That way we can distinguish between what the players will be doing during the game (attribute), why the players are doing what they are doing (objective), and what the designers will be doing before the game (type of game).
<table>
<thead>
<tr>
<th>Term/Type</th>
<th>Description/Definition</th>
<th>Best Use</th>
<th>Value/Payoff/Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjudication</td>
<td>The procedure to resolve the outcome of kinetic and non-kinetic actions taken by a side and all interactions between sides in a game</td>
<td>A necessary part of any game</td>
<td>Appropriate adjudication provides realism, improves game play and determines the acceptability of the game by the players.</td>
</tr>
<tr>
<td>Free Adjudication</td>
<td>Free Adjudication based on professional Judgment and or consensus of the players</td>
<td>Free adjudication is used where computer or manual stochastic calculations of outcomes are not required. Free adjudication has been used in large and complex wargames including Title Ten Games. Free adjudication can replicate the fog of war even in open games if it first assesses the situational awareness of each side and then only allows the sides to take action on what they “see.” It is commonly used in seminar, sand-table and map based games.</td>
<td>Since the opposing sides are involved in the assessment of the situation, the game communications and staffing needs are significantly reduced, game tempo is faster, and player resistance substantially reduced.</td>
</tr>
<tr>
<td>Rigid Adjudication</td>
<td>Rigid adjudication based on predetermined rules or formulas and stochastic tables</td>
<td>Commonly used in manual games, board games, card games and computer games.</td>
<td></td>
</tr>
<tr>
<td>Semi-free Adjudication</td>
<td>Semi-free adjudication where professional military judgment and rigid adjudication are combined to support the game objectives</td>
<td>Used in map exercises and seminar games where those things that can be calculated such as time, distance, movement and consumption are calculated while matters lending themselves to judgment such as politics, policy, morale, deception, combat, etc. are assessed.</td>
<td></td>
</tr>
<tr>
<td>Administrative Personnel</td>
<td>Those persons supporting the execution of the wargame by performing necessary administrative functions such as registration, security and other functions.</td>
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<tr>
<td>Assessment</td>
<td>A qualitative judgment about something based on an understanding of the situation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis</td>
<td>The separation of a whole</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Cell** | **1.** A group of game participants organized to accomplish an assigned purpose.  
**2.** The space to which the cell participants are assigned. |
| **Capture Assessment / Analysis and Production Plan (CAP)** | The plan describing the process, by which the desired data from the game is identified, captured, assessed, produced and distributed.  
The CAP Plan should be an integral part of the game design from the beginning. It needs to spell out what data and in what format is needed to satisfy game objectives, When, where and how it will be recorded and saved. How that data will be analyzed, and what are the deadlines. The CAP plan can also be used to assess the effect the game structure and mechanics has on game play and results.  
A well designed CAP plan can provide analytical rigor to the game results by establishing clear connections between the game objectives and results. |
| **Classification** | The security classification of the game; Unclassified, Confidential, Secret and Top Secret.  
All games for the DoD require a level of classification.  
The level of classification of the game sets limits on what players can attend, and security requirements on game facilities and communications. |
| **Colors (The colors are listed below)** | Opposing sides or Cells and their allies in a game are normally assigned specific colors to reduce confusion.  
Colors are used when the sides need to be generic in nature rather than specific real world entities. In complex games, each color/side may be broken down into several cells.  
As an alternative to colors, cells and sides can be given a descriptive title.  
Assigning real world descriptions provoke real world prejudices in the players possibly blinding them to innovative ideas. |
| **Blue Cell/Side** | The cell or cells containing friendly forces  
For Best Practices the friendly and opposition colors are reversed in Russia and China. The use of colors should be clarified when dealing with them and their client nations and... |
| **Green Cell/Side** | The cell or cells containing neutral or third party elements. Green is sometimes an ally with Blue. |
| **Orange Cell/Side** | A side that is either a Red Ally or a 2nd independent opposition element. |
| **Red Cell/Side** | The cell or cells containing the opposing players. For Best Practices the friendly and opposition colors are reversed in Russia and China. The use of colors should be clarified when dealing with them and their client nations and former Soviet Union Nations. |
| **White Cell** | This term normally applies to the Control Cell for an exercise. White cell is another term for the wargame Control Cell. The term White Cell is more appropriate for exercises and experiments than for wargames. Some organizations actually have a permanent white cell so the use of this term in game design will cause friction and confusion. |
| **Yellow Cell** | The cell containing Non-Governmental Organizations (NGO’s) and Private Volunteer Organizations (PVO’s). Originating in the UK, this color provides more flexibility in assigning cell or side colors. |
| **Control Cell** | The person or group of persons designated to monitor and direct game execution to meet the game objectives also called game control. |
| **Controller** | A member of the control cell. |
| **Exercise** | A military maneuver or simulated wartime operation involving planning, preparation, and execution. It is carried out for the purpose of training and evaluation. --- Excerpt DOD Dictionary JP 1-02. A wargame is an exercise but an exercise may not be a wargame especially if it involves actual forces or equipment. See “Wargame”. |
| **Field Exercise** | An exercise conducted in the field under simulated war conditions in which troops and armament are actually present. The introduction of troops and equipment shifts the focus of effort from decision making to the execution of those decisions. A field exercise is the ideal complement to a wargame. While the wargame focuses on the decisions and develops the concept of operations, the field exercise can determine if the gamed concept of operations can be
<table>
<thead>
<tr>
