

Kazhdyy Gorod



An Introductory Matrix Game

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Introduction

Welcome to the city of Kazhdyy Gorod, with a population of about 250,000, in the former Soviet Republic of Belaria. The city is located close to the border with the Soviet Republic and the majority of the population speak Russian as their mother tongue. Following the dissolution of the Soviet Union in December 1991, Belaria seceded and declared independence in the mainly peaceful "January Revolution". Elections were held and the noted intellectual poet, Aleksei Tomasov, was declared President on a tide of popular support. Sadly in the years that followed, attempts to convert the economy to a more western capitalist model failed to bring about the benefits expected. Successor Presidents to the much loved Tomasov were perceived to be corrupt or incompetent and the 1998 Economic Crisis in the West has shaken the naïve popular assumptions of the strength of Western capitalism. Gross Domestic Product in Belaria, after initial improvement, has begun to decline and there is a general fall in the standard of living of most Belarians. Many young people are out of work, the ruling classes are seen to be corrupt and dominated by the minority ethnic Belarians (at least in the frontier cities) and there is widespread dissatisfaction leading to unrest, rioting and even armed clashes in cities on the Eastern border.

Aim

The aim of this game is to introduce players to the concept of "Matrix Games" in a "serious" setting. Matrix Games can be quite difficult to explain, but are much easier to play and introducing players to a Matrix Game in a restricted scenario with a small number of players is probably the best way to do it.

I have had a lot of people say that they would like to play a Matrix game - then immediately jump in and suggests "ISIS Crisis" (the current situation in Iraq and Syria) which is probably the most complex and difficult to understand scenario ever attempted as a Matrix game, so I usually suggest that you wouldn't want to start there – especially if you are not an experienced facilitator and you are going to try running the game yourself.

What are Matrix Games?

Matrix games are different to normal Wargames. In most of those games you will probably compare lists of statistics and peer at complicated books of rules containing someone else's idea about what things are important, before making a decision, checking that it is covered by the rules and rolling dice to see if you succeed. It can take a long time, look really complicated and can be very difficult to explain to a newcomer. Instead, in a Matrix Game you simply use words to describe why something should happen, the Facilitator or the players (or both) decide how likely it is, and you might roll a dice to see if it happens (but equally, in the face of a compelling argument, you might not need to). If you can say "This happens, for the following reasons..." you can play a Matrix Game.

The games themselves are not intended to be fiercely competitive, with obvious winners and losers. Instead they operate with the players working to generate a credible narrative. It is from examination of this narrative after the game that the players gain insights into the situation being portrayed. The player roles have objectives that will probably place them in conflict with other players, but it is perfectly possible for all of the players to achieve at least some of their objectives by the end of the game.

Where did they come from?

The Chris Engle Matrix Game was created in the USA by Chris Engle, and published in 1992. Chris wanted to create a system by which it was possible for a player to "role-play" anything from a single person to an entire country. Chris felt that previous numbers-ridden game designs essentially missed the point (and anyway were too complicated and boring). What he wanted was a system that could take into account anything the players thought was relevant, including intangible elements such as culture, beliefs, and perceptions of themselves. Taking as his starting point the work of the philosopher Emmanuel Kant, Chris began to develop a "matrix" of cue words that would form the framework for his "model". To this he added Georg Hegel's idea that argument and counter-argument (thesis and antithesis) lead to a synthesis or consensus of ideas. Thus the basic idea of the Matrix Game was formed. Over the years the actual "matrix" of cue words has been dropped, but the name has stuck. Like all good ideas, the Matrix Game is very simple in concept, but has huge potential in that it can be adapted to fit any game setting. Matrix Games have been used by the UK MOD with the Unmanned Underwater Vehicle capability, education of Consultants in UK MOD Procurement systems and in the preparation by HQ ARRC for the deployment into Bosnia. They have even been used by the US DOD, McGill University in Canada, the UK Air Warfare Centre and the Defence Academy of the UK, as well as numerous other organisations all over the world.

