

ANALYSIS: *EXPAND THE FRONT!*

Expand the Front! is a World War 2 strategy game focused on the Pacific War between America and Japan. Controlling supplies is a large part of the game and players must make sure their front lines have enough supplies to conduct attacks and keep expanding their territory. Every turn they must decide what to build, choosing how much to devote towards supplies and how much towards new units. They must also take into account the time it will take for new units to reach the front lines.

Combat between units reveals their strengths. Each unit is most useful in certain situations and has several levers along which they have been balanced, including cost, attack strength, counterattack strength, and supply consumption.

ECONOMICS

In *Expand the Front!*, players are given a static number of resources to play with each turn. This value does not change as the game carries on. This was done for two reasons: to avoid adding unneeded complexity, and to avoid creating a tipping point for the winning player to gain momentum.

Therefore, players are focusing on determining the value of their options at their given moment. In the 'Replenishment' phase, during which they buy units, they must decide not just what is needed at the moment, but what will be needed by the time it can come into play. The most basic dichotomy is between supplies and units. Supplies provide the energy for assaults; units do the fighting. Without supplies, units can still defend. However, combat is weighted in the attacker's favor, so a player attempting to only hold territory will find themselves in losing battles.

The time it takes for units to arrive to the front lines is a major factor in their usefulness. Because units have specific counters, a canny player can counter a homogeneous force. But it may take four turns for newly-built units to arrive at the front lines...during which time the opponent may have dispersed his or her forces. Players are constantly playing this battle against each other, re-evaluating the worth of specific items against what the other is likely to do in response. Though there is no hidden information in the game, the luck of the dice is constantly mucking plans, so the system is solvable only by finding 'best practices'.

The value of the islands themselves can come into play. As each island has a certain number of entry points to it via the important supply routes, it is susceptible to different levels. Player can hold chokepoints which control access to their rear territories. Their opponent can always go through the ocean and around, but as this movement is slower their attack has more time to be anticipated and countered by a newly-created force. Yet it is possible to 'leapfrog' islands as was done in the real Pacific War. A player who can take chokepoint islands and cut off other islands from supplies can predict the threat from those units left behind. While they do not

starve as they would in real life, the number of attacks they have available is directly related to their supplies and their threat can be estimated and better planned for. If they try and escape through direct ocean travel, their slow movement gives the other player opportunity to cut them off.

BALANCE

Expand the Front! aims to provide both a competitive and balanced strategy game and an abstractly realistic model of the Pacific War. As such, it distributes resources asymmetrically but balances these factors out with several other realistic compensations.

Every turn, Japan gets 8 Production versus America's 10. It ensures that Japan must finish its game quickly or be annihilated – and acts as a limiter on how long the game can run, for America will steadily build up an advantage. To balance against this limitation, Japan begins with several turns worth of units and can place them fairly far out. America starts with nothing. Japan can therefore quickly consolidate and push towards their victory conditions, which are much closer than America's – but they do not begin with any Assault units or Bombers. The American player can easily get a defensible position at Hawaii and Midway and push from there if they can achieve momentum.

America is also farther away from the front lines. Their lone production center in California is two and a half turns away from Hawaii, the real eastern edge of the map. This means that the American player generally has an extra two or three turns of lag before their units enter the game. This production lag makes them less effective at throwing up quick counters. If the American is successfully pushing the Japanese back to Tokyo, the Japanese player will be more able to turn the tables around by smartly responding to enemy forces.

The players also have different victory conditions. Japan's target is within reach from the beginning of the game but will quickly be fortified. America's target will require them to beat most of Japan's forces to get close to Japan proper. It's a victory condition that is derived from the real world: it models Japan's strategy of Pacific shields compared to America's total victory strategy. Therefore, the game is set up to allow each of these outcomes to be roughly equally likely.

The supply routes between islands serve as a geographical balancing element to the game. Points were crafted to make chokepoints valuable and important entrance routes navigable by several means. All islands have at least two supply route connections; these tend to make the best chokepoints. But the ones near Japan are close enough by each other that a player can successfully move through open ocean, increasing their danger by rendering their target uncertain. Islands were moved slightly (and certainly increased in size) to put them in better spots for game balancing, to push away dead space and make more interesting decisions for attacks.

Units are balanced against each other in a transitive web. Broadly, Assault units beat Defense, Defense units beat Bombers, Bombers beat Assault units and Ships, and Ships beat an army in

transit. The relationships are situational, however, and any unit has a chance against another given the right circumstances.

