Information about social entities is often spread across multiple large databases, each degraded by noise, and without unique identifiers shared across databases. Record linkage—reconstructing the actual entities and their attributes—is essential to using big data and is challenging not only for inference but also for computation. In this talk, I motivate record linkage by the current conflict in Syria. It has been tremendously well documented, however, we still do not know how many people have been killed from conflict-related violence. We describe a novel approach towards estimating death counts in Syria and challenges that are unique to this database. We first introduce a novel approach to record linkage by discovering a bipartite graph, which links manifest records to a common set of latent entities. Our model quantifies the uncertainty in the inference and propagates this uncertainty into subsequent analyses. We then introduce computational speed-ups to avoid all-to-all record comparisons based upon locality-sensitive hashing from the computer science literature. Finally, we speak to the success and challenges of solving a problem that is at the forefront of national headlines and news.