-PREVIOUS RESEARCH/Introduction

The export of major military equipment by the United States is closely aligned with its strategic foreign policy objectives, functioning as a tool to either reinforce stability in allied regions or to influence political dynamics in areas of strategic interest. This approach reflects a dual strategy where arms exports serve both to consolidate power within existing alliances and to facilitate shifts in regional balances, sometimes fostering insurrection or resistance as a means of countering adversarial influences. In this way, military aid and arms transfers are not merely commercial transactions but are deeply embedded within the broader geopolitical framework of U.S. foreign policy, serving as instruments of influence in regions deemed critical to national security interests.

This project explores those interests through a global dataset of Major Arms Trades since 1946. The Stockholm International Peace Research Institute (SIPRI) Arms Transfer Database is well documented in professional literature. It is often referenced to highlight a specific idea, such as the economic impact of weapons trade (Holtom, Buread-Sudreau) or the development and changes of arms trade because of changing foreign policy (Harkavy). Though the United States is clearly the largest global exporter of major weapons, by any measure possible, there does not yet exist prior research into U.S. military actions, or the implementations of their strategy, and their preceding/following arms trades. Major weapon systems such as aircrafts, tanks, and artillery pieces are the main instruments of war, and most are manufactured in the United States and distributed globally. The timing and destination of these transfers, when visualized appropriately, can show the preparations and results for/of armed conflict across the world since 1946. Additionally, previous publications lack thorough or adequate visualizations to rapidly convey the historic subtleties and complexity of U.S. military relations in the post-WW2 era. Most describe situations in prose and provide a simple data table or bar chart to be referenced but make no attempt to draw the reader’s attention with conviction, as detailed below.

A graph showing the number of arms transfer

Description automatically generatedHoltom’s Figure 1, seen below introduces a 3D bar chart to highlight a 1980’s peak of global arms volume (in dollar amounts). The peak and trough years appear identical in structure and color.

A table of numbers with text

Description automatically generatedCharts like this convey the necessary information- but are bland. There are others that even fall short of this, such as Beraud-Sudreau’s Table 1, seen below. This chart seeks to show the rising prevalence of several countries in the growth of their arms supply, yet the data points decrease in value as the country increases in prominence, since this is a ranking measure, which is not immediately intuitive and does not show relative amounts of exports in scale. Rather than generate a multi-line plot that would have visually communicated this, the author opted to dedicate a paragraph explaining this aspect.

Similarly, Harkavy’s Table 1 lists out categories of countries, depending on their main supplier of arms. A table such as this is incredibly dense and requires the reader to parse each line to get a specific understanding of the information encoded within. Data tables like this easily lend themselves to map representations, though none are observed in this or any other researched publication.

A table of information with black text

Description automatically generated

This project avoids the industry pitfalls highlighted above and instead takes a fresh, digital-age approach to communicate the U.S. military policy decisions embedded within the SIPRI database. Through Node.js, an interactive narrative is explored. Users can visualize specific policy decisions through time, geography, composition, relationships, and dollar value, as described below. By telling the story through preset, yet manipulatable, graphics instead of static images, the user can receive the intended image, but also explore according to their own curiosity and insight.

METHODS: (probably review each page/look and its nuances)

To ensure that the project is communicated as an interactive notebook style, multi-page document, the overall layout incorporates a side navigation panel on the left with the names of the various ‘chapters’ of the intended story. This emphasizes the narrative of the story, making it easy for users to explore different parts of the story sequentially or to skip to a specific area of interest. To the right is the main narrative that is communicated or explained in the accompanying visualization. The dark color scheme allows the maps and visualizations to be highlighted and aids the readability of color-coded text, when used.

On the Introduction tab, the example of the Vietnam War, alongside the ongoing Cold War in 1971, is depicted. Color-coded proportional symbol maps rapidly showcase destinations of various dollar amounts of weapons to countries around the world. Tooltips also lend additional information to help build conflict-oriented context, such as a level of intensity, e.g. whereas Southeast Asia received $9 Billion in arms in 1971, and had an intensity of 4 (the highest), Europe also received $12 Billion but had an intensity of 1. This demonstrates that the U.S. was simultaneously addressing a full-scale war in Vietnam while still arming European Allies, in support of the ongoing Cold War against the Eastern Bloc. This surprising insight comes to life on the page, with a larger bubble over Europe than that of Southeast Asia, and overcomes the American bias towards our direct ‘boots-on-the-ground’ involvement in conflicts. As such, the reader leaves with an expanded frame of reference and appreciation for the complexity of U.S. military affairs in 1971.

(highlight each story tab)

(conclusion- expand this into an evaluation of manufacturers and their success/failures throughout conflicts?