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Guns, Butter, and Dr. Seuss: Using Political Cartoons to Teach the PPC[1]

Political cartoons have often been used in the social studies classroom as a way to deepen students' understanding of historical topics and provide a creative outlet to develop critical thinking and analytical skills. This paper extends this method to the economics curriculum, specifically the topics covered at the introduction of an economics course: opportunity cost, scarcity, and the production possibilities curve. Students are asked to identify how these fundamental economic concepts are relevant to political cartoons created by Theodor Geisel, better known as Dr. Seuss, during World War II. By analyzing these cartoons in the context of the production possibilities curve, students can enhance their understanding and develop an appreciation of the historical significance of these key concepts.

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1. Introduction

Many students find economics to be an intimidating subject. At the beginning of an introductory economics course, students are asked to comprehend several key ideas that provide the fundamental framework for the entire economics course, such as scarcity and opportunity cost. The first graph that students typically encounter in an introductory economics course is the production possibilities curve (PPC). This graph is a visual representation of several key fundamental economic ideas including scarcity, efficiency, and opportunity costs, but students who are unfamiliar with these concepts or intimidated by graphs may have difficulty understanding how to interpret and fully understand the PPC.

The activities described in this paper seek to reaffirm the fundamental concepts of the PPC in a more accessible way for students. Many students have little experience with the economics curriculum when they enroll in an economics course, but are likely familiar with the historical context of World War II. Most students are also familiar with the works of Dr. Seuss. But many are unaware that Dr. Seuss, in addition to his work as a children's author, was also a political cartoonist during World War II. By asking students to interpret the political cartoons of Dr. Seuss during World War II, the economics instructor can aid students in developing critical thinking and analytical skills. These cartoons directly relate to the economic concepts of scarcity and opportunity cost. They can also be used to illustrate key ideas within the production possibilities curve, such as the costs associated with moving from one point to another point along the curve, and the consequences of operating at a point inside the PPC.

The activity discussed in this paper is designed for use in an introductory economics course. It can be applied in an Advanced Placement program in high school, or in a principles course at the college level. According to the Council for Economic Education's Survey of the States, as of 2016 all 50 states require economic concepts to be included in the K-12 education standards (Council for Economic Education, 2016). Twenty-three states require high schools to offer an economics course, while 20 states require students to complete an economics course. Sixteen states include economic concepts in standardized testing. The activities discussed in this paper can be implemented within a high school social studies curriculum to help satisfy the state requirements to include economic concepts in classroom instruction. Within the AP Microeconomics course outline, this lesson could be included in the Basic Economic Concepts content area (College Board, 2012). Additionally, with the recent creation of more rigorous standards in most of the United States, whether this is through the adoption of Common Core or other statewide initiatives, many students are now expected to be proficient in analyzing both primary source and non-fiction text, regardless of whether they are taking an AP level course or a standard high school course.

The reason for the adoption of these new standards is clear: it is for students to "develop critical-thinking, problem-solving, and analytical skills that are required for success in college, career, and life" (Common Core, 2016). With Common Core and many statewide initiatives, high school students are tasked with using primary source material to determine the author's purpose, interpret and analyze the author's message, and cite specific evidence from the primary source to support their analyses. Political cartoons can help students develop and master these essential skills in a fun and non-intimidating way.

This paper proceeds as follows: First, a review of relevant literature on using political cartoons in the classroom to develop critical thinking and analytical skills is undertaken. Next, the paper discusses how the political cartoon can be used in an economics classroom in conjunction with a lesson on the PPC. Then, the paper explores examples of political cartoons drawn by Dr. Seuss during World War II, and how each can apply to an economics lesson on scarcity,

opportunity cost, and the PPC. The paper concludes with some suggested classroom extensions of the lesson, which include promotional posters used by the U.S. government during World War II.

