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*Developing and Implementing Just-in-Time-Teaching Techniques in the Principles of Economics Course*

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### **Warmup: Monopoly Behavior**

**A friend is writing a science fiction novel and she hires you to be the economics consultant. (You remember that's how Alan Greenspan got his start, so you agree.) In this novel set in the future, the air is so polluted that people must buy air like they buy water or gasoline today. The author wants a conflict to arise in which one company has a monopoly on air. Based on your reading in chapter 9, provide advice to the author about what might happen. She has told you that she wants to write an interesting and complex novel in which outcomes aren't simple or predictable.**

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### **Student Responses Used in Class**

1. Several possible events: The quality of the product, oxygen, could be less than satisfactory. Since there is no competition the monopoly would have no incentive to improve the quality of air provided or improve the technology used to provide it. This could lead to health issues etc. Such a monopoly would wield a significant amount of political power. Campaign contributions, bribes etc., could be used to sway government policy. The monopoly could virtually hold the country at ransom by threatening to disrupt the production of air. Since everyone needs air to survive such a threat could bring the government under the monopoly's thumb. Price discrimination could also be put into play. A person with a physically demanding job such as an athlete would require more oxygen than say an office clerk. The monopoly would take advantage of this and charge the athlete more than the clerk. The athlete requires a large amount of oxygen to perform, if he doesn't buy it at the increased price than he will be forced to quit and look for work elsewhere. Most likely the athlete will pay the raised price and keep his job. And office clerk by exerting himself as little as possible would be able to control his oxygen intake more effectively and thus avoid the strain of price increases. Use of patents, lawsuits, key inputs and acquisitions would all be used by the monopoly to keep down the competition. The monopoly also might be dissolved if the public gets up in arms. The government could step in and use antitrust measures to break up the company. The government might nationalize running through a government agency. Or it might regulate it like a public utility such as gas, electricity, water etc.
2. Although a lot of people won't be able to buy air anymore because they would be dead, there are those who would be able to buy air from this one company that has monopoly on air. Since air is essential and people can't live without air, the demand curve for air in this story is going to be inelastic, which means it will be almost vertical. This means that the price for air would be really high. This means that this company will earn a lot of profit because the price will be set on the demand curve above where  $MR=MC$ . An inelastic

demand curve will cause the price to be very high. As a result, the people who couldn't afford air in my friend's story will either end up dying or moving to Mars.

3. In this novel, one company has a monopoly on air that is a natural monopoly. The company abuses its position which is monopoly. They rise price and supported to make huge profit by the government, because many senators participate in management. There are insurmountable entry barriers. Whistle-blower said that there is a cozy relationship between senators and the company and price of air is too high, because technology is advanced. After whistle-blowing, the administration is changed by election. The new president said that air market should be contestable market. The government supports entry into air market by new enterprises and there are tax deductions of investment in plant and equipment. After entry barriers being modest, price is down and also the government taxes on air. There are still discontents.
4. I would tell her that what might happen if you have a monopoly on air, which the air is really needed, there is a couple of things that can happen. One is that since people need the air to survive, the company can charge as much as they want for it, since they are the only market. They can raise the prices as much as they want, till the government puts a regulation on how much they can charge for air. Second is they could be a nice company and charge a low price for air, since they are a big company and have a low ATC, it's causing them very little to produce air, they could charge it at a low price. But I don't think that is what they will do, they will charge as much as they can, that would also make the novel more interesting, which rich people were the only one's that could survive since they had the money for it.
5. There are many conflicts that could arise if there was a monopoly on air. First of all, I would explain to her that when there is a monopoly marginal revenue is not equal to price, since one company is the entire industry there is a downward sloping demand curve as well as downward sloping marginal revenue. However, in the case of air, I don't think this is as true as it would be for a regular monopoly. Air is a necessity, everybody needs air to breath and so I think the demand curve would actually be pretty price inelastic, people will need a specific quantity and pay almost any price. My friend could talk about things in her novel like how monopolies most often reduce the rate of output. In order to maximize profits, monopolies usually reduce output to benefit them (pg. 200). This is could be a major problem, people are going to want air in high demand, but either the company will have a high, but not outrageous price, and reduce output, or they might increase output to fulfill demand but charge outrageous prices. My author friend could also go into to more detail about price. In general, with a monopoly, prices will be higher than if there was a competitive market. Because there is only one company supplying the air they might not only restrict supply, but also raise prices. Also, when supply is restricted, prices will soar even higher because people will be battling to have the "hard to get" air. It would be really interesting if my friend talked about how in monopolies there is a basic tendency for productivity and advances in economic growth to be inhibited (pg. 203). Since only one company produces air they don't have to worry so much about being at their most productive or efficient state. Maybe my friend could talk about how this negatively affected them. Perhaps with the reduction in competition the sole air company was not producing high quality air. Since they were in competition with no body maybe they were not working as hard and started to sell air that was not so clean. This market power could also lead to incredible political power (pg. 204). Since air is a necessity the market power for this monopoly is rather great so maybe this power leads to a corrupt political system too. A cool ending would be for somebody to secretly invent, without using any of the same tools as the current air suppliers, a way to

clean and filter your own air in your home. He would invent an incredible machine that would clean the air around you so you no longer had to continuously buy clean air. This new 'air supplier' or rather air filtering supplier would make tons of money of the filters that were needed for the air filterer and then the original air supplier would not be able to have this incredible domination over air. These two guys would now have to compete to be the one who supplies clean air to consumers and the market power of the monopoly would be greatly reduced.