

Reflections on Model System Sequestration in the Laboratory

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Abstract

In this brief note, the author reflects on the pros and cons of laboratory science.

Usually, science is done in a laboratory. It makes sense because one has a central location for all one's investigative equipment where it can be neatly categorized and organized. It also comes with an address to which new equipment can be delivered easily and repeatably. These advantages come with their concomitant caveats. For example, if all equipment is in one place, then what about the "field?" If your work is fieldwork then having the equipment back in the lab is of no use to you. You'd have to arrange for a more mobile laboratory.

In the laboratory setting, one isolates the system to be investigated, and then probes it. There is a lot of preparation that goes before one gets to this stage however. For example, one has to secure permissions from ethical oversight committees before procuring the model systems for experimental work. We should also talk about the premise which allows one to consider such a study in the first place. For example, why would isolating the system in a laboratory be a good idea? This leads into questions of sequestration from the environment for study purposes - is it wise or not from the angle of yielding the most, and most correct answers.

If one is probing a living system, consider that in the "wild" the system will undergo all sorts of interactions on a daily basis. It will interact with other members of the same family, same species and even other members of the plant and animal families. Pollen, dust, flies - all these interaction will take place throughout its life in the wild. Such a system is brought into a sterile lab environment and one has lost all that variety which was stimulating the system's brain in the wild. Those daily fresh stimuli, most are gone forever once in the laboratory cubicle.