Emerging Questions in Tactual Mapping

*Layperson Summary*

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With advising from Dr. Elizabeth Delmelle
For the visually-disabled, special considerations must be made in order to assist them with movement through space. By using special steps in the mapping field (cartography,) we are able to design a map for blind people that allows them to read with touch instead of with sight (tactual mapping.) This is possible because we use technology that can print shapes in three-dimensional forms, or plastic that can be heated into a mold. Unlike traditional flat maps, these shapes are raised and are easy to feel out. Researchers have studied different ways of designing these maps and our work is to select the method we think is the best to produce at a mass-scale.

The problem in the field right now is that we have not greatly explored the use of three-dimensional printing and software technology in GIS and Cartography – it is still very new, so it is not yet common to create these tools for blind people even though the technology exists to do so. Another major barrier is that there is yet to be an authority or ruling on the matter of the design choices – a standard set of guidelines to follow would make the feat more approachable.

In summation, we think that it is really imperative that all visually-disabled people have access to these important tools, because research shows that it assists them in having more independent lifestyles and gives them a better understanding of their environment. Production at a mass-scale and using a specific guided technique is what will allow us to reach that goal of improving accessibility.