How to Play a Matrix Game

In a Matrix Game, actions are resolved by a structured sequence of logical "arguments". Each player takes turns to make an argument, with successful arguments advancing the game, and the player's position. There are a number of ways you can do this, depending on the size of the game and the purpose (each has their own strengths and weaknesses), but the one recommended for this game is:

The "Pros and Cons" System

In this system each argument is broken down into:

- **The active Players states: Something That Happens and a Number of Reasons Why it Might Happen (Pros).**
- **The other Players then state: A Number of Reasons Why it Might NOT Happen (if they can think of any) (Cons).**

The game needs a Facilitator to adjudicate on the arguments, but if you have a limited number of players, you can take it in turns to be the Facilitator – this works out much better than you might imagine and helps reinforce the idea that your role in the game might be in conflict with others, but you are all working together to generate a credible narrative.

For Example:

In Kazhdyy Gorod, the Police Chief might argue:



I shall break up the Protestors in the Old Industrial Zone with my Police officer, making the Protesters disperse (removing the counter). I can achieve this because:

- *I have a ready source of experienced Police officers who are not afraid of unarmed Protesters.*
- *The Police are equipped with light armoured vehicles so they can concentrate themselves near the Protesters quickly.*
- *This is Belaria, so the Police have far more freedom to crack a few heads, unlike their Western liberal counterparts, so are likely to be more effective.*
- *The Old Industrial Zone is away from the more densely populated parts of the city, so there is less room for the Protesters to hide and more room for them to disperse.*

This represents 4 x Pros – all of which have been accepted by the Facilitator so at this point the other players are invited to point out Cons:



- *The Old Industrial Zone is likely to have big industrial complexes (like the Cement Factory) with walls and security fences, unsuitable for the light armoured vehicles, where the Protesters will be hard to get at.*
- *The Old Industrial Zone is full of material that the Protestors could use to fight off the Police, like pieces of pipe and lumps of concrete.*

This represents 2 x Cons – but the Facilitator doesn't believe that the first reason really makes sense. The Protestors are more likely to be protesting outside the factory, over job losses and poor pay rather than occupying a working factory (which would require a successful argument to get past the security guards on the gate) – or if they were occupying a derelict site instead, who would care? Furthermore, if there are areas where the Protestors can run away to, the Police will have achieved their aim of dispersing them. Also the Old Industrial Zone is probably no more likely than anywhere else to have things the protestors could use to fight off the Police, who are in armoured vehicles, so the he decides the 2 stated Cons only amount to 1 proper Con and at this point there is a net result of +3 Pros.



The overall argument is then adjudicated by taking 2 x D6 with a base chance of 7 or more to succeed. Please note that by needing a 7 or more, the game will have a "narrative bias" because 7+ represents a 58% chance of success (all things being equal). So, in this case, with a total of 3 x Pros, the player will add 3 to the dice score (making it likely that he will succeed). Using only 2 x D6 is to encourage players to come up with a few good reasons, rather than a laundry list of lots of trivial ones.

Of course you could use 3 x D6 and try for a 10+ which is 50%, or you could also use percentage dice (as we do in the accompanying podcast) but if you do, you might want to limit the possible outcomes to the range 0%, 10%, 30%, 50%, 70%, 90% and 100% as this makes assigning a probability easier and people make their minds up more quickly if they aren't arguing about individual percentage points.

The advantage of this system is that you formalise the Pros and Cons of an argument and the role of the Facilitator becomes that of ensuring that the Pros and Cons carry equal weight - perhaps making compelling reasons worth two Pros and two or three weaker reasons against only worth one Con. You need to ensure you don't end up with a laundry list of trivial reasons, or the player re-stating a reason already accepted in a slightly different way in a desperate attempt to gain points.

One very useful benefit of the "Pros and Cons" system is that it provides reasons for failure should the dice roll not succeed. You can also more easily run the game with very knowledgeable players.

Notes about arguments

The important thing to remember in a Matrix game is that arguments can be made about anything that is relevant to the scenario. You can argue about your own troops or about the enemy, the existence of people, places, things or events, the weather, plague, disease or public opinion. This can seem a little odd to some players – "how can he argue about *my* troops?" – It is true, he can't give them orders, but he could argue that their morale and motivation is low because they haven't been paid in months. The only criteria for judgement is the likelihood of the event taking place. With a bit of imagination, common sense and rational thinking, it is possible to present persuasive arguments as to what should happen in any scenario - from traditional military campaigns to the strange world of defence procurement.

