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Conceptual Design for a Multiplayer Security Force Assistance Strategy Game

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Prepared for the U.S. Africa Command

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Preface

In 2017, U.S. Africa Command (AFRICOM) asked RAND to design a bespoke game to explore alternative security force assistance (SFA) strategies. This report documents the game design developed as part of this effort and includes a description of the game design, as well as a summary of the model of SFA that underpinned the game. This report will be of interest to game designers seeking gaming approaches to evaluate alternative strategies. It will also be of interest to experts in SFA, who may find this approach valuable for their own research.

This research was sponsored by AFRICOM and conducted within the International Security and Defense Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

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Summary

The United States routinely provides security force assistance (SFA) to strengthen foreign partners in support of broad U.S. national security goals, such as counterterrorism. Such assistance allows the United States to pursue certain objectives without large-scale commitments of U.S. forces overseas. In an era of limited resources and wariness about the value of large-scale U.S. interventions, policymakers have looked to SFA as a cost-limiting strategy.

To support and strengthen such efforts, the RAND Corporation designed a strategy game that allows participants to explore the pros and cons of different SFA strategies, in different countries, under different conditions. The initial run of the game focused on Libya, but the game engine is applicable to any other country or region in which the United States, its allies, or its partners seek to develop robust SFA policies.

To play the game, teams are allocated resources in the form of coins, which they distribute across a range of potential recipients of assistance in a target country. They are able to choose various types of operational capabilities in so doing. After they have allocated their coins, each play is adjudicated through a mixed method involving both stochastic rules and subject-matter expert decisions to determine the outcome of each investment the team makes. The method of adjudication is grounded in the best available knowledge about what factors have affected SFA programs negatively or positively in the past. Adjudication of strategic-level outcomes is based on expert opinion and takes place once the outcomes of specific investments have been determined.

The game is designed to support play over different lengths of time and for repeat play, so teams can explore multiple strategies under different conditions and compare the resulting decisions. For example, teams can play multiple moves, sustaining or varying their strategy over time to see how a particular SFA program might evolve over a long period. In addition, they can reset the game and attempt different strategies. The underlying conditions in which the assistance is taking place can also be altered to explore the effects of different strategies in different future contexts. Finally, multiple teams can play in parallel, competing to develop the best strategy for a given country under a given set of conditions.

The basic game engine can be applied to any situation in which SFA is under consideration, be it a particular country or a broader region. It allows for investments by the United States and investments by other countries, including competitors who may have different objectives in the host nation.

We hope this tool will be useful for the U.S. SFA policy community and its related communities in allied and partner countries.

Acknowledgments

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Abbreviations

DoD	U.S. Department of Defense
DoS	U.S. Department of State
EU	European Union
GCC	geographic combatant command
SFA	security force assistance
USAID	U.S. Agency for International Development

1. Introduction

The United States routinely provides security force assistance (SFA) to strengthen foreign partners in support of broad U.S. national security goals, such as counterterrorism. Major programs to build up military forces have been implemented in Iraq and Afghanistan, for example; there have been medium-sized efforts in such countries as Somalia and smaller efforts across Africa, Asia, Latin America, Europe, and the Middle East. Such assistance programs are often intended to allow the United States to pursue national security objectives without large-scale commitments of U.S. forces overseas. In an era of limited resources and wariness about the value of large-scale U.S. interventions, policymakers have increasingly looked to SFA as a cost-limiting strategy.

SFA programs are often implemented, however, without an overarching strategic logic to connect their component parts and to link these parts clearly to a desired strategic end state.[1] For example, the United States might seek to develop an expensive tactical-air capability for a partner without investing sufficiently in the underlying logistics and command and control necessary to make the tactical-air capability sustainable and effective. More broadly, it might choose to invest in a country where political or economic factors negatively affect the chances of success in certain areas of potential SFA.

Indeed, the factors affecting the success or failure of an SFA program can be dizzyingly complex. To support and strengthen such efforts, the RAND Corporation designed a strategy game to help SFA planners think systematically about the pros and cons of different SFA strategies so that they can master the inherent complexity of their endeavor and minimize the chances of error in specific cases.

The game allows participants to develop SFA strategies under given resource constraints and then witness how effective these strategies turn out to be in achieving broader operational and strategic goals. The outcomes of the game are not predictive but do illustrate common patterns of behavior based on historical SFA outcomes. In the prototype game, for example, three teams developed and then played three different strategies for SFA in three different future Libyan environments.

This report describes this game and its potential future applications. It is divided into three chapters. The first discusses the design of the game in greater detail. The second documents the model of SFA that underpins the game design, particularly the adjudication process. The third chapter discusses the limitations of the game, identifies recommendations for future extensions

[1] See, for example, Christopher Paul, Colin P. Clarke, Beth Grill, Stephanie Young, Jennifer D. P. Moroney, Joe Hogler, and Christine Leah, *What Works Best When Building Partner Capacity and Under What Circumstances?* Santa Monica, Calif.: RAND Corporation, MG-1253/1-OSD, 2013.

and variations, and offers conclusions learned in the process of designing and running the game so far.

2. Game Design

This chapter reviews the purpose, design concept, and game elements of the SFA game as it was played in June 2017 in Stuttgart, Germany, for midlevel military officers and January 2018 in Washington, D.C., for interagency and think-tank personnel. It covers major design decisions, including theoretical and practical motivations. This should provide a more nuanced understanding of the strengths and limitations of the game and help other game designers adapt the game for future use. Although these iterations of the game focused on a single country in the near future, it is designed for broad global applicability.

Purpose

Fundamentally, the game is a tool that helps players better understand the impact different SFA strategies might have on a given country.[2] Every country in which the United States invests in SFA poses a different set of risks and opportunities. Many SFA recipient countries, moreover, exhibit suboptimal conditions for SFA effectiveness. This is because countries with strong militaries, well-defended borders, and a long history of civilian rule do not tend to be recipients of SFA. Such countries tend neither to need assistance nor to be located in parts of the world of significant concern to U.S. counterterrorism or other national security objectives.

The challenge for SFA designers is thus to understand the nature of the risks and opportunities in a particular recipient country and how these might evolve over time, especially once the country has begun to receive assistance. The game allows players to work through and experience (virtually) the pros and cons of different SFA strategies for a given country in a matter of a day or so.

Moreover, because SFA is a multiyear effort and conditions in a country are bound to change over time, the game is designed to allow planners to explore the consequences of their decisions under different future country scenarios or operating environments. This allows the players to gain insight into how the strategies they are testing might fare if conditions in the recipient country change in subsequent stages of strategy implementation and to identify the most robust SFA strategies across a range of possible futures.

Design Challenges

SFA is a challenging subject to game because its causal dynamics are highly complex. SFA is a social and political phenomenon as much as a military one and thus tends to be characterized

[2] As discussed in other sections of this report, this game design would also be appropriate to examine a set of countries collectively; however, as this has not been tested, we refer to "a country" throughout the description of the game design.

by nonlinear dynamics.[3] As a result, we needed to translate complex phenomena into an explicit model to support game play rather than depend on tools from conventional wargames that are built on a foundation of physics. The standard solution to gaming such complex topics is *free-form* political-military games.[4] Such games generally focus on building a shared understanding of a phenomenon among participants and normally involve subject-matter expert adjudication, which leverages expert knowledge to deal with unexpected player moves and overall complexity. Yet, while free-form games with little structure can allow a range of unanticipated interactions and outcomes, they impede systematic comparison between game series. This is because different teams of players and adjudicators may have different mental models shaping their decisions, creating divergences between group outcomes. These mental models are, moreover, opaque to other participants and hence to analysis.

Further complicating the design was the fact that strengthening the recipient military units through SFA is not the ultimate objective of assistance programs. Instead, broader strategic objectives, such as creating more-stable partners who respect the rule of law, are overriding. It was thus not enough to build a game that could depict how SFA investments change the capabilities of individual units. We also needed a game that would allow players to consider how changes in those capabilities might contribute to political, security, and economic stability and balance of power. We thus needed a *two-level* game that could assess both the operational and strategic effects of player actions.[5]

Simplifications

Balancing complexity and playability is a central challenge in designing any effective game. If a game system is too simple, it may lack authenticity and fail to produce insights relevant to real-world policy decisions. If the system is too complex, it may be baffling and unplayable for participants with limited time and bandwidth to devote to game play. Game designers therefore employ abstraction—seeking to reflect key aspects of the problem while stripping away details that are less critical to understanding the phenomena at hand. An effective conventional wargame abstracts away many details of warfare's intrinsic complexity to focus on key choices and essential causal dynamics. This was no less true in this case.

