

# Department of Marketing



Research Seminars Series

## Remi Trudel, Boston University (US)

March 13, 2025 | 12:00 - 14:00 | TC.0.58 TC Hall

### The Material Diversity Paradox: Why Products with Many Recycled Materials (Erroneously) Seem More Eco-Friendly

Products with a smaller diversity of materials—composed of a smaller number of different materials—are almost always more eco-friendly. Yet, seven pre-registered experiments reveal a paradox in consumers' perceptions of eco-friendliness: while consumers reasonably perceive products with a smaller material diversity as more eco-friendly, this perception reverses when the materials are recycled as they erroneously view products with greater recycled material diversity as more eco-friendly. This reversal occurs because of a numerosity effect whereby greater material diversity is perceived as increasing the total magnitude of material, influencing perceptions of product material efficiency—how effectively products minimize the use of new materials and are thus more eco-friendly—in opposite directions depending on whether the materials are new or recycled. For new materials, increased total material magnitude is seen as less materially efficient, while for recycled materials, it is mistakenly perceived as reducing the use of new materials, and thus more materially efficient. The misperception arises because consumers are unaware of energy efficiency—how effectively products minimize energy use—which declines as material diversity increases. This research advances the extant understanding of how consumers interpret frequently salient quantity information in the marketplace and the underlying drivers of consumers' eco-friendly consumption decisions.