2. Literature Review

The benefits of using political cartoons in a social studies classroom have been documented by several authors. Mattos (1972) discusses that the visual nature of the exercise provides students with a more appealing way to comprehend abstract concepts. Political cartoons have an important place in history, and can even influence political and social outcomes. Mattos suggests dividing students into groups when analyzing the political cartoons. McCarthy (1977) adds that political cartoons serve as a useful assessment of student understanding of course material. He discusses the importance of students recognizing that the cartoonist is seeking to "sell you his viewpoint" (McCarthy, 1977, p. 32). Thomas (2004) emphasizes the role of the political cartoon as a primary source, subject to the same type of critical analysis as more conventional primary documents. Thomas reiterates that he found the most success with this activity when student interaction and discussion were integral to the completion of the assignment. He outlines the following method as a guide for analyzing the political cartoon: "1) identify the thesis of...each portrayal; 2) understand the author's frame of reference and biases; 3) know something of the event...that precipitated the cartoon; 4) compare its message...with other contemporary sources; and 5) evaluate the cartoon's intent, reliability, accuracy, and usefulness as a historical insight" (Thomas, 2004, p. 427). Kleeman (2006) discusses the use of the political cartoon within a geography classroom. He explains that cartoons have the power to communicate complex and abstract issues in a simplified and accessible way. He finds that cartoons are an effective way for instructors to gain student attention, and encourages the use of political cartoons in classroom debates and discussion.

Economists have also discussed moving beyond the lecture format. Becker and Watts (2001) investigate the most prevalent teaching styles within the economic classroom. Despite increased research on the benefits of active learning in the classroom, their survey results reveal the continued prevalence of chalk-and-talk lectures that focus on passive rather than active learning in economics instruction. The authors note that economics instructors are less likely than instructors of other disciplines to use methods other than the standard lecture format. Luccasen, Hammock, and Thomas (2011) address the benefits of using visual media in economics instruction. By complementing the economics lesson with visual aids, the instructor can more effectively reach students who learn best from visual modes. The authors state that using multimedia sources familiar to the student can deepen their interest in finding the economic concepts within that example. To be effective, students must be active members of the activity; therefore, the authors suggest class discussion or writing assignments to ensure the students make the connection between the media that is presented and the underlying economic concepts.

Using Dr. Seuss to teach economics is not a new concept. Miller and Watts (2009) provide a thorough discussion of the economic concepts contained in the children's books written by Dr. Seuss. Economic concepts such as scarcity, opportunity cost, utility, demand, and specialization are found in the short stories, and the authors provide an impressive list of the children's books that align with specific economic concepts. We will expand the work of Miller and Watts by focusing not on the children's stories of Dr. Seuss, but instead on the political cartoons he created during World War II.

Using political cartoons in the classroom is cited as an effective way to engage students

in critical and analytical thinking exercises. It aids students in the comprehension of abstract concepts in an approachable manner. While much of the literature focuses on the use of political cartoons in the history classroom, this paper seeks to identify ways to bring this teaching strategy to the economics classroom. The benefits from increased student comprehension of abstract concepts extend to economic instruction. As cited in the previous works, the exercises described in this paper are intended to be a group activity, with a suggested group size of two to four students. This allows students to exchange ideas about the interpretation of the cartoon and discuss its relevance to the economic concepts relayed by the PPC.

3. Methodology

A classic application of the PPC is the "Guns vs. Butter" tradeoff. This example illustrates how nations, given their limited resources, must choose how to allocate these resources for the production of guns, which represent military goods, and butter, representing consumer goods. Students can identify the opportunity cost of producing more guns is the sacrifice in butter production, and vice versa. By using World War II as an example, students will have a more tangible reference for the economic concepts contained in the PPC lesson.

Using the students' knowledge of the U.S. involvement in World War II and the constraints that were faced by society as a result, this lesson allows instructors to build the economic concepts of scarcity, opportunity cost, and the production possibilities curve within this framework. We suggest that this lesson be implemented after students have been introduced to the PPC and are aware of the underlying assumptions of the model. First, using the context of the U.S. involvement in World War II, instructors can check student understanding of movement along the PPC. After the United States became involved in World War II in 1940, our country's need for military goods increased. In order to support the war effort, many production facilities that had been used exclusively for consumer goods in the past became tasked with producing military goods. Graphically, this is represented with a movement along the PPC towards increased gun production. Instructors can verify that students understand the consequence of this movement along the curve; less butter is now available as our limited resources have been shifted towards gun production.

A good illustration of this is the automobile industry. Under the War Production Board established by President Franklin D. Roosevelt, automakers halted the production of consumer automobiles in 1942. Instead, automakers "retooled to manufacture tanks, trucks, jeeps, airplanes, bombs, torpedoes, steel helmets, and ammunition under massive contracts issued by the government" (Buescher, n.d., p. 7). This example can be used to illustrate how labor and capital were diverted to war goods, and how the fundamental concepts of limited resources and scarcity can be applied in the historical context.