A common error in Matrix games is for a player to argue about another player being influenced by something or them agreeing to a course of action. The player is present and can simply be asked – so that a little time between turns to allow the players to negotiate with each other (in secret if necessary) makes for a better game. It might be that a player wants to argue that all parties come to negotiations – in which case let them state their case, then ask the other players if they want to come along. If they agree then the argument is an automatic success. Arguments are for *actions* – if the players want to negotiate with each other, they can do that in between turns.

Sometimes players get carried away with their arguments and try to do several different things. This isn't allowed in a Matrix game – you only get to do one action a turn because part of the insight comes from deciding what the highest priority is. The action itself could be large (like a general mobilisation of the Militia), but it must be a single action, so mobilising the Militia and providing the Police with heavy weapons would be two separate actions – which one do you want to do first?

When an argument succeeds it can remain in effect until another argument stops it. This means that the Protest Leader could argue, after a particularly successful event, that the Protestors' cause has inspired the youth of the city to join their movement, resulting in an additional Protester counter every turn. This would be less likely to succeed than an argument for a single additional counter, but if it did the Government would have a real problem and would most likely be forced to make an argument as to why the flood of recruits stops or they will soon be overwhelmed.

SECOND CHANCE

This chit permits you to re-roll the random number generator when deciding on the outcome of a Matrix Argument.

Single Use Only

Optional Rule: If your argument fails to succeed, you get a "Second Chance" chit. This is retained and can be used at a later stage in the game to re-roll your dice (if the score wasn't what you wanted). This helps balance the game for beginners and prevent an unlucky player getting placed at a big disadvantage early in the game and being demoralised.

Also if you are using the game educationally, you can ask a general knowledge questions relevant to the situation each turn – the first person to answer correctly gets the chit. You will need to be careful though, because a knowledgeable player can run up a string of chits and then always win that crucial roll by re-rolling over and over again...

If two arguments are in direct opposition ("This happens" - "No it doesn't") they represent a Logical Inconsistency since they cannot both be true. The earlier argument has already happened, so it is impossible for it not to have happened. The later player may argue that the event is reversed, but this tends to make for a poor narrative in the game and should be discouraged (see Playing Tips below).

Reasonable Assumptions and Established Facts

It is important that the Facilitator understands the difference between "reasonable assumptions" in the game, such as the proposition that well trained and equipped Special Forces soldiers are going to be much more effective in combat than untrained protestors; and "established facts" which are facts that have been specifically mentioned in the game briefings or have become established during play as the result of successful arguments.

The former can be deployed as supporting reasons (Pros and Cons), but the latter need to have been argued successfully in order for them to be included. Many inexperienced players will make vast all-encompassing arguments full of assumptions that are not reasonable. For example: It is not a reasonable assumption that an unarmed Protestor counter could fight off a trained Police counter. It is reasonable to assume that the Police are trained, armed, equipped and quite capable of dealing with a group of protestors (after all, that is their job). It would be necessary to argue for large number of Protestors, argue that they had weapons of some sort or argue that they were especially devoted or fanatical about their cause, for them to have a reasonable chance of beating the Police.

Of course, you might argue that your Protesters undergo special training, get access to firearms, or are simply fired up with enthusiasm by the powerful and impassioned speech from their leader, so they get a bonus. In this case you should mark the counter with a +1 or something similar (depending on the strength of the argument) to show their improved status.

Turn Length

Another important element to the game is working out how long each turn is supposed to represent. In this game it is "about a week" (a variable length of time from a few days to a couple of weeks), so arguments need to be made about things that could take place over that time. Thus, organising a raid by rebels is perfectly possible in that time, but preparation, reconnaissance, formulating a plan, rehearsals, movement, and the actual raid would make those timings tight – so perhaps a preparatory argument about preparation might make success more likely. Similarly, the Mayor asking the Capital for reinforcements may get a decision in a week (if it was really urgent), but actually identifying the troops, mobilising them (with the appropriate notice to move), giving them orders, moving them, finding them accommodation, fuel, rations, equipment, issuing them with equipment, ammunition, etc., means that it would be extremely unlikely that they would arrive in the same week, so the outcome of the successful argument might merely be a communication saying optimistically: "They are on their way!".

End of Turn "Consequence Management"

At the end of each game turn (a cycle of player arguments) the Facilitator should go over those successful and failed arguments that have generate new "established facts" in the game. They should also review situations that are on-going, such as the generation of refugees from fighting or the arrival of new recruits to a popular cause. If these have not been countered during the turn by a successful argument, the Facilitator should make them continue until someone does make an argument to stop them.