The first important simplification we introduced was to focus the game on U.S. coalition decisionmaking. Because the purpose of this game was to explore the potential effects of different U.S. (and U.S. partners' and allies') approaches to SFA, rather than the broader

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[3] This is a clear theme in such works as Barbara Tuchman's *Stillwell and the American Experience in China 1911–1945*, New York: Macmillan, 1970; Dana Priest's *The Mission: Waging War and Keeping Peace with America's Military*, New York: Norton, 2003; and Donald Stoker, ed., *Military Advising and Assistance: From Mercenaries to Privatization, 1815–2007*, New York: Routledge, 2008.

[4] William M. Jones, *On Free-Form Gaming*, Santa Monica, Calif.: RAND Corporation, N-2322-RC, August 1985.

[5] For a longer discussion of the particular changes of representing multiple levels of analysis in games, see Elizabeth Bartels, Margaret McCown, and Timothy Wilkie, "Designing Peace and Conflict Exercises: Levels of Analysis, Scenario, and Role Specification," *Simulation and Gaming*, Vol. 44, No. 1, 2013.

dynamics of SFA as a phenomenon, we designed a game in which all the teams played as the United States (and its coalition of SFA providers). The behavior of the many other actors that determine SFA outcomes in a given country therefore needed to be built into the game's mechanics. In effect, players were competing against the game, and the RAND control team, rather than against other players.

This allowed us to include a diverse range of potential aid recipients and establish their preferences and other key characteristics that affect SFA outcomes in advance based on research and in consultation with subject-matter experts. The assumptions made about these other actors' traits then became the engine through which player inputs were run to determine outcomes. The principles underlying this engine are discussed in greater detail later.

The cost of this simplification was that recipient preferences were "locked in" to the game and could not evolve and change in response to game developments. While the flexibility of the strategic adjudication process (described in detail further on) allowed for some flexibility in representing these results, it did so outside of the framework of the explicit adjudication model. For example, units could be shifted between factions or gain new capability due to third-party investment by the adjudication team making a determination that such an event was interesting or useful to game play, but those decisions reflected the opaque mental model of the individual making the decision, rather than the explicit adjudication model, and thus were less traceable to outsiders.

A second simplification was to make each U.S. team a unified actor. Anyone who has worked in the U.S. foreign policy bureaucracy is well aware that this is usually not an accurate representation of how U.S. policy is made. Hence, the work of nonmilitary entities, such as the U.S. Department of State (DoS), U.S. Agency for International Development (USAID), and the Intelligence Community, in building partner capacity was either integrated fully[6] or was not played to focus attention on U.S. Department of Defense (DoD) efforts. Furthermore, all funds were treated as fully fungible, so that the total U.S. budget could be devoted to any activity, rather than requiring consideration of differing authorities, permissions, and other restrictions that vary considerably by program and recipient in reality. Similarly, while non-U.S. programs were included, they were deemphasized compared with the focus on U.S. decisionmaking.

In some cases, we opted to include other actors' policies in the form of constraints, in terms of either what resources were available or what types of investments could be played. For example, while the role of Congress and the broader DoD was minimized in game play, their role in the budgeting process was represented abstractly in the preset budget that was provided to players, while their role in setting policy was represented in what types of investments were available to players. In addition, certain game outcomes, specifically the loss of U.S. forces, would lead Congress to reduce available resources for the team that experienced the loss.

[6] For example, players were able to make investments in Ministry of the Interior forces as well as military forces, which would traditionally be a DoS activity rather than one falling to DOD.

A third major simplification was to abstract from lower-level operational and tactical considerations. The role of small units on the ground, and the personalities of individual liaisons and trainers, was abstracted in the game through the use of probability in the adjudication engine to represent the fog and friction of these low-level interactions. Adding these levels of play would greatly complicate game play for little benefit, in our mind, because the game was intended to provide a framework through which teams could develop and then assess broad strategic choices about which partners to work with in a given country and what general categories of capabilities to build in each. However, this simplification somewhat obscures the critical role of personalities on the ground and downplays the need for U.S. planners to collect and consider information on these dynamics as part of the planning process.

Game Elements

At the sponsor's request, game play focused on U.S. SFA investment in a near-future Libya, in which we posited continued fragmentation of the government and a wide range of local security actors with meaningful power. Teams of ten to 15 players gathered in person represented the United States and European Union (EU) partners, who were tasked with allocating a multiyear assistance budget over a series of three moves. Players could opt to invest in a range of political-military factions (some traditional U.S. partners, some not). Factions ranged in size, with some having only one or two brigades and some having about a dozen; location; and starting capabilities. Players selected which factions, units, and capabilities to invest in and how to provide aid. After players debated and finalized their decisions, the game-controlling White Cell then determined the results of investments. These results included both the operational changes in capabilities to individual units and the broader shifts in national political, security, and economic dynamics caused by shifts in relative military power among the factions. Players used these results to inform their decisionmaking in subsequent moves.

The following section discusses the major elements of this design in more detail. The major components of the game were the player roles, the mechanisms to represent different SFA investments, the SFA recipients, the rules guiding SFA investment decisions, and an operational adjudication model that supported structured comparisons across game runs.

Player Role: Combatant Command SFA Planners

Players took the role of planners charged with developing an overall approach to SFA in a war-torn country, given a limited budget and within an interagency context. In the two iterations of the game, we recruited somewhat different players. In the June 2017 game, players were drawn from combatant command staff and other operational planners, largely consisting of midlevel military officers from across the joint community. As much as possible, we recruited players with real-world responsibility for SFA planning decisions, though some participants were more general planners. To supplement gaps in player knowledge, we provided several substantive briefings prior to the state of game play. In contrast, the January 2018 game's

participants were drawn from interagency and think-tank personnel. These individuals were civilians, recruited for their regional experience, though many also had experience with SFA policy at a strategic level. This group received only a short briefing on our model of SFA (as described in Chapter 3).

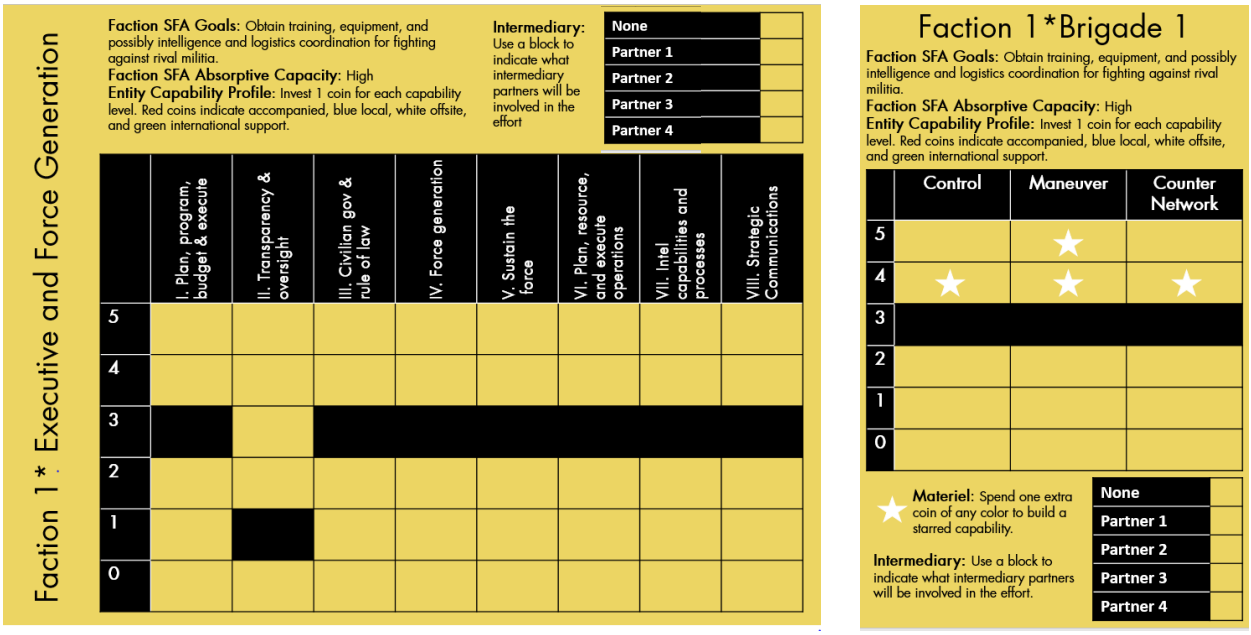
Both groups received a near-future scenario laying out the political, security, and economic situation at the start of the game, as well as information about each faction that was eligible to receive aid. These materials ensured a common baseline of information among players. Players also learned from each other by sharing relevant information during game play.