By providing students with real examples of the guns vs. butter tradeoff, they may now find the graph less intimidating. Providing a story to accompany the visual PPC aids student understanding and retention of the fundamental concepts illustrated in the model. Once the lesson on the PPC is complete, the following activity is suggested to reinforce and deepen student comprehension of the lesson. From 1941-1942, Theodor Geisel served as a political cartoonist for the New York daily newspaper *PM*. His cartoons are a reflection of the attitudes of New Deal liberals, who were the primary readers of this newspaper. Among his cartoons can be found striking examples of the fundamental concepts of scarcity, opportunity cost, limited resources, and productive efficiency. Instructors may find it necessary to review the basic principles of a political cartoon with their students. If students are not familiar with political cartoons, they may be unable to interpret the message being portrayed by the author. The National WWII Mu-

seum provides a comprehensive overview of the underlying components of a political cartoon, and includes examples to help students understand how to interpret the cartoon. The guide discusses the role of symbols, caricatures, stereotypes, analogies, juxtaposition, irony, and captioning to convey the message of the author (National WWII Museum, n.d.).

To use the cartoons as an assessment of student understanding, instructors can form groups of students (with two to four students per group) and give them the political cartoons. It is helpful to have a worksheet to provide students with specific guidelines and questions that lead them in interpreting the political cartoons. Ask them to discuss the cartoons with each other, using the following methodology, which can also form the basis of the worksheet distributed to students:

- Have students read any text (titles, captions, date of publication, dialogue, etc.) that they see in the cartoon. This is an initial introduction to the cartoon. Students do not have to understand or interpret the meaning behind the text during this step. This is for students to acknowledge and recognize that there is text there to assist them with the cartoon's interpretation.

- Have students list the objects that they see in the cartoon. It is recommended that teachers explain that this is just what they see in the cartoon itself, and they do not yet have to interpret what these might symbolize. Instructors can remind students to list what they see when they look at this cartoon. For example, what is the first object in the cartoon that captured your attention? What are some other images that you notice as you look closer at the cartoon?

- From the list of objects, ask students to identify what the objects may symbolize. This might be directly stated through labeling in the cartoon, or it might be relying on some common symbols that the students might recognize (i.e. Statue of Liberty representing the United States). Have students list possible symbols next to their list of objects from the second step.

- Have students re-read any text (titles, captions, date of publication, dialogue, etc.) to interpret the meaning of the cartoon. They should decide what the cartoon is saying about a specific topic. Is it in favor or opposed to its subject?

- Ask students to brainstorm on the intended message of the cartoonist. What is the cartoonist hoping to achieve by drawing this cartoon?

- Have students consider their reaction to the cartoon. How might this be similar or different than the intended reaction the cartoonist was trying to elicit? Do students believe that the reaction they had would have been the same or different than the reaction people had at the time when the cartoon was drawn? Why?

- Finally, ask the students to identify and explain the economic concepts displayed in the cartoon. Each of the cartoons included below contain economic concepts that align with a lesson on the production possibilities curve.

Figure 1 was published on August 18th, 1942, a time when the United States was continuing its island hopping campaign in the Pacific against the Japanese and as German troops were advancing towards Stalingrad. Students should be able to identify that the amount of resources devoted to war production is based on the efforts of consumers, which also determines our ability to win the war (or enjoy a "Victory Omelette"). Instructors can ask students to explain how the concepts of scarcity, opportunity cost, and movement along the PPC are relevant in

Figure 1 – "Victory Omelette"

Source: Minear, R. H. (1999). *Dr. Seuss Goes to War: The World War II Editorial Cartoons of Theodor Seuss Geisel*. New York, NY: The New Press, p. 251.

this cartoon. Students should identify that, because our production is now more focused on war goods, the opportunity cost is the amount of consumer goods given up. As the country operates at a point closer to the gun axis, we are sacrificing our butter production. This results in fewer consumer goods, such as the ingredients for a "Victory Omelette."

One possible class exercise is to ask students to construct a PPC, showing butter and guns on the axes, and label a point that best represents the society as depicted in Figure 1. Students should choose a point that shows society devoting more resources to gun production than to butter production. An example is included in Figure 2.

