Twilight Struggle AI

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Γ. If final action round of turn in which AI holds a card, and AI lacks Required Military Operations only use steps... (Ignore space race)
1. Coup in Italy
4. Coup in non-European Battleground
6. Coup in non-Battleground

> If AI loses control of all battleground countries in Europe, use steps 1, 2, 3, 8 (at 8 playing all qualifying events that take place in Europe only), and 9(Europe only/no D20)

Δ. If a 1 Ops card that meets step 8 criteria, event is played

> If any event gives AI victory, play event

> If *Red Scare/Purge* is in effect against AI, any Step 8 event that does not contain the use of Ops is played

1. Coup in Italy with a 3+ Ops Card

2. Place influence in uncontrolled Battleground countries in Europe
A. In the highest level unc. bat. countries *that can be controlled this action turn*, starting with the highest, one at a time, until each is controlled.
B. In the highest level unc. bat. country.
*Country adjacent to enemy/your superpower(Poland) has higher priority within sequence

> "within sequence" means all above criteria are to be met first, then ties get broken by said consideration

3. Realign European Battleground Countries
In Battleground countries which have the highest die modifier bonus down to -1 penalty (within sequence, the highest level stability countries first). No more than -1 penalty. No realignment in a country which AI has influence without a die bonus.

> "penalty" for AI, relatively speaking; It's actually a +1 for your roll.

*Country adjacent to enemy/your superpower(Poland) has higher priority within sequence

> If *Iran-Contra* has been played against AI, no realignments

4. Coup in a non-European Battleground country
Only if lacking in Required Military Operations and have a 3+ Ops card.
In a level 2 country, unless with 5 Ops card(China card in Asia), then a level 3 country.

> Even if holding a 2 Ops card and lacking RMO, use step 4a

A. Asia (Roll die; if 5-6 AI uses *China* card at this point if there are any level 3 countries)

> If AI is US and *Formosan Resolution* is in play, ignore parenthetical action in 4a.

B. Middle East
C. South America
D. Africa
E. Central America

> If *Latin American Death Squads* is in play for AI, and coup possible in SA and CA, roll a D6; If 3-6 ignore "only if lacking in RMO" and use only C and E (also remember that a 4 card becomes a 5 if used in SA or CA and so can be used on a level 3; same with a 2 card becoming a 3).

*Country adjacent to enemy/your superpower(N. Korea/Mexico) has higher priority within sequence

5. Place influence in non-European uncontrolled Battleground countries

A. In the highest level unc. bat. countries *that can be controlled this action turn*, in:

i. Asia

ii. Middle East

iii. South America

iv. Africa

v. Central America

starting with the highest, one at a time, until each is controlled

B. In the highest level unc. bat. country following the same criteria as A.

*Country adjacent to enemy/your superpower has higher priority within sequence(Japan/N. Korea/Cuba/Mexico)

6. Coup in a non-Battleground country

Only If lacking Required Military Operations, coup in:

A. Europe

B. Asia

C. Middle East

D. South America

E. Africa

F. Central America

If *Yuri and Samantha* is in play against AI, AI only plays a 3+ Ops, not a 1-2 Ops

If on final action round, the AI has a 1-2 Ops card and still needs RMO and there are no level 1 countries that can be couped, then coup against a level 2; if no 2, then a level 3.

If a 5 Ops card(*China* card in Asia) then a level 3 country. If a 3-4 Ops card, then a level 2 country. If a 1-2 ops card, then a level 1 country.

*Country adjacent to enemy/your superpower has higher priority within sequence(Afghanistan).

7. Realign in a controlled non-European battleground country

Using Step 3's criteria. Not in Level 1-2 countries.

8. Play event

If card is unassociated or associated with AI's side, is playable, and the event at least possibly favors AI (for example, a war event, in which die roll penalties are such that the AI cannot win the war, event is not played), unless victory points are at stake(a'la *Summit*), then it must be *more* favorable to the AI, than to you(ex: +2 die bonus against your +1).

Roll a D6; If a 4-6 play the event.

Adding influence to a country already controlled by AI, or giving RMO beyond current defcon level is not favorable

If game is in late war, the card meets the previous conditions, and the event offers the AI victory points, then play the event on a 3-6 instead of 4-6.

Wargames is only played if it causes Victory for AI(obviously).

If *Containment* or *Brezhnev Doctrine* are in effect for AI, don't play any event of a card that is 1-3 ops unless the event also gives 1-3 ops, or unless it causes AI victory.

9. Place influence in non-Battleground countries or Realign.
First roll a D20 to see what Region the action will take place in:
In Early War: Europe 1-7, Asia 8-13, Middle East 14-17, South America 18, Africa 19, Central America 20.
In Mid/Late War: Europe 1-5, Asia 6-9, Middle East 10-13, South America 14-16, Africa 17-18, Central America 19-20.
First Realign
Use **Step 3**'s criteria. Not in level 1-2 countries.
If Realign not possible, Place Influence:
A. In uncontrolled countries adjacent to enemy/your superpower.
B. Randomly in uncontrolled countries. Assign partial influence countries twice as much on die/dice as countries which have no AI influence. Roll as many times as there are Ops; do not roll once and place all influence there. However all Ops will be placed in the same region which was already rolled.
If neither are possible in that region, place in the first available country in the Europe-Central America hierarchy(do not re-roll the D20).

