Takeaways: Take individual action, follow OSPs, collaborate with peers to encourage discussion. There is hope.

"Big data" : the increasing volume, variety, and velocity (3Vs) of data streams across Sectors.

Problem: ecologists produce a tremendous amount of data, but ecology has yet to develop a culture of transparent data exchange and aggregation

Answer: Big Science? Not quite. The term "big science" was coined in 1961 by Alvin Weinberg, then director of the Oak Ridge National Laboratory (ORNL), to describe the large, complex scientific endeavors in which society makes sizeable investments, often in the form of government funding (Weinberg 1961). These projects tend to involve international, collaborative efforts among many scientists and institutions (Price 1963; Borgman et al. 2007; Aronova et al. 2010) and are often characterized by expensive shared equipment (Borgman et al. 2007).

Dark Data: Traditional individualistic research approach imposes challenges on the scientific endeavor at large. Heidorn (2008) made the important point that the data produced by a multitude of smaller projects are frequently less available and less well curated than those produced by major initiatives, with less funding and personnel time dedicated to information management. The fate of these smaller datasets is mostly unknown.

Issue:

- Thus The problem of dark data is one of lost opportunities – what could have been produced had the data been available to others – as well as the additional costs of unnecessary data replication. Diverse, repurposed data can support synthetic approaches at larger scales than was originally intended (Palmer et al. 2005; Jones et al. 2006), lending new perspectives to old questions and inspiring new lines of inquiry. Funders are becoming increasingly aware of this wastefulness in the use of their research dollars and are encouraging Reform.

- potentially invaluable information is largely inaccessible, with only a portion of

the data visible through the investigator's publications

Conclusions:

- Individual researchers must: Organize, document, and preserve data for posterity. Share data. Collaborate with networks of colleagues to bring together heterogeneous datasets to address larger scale questions. Address data management issues with students and peers.
- There is hope… becoming more common in areas like Biology. E.g in areas of biology that
- use genetic data, publishing data is now the norm
- Level up or die. Or level up and be the revered leaders of a new eraaa in ecology (not exactly but you know what I mean): Ecologists who thrive in the shifting landscape of the information age will be those who recognize that leveraging our expertise requires us to share our data. These ecologists will treat data as important products of research,bringing ecology into an era of data-intensive research