In this week's reading, I was fascinated by a confrection between Florman and

Zimmerman. They present similar claims but make contradictory conclusions. It is in the contradiction that my questions emerged.

Florman is suggesting that small is nothing more than a neutral word; but "small is beautiful" as a design strategy, engineering requirement, or political structure is beyond unrealistic. Florman derides the idea that individuals in smaller communities can experience greater freedom or a higher quality of life than those living with (and presumably benefiting from) large technological systems.

Florman doesn't seem to consider the idea that perhaps one of problems with "bigness" is the opaqueness of the institution to the everyday person. He's correct that large institutions and technologies can help cities rebound after disasters and can efficiently provide what he calls "life support" to marginalized and disenfranchised people in big cities. However, these technosocial institutions don't always do this beneficial work.

To use Florman's example, of course having competent repair people available when my power is out is a great convenience. While the size of a utility company can be an asset when one needs a repair person, the size is also a barrier to company accountability and transparency. The PG&E water contamination case is a prime example of this. PG&E's size and assets made it difficult to first *see* their environmental impacts and later to hold them accountable for their actions.

However, this isn't just about accountability. It's about Zimmerman's idea that we cannot create technological citizens unless we move to a more democratic method of technological production and technological governance. In order to achieve

is it about scale? or about process? this is where Jasapor democratic production and governance, the scale of technologies will have to be reduced. Individual citizens cannot engage democratically with large utility companies. This is more complicated because most individuals in America have very little experience in civic and democratic engagement.

This lack of engagement, says Zimmerman, results in lower individual and moral autonomy and part of the blame for this rests with large technological systems. The fix? Destroy authoritarian technological systems (no big deal!).

Zimmerman says that authoritarian technologies (these same technologies that Florman is praising as keys to a happy world) will collapse only when we "become more capable of recognizing this authoritarian tendency as an abdication of moral responsibility." (p.101).

Florman and Zimmerman agree - large sociotechnical systems are designed to reinforce their importance. However, if we are to become mature technological citizens, we will have to transform into a society that can exists without the systems. How can we engage in democratic technological production (and accountability and governance and obsolescence) when we are still so dependant on gigantic technological systems? Florman claims that cities cannot survive on "neighborhood gardens, community bakeries and roof-top solar panels" (p.158) If this is true, and it is also true that our existing large systems are impeding our moral development and making us subservient to authoritarian technologies - what are our alternatives?