Other Actors: SFA Recipients and Third-Party Providers of Support

Because of the fragmented nature of the specific case used in our initial game, teams could invest SFA resources in any of seven different *factions* or political entities, each of which consisted of several component units. Players received information about each faction's preference for investment and absorptive capacity. Each faction had two types of units that the players could choose to invest in: executive and force generation units and operational units. These represented, respectively, the military institutions behind the force and fighting forces in the field. Each type of unit had a number of capability areas on which it could be assessed on a scale from 0 (no capability) to 5 (highly capable within the host-nation context), based on past U.S. SFA assessment practices. Each specific unit in play had a starting score for each capability based on the best information available about the specific factions and their units in the real world. (Due to spotty information and intelligence, these assessments necessarily involved educated guesses.) Players could easily reference this information by looking at cards that were provided for each unit, as shown in Figure 2.1.

U.S. partners and allies supporting SFA efforts were represented in one of two ways. EU partners were represented by a subset of players and were provided with a small number of coins they could use to make complementary SFA investments. These investments were adjudicated using the same process as U.S. investments. In contrast, regional partners were represented by a game mechanic, in which players could indicate whether they wanted to work with a partner as part of their investment move. The adjudication system included a process for assessing whether such a partnership was more likely to help or hurt the chances of successful SFA based on an assessment of both the friction generated by more actors and the preferences of the recipient faction.

Figure 2.1. Sample Executive and Force Generation and Operational Unit Cards for a Faction



Generally, the behavior of other third-party actors, including potential state and violent extremist organization adversaries, was controlled by the RAND team. Choices about when and how to manipulate the scenario were made based on expert judgment of most likely behavior under the initial scenario conditions, tempered by the impact that U.S. and European investments may have had.

Key Player Decisions: SFA Investments

We adapted an existing RAND gaming approach for considering allocation of priorities to consider the allocation of the U.S. and European SFA budget among different political and military actors.[7] This approach requires players to specifically allocate coins or points, thus requiring them to make constrained choices and to explicitly prioritize their actions. In each game turn, players were first asked to develop a multiyear SFA strategy, then to allocate funding to support their goals.

Each turn started with a team discussion of the goals. Players then transitioned to discussing which specific SFA investments might support these goals. In so doing, they debated the merits of different (1) factions, (2) units, (3) capabilities, and (4) modes of delivery. At the end of each turn, players indicated which investments they wanted to make and provided a short briefing to the adjudication team that explained their choices.

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[7] See Eric Landree, Richard Silberglitt, Brian G. Chow, Lance Sherry, and Michael S. Tseng, *A Delicate Balance: Portfolio Analysis and Management for Intelligence Information Dissemination Programs*, Santa Monica, Calif.: RAND Corporation, MG-939-NSA, 2009; RAND has additional research in this area that is unavailable to the general public.

To ease game play for both players and adjudicators, we developed a formalized process for documenting investments. Players were provided a fixed number of wooden "coin" markers, each of which represented a U.S. investment of a particular size over a set time period.[8] Players could choose to invest their coins in any faction's unit by placing a coin on the desired capability on that particular unit's card.

For executive and force generation units, these capabilities focused on areas like rule of law and intelligence capabilities. Operational (combat) units had the capabilities to control territory, maneuver to new locations, or conduct counternetwork operations. The current assessed capability of the unit in each area was conveyed on the cards in terms of a level from 1 to 5, with 1 representing a capability that has only been initiated and 5 representing a sustaining capability.

Further information about the investment was conveyed by the color of the coin, which indicated whether training was provided by embedded forces (red coins), at a local facility (blue coins), or overseas (white coins). Additionally, a wooden cube could be placed on the card to indicate whether a third-party intermediary would help provide training.

Finally, some capability levels required the provision of materiel, which was indicated by a star marker in the box and required teams to pay an extra coin.

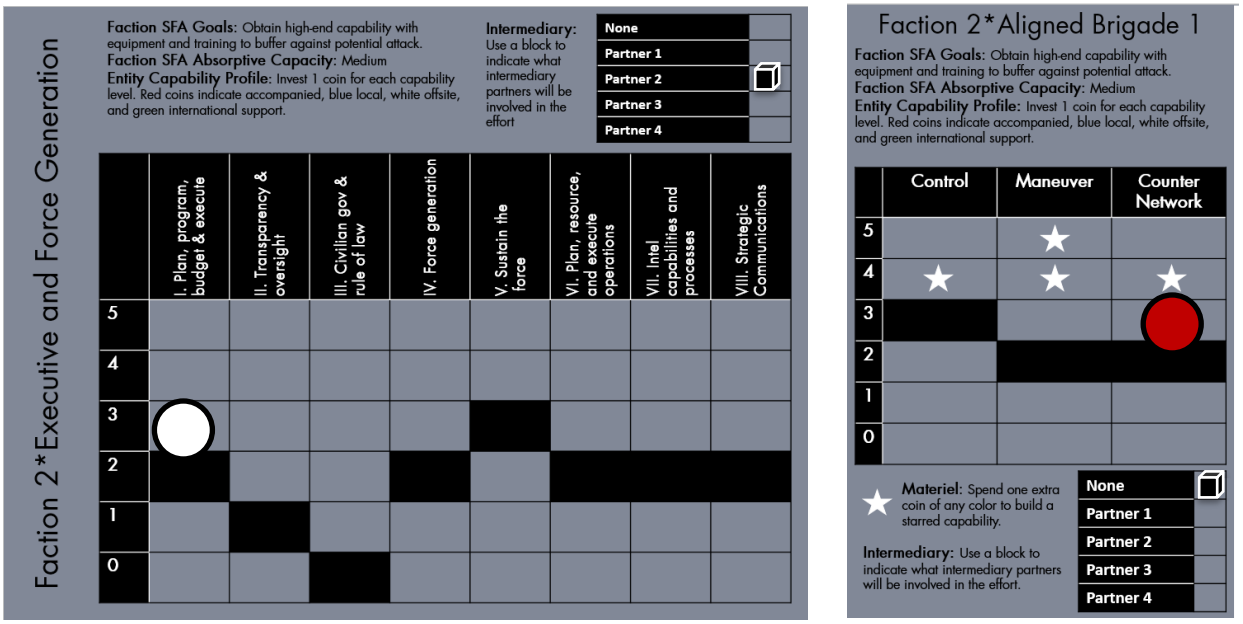
This system helped players to plan while they deliberated and systematically documented where investments were made in terms of the factions, units, and capabilities that were targeted.

Making a Move

A sample move is shown in Figure 2.2. Here, players have invested coins in an executive and force generation unit and an operational brigade. For the executive and force generation unit, the players opted to try to improve the "plan, program, budget, and execute capability" from a level 3 to a level 4 using off-site training (indicated by the white coin) with the involvement of Partner 2 (indicated by the black cube). At the same time, the players invested in increasing gray brigade 1's counternetwork capabilities from a level 2 to a 3 using embedded forces (indicated by the red coin) without an intermediary actor.

[8] For example, in different games, we played 15 coins worth $15 million–25 million over three years, 15 coins worth $8 million–12 million over 18 months, and ten coins worth $8 million–12 million over one year.