Changes to Sequence of Play
Deal AI's hand face-down in a pile and do not inspect the cards unless instructed to look at opponents cards by an event. Give the AI one less card than normal, then after you have committed your event, draw the AI's headline phase card straight from the deck; if the card drawn for AI does not meet the criteria of Step 8, put the card back into the center of the deck face-down (do not discard), and redraw from the top until one meets the Step 8 criteria. During the action rounds, turn over the top card of the AI's face-down pile. If the card is associated with your side inspect the text of the card; if the card is not playable, or the event does not potentially help you, then AI uses the card. If the card does favor you, then the card is placed face-up in a face-up pile of cards to be used later for space race or to be used as a last resort after all other cards have been used. If AI has the *China* card, *China* card is only to be used (unless 5-6 is rolled in Step 4A) after all cards that cannot help you have been played, and after the space race has been exercised to the greatest extent, but before AI starts playing cards that are helpful to you. For space race, the AI chooses from all the cards that favor you, which meet the space race Ops requirement.(See Page 5's Discard Ability for space race burning criteria) After using the space race, and then the *China* card, the leftover cards that favor you, will be chosen randomly for use.

Then roll D6 to Determine if a card's event associated with you will happen before, or after the AI acts(ex. 1-3 before, 4-6 after). At the end of turn, the Discard Ability to discard one card will be exercised(see page 5).

> **Exception:** *Doomsday cards* are cards that should be burned on space race first, and discarded by the *discard ability* first; they are any card that is you-associated and has an event which allows Defcon to degrade or gives you the ability/opportunity to coup.

AI always obeys Defcon track and never causes Thermonuclear War by coup or event if AI is the "*Phasing Player*", but **always** causes it if AI is not. Anytime all Criteria have been met in a given category and there are still possibilities (such as placing influence in multiple locations), or a card event indicates multiple possibilities which all meet Step 8 criteria, assign the possibilities to a D6, D12, or a D20. Results not assigned cause re-roll(no rounding). When placing influence(in any step), and rolling for the remaining competing possibilities, assign twice as many die numbers for countries that have partial influence as those which have no AI influence (as already mentioned in Step 8). But the opposite is true for realignments; realignments are better if there is no AI influence. And Coups get more die if a country is uncontrolled. Scoring cards are always played by AI as soon they are revealed. Coups are not done in countries AI controls.

If conducting realignments or placing influence during any of the 9 steps, the same action is no longer possible in that region, conduct the same type of operation using the Europe-Central America Hierarchy.

Events Resulting in...
Coup: Follow *Step 4* except include Europe as most important in the list.
Realignment: Follow Steps 3, 7, and 9's realignment guidelines(use Europe-Central America hierarchy\no D20).
Place influence: Follow Step 2, Step 5, and Step 9(use Europe-Central America hierarchy\no D20), placing influence in controlled countries as well, first, in each step if it can do so at no penalty(because of event).
Ops given for any type of action: Use AI steps from beginning as normal.
AI events that Remove your influence do so by removing what "Place Influence" above, would add. Except first apply the limitation of "countries adjacent to AI influence" to all criteria.
AI events that take a non-random card from discard pile or your hand take: If for you to discard: The highest value card; you-associated first, then non-associated. Only discarding AI-associated if no other card types. If from the discard for AI use(*Star Wars\Salt Negotiations)*:Highest value card; AI-associated, then non-Associated; if discard pile only has you-associated, then card will be played by AI as Ops, not event(of course unless you played the event then AI must take a card; benign ones first, then randomly).

Space Race Advantages for AI
Man in Earth Orbit: You must play a card that favors the AI during your part of the headline phase.
Eagle/Bear has Landed: Once all AI cards have been turned over and only the ones that favor you remain, but before any have been played on space race and thus also before the *China* card has been played, Return 1 random card to the center of the deck(do not discard) and replace it with a fresh card that does not favor you from the deck(again returning other cards that favor you to the center of the deck as well).
Space Station: May take 8 Action Rounds (this part remains unchanged), and also gets to exchange a card the same way Eagle/Bear has Landed does; Effect stacks with Eagle/Bear has Landed.
AI's special abilities are still canceled when you reach the same given box as usual.
Discard Ability
Throughout the whole game, at the end of the turn, AI discards one card (the default effect of *Eagle/Bear has Landed*) that does not meet Step 8 criteria(all useful cards are kept by AI and not discarded). *Doomsday cards* have highest priority, then cards that will give you more than 1 VP, then Cards that can help you, then you-associated cards. Also use this priority for space race burning.

