Lorenzo Maria Stanca

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Contact Information

Address:

Piazza Vincenzo Arbarello, 8
10122 Torino, Italy
and Corso Unione Sovietica, 218 Bis
10134 Torino, Italy

Mobile: +39 3333421801 and +1 773-290-4906
lorenzo.stanca@kellogg.northwestern.edu
http://lorenzomstanca.com/
Citizenship: Italian
Date of Birth: 21st of April, 1992

Fields

Research: Microeconomic Theory, Decision Theory, Game Theory.

Academic Positions

Assistant Professor of Economics, Collegio Carlo Alberto — September 2022-
Research Fellow, ESOMAS Department, University of Turin — September 2022-

Education

Ph.D., Managerial Economics and Strategy, Northwestern University — 2022
Dissertation: *Essays on Decision Theory*
Committee: Peter Klibanoff (Co-Chair), Marciano Siniscalchi (Co-Chair), Nabil Al-Najjar, Daniel Martin.

M.S., Mangerial Economics, and Strategy, Northwestern University — 2017

M.S., Economics, Bocconi University, — 2016
Advisor: Pierpaolo Battigalli.

B.S., Economics, Bocconi University, — 2014.
Advisor: Massimo Marinacci.

Teaching Experience

Teaching Assistant, Northwestern University — year 2017-2022
MECS 560-2, Dynamic Optimization in Economics.
DECS 430-0, Business Analytics.
DECS 452-0, Game Theory and Strategic Decision Making.

Refereeing

Econometrica, *American Economic Review*, *Journal of Economic Theory*, *Economic Theory*, *Journal of Mathematical Economics*, *Mathematics of Operation Research*.

Publications

"Foundations of ambiguity models under symmetry: α-MEU and smooth ambiguity" with Peter Klibanoff, Sujoy Mukerji and Kyoungwon Seo, Volume 199, January 2022.
Journal of Economic Theory, Forthcoming on the Special issue on Ambiguity and Robustness.

Brief abstract: The α-MEU model and the smooth ambiguity model are two popular models in decision making under ambiguity. However, the axiomatic foundations of these two models are not completely understood. We provide axiomatic foundations of these models in a symmetric setting with a product state space S^∞. This setting allows marginals over S to be linked behaviorally with (limiting frequency) events. Bets on such events are shown to reveal the i.i.d. measures that are relevant for the decision maker's preferences and appear in the representations. By characterizing both models within a common framework, it becomes possible to better compare and relate them.

"Smooth aggregation of Bayesian experts"
Journal of Economic Theory, Volume 196, September 2021.

Brief abstract: I study the ex-ante aggregation of preferences of Bayesian agents in a purely subjective framework. I relax the assumption of a Bayesian social preference while keeping the Pareto condition. Under a simple axiom that relates society's preference to those of the agents, I obtain an additively separable representation of society's preference. Adding an ambiguity aversion axiom I obtain a representation that resembles the Smooth Ambiguity

Criterion of Klibanoff et al. (2005). I then briefly consider applications of this framework to inequality and treatment choice under ambiguity.

"A simplified approach to subjective expected utility."

Journal of Mathematical Economics, Volume 87, March 2020, Pages 151-160.

Brief abstract: I provide a novel simplified approach to Savage's theory of subjective expected utility. Such an approach is based on abstract integral representation theorems in the space of measurable functions. The advantage of such an approach is that these results can be used to easily obtain variations on Savage's theorem, such as representations with state-dependent utility or probability measures that can have atoms. Finally, I discuss how such an approach can be used in other settings such as decision making under ambiguity.

Working papers

"Robust Bayesian Choice"

Brief abstract: A major concern with Bayesian decision making under uncertainty is the use of a single probability measure to quantify all relevant uncertainty. This paper studies prior robustness as a form of continuity of the value of a decision problem. It is shown that this notion of robustness is characterized by a form of stable choice over a sequence of perturbed decision problems, in which the available acts are perturbed in a precise fashion. Subsequently, a choice-based measure of prior robustness is introduced and applied to portfolio choice and climate mitigation.