Figure 2.2. Executive and Force Generation Unit and Operational Unit Cards Showing Sample Investments



Adjudication Model

Adjudication took place in two parts: The outcomes of individual player investments were adjudicated using a rigid rule system, while the strategic outcomes were adjudicated by a team of experts. The two systems were designed to work in layers: Operational-level results were inputted into the strategic adjudication. In this way, we were able to deal with the fact that SFA is just one factor of many shaping the strategic political-military outcomes. Furthermore, representing the system as a two-level game provided opportunities for "good" operational results to produce negative second- and third-order strategic effects, and vice versa.

The difference between broad strategic results and more-granular operational-level feedback mirrored a key real-world challenge. It is far easier (though by no means easy) to measure the ability of a particular unit than to understand how changing capabilities are contributing to long-term achievement of U.S. strategic goals. This creates a risk that planners will prioritize the measurable over the important. Our game was designed to ensure that, despite the simplifications inherent in modeling a phenomenon as complex as SFA, feedback was strategically relevant and encouraged reasonable expectations.

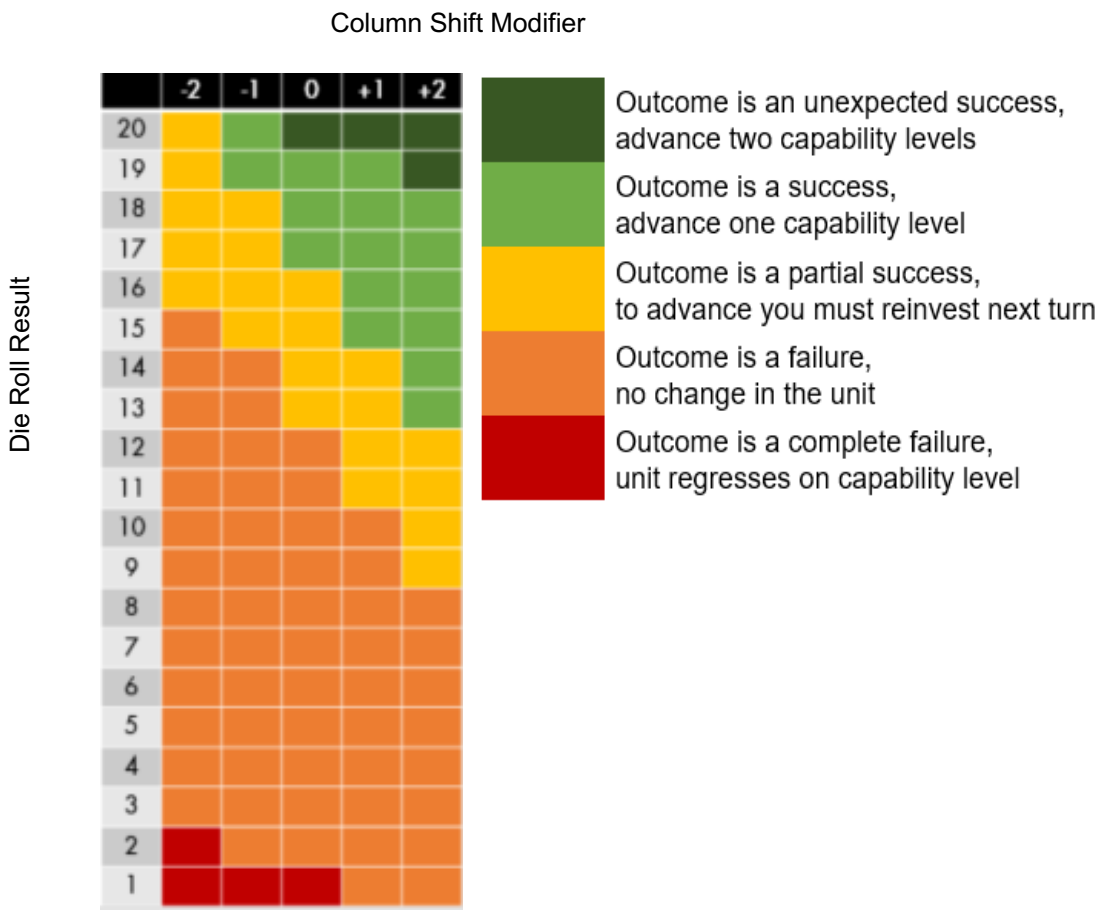
Operational Model

Operational adjudication was based on a series of simple rules that could be used to quickly determine the output of player investments in unit capabilities. These rules were themselves based in the best extant knowledge about what makes SFA work or not work. The model was, of course, only as strong as the literature and subject to our own interpretation of it (as explained further in Chapter 3).

In real life, SFA outcomes are always uncertain. Context, fortune, personalities, and many other factors matter yet are outside the control or even understanding of implementers. Thus, we decided that the effects of SFA investments in the game should be probabilistic, rather than being purely determined by the choices of the players. In other words, certain decisions on the part of the players could increase the probability of success in a particular investment, but none could guarantee it. We thus created probability distributions that varied according to factors identified in the literature as positive or negative and then used dice as a random number generator to determine where the result of a particular move fell within the distribution.

Because SFA is often unsuccessful, we set the baseline probability distribution such that half of the time, an investment would fail to produce any improvement in capabilities (put differently, our default assumption was a 50-percent chance of failure).[9] Player decisions shape the probability distribution by changing either the shape of the curve or the mean. A sample adjudication table is shown in Figure 2.3.

Figure 2.3. Sample Adjudication Table



[9] A more detailed discussion of the empirical basis for this claim is presented in Chapter 3.

Put more practically, based on the conditions surrounding an investment, we altered the probability of success. We developed a set of rules in which we either shifted how many die roll results equated to a particular outcome by adding a column shift modifier (indicated in the columns of Figure 2.3) or added (or subtracted) value to the die roll to shift the results by moving which row of Figure 2.3 showed the correct result. This basic approach is common in commercial wargames and is a helpful way of quickly shifting probability distributions of results in predictable ways.

Our goal was to create a model that generated plausible results (or, put differently, whose results seemed reasonable to subject-matter experts who played the game) but was not intended to offer an exact prediction of real-world outcomes. We developed a probabilistic approach to SFA outcomes in which outcomes were distributed across a spectrum bounded by extreme cases, such as a catastrophic failure in which a unit actually regresses and an unexpected success where a unit's capability moves up two levels. But based on the research on SFA, the most common outcome is a failure in which there is no appreciable change in the unit's capabilities. While the precise probabilities used are not predictive, at an aggregate level, game outcomes approximated real life closely enough to be valuable to planners.

The two key factors shaping SFA outcomes are the preferences of the actor receiving support and the actor's absorptive capacity. We thus gave these two factors a greater weight in determining whether a particular investment resulted in a capability improvement. The alignment between the U.S. investment and faction preferences was determined by comparing the investment choice to a "preference map" for each faction that indicated which types of SFA investments were seen as positive, which were negative, and which were neutral. Positive alignment improved the probability of a positive outcome, while negative alignment decreased the probability of the desired outcome. Each faction also received an absorptive capacity score of high, medium, or low, based on the best available information about the faction itself (although for many factions this factor required assumptions about what absorption likely was, rather than hard data, which were not available). A high rating improved the chances of success, while a low rating decreased them.

The next most important factors in shaping the probability of success were the current level of capability of the unit and size of investment. Empirical evidence suggests that it is easier to improve an already competent unit than to build up skills from the population baseline. Thus, the probability of success increased for each capability level—that is, an investment to move a unit from a level 4 to a 5 capability was more likely to succeed than an attempt to move a level 0 to a 1. However, attempting to build capability quickly by means of fast, large investments in a single unit was subject to decreasing returns to scale—in other words, a lower probability of success. For example, a double investment that sought to move from a level 1 capability to a 3 capability in a single turn had a lower chance of success than an investment to move from a 1 to 2. The model thus reflected bandwidth issues that are present with SFA while reinforcing the importance of dwell time, which is established in the SFA literature.

Finally, a range of other choices about how investments were delivered shaped the likelihood of success. Penalties were put in place for investing in executive functions—to reflect that the system is more complex and likely to be opaque to outsiders—and the use of third parties to deliver training—reflecting the friction inherent in involving more actors. However, there were also bonuses for investments that complemented each other—such as the right executive investment for a particular unit—or that built on past success.