<th><strong>Game Assumptions</strong></th>
<th>Specific things or issues that are fixed and will or will not be gamed.</th>
<th>Best used in games were the boundaries are not clear, when easy solutions must be avoided, or when certain anticipated player decisions will move the game in the wrong direction. For example, the use of nuclear weapons in a tactical game immediately moves the decision making out of the hands of the players and up to the National Level. The standard assumption for this is: &quot;Players must plan for the use of nuclear weapons; however these weapons will not be used in this game.”</th>
<th>Stated as part of the game brief and instructions, the game assumptions are used to keep the game focused on the objectives and when necessary to avoid known showstoppers executed.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Game Facilities</strong></td>
<td>Where the game will be played</td>
<td>The game facilities must be determined as early as possible in the game design process.</td>
<td>The facilities limit the size, complexity, classification, and schedule of the game.</td>
</tr>
<tr>
<td><strong>Game Purpose</strong></td>
<td>A short paragraph clearly stating the reason for the game and the sponsor’s intent</td>
<td>This clearly communicates the purpose of the game to the designers, players and interested parties as the opening paragraph in game documents and briefs.</td>
<td>The objectives are focused on specified game tasks and are sometimes hard to understand.</td>
</tr>
<tr>
<td><strong>Game Objectives</strong></td>
<td>A short list of tasks that must be accomplished by the game</td>
<td>The game objectives should drive the game design and are the measures by which game success is judged.</td>
<td>The tasks keep the designers and players focused in the right direction.</td>
</tr>
<tr>
<td><strong>Game Mechanics</strong></td>
<td>The specific procedures that the game, cells and players will follow for each move</td>
<td>The game mechanics incorporate both the rules and process and state them as easily comprehensible procedures.</td>
<td></td>
</tr>
<tr>
<td><strong>Good Idea Cutoff Date</strong></td>
<td>The date that the game design is finalized and no further changes will be accepted.</td>
<td>Should be used in any game design process when feasible</td>
<td>Gives the game developers the time needed to flesh out the game design into the final product</td>
</tr>
<tr>
<td><strong>Ground Truth</strong></td>
<td>The actual status of units played in a game. In an open game all players are given the ground truth. In a closed game the Control Cell maintains ground truth and communicates a limited and possibly distorted view of ground truth to the different sides playing in the game</td>
<td>Part of the “three map problem” which is an essential part of any game design incorporating the “Fog of War”</td>
<td></td>
</tr>
<tr>
<td><strong>Higher Authority</strong></td>
<td>Designated Controllers, who</td>
<td>They make the higher level</td>
<td>The technique gives</td>
</tr>
<tr>
<td>Higher Authority Cell</td>
<td>act as commands and organizations outside of game play.</td>
<td>decisions and provide the expected policy guidance to the players as required to maintain game play and keep the game focused on the objectives.</td>
<td>realism to the game without adding a full layer of higher game organization and players.</td>
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<td>----------------------</td>
<td>--------------------------------------------------------</td>
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<tr>
<td>Hotwash</td>
<td>Senior Players who act as commands and organizations above the main level of game play and they make decisions and provide policy guidance to the players as required to maintain game play and keep the game focused on the objectives</td>
<td>Allows multiple levels of conflict in game play</td>
<td></td>
</tr>
<tr>
<td>Level(s) of Conflict</td>
<td>There are three levels of conflict: strategic, operational, and tactical. The strategic level is that at which a nation determines national or multinational security objectives and guidance, and develops and uses national resources to accomplish these objectives. The operational level is that at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations. The tactical level is that at which battle and engagements are planned and executed to accomplish military objectives assigned to tactical units or task forces. -- Excerpt DOD Dictionary JP 1-02</td>
<td>Any Wargame design must identify the level or levels required by the game purpose and objectives.</td>
<td>Essential where the issues being gamed cross over multiple levels.</td>
</tr>
<tr>
<td>Number of Sides</td>
<td>The type of operation and the number of opposing sides or different commands that need to be represented in the game determine the</td>
<td>In single sided games the opposition comes either from the situation rather than a thinking enemy or from a recalculated enemy course</td>
<td></td>
</tr>
<tr>
<td><strong>Open Game</strong></td>
<td>Games where everything is visible to all players</td>
<td>The game style used where the “Fog of War” is not important. Board games are open games.</td>
<td></td>
</tr>
<tr>
<td><strong>Player</strong></td>
<td>Those persons specifically appointed to play the game</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Player Requirements</strong></td>
<td>The experience, skills and rank of the players needed or expected in the game.</td>
<td>If the players are being requested, the designer must ID their characteristics. If the players are already determined, then the designer must take into account their experience and skills and adjust the game materials accordingly.</td>
<td></td>
</tr>
<tr>
<td><strong>Plenary</strong></td>
<td>A plenary session is a meeting attended or viewed by all game participants</td>
<td>An important element of seminar, educational, and training games.</td>
<td></td>
</tr>
<tr>
<td><strong>Road to War / Crisis</strong></td>
<td>The narrative that transitions from a point in history to the start point of the game scenario.</td>
<td>This narrative provides context, essential details and plausibility to the scenario and reduces “fighting the scenario”.</td>
<td></td>
</tr>
<tr>
<td><strong>Role Playing</strong></td>
<td>Assigning a player to a specified billet</td>
<td>Role playing can be strict, loose or non-existent. Training games, role playing games and games examining the roles, organization, function and performance of specific units and organizations normally require strict role playing. Educational games, research and exploration games usually need players with specific abilities, experience or viewpoint usually require a loose degree of role playing allowing the player to contribute outside their role.</td>
<td></td>
</tr>
</tbody>
</table>