To balance these units, I had several levers. The most straightforward was the combat resolution – a matrix grid of rolls needed to destroy a given target unit given an attacking unit. It allowed direct control of combat results, from which the intransitive relationship could have been forced if I wanted it to. But it's not that cut-and-dry, so the table does not give overriding advantages for unit combinations on its own. The exception is anything attacking bombers, but that's because generally attacks against bombers only happen when they are resting on an airfield (only Defense units can counterattack against them).

Said counterattack matrix shows which units get a free attack back when they are attacked. As a global rule, units counterattack as their attack minus one, giving a seventeen percent less chance of success. This is counterbalanced by the fact that counterattacking does not cost supplies, rendering it a very efficient method of attack. It also gives a weaker player more of a stand-up chance, unless the dominant player is being really smart and using bombers.

The movement rate of units is something that is exposed and possible to change but has not been messed with yet – all units move at a speed of one through ocean or land and two if on a supply route. Tweaking this will prove interesting, but it was best to limit my tweaks to a smaller set of variables given time restrictions limited the amount of playtesting that could be accomplished.

The requirement that attackers consume supplies puts a useful damper on a dominant attack. Because a player must ensure a steady stream of supplies is moving to all their fronts, any given push is unlikely to have a dominant amount of supplies built with it, at least not without compromising attack strength. And the more successful a series of attacks is, the more supplies it uses. It prevents players from blitzing past several lines of defense. There's no capturing enemy supplies – for the moment. It may be an interesting variant to try.

Another considered variation is that of chance cards drawn after successful island captures, which would give random supplies, units, or even beneficial combat effects. These were dropped for two reasons: one, it was feared they would advantage a player currently winning already, and two, the concept of 'island control' is somewhat fuzzy in the simple way the rules are written. Adding mechanics must always be balanced against the new rules it creates.

RESOURCES

One main resource moves through the economy – the production unit, which is responsible for purchasing units and supplies. But through it is expressed the supplies, which act as a walking, mortal resource.

Supplies must be bought with the same resource pool as units. This leads the player to determine for themselves how much use they will get out of each unit. A player hoping to do very little attacking will look at buying more units and stationing them in advantageous positions. A player who wishes to wage an assault would do well to stock up on supplies. But assaults are

necessarily fragile things, for the units which are required for assaults are vulnerable in water. A player with a large fleet of Ships can destroy them en route to battle or simply disrupt the supplies heading towards the front, killing the forward momentum the recipient desired.

Supplies are functionally similar to rice in the game *Shogun* – they are expended to perform aggressive actions. However, supplies need to make it to the front lines. Their continual production and mobility leads to the sight of supply lines snaking across the board (a goal of the project from conception). Supplies are subject to sabotage by the enemy – a Bomber or Ship can attack them if they are in the ocean, and anything can easily destroy them if left on an island. They are exposed to the influences of the game, and players skilled at combat can even out a production disadvantage through smart application of supply chain disruption using guerilla tactics.

Supplies are consumed at a constant rate (excepting the expensive Bombers), though the units using them have different attack spreads. This is a more interesting system than one perfectly balanced because it allows room for players to learn better ways to play the game. Attacking with a Defense unit is normally a poor use of resources, but it can of course be the right move in a certain situation.

CONCLUSION

A strategy game is several parts, moving simultaneously and impacting each other. The economy of the game, affecting the values of items and actions, affects how players use the game's resources, whether those be explicitly stated or implicit to the rules and their expression. And the balance must hold through it all.

The game's economy uses static throughput but with variable unit values – just because a Bomber always costs five doesn't mean that price (in terms of opportunity costs) is always the same.

As a two-player game, *Expand the Front!* lacks some of the automatic stabilization a multiplayer game can bring through opportunistic teamwork. And because the game uses one primary resource, whose distribution is static throughout, it lacks the stabilizer of a variable economy and player barter. Therefore, balance must be built in.

This was achieved through the unit interactions and design, the starting position of the players, and the differing victory conditions. And through this balance it achieves an abstract model of the real thing, adding a level of engagement.

The single resource, production, becomes the derived resource, Supplies, and there turns into an interesting gameplay element. A smart player will shift their production and targets based on the conditions of the war as it changes.

And if a player is thinking smart, well, they're certainly playing a strategy game the way it was meant to be played.