Finally, the proximity of U.S. personnel also influenced the probability of success. Training delivered out of country was penalized, while training with embedded forces was more likely to succeed. Embedding forces, meanwhile, carried a small probably of casualties. If these occurred, the team received less funding from Congress in the next round.

Strategic Model

At a strategic level, player decisions shaped the outcomes by shifting the balance of power among competing political factions. Investments also could contribute to feelings of resentment and further fragmentation at the political level—or reinforce more-balanced political bargains, depending on the specific scenario. However, the positive strategic effects of operational SFA success were relatively small, to depict the historical reality of SFA as an evolutionary rather than revolutionary tool to promote change. Given the relatively short time frame, major strategic outcomes tended to focus on the potential for regret, rather than opportunities to turn the tide in the United States' favor.

In contrast to the rules that determined how unit capabilities changed over time due to investments, the strategic outcomes were determined by a framework—a decision tree—developed by experts. Prior to the game, experts examined each of the game scenarios to determine what the major factors moving the scenario were and identified the range of potential SFA outcomes that might disrupt or shift the strategic scenario in one direction or another. During game play, experts provided two updates based on the framework, in which they assessed the most likely progression of the overarching scenario given the initial assumptions, starting conditions of the different scenarios, player decisions, and SFA operational outcomes. Experts then considered how potential shifts in key factors, such as the balance of power or counterterrorism capabilities that emerge from tactical adjudication, might change strategic outcomes.

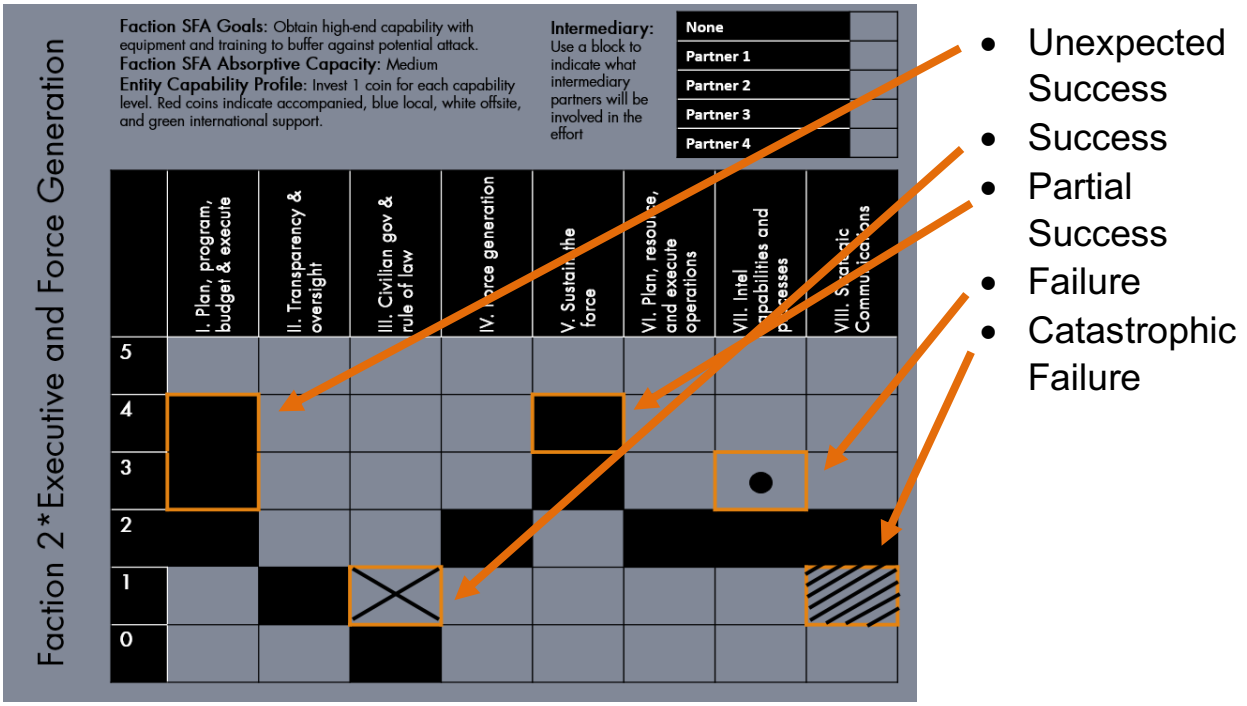
For example, a major concern identified in advance in several scenarios was that one faction could act as a destabilizing political force if it were given too much aid—or if it were ignored entirely. As a result, if players opted to invest heavily in their military capacity, scenario elements with increases in military and political destabilization would be selected. On the other hand, if players made only moderate investments in institutional capabilities, a more stable political option was selected, with the scenario effectively on autopilot (i.e., running its predetermined course).

Feedback to Participants About the Outcomes of Their Decisions

The results were briefed back to the players as a narrative update. Operational results also were visible to players. The game boards depicted the outcomes of their individual investments in terms of the change in the capability level of each SFA recipient. As part of adjudication, the control team indicated the outcome of each investment on the unit card (illustrated in Figure 2.4), allowing players to easily track what investments had been made in the previous turn and what the outcome of the spending was while making decisions in later rounds. By contrast, strategic results were conveyed only verbally.

After move one, individual teams were briefed separately, so teams did not know how their scenario compared with those of other teams. However, at the end of the second move, all teams were briefed on the outcomes of all games, so each could gain an understanding of how its approach had fared compared with those of the other teams. Because of the probabilistic nature of the underlying model, even good strategies could fare poorly, but they were less likely to do so, especially at the strategic level.

Figure 2.4. Sample Adjudication Results



3. Security Force Assistance Principles (Game Engine)

As noted in Chapter 2, the operational adjudication model was grounded in the best available knowledge of what makes SFA work. We identified 12 preliminary SFA principles to guide operational-level adjudication of SFA games conducted at the geographic combatant command (GCC) level.[10] The principles are based on a meta-analysis of existing academic scholarship and other sources ranging from service and joint doctrine to practitioner experience.[11] From these sources, we distilled central tendencies in the relationships between SFA causes and effects. We also assessed each to belong to one of three categories: primary determinants, significant determinants, and determinants. Primary determinants define the shape of the distribution of potential results. Significant determinants influence where the results of any given SFA initiative are most likely to be within that distribution. Determinants have measurable but less significant influence on where the results of a given SFA initiative are most likely to be within that distribution, because they are secondary conditional interactions (i.e., they are relevant only where there is some degree of primary success that may or may not be consistent and/or coherent) and therefore less influential on the overall probability distribution. These principles provide a sound basis for a GCC-level SFA game adjudication system that is playable yet sufficiently detailed to produce useful strategic insights.

[10] Most works in the scholarly literature on SFA focus on individual case studies or compare a relatively small number of cases. These works serve important scholarly and policy purposes, but they are an insufficient basis for deriving empirically generalizable principles of effectiveness. Recent examples include Stephen Biddle, Julia Macdonald, and Ryan Baker, "Small Footprint, Small Payoff: The Military Effectiveness of Security Force Assistance," *Journal of Strategic Studies*, Vol. 41, No. 1–2, May 2017; Paul et al., 2013; Christopher Paul, Jennifer D. P. Moroney, Beth Grill, Colin P. Clarke, Lisa Saum-Manning, Heather Peterson, and Brian J. Gordon, *What Works Best When Building Partner Capacity in Challenging Contexts?* Santa Monica, Calif.: RAND Corporation, RR-937-OSD, 2015; Stephen Watts, Caroline Baxter, Molly Dunigan, and Christopher Rizzi, *The Uses and Limits of Small-Scale Military Interventions*, Santa Monica, Calif.: RAND Corporation, MG-1226-RC, 2012; Austin Long, Stephanie Pezard, Bryce Loidolt, and Todd C. Helmus, *Locals Rule: Historical Lessons for Creating Local Defense Forces in Afghanistan and Beyond*, Santa Monica, Calif.: RAND Corporation, MG-1232-CFSOCC-A, 2012; Mara E. Karlin, "Training and Equipping Is Not Transforming: An Assessment of US Programs to Build Partner Militaries," PhD dissertation, Johns Hopkins University, 2012; Stoker, 2008; and Adam R. Grissom and David A. Ochmanek, *Train, Equip, Advise, Assist: The USAF and the Indirect Approach to Countering Terrorist Groups Abroad*, Santa Monica, Calif.: RAND Corporation, 2008, not available to the general public.

