



## Reintroduction Of Wolves: Market Failed or Market Failure?

I was recently asked to conduct some research on the reintroduction of wolves into the Colorado area. Wolves used to be a normal part of the Colorado landscape but have been effectively extinct from the area for quite some time. As an economist, I must rely on my economic principles in order to sort through the issue of reintroduction. This includes a discussion on market failures and efficiency improvements.

First and foremost, we must agree upon our definition of society. This is very important because any evaluation of policy must have defined participants. If we can't agree on at least some sort of broad definition, we may never achieve an answer to our little dilemma. So let us consider who will be affected by the reintroduction of wolves into Colorado. There are, of course, the farmers and ranchers who will be affected. The nature viewers and those who would like to know there are wolves in Colorado make up another portion of the pie. Then we might ask if we just consider people in this country or if we need to consider foreigners as well. That should cover the human portion of society, but what do we do about the animals that will be affected by reintroduction? Do animals deserve a say? Do they deserve representation? Here we find ourselves in an ethical hold with no easy answers. Well, I am a practical person by nature and I feel there would be no real way to represent the animals because we can't possibly know or try to assume what they want. Therefore, it is my suggestion that we limit our society to

humans only. After all, it was us that removed the wolves and so it should be us to decide if they come back. This also begs the question, should we only consider the present generation or should we also take into account future generations? I think that in this case we need only consider the present generation. Since preferences and lifestyle changes with each generation, we must be careful not to assume anything about the future. There is no way for us to know what future generations might prefer when it comes to wolves. Unlike pollution or something that is clearly a negative externality, we don't know for a fact if future generations will or will not want wolves. Now that we have it down to humans in the present, I believe we should only consider the opinions and values of residents of Colorado. Someone might argue that I am neglecting the non-use values of others. I would agree, however, non-use values are not measurable in my opinion and until they are, they should be excluded from policy. I say they are not measurable because unlike use-values, they cannot be observed by behavior. An individual's non-use values for an environmental policy can only be determined by surveying the individual about his or her preferences. This can be very difficult and lead to bias data. Use-values, although not perfect, are observable and will allow those who will be most directly affected by this policy to decide policy. I don't always believe that this should be the case, however, for this dilemma I suggest using those people who will actually feel the brunt of this change. I do recognize that we often make policy that doesn't directly affect us but sometimes it is necessary. For example, Americans who don't even live near Iraq decided the war in Iraq. However, I believe there is a relationship here and because Iraq is a direct security threat to the United States it does

effect us as citizens. In other words, unlike wolves in Colorado, Iraq does affect the entire U.S.

Now we have our society for this discussion and must now determine what our society wants. Were wolves removed from Colorado on the basis of a working market? In other words, did the market succeed when it removed wolves or was the removal of wolves a market failure or even a non-market failure? In order to answer this question, we need to discuss market failures. A market fails when it cannot achieve the efficient amount of something. In this case we are talking about the efficient amount of wolves in Colorado. Specifically, since there are no wolves in Colorado, is that the efficient amount? Did society direct the market to achieve this number? In order to answer these questions, we must again determine who runs the market. Was it just our sub-market of Colorado citizens that drove the wolves out or was it a larger market that includes many different elements? If, in fact, our sub-market of Colorado citizens did create market efficiency with zero wolves, then we should have no problem with wolves staying gone forever. But perhaps the proper market was not represented at the time and a market failure occurred.

Let's now talk briefly about government intervention and how it affects our market and economic policy. Government intervention has been a hot topic in economics for as long as economics has existed. There are those who believe in the Coasian argument and disagree with intervention. It is their feeling that the market should be left on its own to internalize externalities. In a perfect world with perfect information, this argument would be very compelling. However, I think any practical person can see that we don't live in such a society and that perhaps some government intervention is

necessary. That is not to say that the government doesn't fail at its duty from time to time. They cannot compensate for everyone's costs and benefits; they can only attempt to guess and try to create equilibrium. I believe that some intervention is necessary but the less there is, the better. The reason I am having this discussion is because I feel it is relevant in determining if the market is still failing when it comes to wolves. A person who does not believe in intervention would simply argue that if wolves were removed due to market failure, that the market should have fixed itself by now and we would be seeing wolves. A person on the other side could argue that the market failed when wolves were removed and government intervention is necessary to restore equilibrium and achieve a working market. This is where a decision must be made and we must go back in time to determine if the market failed or succeeded when wolves were removed. Another issue that we must touch on is the government intervention that occurred when wolves were removed in the first place. Bounties were placed on wolf's lives and thus helped with their removal. So did this intervention lead to a market failure or did society want this intervention to help rid Colorado of wolves?

