

As with any system, the country of Mali is complex and operates under an infinite number of relationships and connections among parts. Looking at the tomato farming system specifically within Mali, there are stocks of tomatoes, flows of incoming resources necessary to produce the tomatoes and a reinforcing loop of profit. However, this system fails when the outgoing flow of a tomato harvest runs low due to production issues and profits cannot be made and thus put back into the system. That is why Molly and her team were tasked with modifying the tomatoes during the production stage to improve the quality and therefore profitability of the harvests. Even though this one flow of the system was improved and garnered a “success,” that flow impacted the other stocks it fed into, specifically the processing and distribution of the tomatoes.

Systems thinking largely incorporates the perspectives of the individuals looking at the system; thus, every perspective uses a different set of boundaries, which can exclude some vital parts of the system. Molly set her boundaries relatively tight, looking only at the system of tomato production rather than the entire system of the market for tomatoes. With Molly’s set of boundaries, the only problem in sight was that poor-quality tomatoes were being produced, whereas with a larger boundary Molly would have seen the other issue of tomato distribution. This transcends into the definition of “success” and “failure,” since a “success” in a large boundary setting is a great deal more meaningful than a “success” when boundaries are restricted.

I think it is unreasonable to say that changing your perspective actually “creates” a new problem. That problem was always present in the system, it was just not something anyone could have noticed or considered when holding a constrained view. Based on the perspective of Molly and her team, it is interesting to consider whether knowing the issues with the lack of electricity

in the processing/distribution plant would have impacted the functioning of the system. Would the team have continued with the tomato plant modifications anyway? Or would they have shifted their focus to include fixing the distribution issues as well? I would hope that if the team had broader boundaries they would have recruited help for that flow of the system as well, but I suppose there still would not be any guarantee that other resulting stocks such as actual profit would be improved since there are likely other problems one would notice with an even larger boundary: the international market for tomatoes. On another note, would the resulting tomato harvest outflow have been any different if Molly and her team had never even modified tomato production to begin with? Having some tomatoes is probably better than having no tomatoes, but in order to get that outward flow of harvest and feedback loop of profit, it is likely that the stock of tomatoes has little impact on that outflow with the hinderance of processing and distribution not functioning properly.

This example makes it clear that consideration of boundaries is dire. It can be the difference between what is considered a “success” to those who fix the problem they see versus those who in theory would be reaping the benefits of the system-wide all-together “success,” in this case profit from selling tomatoes. Going forward, I think when looking at a system and attempting to point out its flaws, it is important to set wide boundaries to ensure no stock, flow, or feedback loop is excluded. Each part contributes to the functioning of the whole, so unless you can see as many of the relationships as possible, it will be difficult to then “fix the system” since you may only be altering one part that will not affect the system in the desired manner.