[11] Our primary source for practitioner views was the database of oral history interviews maintained by the U.S. Army Combined Arms Center Operational Leadership Experiences Project (database, undated). More than 300 interviews in the Operation Leadership Experiences database address SFA. RAND project members also have direct experience as SFA practitioners.

Principle 1. Security Force Assistance Is Complex

SFA is clearly a highly complex phenomenon in which "inputs" do not produce "outputs" in a linearly predictable manner.[12] As discussed earlier, this complexity stems from the large number of potential variables that may intervene between cause and effect and the fact that these intervening variables are themselves social in nature and therefore more difficult to model in abstracted fashion than physical phenomena are.

As a result, historical SFA studies are replete with examples of outwardly similar SFA efforts that produced widely varying results due to a variety of intervening variables.[13] Perhaps the most significant examples come from large-scale SFA operations in which different partner units subjected to the same SFA inputs evince widely differing levels of capability.[14] Scholars note that this indicates SFA effectiveness is probabilistic in nature, with chance playing a significant role in determining outcomes.[15]

Because complexity creates so much uncertainty in cause and effect, we opted to inject randomness into the process for determining results, rather than a particular player decision always generating the same outcome. Put formally, we used a probabilistic rather than a deterministic model in building the adjudication engine. We also built a model with a comparatively wide range of potential results, so the same investment could result in anything from large positive effects to negative effects on partner capabilities, depending on the randomized outcome. This principle also suggests, by way of contrast, that a linear approach in which player moves result in highly predictable effects would be a poor abstraction of SFA dynamics.

Principle 2. Security Force Assistance Rarely Produces Decisive Success

While the historical success rate of SFA efforts cannot be precisely estimated, scholars and experienced practitioners generally agree that the most common result is partial success or outright failure. Complete success is comparatively rare.[16]

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[12] See, for example, Kathleen J. McInnis and Nathan J. Lucas, *What Is "Building Partner Capacity?" Issues for Congress*, Washington, D.C.: Congressional Research Service, R44313, 2015.

[13] A much-discussed example is the Military Assistance Program that guided what is now called SFA from the late 1940s to the early 1960s. The Military Assistance Plan framework imposed considerable uniformity across SFA efforts with different countries but produced widely varying results. For a useful overview, see Harold A. Hovey, *United States Military Assistance: A Study in Policies and Practices*, New York: Praeger, 1965.

[14] To take two recent examples, the widely varying capabilities of Iraqi and Afghan units subjected to the same SFA "inputs" illustrate the unpredictable nature of SFA effectiveness. See, for example, Terrence K. Kelly, Nora Bensahel, and Olga Oliker, *Security Force Assistance in Afghanistan: Identifying Lessons for Future Efforts*, Santa Monica, Calif.: RAND Corporation, MG-1066-A, 2011.

[15] William H. Mott, *Military Assistance: An Operational Perspective*, Westport, Conn.: Praeger, 1999, pp. 267–268.

[16] Mott is the key source; see Table 8.1 in William H. Mott, *United States Military Assistance: An Empirical Perspective*, Westport, Conn.: Praeger, 2002, p. 300. Biddle and many others have repeated the point with less empirical rigor.

SFA simply appears to be an activity with a naturally low probability of success.[17] In Mott's memorable formulation, SFA successes tend to be "partial, local, and transitory."[18] This is most likely because, generally speaking, in any given circumstance there are more or less deeply embedded reasons why a partner does not possess a particular capability in the status quo. Those reasons, across the range of political, social, economic, financial, and/or human capital factors, become de facto obstacles to SFA. Overcoming them is naturally difficult, particularly for an external actor like the United States.

A corollary to this principle is that the United States has certain weaknesses when it comes to SFA. The available evidence suggests that these include, but are not necessarily limited to, a lack of regional and language expertise in the force, limited resources, few personnel whose primary role is to train and advise partner forces, and the general sophistication of U.S. forces, which can make it difficult to assist partners that function in fundamentally different ways.[19]

A second corollary is that, despite those weaknesses, the United States does not appear to be generally more or less effective than other modern great powers in conducting SFA. The available evidence suggests that all great powers have a mixed track record with SFA. It is simply a very difficult mission with a low success rate in most contexts.[20]

For wargame adjudication purposes, the indecisiveness principle and its corollaries suggest that the base probability of success for any given SFA play should be, ceteris paribus, reflected in a wide range of potential outcomes and a success in only some cases. We developed our results tables so that about half the time, SFA investments would result in no change in capabilities. Our meta-analysis broadly confirms this impression—of 100 cases drawn from various sources, 18 percent were complete successes, and another 28 percent were limited successes, for a composite success rate of just under 50 percent.[21]

Principle 3. Partner Preferences Regarding Investments Are a Primary Determinant of Security Force Assistance Effectiveness

Numerous sources emphasize that alignment between U.S. objectives and partner preferences is a primary determinant of SFA effectiveness.[22] Fundamentally, it cannot be assumed that the United States and the partner receiving assistance have the same ideas about what capabilities the

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[17] Batting average and striker scoring rates are useful analogies from the sports world.

[18] William H. Mott, *Soviet Military Assistance: An Empirical Perspective*, Westport, Conn.: Greenwood, 2001. p. 304.

[19] Grissom and Ochmanek, 2008.

[20] Stoker, 2008; Mott, 1999.

[21] The team combined the case-level results from Mott, 2002; Paul et al., 2013 (to the limited extent possible; detailed cases are restricted to a classified volume); Adam R. Grissom, Alexander C. Hou, David E. Thaler, Stephan B. Seabrook, Beth Grill, Richard Bennet, and John P. Godges, *Developing the Afghan Special Mission Wing: Insights from Four Contemporary Aviation Foreign Internal Defense Operations*, Santa Monica, Calif.: RAND Corporation, 2018, not available to the general public; and several monographs on single cases.

[22] For example, one of Mott's primary conclusions is that "convergence of donor and recipient aims is clearly the dominant factor" in SFA effectiveness (Mott, 2002, p. 301).

partner should develop, what ends they should be used to support, or how they should be used. For example, one common experience across many SFA programs is a preference for equipment, rather than training, among SFA recipients. The United States' resistance to such investments is grounded in empirical evidence that such equipment is often not sustained by host-nation forces and is of little operational value. However, the appeal to partners, for whom highly visible military equipment may be a status symbol and who can often profit from reselling equipment or expendables, should also not be surprising.[23] As a result, the preferences of the donor and recipient are often misaligned. What's more, partners also have agency to shape how investments they do not support affect their organizations. Responses to unwelcome investment can take a range of forms: For example, organizations can attempt to shift resources to other priorities, slow-roll the implementation of programs, or simply refuse to participate in unwanted training. In other words, the partner gets a vote.

This broad point conceals a number of nuances, however. For example, the literature discusses several cases in which "partner preferences" actually varied among the components and echelons of a partner security force. In particular, partner unit commanders may have more- or less-favorable views toward U.S. SFA compared with political leaders.[24] The DoD community is accustomed to viewing foreign governments as relatively unitary actors, but there is ample evidence to suggest that the reality of "partner preferences" is far more complicated.

The literature also contains strong evidence that convergence of interests occurs at multiple levels. Mott, in particular, describes several cases in which donors and recipients had diverging overall policy interests but converging interests on capability priorities. For example, the United States might want to invest in counternetwork capacity to combat transnational terrorism, where a local actor might see these capabilities as a means to identify and target political or economic competitors. He also cites the reverse—cases in which overall convergence on policy priorities was coupled with disagreement on capability priorities.

Together these points indicate that, for wargame adjudication purposes, preference alignment between the United States and its SFA partners should be measured across multiple dimensions, including both unit and policy levels, as well as overall policy and capability development priorities. Divergence in any of these areas would tend to reduce the probability of success for an SFA effort.