Figure 3 was published on December 23rd, 1942, following the Allied invasion of Northern Africa and as the Soviets were continuing their offensive against the Germans in Eastern Europe. Students can identify that the cartoon is encouraging consumers to forego travel for the sake of the Army. Instructors can ask students to describe how sacrificing consumer travel during Christmas frees up resources that can be used to support the war effort. Once again, instructors can ask students to explain how the concepts of scarcity, opportunity cost, and movement along the PPC are relevant in the cartoon. This cartoon allows instructors to emphasize one of the underlying assumptions of the PPC, that our resources are limited. A possible class exercise is to ask students to explain why consumers can help the Army by not traveling for the holidays. Students should identify that by not traveling, consumers are not using resources such as fuel and rubber. These resources can instead be used by the Army.

Figure 2 – Example PPC showing the "Guns vs. Butter" Tradeoff

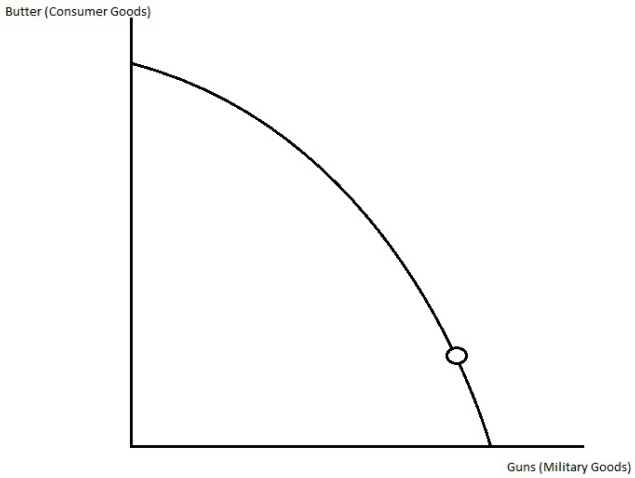
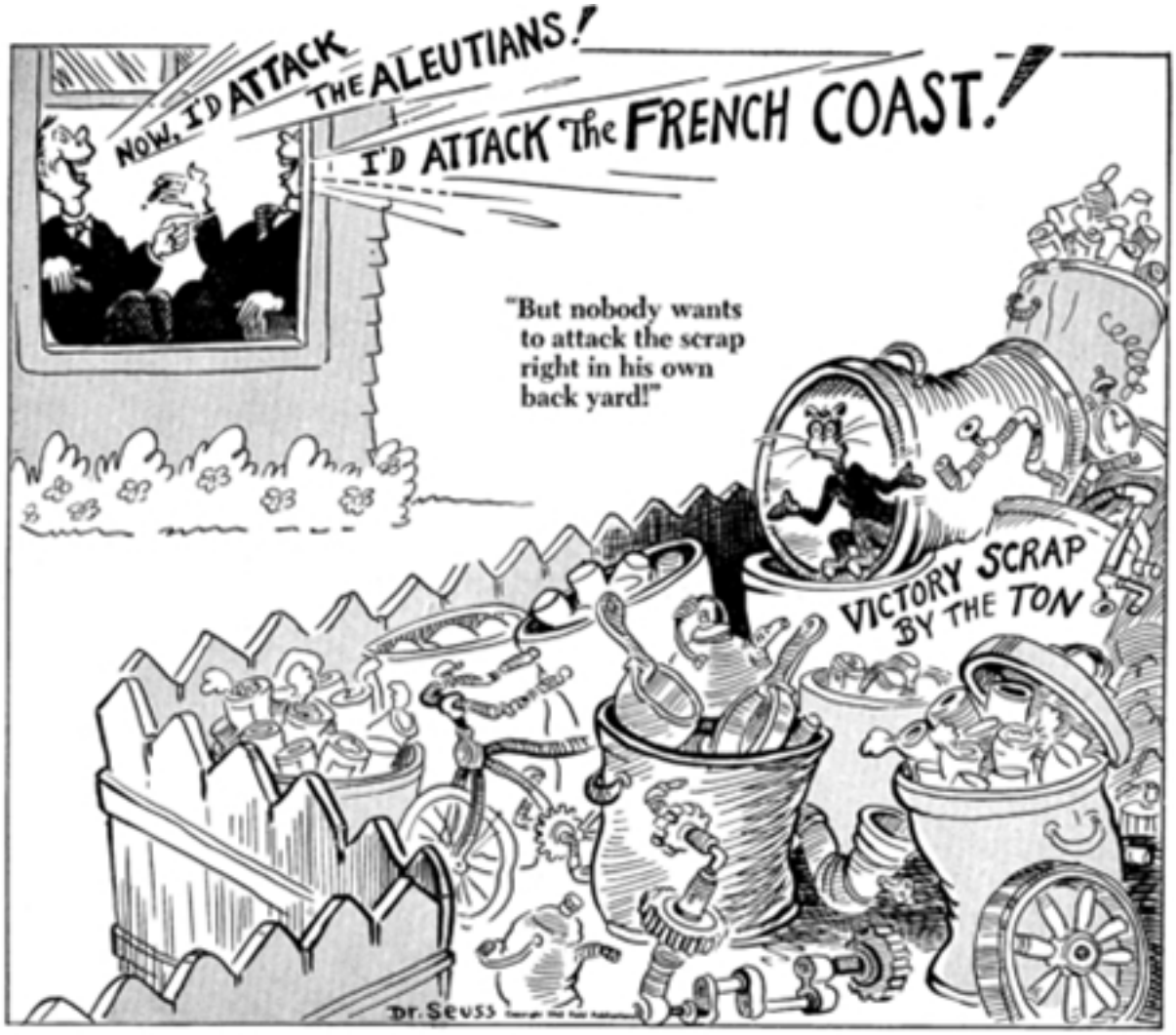


