# Personalization and probabilities: impersonal propensities in online grocery shopping

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Accounts of big data practices often assume that they target individuals. Personalization, with all the risks of discrimination and bias it entails, has been the critical focus in accounts of consumption, government, social media and health. This paper argues that personalization through models using large-scale data is part of a more expansive change in probabilization that, in principle, is not reducible to individual or 'personal' attributes and actions. It describes the 'personalization' of an online grocery shopping recommender system to list a small number of grocery items of personal relevance for each of the millions of online grocery shoppers at a major UK supermarket chain. Drawing on a theory of probability proposed by the philosopher of science Karl Popper and anthropological work on shopping, it suggests that the attempt to generate personalized predictions necessarily incorporates impersonal relations to others and things. Using a mixture of discourse analysis and code-based reconstruction of key elements of the recommender system, it suggests that personalization is one facet of an open-ended weave of propensities associated with people and things in contemporary big data configurations. The paper explores how, in the context of recommender systems, the constitutive incompleteness of shopping lists, their propensity to expand or change, might be more important than their capacity to be personalized.