Role play is not required in games where players are needed for their experience, expertise, and knowledge and performance in a billet, position or role is irrelevant to the game objectives.
<p>| Scenario | The operating environment in which the game is played. | The scenario sets the boundaries of the game. It determines what can and cannot be played; therefore it should not be finalized until the full scope and range of game play has been determined. If a pre-existing scenario is prescribed, it still may need adjustments to meet the new game objectives. The level of detail in the scenario should match the level of operations required of the game. The geography, hydrography, season, climate, infrastructure, political, economic and cultural climates in the scenario must support the game objectives. The scenario provides the context and information that enables the decision making needed to meet the game objectives. A plausible, reasonable, interesting and challenging scenario engages the players, overcoming player resistance. |
| Seminar | A meeting for the exchange of ideas; a conference. (American Heritage College Dictionary) | |
| Seminar game | A wargame using the seminar format in the majority of its game cells | Seminar games are inherently flexible and adaptable and can be used in business, the military and academia. |
| Showstopper | A situation where one side or the other cannot continue the game before the expected end of the game is reached. | Showstoppers are important findings in any game. They must NOT be bypassed and ignored. Showstoppers indicate a problem with the matter being gamed, the game design; game play or a combination the three factors. Play testing, rehearsals, and the experience of gamers can reduce problems with game design but not flaws in the idea being gamed, or the actions of the players. A show stopper must be examined, documented, communicated to the players, a solution established and game play resumed if possible. If the flaw is with the subject being gamed, possible solutions could be gamed. If poorly handled showstoppers can: gloss over fatal flaws in the matter being gamed; fail to teach the players and gamers vital lessons; teach the players and gamers the wrong lessons and demoralize players by ignoring their successful actions. |</p>
<table>
<thead>
<tr>
<th><strong>Strategic Issues Cell (SIC)</strong></th>
<th>A seminar group designed to address prescribed issues and issues raised in the game that will not be addressed by game play. The SIC works for the Control Cell. It is different from the <strong>Higher Authority (HA) Cell</strong> because it does not directly influence game play.</th>
<th>The SIC cell is a valuable tool to adequately address issues that fall outside game play. The SIC is a good place to gainfully employ important people who cannot play in the game.</th>
<th>Idle hands are the devil's workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-Objective</strong></td>
<td>Subordinate Objectives are those things that must be accomplished to meet a Game Objective.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Support Cell/Team</strong></td>
<td>Security, technical and administrative personnel need to support the game.</td>
<td></td>
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</tr>
<tr>
<td><strong>Three Map Problem</strong></td>
<td>In a two-sided closed game, Game Control must maintain three maps: the Ground Truth, the Red Situation Map and the Blue Situation Map. The Ground Truth Map shows all forces in their actual position and actual status. The Red and Blue Situation maps, shows the situational awareness of each side as determined by Control, which replicates the “Fog of War.” This requires extra staff and communications channels to insure that the different sides receive the correct information in a timely fashion.</td>
<td>An essential design principle that has implications for game communications, displays and mechanics.</td>
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</tr>
<tr>
<td><strong>Timeframe and Duration</strong></td>
<td>The year or years in which the scenario is played and how much time is covered during the scenario.</td>
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<tr>
<td><strong>Time &amp; Move Convention</strong></td>
<td>How time is handled in the game and what are the conventions and procedures.</td>
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</tbody>
</table>
Title Ten Wargame