Figure 3 – "Xmas Travel"

Source: Minear, R. H. (1999). *Dr. Seuss Goes to War: The World War II Editorial Cartoons of Theodor Seuss Geisel*. New York, NY: The New Press, p. 256.

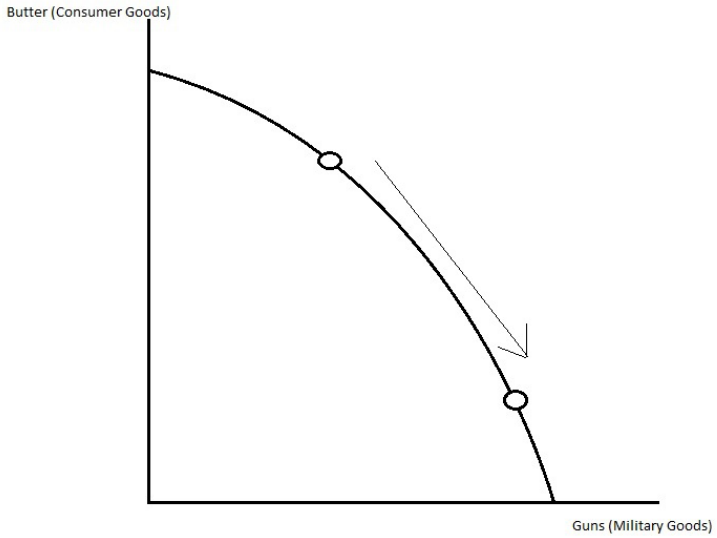
Figure 4 – "Victory Scrap"



Source: Minear, R. H. (1999). *Dr. Seuss Goes to War: The World War II Editorial Cartoons of Theodor Seuss Geisel*. New York, NY: The New Press. p. 252.

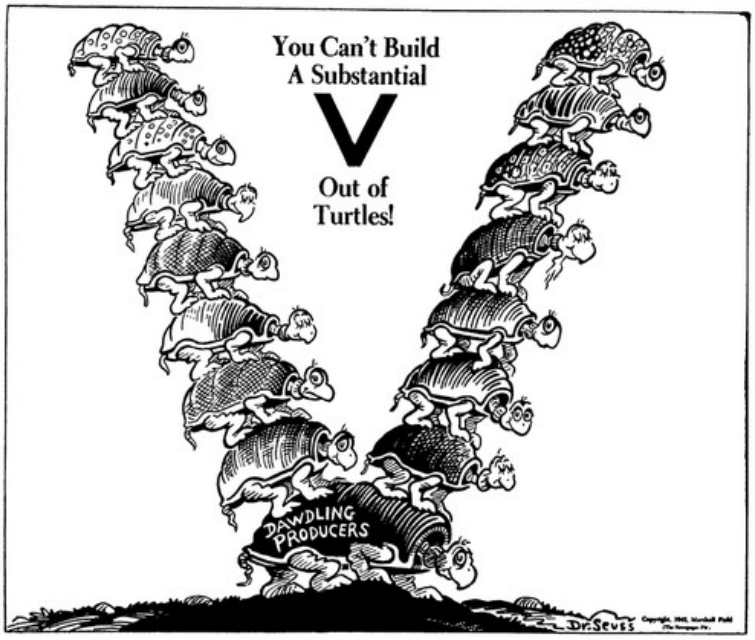
Figure 4 was published August 20th, 1942. Limited resources and shifting our resources from consumer to military use can be found in Figure 4. Like Figure 3, this cartoon emphasizes our fixed resource capacity that forces society to engage in tradeoffs between war and consumer goods. The old pots and pans, bicycles, and cans may be put to better use if allocated to the production of military goods. By turning consumer scrap metal into military goods, we can see a movement along the PPC. Students can identify the movement along the PPC because of the reallocation of metal used for consumer goods to military goods. An example is included in Figure 5 below.