It might also be that some of the arguments, when considered as a whole, will have additional or even unintended consequences that are reasonable to expect to arise. It is therefore worth taking time to consider the consequences of the players' arguments beyond their immediate results. Invite the players to consider the events of the turn, suggest possible consequences and then agree on the most likely that should be taken forward to the next turn.

In some games it is worthwhile having an individual (if you have one to spare) who is particularly experienced about the sort of subject that the matrix game is focussed on, make “the law of unintended consequences” arguments at the end of a turn. This can help to formalise the process and provide good examples to widen the players’ understanding of the consequences of their actions.

Inter-Turn Negotiations

As we have already said, the actual “arguments” of the Matrix Game are about actions that take place in the course of the game. In most cases, the actors represented by the players may well want to engage in face to face negotiation with each other in an effort to strike a deal. Players attempting to make Arguments saying that they want to “influence the Mayor” are essentially pointless because the Mayor is represented by another player. If they want to strike a deal, then they had better head off to a quiet corner of the room and try a little influence in real life. Of course if a player wants to make an argument about a position or group not represented by another player, they are welcome to do so in the normal way.

In analytical games it is important to record the essential elements of these discussions. What was suggested? Was agreement reached and why? If no agreement was reached what were the private and public reasons why the negotiations were unsuccessful? Analysis of these “off-table” negotiations and the reasons the players felt why they were successful or failures can provide important insights.

Elections

In this game it is highly likely that at some stage it will be suggested that elections take place. Belaria has, of course, held elections in the past following the fall of communism, so they are familiar events, but they would still take some time to organise. As a minimum I would suggest that you could not ask for an election and get the results in a single turn (of about a week). The minimum time would probably be two weeks for a snap election and that would give players at least one turn of arguments to make between the announcement and voting. I suggest that you run the election by giving the players a vote each (meaning that the voting is, at least on the face of it, balanced between those wanting to overthrow the current regime and those anxious to remain in power). I would then add to those votes the “popular standing” in which the player character and their supporters are held among the general populace. So, each time the players argue for an action that increases their support or popularity, you should record the advantage they have gained by marking their playing piece with plusses and minuses (so the other players are aware of their general standing as well).

This means that during the game some players’ popularity will go down as well as up and there may well be a good deal of off-table negotiations taking place before the actual votes are cast.

Secret arguments

There will be some cases where you want to hide from the other players the thing you want to argue about. It could be that you have booby trapped a piece of equipment you think your opponent will use, or that you have swapped the vital blueprints for a set of fake ones in case the safe is broken into. In this case you simply write down your argument on a piece of paper, and present it to the Facilitator announcing to the other players that you are making a secret argument. The Facilitator will make a judgment and you will roll the dice normally, but the other players have no idea what it is about.

You should be careful, however, that the players don't make too many secret arguments. This can ruin the game's atmosphere and reduce the focus, so that the game drags on unnecessarily. They also depend on the judgement of the Facilitator as to their success or failure, rather than being decided on a consensual basis from the participants. They must only be permitted when they refer to quite specific things or events. An argument about gathering information from a spy, in most games, will be quite a generic argument and should be argued openly. Similarly Arguing about the placement of an IED to catch forces moving down a route should be made openly as the results will take effect the same turn. It is only really for secret things you need to establish several turn in advance.

You may want to limit the players to only a single secret argument per game.

Measures of Success

In many arguments success or failure may not be a simple "Yes" or "No" proposition. There might well be a sliding scale of success or failure in terms of numbers or the quality of the outcome, which is usually represented by the score on the dice. If you needed a 7+ to succeed and rolled a double-six (12), this can indicate an especially notable success. So if in the previous argument the Rebels succeeded in stealing weapons from the Militia armoury and rolled a double-six, they might steal rifles, machine guns and a few anti-tank rockets. If they only just managed to roll a 7, then they might only take some rifles. Conversely, if they rolled a double-one, it could represent a disastrous failure where CCTV footage is leaked to the media of Rebels hammering impotently on the steel door of the armoury until they finally leave, empty handed and humiliated.