The Service Title Ten Wargames are a series of major service-sponsored war games that address future capabilities in the context of Title Ten responsibilities to organize, train, and equip its forces to carry out its roles and functions as a component of national military capability.”

Source: MARINE CORPS COMBAT DEVELOPMENT COMMAND ORDER 3053.1
(Note: The Roman numeral X was replaced with word "Ten" in an update to the order in 2011)

These games inform and influence service and higher policy. The games are an excellent way for the professional gamer to gain experience.

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<td>Title Ten War Games are a series of major service-sponsored war games that address future capabilities in the context of Title Ten responsibilities to organize, train, and equip its forces to carry out its roles and functions as a component of national military capability.” Source: MARINE CORPS COMBAT DEVELOPMENT COMMAND ORDER 3053.1 (Note: The Roman numeral X was replaced with word &quot;Ten&quot; in an update to the order in 2011)</td>
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<td>The Service Title Ten Wargames are large and complex games with many parties having a stake in the outcomes. These games usually take close to a year to design, develop and execute. The game products include but are not limited to executive outbriefs, written reports, and multimedia products. While each service has a preferred game type, each game may employ a variety of gaming techniques and frequently experiment with new gaming ideas</td>
</tr>
</tbody>
</table>

Toolboxes

Hard copy or electronic notebooks containing one-page descriptions of systems and major end items used in the game. Toolboxes are usually sorted by service. When using hard copy, at least one notebook is placed in each game cell.

In games with many sponsors or major service participants, it is common to have too many objectives. Therefore “Topics of Interest” are used to satisfy their needs. Accomplishing Topics of Interest are not critical to success of game; however; Topics of Interest are included in the game design if practical, also called Areas of Interest, Focus Areas, etc.

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Topics of Interest

Minor objectives concerning specific areas or issues the customer would like for players to deal with during game play.

In games with many sponsors or major service participants, it is common to have too many objectives. Therefore “Topics of Interest” are used to satisfy their needs. Accomplishing Topics of Interest are not critical to success of game; however; Topics of Interest are included in the game design if practical, also called Areas of Interest, Focus Areas, etc.

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<td>Minor objectives concerning specific areas or issues the customer would like for players to deal with during game play</td>
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Trusted agents

Designated players who have privileged information provided by Control that is to be revealed only under specific circumstances.

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Umpire

Controller who enforces the rules and procedures and judges the outcomes of interactions between sides.

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Vignette

A scenario that is a "snap" Vignettes are used when: Properly chosen

<table>
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<tbody>
<tr>
<td>A scenario that is a &quot;snap&quot;</td>
</tr>
</tbody>
</table>

Properly chosen
A vignette may be a specific situation that is part of a larger scenario. It may focus on:

1. Focusing on a specific situation in the larger scenario.
2. An excursion into a level of conflict different from game play.
3. When there is not enough time nor a need to play all phases of a campaign or operation.

Vignettes can focus the game on those specific situations essential to satisfy the game objectives.

<table>
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<tr>
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<tr>
<td><strong>Wargame</strong></td>
<td>A wargame is a model or simulation of war conducted without maneuvering actual forces and with a sequence of events that affects and is affected by decisions of the players... Peter Perla “Art of Wargaming.” (See Exercise and Field Exercise)</td>
</tr>
<tr>
<td><strong>Wargame Staff</strong></td>
<td>Those non-players who are responsible for or support game execution</td>
</tr>
<tr>
<td><strong>Wargame Participant / Player</strong></td>
<td>Those persons specifically appointed to play the game.</td>
</tr>
</tbody>
</table>