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In 1950 Frank Preston noted that the frequency distribution of species abundances in ecological communities was remarkably similar to the Boltzmann distribution of molecular kinetic energies and the Pareto distribution of personal incomes. He later expanded this list to include marriage ages of Danish, British, and US women, the longevity of restaurant drink tumblers, and the stress required to fracture microscope slides. This correspondence runs deeper and also includes power-law species area/time relationships and the non-linear distance decay of similarity. A striking resemblance even exists between the body-size distribution of beetles in Borneo tree canopies and cars in York and Heathrow Airport parking lots. Social scientists – as well as ecologists – are thus faced with three major tasks: 1) documenting those patterns which reflect general cross-disciplinary expectations; 2) searching for ultimate mechanisms of these patterns; and 3) we must understand which patterns can and can not be altered. I consider these issues via a thorough cross-disciplinary investigation the non-linear distance decay, and will show how variation in its functional form (power-law like vs. exponential) and decay rate provides important insights regarding system dynamics. (Received February 10, 2014)