Principle 4. Partner Absorptive Capacity Is a Primary Determinant of SFA Effectiveness

There is broad agreement among scholars and practitioners that a partner's absorptive capacity is a primary determinant of SFA effectiveness. Specifically, many studies identify a partner's limited absorptive capacity as an obstacle to capability development. The general point is fairly intuitive—that is, that partners vary widely in their capacity to develop meaningful

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[23] Adam R. Grissom, "Shoulder-to-Shoulder Fighting Different Wars: NATO Advisors and Military Adaptation in the Afghan National Army, 2001–2011," in Theo Farrell, Frans Osinga, and James A. Russell, eds., *Military Adaptation in Afghanistan*, Palo Alto, Calif.: Stanford University Press, 2013.

[24] Discussed by Grissom in Grissom et al., 2018, not available to the general public.

capabilities when provided with the same type and level of assistance. There is, however, great diversity in how absorptive capacity is conceived. Some point to fundamental characteristics (such as literacy and numeracy rates) of the partner nation's society or its armed forces. Others point to the general problem of attempting too much change too fast. Still others point to the functionality of generating force institutions as a determinant of the absorptive capacity of subordinate operational forces.[25] This suggests that absorptive capacity is a complex and multidimensional characteristic.

For game adjudication purposes, the absorptive capacity principle suggests that potential recipient units should be rated for their absorptive capacity. These ratings should then support a probabilistic determinant of the likelihood of success of SFA plays at the unit or function level. Additionally, the capabilities of generating force institutions should be treated as a constraint on the development and sustainment of advanced capabilities in operating forces.

Principle 5. Capability-Level Characteristics Are Significant Determinants of SFA Effectiveness

Many sources suggest that U.S. SFA efforts have the greatest probability of success when they are focused on comparatively simple functional capabilities of partner operating forces. Light infantry tactics are, according to this view, the archetypal capability most likely to be successfully developed in partner forces. More-technical capabilities, such as aviation, have far lower success rates for a given level of time and resources invested.

A corollary to this principle is that the United States is significantly more successful in developing the capabilities of operating forces than of executive and force generation institutions. This is likely because assistance to operational units focuses more on functional skills. Executive and force generation institutions are more obviously entangled in the political economy of the partner society, making it more difficult for U.S. advisors to navigate and effect change.

A second corollary is that, for any given period of time or level of resource investment, SFA efforts that seek greater change will be less successful than those that seek less ambitious change. Moreover, this relationship is nonlinear—i.e., doubling the amount of attempted progress will typically result in less than half the probability of success.

For game adjudication purposes, this principle and its corollaries suggest that SFA efforts focused on capabilities that are more technically advanced than those already possessed by the partner should enjoy lower success rates. Likewise, SFA efforts focused on generating and executive institutions will, for a given level of time and resources invested, have a lower probability of success. Finally, overly ambitious investments are more likely to fail to make any gains. For example, attempting to make one large gain with a sizable investment is less likely to succeed than making small, persistent investments over time to gradually increase a capability.

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[25] Paul et al., 2015.

Principle 6. Degree of Accompaniment Is a Significant Determinant of SFA Success

There is general agreement in the literature that closer association between advisers and recipients produces a greater likelihood of SFA success. Fully embedded advisers who accompany their partners on all operations and activities define one end of the spectrum, while episodic visits by U.S.-based training teams or instructors define the other. The countervailing risk is that accompaniment exposes U.S. personnel to enemy action and, in some circumstances, "green on blue" attacks.

For game adjudication purposes, this suggests that SFA plays featuring fully embedded advisers should enjoy a somewhat higher probability of success, at some increased risk to the safety of the advisers sent out to the field.

Principle 7. Duration of Assistance Is a Significant Determinant of SFA Success

There is strong evidence that enduring SFA commitments are more likely to produce success than short-term assistance is. This is because, in practice, SFA success tends to follow a pattern of punctuated equilibrium, in which periods of rapid progress are interspersed with periods of limited progress and even regression. An enduring SFA commitment allows U.S. personnel to identify windows of opportunity for rapid progress and align resources to capitalize upon them. Short-term assistance is more reliant on random good luck in terms of timing.

For game adjudication purposes, this suggests that SFA plays sustained across multiple turns should be associated with a modest increase in probability of success.

It is important to note that this principle also comes with an important caveat—long-term assistance can also breed dependency. This means not only that, over time, a recipient can grow to require U.S. funds to sustain capabilities but also that long-term provision of particular types of assistance can make it hard for nations to pivot to develop new capabilities to confront emerging threats.

Principle 8. Involvement of Third Parties Is a Significant Determinant of SFA Effectiveness

The United States has substantial experience conducting SFA in conjunction with allies and partners. The capabilities of these third parties vary widely, but, consistent with Principle 2, in general, third parties are neither significantly more nor less effective at SFA than the United States is. However, the additional frictions and coordination burdens introduced with third parties will tend to reduce the effectiveness of the SFA effort.

Additionally, the impact on U.S. SFA depends to some extent on whether the partners are openly cooperating with the United States or working in an unacknowledged manner (perhaps even countering some part of the effort). Open partnerships with actors whose interests align with those of the United States are more likely to produce desired results.

For game adjudication purposes, this suggests that involvement of third parties should be associated with a net reduction in the likelihood of success.[26] However, some third parties also increase the likelihood of success, since they better align with preferences of the recipient.

Principle 9. Consistency of Assistance Is a Determinant of SFA Success

Key sources argue that consistent assistance over time is more likely to produce SFA success than assistance that is highly variable or uncertain. This is most likely because consistency makes the United States a more trustworthy partner and allows recipients to build their own planning around U.S. assistance.

For game adjudication purposes, this suggests that major fluctuations in level, type, and/or recipient of assistance should be associated with a modest reduction in likelihood of success.

Principle 10. Coherence of Assistance Is a Determinant of SFA Effectiveness

The literature observes that SFA success typically requires a multidimensional package—individual and collective training, education, materiel assistance (end items, spares, supplies), organizational reforms, and infrastructure improvement. Incoherence among these elements tends to reduce SFA effectiveness.[27]

For game adjudication purposes, this suggests that partner capability improvements requiring multidimensional assistance should be identified. Where an SFA play lacks all required dimensions of assistance, it should face longer odds of success.

Principle 11. SFA Effectiveness Exhibits Declining Marginal Returns to Scale

Beyond a relatively low threshold, increasing the financial, materiel, and/or human resources devoted to an SFA effort in any given period will produce declining marginal returns. Multiple studies suggest the relationship approximates a natural log function.[28]

For game adjudication purposes, this suggests that additional resources devoted to an SFA play should produce progressively smaller increases to probability of success.

Principle 12. SFA Successes Are Temporary Unless Partner Executive and Generating Force Institutions Are Sufficiently Capable to Sustain Them

There is broad consensus in the literature that capabilities developed in partner operating forces will not be sustained unless SFA effort is also devoted to executive and force generation institutions. The fact that a partner did not possess a capability before the SFA effort generally signals that it will not be in a position to sustain the capability without a deliberate parallel effort.

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[26] The inefficiency of multinational training efforts in Iraq and Afghanistan illustrates this point. Mott also systematically measures the decline in effectiveness associated with multiple assistance providers. See Mott, 2001, pp. 309–310.

[27] Mott, 2002, p. 301; Paul et al., 2013.

[28] Paul et al., 2013, p. 77.

The United States often confronts a choice among sustaining partner capabilities itself indefinitely, investing in executive and force generation capabilities, or allowing partner capabilities to disintegrate.

For game adjudication purposes, this suggests that partner capabilities beyond some threshold of sophistication should be sustained only if the United States continues to invest effort into sustainment or some required level of executive and force generation institutional capability exists or has been developed.

4. Recommendations for Future Applications

In the course of game development, we considered a range of modifications and extensions to the game design described in the previous chapter that may be of interest to those seeking to modify the game for future use. They range from relatively small shifts in the rules to more-substantial reworking of key game mechanics and will require refinement and play-testing before implementation. They are listed next, in rough order of importance in the mind of the design team, though of course the particular context of future applications will shape which will be most relevant for a particular game.