Figure 5 – Reallocation of Resources from the Production of Consumer Goods to the Production of Military Goods



Figures 6 and 7 can be used to illustrate the importance of operating at a point on the PPC, not inside the PPC. These cartoons display the importance of using resources to their fullest capacity to get as much output as possible.

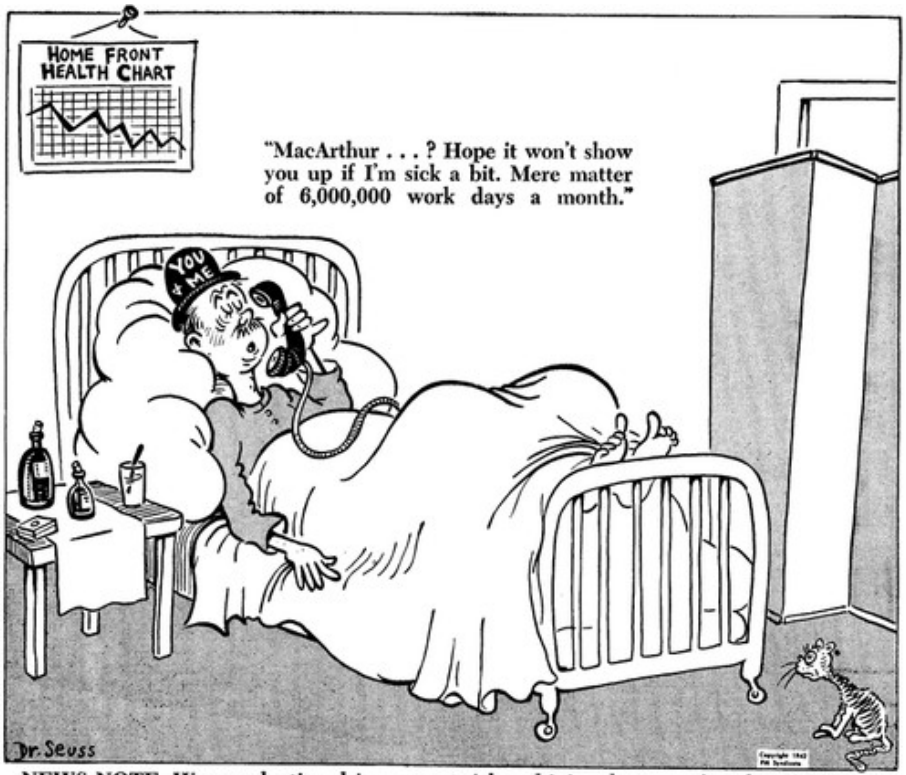
Figure 6 – "Dawdling Producers"



Source: Minear, R. H. (1999). *Dr. Seuss Goes to War: The World War II Editorial Cartoons of Theodor Seuss Geisel*. New York, NY: The New Press, p. 244.

Figure 4 was published March 20th, 1942 after the United States began the rationing of tires and the Allied naval forces were damaged in the Battle of the Java Sea. The cartoon references the wartime slogan "V for Victory," which was a popular Allied symbol during the war. Here, it is important for students to make note of the phrase "dawdling producers" and infer the symbolism of the turtle. If producers are not working at full capacity, then the country cannot achieve victory. Dawdling producers represent an inefficient point within the PPC model.

Figure 7 – "Home Front Health"



NEWS NOTE: War production drives report sick and injured war workers lose 6,000,000 work days every month.