There is no doubt that society has changed over the years. This includes changes in preferences and changes in standard of living. The wolf was removed by hunting, which ultimately left them on the verge of extinction. That is why they were placed on the endangered species list a while back. Now, however, they have revived and come back in numbers so great that they were recently removed from the list. If you agree that society has changed then you could also agree that the market has effectively changed as well. Does this mean that the new market wants wolves? That I cannot say for sure

without more information on peoples preferences. Perhaps that information could be obtained by using contingent evaluation methods.

In order to determine if wolves should be reintroduced, we must consider the market we now face and decide if it is different than the one we faced when wolves were first removed. Keep in mind though, even if they are different, that doesn't mean that wolves should or shouldn't be reintroduced. Maybe, however, it will suggest that wolves deserve another chance against this new market. We know that quality of life and preferences could have changed and therefore, the market equilibrium for wolves could have changed. Then the big question becomes, if we do decide that wolves should be reintroduced, how do we reintroduce them? Is government intervention necessary or will wolves find their way back on their own.

There is an opportunity here for a potential pareto improvement. I don't believe however, that we have a chance at pareto improvement. I say this because not everyone will benefit from reintroduction and in fact, some will be harmed. For example, farmers and ranchers that will likely lose livestock will be hurt. By not reintroducing wolves, those people who desperately want to see wolves in Colorado will be hurt. This only leaves the option of a potential pareto improvement. The case where the gain to the gainers is greater than the loss to the losers. Perhaps we could create an actual pareto improvement through a compensation system but this is highly unlikely and probably would never really work. So let's find the best potential pareto improvement.

I would like to close my paper by summing up my answers to these questions and my conclusion. It is my opinion that wolves were removed from Colorado based on a working market. Although government intervention was present at their removal (i.e.

bounties), I believe it was at the request of citizens and therefore the market. Perhaps the optimal amount of wolves was zero but the market was unable to achieve this number without incentives and intervention. The society then created an equilibrium and efficient market based on zero wolves. This occurred because people's preference to hunt and remove them outweighed the preferences of those people who liked wolves at the time. However, I also believe that we now face a different market than we did before due to several factors. Therefore, I will suggest allowing wolves to be reintroduced to Colorado but only if we can determine that the citizens of Colorado would really want that. This, of course, would require extensive work to try to reveal the true preferences of the people. But if a working market was able to remove the wolves, a working market should bring them back. Another issue I must touch on is intervention. Unlike their removal, I don't think any intervention will be necessary. The cost of introduction (in money terms) could be quite expensive and I think it would make the overall cost of introduction much higher. This may deter people from reintroduction for the wrong reasons. People may really want wolves in Colorado but may not want to pay for it. If a reintroduction tax is proposed, it might not pass and thus lead people to believe that wolves shouldn't be introduced. However, this could be false in that they would like reintroduction but not at that high of a cost. The best way to deal with this problem is to avoid the situation. So let's just let wolves come to Colorado without intervention if we determine that people want that. Besides, I think it will be much more telling if wolves are able to come back without the help of anyone else. This should effectively prove that the market is doing its job and that wolves belong here in a natural sense. According to the Colorado Wildlife Federation, they believe that "either natural or human-initiated

expansion of wolves to Colorado is inevitable, and that Colorado must be ready.” In other words wolves are ready to come here if our market will let them. Maybe we will find that although society has changed, it still doesn’t want wolves. I say, let’s put it to the test and see if our market works.

## REFERENCES

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