

JOHN W.E. CREMIN

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Position:

Postdoctoral Fellow at the Aix-Marseille School of Economics from September 2024

Education:

2024	Ph.D. Economics	Columbia University
2021	MPhil Economics	Columbia University
2020	M.A. Economics	Columbia University
2018	M.A. Economics	Cambridge University

Honors and Awards:

2023-2024, Dissertation Fellowship, Department of Economics, Columbia University
2025, The Louis-André Gérard-Varet Prize at the ASSET 2025 Conference, awarded for
Bot Got Your Tongue? Social Learning with Endogenous Action Visibility

Fields of Specialization:

Primary Field: Microeconomic Theory (particularly Bayesian Learning)

Working Paper: Too Much Information & The Death of Consensus

*Revise & Resubmit at **Games and Economic Behavior***

Abstract: Modern society is increasingly polarized, even on purely factual questions, despite greater access to information than ever. In a model of sequential social learning, I study the impact of motivated reasoning on information aggregation. This is a belief formation process in which agents trade-off accuracy against ideological convenience. I find that even Bayesian agents only learn in very highly connected networks, where agents have arbitrarily large neighbourhoods asymptotically. This is driven by the fact that motivated agents sometimes reject information that can be inferred from their neighbours' actions when it refutes their desired beliefs. Observing any finite neighbourhood, there is always some probability that all of an agent's neighbours will have disregarded information thus. Moreover, I establish that consensus, where all agents eventually choose the same action, is only possible with relatively uninformative private signals and low levels of motivated reasoning.

Working Paper: Bot Got Your Tongue? Social Learning with Endogenous Action Visibility

Abstract: Models of social learning conventionally assume that all actions are visible, whereas in reality, we can often choose whether or not to advertise our choices. In this paper, I study a model of sequential social learning in which *social* agents choose whether or not to let successors see their action, only wanting to do so if they are sufficiently confident in their choice (they have *reputation concerns*), and *noise* agents act randomly. I find that in *sparse* networks, this produces a form of unravelling to the effect that noise agents are overrepresented. This can damage learning to an arbitrary extent if social agents' reputation concerns are sufficiently strong. In *dense* networks, however, no such unravelling occurs, and the combination of noise and reputation concerns can facilitate complete learning even with *bounded* beliefs.

Working Paper: Sleeping Newcomb

I study games with self-locating uncertainty in which an agent at a single information set is uncertain of his position even within a given information set of a given play of the game. In such games, there is an analogy to be drawn with Newcomb's problem: in both settings, locally rational (third-order) reasoning and globally optimal (planning) reasoning can prescribe different strategies. I call this a Newcomb tension, and present a representation theorem: a Bayesian with commitment power and an uncommitted agent holding incorrect 'one-boxer' beliefs are behaviourally equivalent. In the single-agent case, randomisation always resolves the tension but in multi-agent games, in which planning and interim social weights diverge under some conditions, a multi-agent Newcomb tension can survive this randomisation resolution with an asymmetric awakening structure across agents. I consider the implications of this for the duplicating Sleeping Beauty problem, and a duplicating variant of the absent-minded driver.

Working Paper: Sleeping Beauty Loses her Magic Psychic Powers

An agent, Sleeping Beauty, in a game with self-locating uncertainty (i.e. one play of the game visits the same information set multiple times, as in the paradox of the absent-minded driver) must select a behavioural strategy that is self-ratifying: a best-response to the belief that her other instances do likewise. When there are multiple such fixed points, the standard treatment of Aumann, Hart and Perry (1997) assumes that all instances of the agent can simply coordinate. I drop this assumption (supposing that Sleeping Beauty 'lose her magic psychic powers'), and study said agent iteratively reasoning her way to an equilibrium selection instead. Which strategy other instances select can be seen as ambiguous, so I model Beauty's choice via a response function that encodes her response to ambiguity, and a procedure that describes in what manner she iterates the application of this response function. I consider two response functions, 'Bayesian' and EU-maximin, and two procedures, replacement and accumulation, and characterise in which cases the iterative reasoning converges. For either response function, accumulation always converges, but replacement does so if and only if there are no cycles of length weakly greater than two on a particular finite functional digraph I call the support digraph.