Recommendation 1: Use "Live" Teams of Experts to Represent Recipient Nation Decisionmaking

Game designers might also use active players to directly articulate the preferences of recipients dynamically in response to U.S. investments. Expert players would be able to articulate the preferences of the actor in favor of or against different investments, determine how that information was conveyed to U.S. players, and change their preference over time. Such players would also allow for more consideration of changes in capabilities due to investments by the factions themselves and how those changes might complement or undermine the United States' investments. Finally, the inclusion of live players would allow for deeper exploration of negotiation dynamics in SFA, creating a richer game play experience.

Inclusion of these actors would require designing a method of collecting receiving-nation player preferences for adjudication, as well as developing a results table to account for the receiving-nation investments. While this can likely take the same basic form as the U.S. investment results table, the different effects of receiving-nation, as opposed to outside, investment would need to be captured. Furthermore, play-testing would be required to ensure that the provision of additional investments was calibrated so the interactions of multiple parties still produced realistic outcomes. Finally, this approach would require identifying players with enough knowledge about each faction to credibly represent the results of the group's decisionmaking processes. This may be difficult to achieve, depending on the pool of expertise available for the country under study. However, if players are not experts, then their decisions cannot be assumed to represent the actual preferences of the actors on the ground, and the analytic utility of live play may be compromised.

Recommendation 2: Explore SFA in a Competitive Marketplace with Multiple Possible Investors

Similarly, in the initial game, the White Cell controlled the behavior of third parties, ranging from terrorist groups to potential state adversaries, as part of strategic adjudication, while player choices controlled regional partners. In future games, it may be more interesting to focus on SFA

as an area of competition between different actors. This might include both adversarial states, which would support study of phenomena like proxy conflicts, and potential partners to study coordination of strategy across actors. SFA in a competitive marketplace changes the dynamics even when the other states involved are close partners or allies, as their interests do not always align perfectly with those of the United States. Furthermore, even friendly actors may act in secret, complicating the ability of the United States to develop a coordinated response. A game with multiple teams playing the various donor nations would allow one to explore how other nations' SFA choices impact U.S. options by, for example, creating a bidding environment, constraining U.S. choices, or providing opportunities for burden sharing.

Such a step would require having multiple parties able to invest in the same recipients. While the basic process of player investments could likely mirror U.S. play, the effects of investments would likely have to be recalibrated based on evidence from assistance provided by other states. This will be particularly important when considering actors that may have very different assistance practices. Finally, testing will be required to ensure that the addition of actors maintains the balance of play.

Recommendation 3: Subdivide the U.S Team to Better Reflect Competing Objects and Constraints

In the initial games, the teams were not formally subdivided to represent different components' objectives and constraints. While in some cases players drew on their own experience to describe the reactions of the interagency, this may have caused players to undervalue how different constraints limit U.S. options and may make SFA less likely to succeed. Formal subdivision of the team to ensure representation of Congress, DoS, and the Intelligence Community might introduce more-realistic constraints—striving from budgetary constrictions, force protection, and other security concerns and from greater emphasis on such objectives as human rights. This would require players to confront more directly that U.S. policy is driven by more than the narrow goal of strengthening a particular unit.

To put this into practice, future games would need to either recruit players from the communities in question in sufficient numbers to forcefully advocate for a range of objects or develop a more formal role-playing element to the game. While the latter approach would require some investment in developing role guidance, it offers substantial potential educational, as well as analytical, benefits.

Recommendation 4: Play Further into the Future by Including More Turns

For practical reasons, the initial runs of the SFA game featured a small number of moves, representing several years of investment in total. However, due to the importance of consistency of aid and the decreasing marginal returns to large investments over a short period of time, playing more than two turns could yield additional insights and provide a fairer test as to whether SFA investments succeed or fail. For example, playing more, shorter turns would allow for more opportunity to refine a strategy that can benefit from feedback loops built into the game

mechanics and would allow players to develop more-sophisticated strategies. This change would require adjusting the number and value of the coins. Modifiers for past success would be carefully evaluated in play-testing to ensure that the game remains correctly calibrated. Alternatively, one could keep playing more turns representing multiyear investments to push further into the future.

Playing over longer time periods could also require new rules to capture some of the negative consequences of long-term assistance. For example, the current model provides a benefit only for sustained investment in a particular area. If does not include penalties to represent the dependence that such a relationship can produce. Adding dynamics like these to the rules would be important for capturing long-term consequences but would also require some effort to ensure that the dynamics were correctly captured in the game rules.

Recommendation 5: Require Materiel Investments to Be Sustained

In the initial play of the game, the rules for investments required that materiel needed only a one-time investment to be sustained. However, best evidence shows that, generally, such capabilities either require repeat investments to maintain or require substantial capability on the part of the receiving nation for organic sustainment. Future iterations of the game should consider adding rules requiring that, to retain or advance beyond a starred capability level, players must either invest in materiel each turn or develop the executive function of the faction.

Recommendation 6: Consider Using the Game to Examine SFA in Other Countries or to Create a Strategy for SFA Investments Across Multiple Nations

The SFA game was initially designed to examine a highly fragmented environment, which is not necessarily representative of other contexts where the United States provides SFA. This created an interesting strategic dynamic, in which U.S. investments could meaningfully change the balance of power among factions to promote stability or greater conflict. In applying the game to other contexts, it will be critical to give careful consideration to what factional or other divisions within receiving-nation forces are important for the United States to shape. For example, countries at risk of coup, where the balance between forces could shape the support available to the United States' preferred political leadership, might be a relevant context. Likewise, a post–civil war military that has integrated units from militias or a country with a history of factional tensions that could lead to a future conflict could be appropriate. However, at the very least, strategic adjudication practices would need modifications that took account of the literature on SFA in the alternative contexts.

Additionally, this game could be modified to help SFA planners to budget their investments across a number of countries. With limited resources, this approach could help planners to explicitly consider the trade-offs of investing in one nation versus another and to prioritize their SFA dollars.

5. Conclusions

Overall, the game design presented in this report met our objective of creating a forum for stimulating concrete assessments of the pros and cons of different SFA strategies that were grounded in available empirical evidence about when and why security cooperation succeeds or fails. We demonstrated that it was feasible to convert a series of principles that spelled out empirical patterns to generate a set of rules that were easy to execute and could be explained to multiple audiences. Additionally, we were able to logically link these operational results to a higher-level discussion about strategic outcomes. As a result, the game could provide players with empirically grounded feedback on their strategies, which generated robust discussion and positive player engagement. The game design helped the players systematically think through their choices and forced them to make resource-constrained decisions. Furthermore, the game proved valuable to multiple audiences with different perspectives, understanding of SFA, and knowledge of the region, demonstrating versatility.

As with all games, the design has limitations. First, the game took a top-down approach in that the core design concept prioritized broad discussion of strategy over concrete discussion of implementation. Thus, much work would be required to convert a strategy played in this game into an actual course of action that could be executed. Second, this game design did not include endogenous changes to the SFA recipients. In other words, the focus on SFA may have overemphasized the ability of external factors to shape operational outcomes versus internal ones. Third, the game's consideration of third-party investors limited the consideration of their preferences and capabilities and likely simplified the complexity of how their decisionmaking shapes opportunities for and risks to the United States to achieve its goals. Fourth, the choice to have key actors, such as the recipients of assistance and Congress, represented only in the adjudication model risks underselling the importance of these actors in the success of SFA. Some, but not all, of these shortcomings could be mitigated by adopting the recommendations in Chapter 4.

More fundamentally, even the most successful SFA program is likely to have a limited ability to create substantial short-term change in strategic direction of a failed or war-torn state. These programs alone are too little to achieve major U.S. national security objectives, such as stabilizing a country that has experienced a civil war or defeating terrorist groups in a particular region. As a result, even the most successful player strategy was likely to have relatively little strategic effect. On one hand, the game prompted participants to grapple with key policy questions: How much change can be expected from programs with limited resources? How well suited is assistance to changing deeply held practices in cultural contexts we do not understand well? On the other hand, games are most successful when they give participants a sense of agency, which we could not achieve here without imposing inaccurate artificialities. While our solution was sufficient to achieve our goals, we recognized the innate tension in the project. New

applications of this approach, with different audiences and in different cases, however, could work out differently.

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