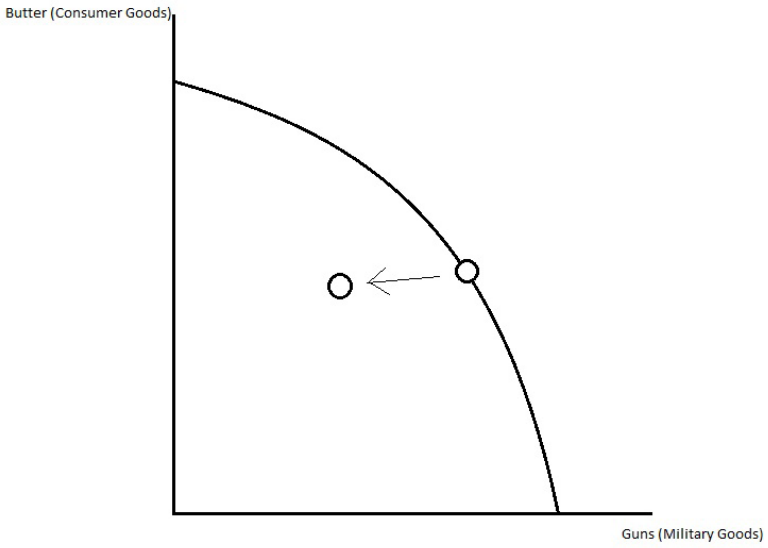
Source: Minear, R. H. (1999). *Dr. Seuss Goes to War: The World War II Editorial Cartoons of Theodor Seuss Geisel*. New York, NY: The New Press, p. 248.

Figure 7 was published June 23rd, 1942 following the Allied success at the Battle of Midway and the Lidice massacre by Nazi Germany. Once again, the cartoon reflects the importance of using labor to the fullest capacity. By highlighting the number of work-days missed collectively by workers, the cartoon illustrates the negative impact this will have on the war effort. An interesting class discussion can accompany this cartoon, which seems to encourage sick laborers to continue going to work. Students can consider whether this would definitely help the war effort. Under what conditions might it hurt the war effort?

Figures 6 and 7 both address the problem of not using resources to their fullest capacity. In Figure 6, the use of the turtle and the text "dawdling producers" suggest that slow and ineffi-

cient production will not result in a victory. In Figure 7, we are reminded that for each laborer who does not report to work, there is a measurable negative impact on war production. Instructors can ask students to identify a point on the PPC that aligns with the message of these cartoons. Students should identify a point inside the PPC, as displayed in Figure 8. Further discussion can include why this is not an optimal point for society. Because we are not using all of our resources, we are not achieving our potential output. Have students identify that the quantity of both guns and butter is greater when operating on the PPC as compared to a point inside the PPC.

Figure 8 – Operating Inside the PPC



Most students are familiar with the work of Dr. Seuss as a children's author and illustrator, but most are unaware that he worked as an editorial cartoonist during World War II. Political cartoons drawn by Dr. Seuss offer an engaging and non-threatening tone for students to interpret within this medium. At the conclusion of these activities, students will have applied several fundamental concepts of economics including scarcity, choice, opportunity cost, and limited resources. All of these key issues apply not only to the production possibilities curve, but to lessons throughout an introductory economics class. By providing a strong foundation in these fundamental concepts, students may more easily relate to these ideas within future lessons.

4. Extensions

An additional medium to illustrate and reinforce the "Guns vs. Butter" tradeoff is the use of U.S. propaganda posters from World War II. Figure 9 shows two promotional posters distributed by the U.S. government to encourage citizens to accept the consequences of increased military production and make the necessary sacrifices for the sake of the military.

Figure 9 – U.S. Propaganda Posters from WWII

Source: Waldrep, M. C. (2010). *60 Great Patriotic Posters*. Dover Publications.

As an additional extension, instructors can ask students to compare the attitudes regarding scarcity and the tradeoffs society faces depicted by the cartoons to those of today. How and why has the production possibilities curve changed from the 1940s to today? Can we say that scarcity is no longer an issue for society, and therefore society doesn't have to consider the tradeoffs associated with producing more of any particular good?

5. Conclusion

At the beginning of an introductory economics course, students encounter several key ideas that provide a framework for content covered throughout the entire class. Getting students comfortable with these key ideas is critical to their success throughout the course. In addition to delivering the content within a traditional lecture, this paper encourages the instructor to use the political cartoons of Dr. Seuss to emphasize these key concepts. Students engage in discussion and interpretation of the cartoons through an economic lens, which encourages the economic way of thinking and reinforces these key concepts in a fun and relatable way. By applying an economic lesson to topics already familiar to them, such as World War II, and using political cartoons drawn by the beloved Dr. Seuss, this lesson instills a deeper understanding of central economic concepts and expands the students' appreciation that economics can be found all around us.

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