"Ask Not...": AI discards all you-associated cards(even benign you-associated ones)
Brush War: Follow Europe-CenAm Priority, looking in all regions for a level 2 Battleground with no die penalty, then with -1. Then instead of looking for -2, look for the a level 1 battleground with no penalty, then -1, then level 2 non-battleground with no penalty etc...
Cambridge Five: The AI, if possible, places influence in the most valuable region, in which AI does not have any influence in a battleground country. Then follow standard placement criteria.
Che: Follow normal region value, and level priority (of course).
Chernobyl: Uses the D20 roll of Step 9 to determine region.
CIA: If you are US and play CIA card against USSR AI, then every time you look at the hand of AI, shuffle the AI hand, and place back face-down before AI plays the next card. This way you will know what the AI holds, without knowing what he will play next. If AI is US, then add 1 Op to the text(not the card). Do the same for Soviet playing *Lone Gunman*.
Cuban Missile Crisis: If played against AI, AI will not Coup until end of turn. AI will not withdraw from Cuba or Turkey to stop it.

De-Stalinization: Roll D20. Transfer influence from the lowest level non-battleground countries; transfer the influence to the highest level battleground country in the most valuable region in which the AI does not have any influence in a battleground country.

Flower Power: If played against US AI, war cards are to be considered by AI as cards that favor you, and thus are to be played by AI as a last resort (they will be used on space race and discarded).

Grain Sales to Soviets: Play event if the card meets Step 8 criteria; otherwise return it.

Independent Reds: AI follows normal placement rules, except only choosing a you-controlled country. If none, AI chooses not to play event.

Nuclear Subs: As you might guess, during the turn this is played for AI, coups can be done done in battleground countries during Defcon 2 unlike normal.(unless *Cuban Missile Crisis* is in effect)

Our Man in Tehran: AI discards all cards that are you-associated.

Puppet Governments: If possible, AI places influence in the most valuable region, in which AI does not have any influence in a battleground country. Then follow standard placement criteria and the card's limitation.

Quagmire: If it is played against the US AI, then keep turning over cards, until you find a you-associated card to discard. Once you find one and discard it, shuffle all AI cards and put them face down again. Same rules for **Bear Trap** and USSR AI.

Red Scare/Purge: While in effect against AI, all cards that meet Step 8's Event criteria, and also do not result in the playing of any Ops, are played instead of any of the steps. Similarly, if a card gives -1 for all realignments (**Iran-Contra**) to the AI, then no realignments will be chosen by the AI, either by text or by Ops. Coups however will always be done to avoid RMO penalty, but if -1 penalty against coup is in effect(**death squads**), then cards must be 4+ for a level 2 country, while 1-3 cards will be for level 1 countries.

UN Intervention: Lay it in the face-up pile until all cards have been flipped over, then, before AI would play the China card, choose the highest value card that favors you to pair it with and use.

War Cards: If there are multiple choices(Indo-Pakistani War), then the AI Chooses the side which gives the greatest bonus for winning against a country it doesn't yet control, then the highest level country.

Wargames: event is automatically used by AI if it causes AI victory.

Starting AI influence in Europe:
US: 4 in West Germany, 3 in France
USSR: 3 in Poland, 3 in Yugoslavia

A note from the creator of this AI:
When I discovered the new GMT game, Labyrinth, I saw that it had an AI for single-player games. The idea quickly emerged that the same would be possible for Twilight Struggle, and perhaps with even more simplicity. Though I started with a flow chart, I ended up using written steps; and while visually, this AI may seem more complex(6 pages to Labyrinth's 1 flow chart), I believe the steps and instructions laid down in this AI will be easier to memorize and more immediately understood as representing the principles of generally correct play.

This brings up another possible use for this AI: as a set of educational guidelines for new, or just poor quality players (of course taking out the unfair [so-to-speak] advantages[discard ability and space race perks]). These guidelines will turn a beginning player into an intermediate player. But understand, that advanced play will not be achieved by strict adherence to this AI. Indeed to write an advanced level AI would be far too complicated to follow for the reader(even for me to keep track of what I wrote!). To simulate playing against an advanced opponent instead of an intermediate one, I artificially made the opponent more difficult to play against using the aforementioned AI cheats. If one finds the AI to be too difficult for them to deal with, the AI cheats may be disregarded until the player's ability increases to meet the challenge.

Speaking of simplicity, before releasing this, I decided to cut out some more complicated elements to keep this AI simple, but decided to leave in some elements that still posed a danger of making it overly-complex for some users. I will admit, that for the sake of simplicity, I was very close to cutting out the D20 region-selection in Step 9 in favor of the Europe-Central America hierarchy. Players may feel free to make that substitution themselves. For the time being, I left it in, since waiting until all possible non-battleground countries have been realigned and filled with influence, may leave South America, Africa, and Central America, lacking in influence, so much so, that influence cannot be placed in the battleground countries there, since there is no influence in the adjacent non-battlegrounds. Since the numbers are calibrated to favor the more important regions, this still gives them priority, while allowing for the possibility of placement in those regions possible much sooner in the game. If one feels overwhelmed by the number of extra stipulations in the small boxes with regard to cards(like the *Red Scare/Purge* note in step Δ on page 1 for example), such a person may ignore them(though this will make the AI less intelligent). I will not bother you with the things I did cut out of the AI.

I have found great joy in the midst of solitude by playing Twilight Struggle with this AI and I hope it will function the same way for you.

Best wishes,
-Jonathan Fanno, AI creator