Killing arguments

It occasionally arises in Matrix Games where one of the players argues that something happens to kill off one of the other player characters. This is, of course, permitted as you can argue about almost anything in a Matrix Game, and it will be assessed like any other argument. It may not be terribly likely to succeed, however, as you need to consider real world examples of individuals in those roles being killed, but it is not impossible - nor should it be.

If a character is killed off in a game, however, it does not prevent the player from continuing to make arguments or that another Mayor is appointed or another Protestor steps into the leadership position.

Levels of Protection and Hidden Things

At the start of a game there are certain things that are not readily accessible to some of the player characters. For example, in a Cyber-Security Game the secret plans for a new submarine would be heavily protected. Equally, in an X-Files game, the location of the secret government base would be carefully concealed.

Things that are hidden or secret require a successful argument merely to find them. Things that are protected will require successful arguments to overcome the different levels of protection. A secret government base may declared by the Facilitator to have 3 levels of protection: Its hidden location, its boundary fence, and the security guards, all of which must be overcome by successful arguments before the base can be penetrated.

As a rule of thumb, nothing should have more than 3 levels of protection as it will simply take too long and dominate the game to the exclusion of everything else.

Big Projects

Depending on the level of the game, some actions and events represent such a large investment in time and effort that they require multiple arguments in order to bring them to fruition. As a rule of thumb, a Big Project should also take no more than 3 successful arguments (like protected and hidden things above); otherwise the game is focussed too much on this single thing. You should also remember the principal that once an argument has started an ongoing action, it will continue until another argument stops it. In Kazhdyy Gorod, if the Major wants to re-open the abandoned factory the facilitator may state that he will need to secure the funds, carry out the work to re-commission the factory machinery, and finally recruit suitable trained workers, in order to succeed.

Number of Players

Matrix Games are best played with an even number of players as it is the action and counter-action running through the game that generates the insights. If you have an odd number, the extra person should be the facilitator. I would recommend you try to have at least 4 players, but it is possible with only 2 and an Facilitator. The game works best with 6 players and a facilitator.

More information

More information and examples of recreational Matrix Games can be found at: <http://www.mapsyms.com/wdmatrix.html>.

The original Chris Engle Matrix Game site is here: <http://hamsterpress.net/>.

A very good website that has developed the Pros and Cons system: "The Open Ended Machine" is here: <http://theopenendedmachine.blogspot.co.uk/>.

The graphics for the counters came from marketing images of the Rocketbox library of 3D computer models at: <http://www.rocketbox-libraries.com/>.

Matrix Game Methodology Support to V2010 Olympic Marine Security Planners by Antony Zegers at: <http://www.professionalwargaming.co.uk/MatrixGameOlympics.pdf>. This is a report by DRDC CORA dated 2011 about the use of Matrix Games.

International C2 Journal at: <http://www.professionalwargaming.co.uk/MatrixGameC2Journal.pdf>. Composing Effective Environments for Concept Exploration in a Multi-Agency Context by Helen Mitchard and Simon Ng (Defence Science and Technology Organisation, AUS). This is another report on the use of Matrix Game techniques

There has been quite a lot of discussion about Matrix games on the "PAXsims" Blog that is worth reading: <https://paxsims.wordpress.com/?s=Matrix+Game>

Professor Rex Brynen was also interviewed by the GrogHeads "GrogCast" Podcast, a copy of what he said about Matrix Games is here: <http://grogheads.com/?podcast=grogcast-season-2-episode-12> with the discussion about Matrix Games starting at the 31 minute mark.



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In Kazhdyy Gorod there are protests in the street in some of the poorer parts of the city and journalists have been giving them much publicity. The Mayor has been debating whether to get the Police to crack down hard to prevent things getting out of control and the Militia Commander has been quietly reviewing security at the base in the light of rumours that there are armed rebel troops in the forest to the East of town...

Roles:

Order of Play:

- The Protest leader, Mitislav Radimir.
- The Chief of Police Ratgo Sisimiovich (only play if you have enough players).
- The Journalist Anna Mittoilev (only play if you have enough players).
- The Mayor, Svorkin Papovich.
- The Rebel leader, Stanislav Yuri.
- The Militia Commander Tolya Markovich.

Scales:

- Each turn is "about a week", a "Protest" counter is about 100-200 civilians, a Police or Militia Counter is about 50 men.