"Recursive Preferences, Correlation Aversion, and the Temporal Resolution of Uncertainty."

Abstract: Models of recursive utility are commonly associated with a preference for early resolution of uncertainty, often regarded as an important economic channel in applications. This paper provides a different understanding of recursive preferences based on attitudes toward correlation, and in particular aversion to intertemporally correlated risks. I formalize and investigate such a property. I show that an increase in correlation makes a decision maker that prefers early resolution worse off even when increasing correlation also provides non-instrumental information about future consumption. Relatedly, I show that one can separate risk aversion from intertemporal substitution by considering a domain of choice in which pure preferences for early resolution of uncertainty play no role. Finally, I apply the insights of this paper to better understand the features possessed by existing models of recursive utility. I argue that attitudes toward correlation are the key behavioral feature driving the results of consumption-based asset pricing models.

Preliminary work

"A model of smooth discounting."

Brief abstract: Discounted expected utility is the standard model of decision making under uncertainty. However, it has several shortcomings, both at the experimental and theoretical level. For example, it conflates attitudes toward risk with intertemporal substitution; it takes the rate of time preference as "given" or exogenous; it implies risk-seeking attitudes over prospects that contain uncertainty only over the date of payment. We propose, in an axiomatic framework, a new model of multiple discount factors that addresses such shortcomings while maintaining dynamic consistency. We illustrate important implications of this model for the theory of asset pricing.

"Deliberate randomization and preference for correlation" with Xiaoyu Cheng.

Extended abstract: We revisit the literature on stochastic choice based on an observation from the existing experimental evidence: A decision-maker (DM) often chooses differently from the same set of alternatives when asked to choose multiple times. The existing literature offers an interpretation that the DM has a convex preference over lotteries, i.e., strictly prefers a non-degenerate probability distribution over the alternatives to any degenerate ones. Because the experiments are often conducted in a dynamic setting, we observe that the subjects' choices also exhibit a form of negative correlation: if an alternative was chosen in the past, it is less likely that it will be chosen today. In other words, it shows a form of intertemporal preference for variety. In order to capture such a preference, we translate the convex preference over lotteries to a convex preference in an intertemporal setting. Specifically, we introduce a dynamic extension of the Cautious Expected Utility model and show that it can generate this pattern of choice. In addition, we aim to show that

the converse is true, i.e., any stochastic choice function that exhibits negative correlation over time is the product of the optimization of some dynamic convex preference.

"Understanding contagion dynamics when new infections are partially identified"

Brief abstract: As a consequence of missing data on tests and their inaccuracy, the number of new COVID-19 cases is not measured correctly, hampering the estimation of parameters that are used by policy makers to understand the spread of the pandemic. Following the literature on partial identification, I show how one can obtain bounds of the number of new infections. I then present a Poisson auto-regressive model which can be employed to understand the contagion dynamics of COVID-19 when one observes an interval valued process given by the bounds obtained on the number of new infections. I show that the effective reproduction R_t is substantially underestimated in phases of growth of the epidemic and discuss the policy implications of this fact.

Research Visits

2023 ETH Zurich (Chair of Integrative Risk Management and Bielefeld University (Center for Mathematical Economics).

2022 ETH Zurich (Chair of Integrative Risk Management and Economics), Bielefeld University (Center for Mathematical Economics).

Invited Presentations

2022 University Paris 1 Panthéon-Sorbonne, Collegio Carlo Alberto, University of Naples Federico II, Bocconi University, Queen Mary University, IÉSEG School of Management, ETH Zurich, Bielefeld University.

Languages

Italian (native), English (fluent), Spanish (intermediate).

References

Professor Peter Klibanoff
MEDS
Northwestern University
2211 Campus Drive
Evanston, IL 60208
847-491-5153
peterk@kellogg.northwestern.edu

Professor Marciano Siniscalchi
Department of Economics
Northwestern University
2211 Campus Drive
Evanston, IL 60208
847-491-5398
marciano@northwestern.edu

Professor Nabil Al-Najjar
MEDS
Northwestern University
2211 Campus Drive
Evanston, IL 60208
847-491-5426
al-najjar@kellogg.northwestern.edu