Working Paper: TLDNR: Inattentive Learning on the Internet

Observing the views of others takes time and effort, yet in social learning it is typically assumed that we observe all those to whom we are connected for free. I investigate a model in which agents are rationally inattentive: they pay a certain cognitive cost to acquire private information, but must also pay to observe those to whom they are connected. In social networks where the cost of observation is decreasing in the strength of a given connection, I investigate the network and information conditions required for complete learning. I also analyse whether increasing or decreasing the connectivity of the network increases or decreases asymptotic accuracy, and under what circumstances.

Works in Progress:

Sleeping Beauty's Dismal Day Out

In modelling games with self-locating uncertainty, it can seem more natural to represent multiple distinct agents as having decision nodes within the same information set, though these are conventionally defined as belonging to one specific agent each. When can one find an equivalent conventional representation for a game involving multiple agents certain information sets, and which representation should we use when studying games with self-locating uncertainty?

Sleeping Beauty Joins Twitter

In a model of sequential social learning with finitely many agents, whenever the visibility of actions depends upon the state of the world, agents should update their beliefs simply upon learning how many agents have acted before them. In a sequential model where they are uncertain about the total population size, and receive only limited information about how many predecessors have arrived and acted before them, I study how agents should form beliefs in response to such indexical information, and how this relates to the Sleeping Beauty Paradox. With endogenous visibility, we also encounter the absentminded driver paradox, as considered in *Sleeping Beauty Loses her Magic Psychic Powers* (see above).

Research and Work Experience:

Research Assistant for Evan Sadler Academic Year 2022-23
Research Assistant for Navin Kartik Spring 2021
Research Assistant for Andrew Kosenko Fall 2021

I have acted as a Referee for the Journal of Economic Theory.

Teaching Experience:

I have worked as a Teaching Fellow for the following classes:

Fall 2019: Introduction to Econometrics UN3412, Professor Jushan Bai

Spring 2020: Introduction to Econometrics UN3412, Professor Thomas Piskula

Fall 2020: Principles of Economics UN1105, Professor Sunil Gulati

Spring 2021: Market Design GU4260, Professor Guillaume Haeringer

Fall 2021: Market Design GU4260, Professor Guillaume Haeringer

Spring 2022: Behavioral Economics GU4840, Professor Mark Dean

Teaching Evaluations are available upon request.

Conference Presentations:

CERGE-EI Workshop on Economic Theories of the Information Society (*Invited*)

November 13-15th 2026 in Prague, Czechia

Will Present *TBA*

ASSET (Association of Southern European Economic Theorists)

Nov 5-7th 2026 in Cagliari, Italy

Will Present *Sleeping Newcomb*

Bristol University Seminar on Economic Theory (*Invited*)

October 27th 2026 in Bristol, England

Will Present *TBA*

CES Economic Theory Seminar

October 16th 2026 in Paris, France

Will Present *TBA*

Stony Brook International Conference on Game Theory

July 20-23rd 2026 in Stony Brook NY, USA

Presented *Sleeping Newcomb*

SAET European Workshop on Economic Theory

June 10-12th 2026 in Venice, Italy

Presented *Bot Got Your Tongue?*

CEAFE/MWET (Mediterranean Workshop in Economic Theory)

June 5-6th 2026 in Settat, Morocco

Presented *Bot Got Your Tongue?*

France-Spain Meeting in Microeconomic Theory (*Invited*)
April 30th 2026 in Granada, Spain
Presented *Sleeping Newcomb*

ADRES (l'Association pour le développement de la recherche en économie et en statistiques.)
Jan 22nd 2026 in Paris, France
Presented *Bot Got Your Tongue?*

ASSET (Association of Southern European Economic Theorists)
Nov 1st 2025 in Rabat, Morocco
Presented *Bot Got Your Tongue?* and received the LAGV Prize

SAET (Society for the Advancement of Economic Theory) (*Invited*)
July 1st 2025 in Ischia, Italy
Presented *Too Much Information & the Death of Consensus*

CTN (Coalition Theory Network)
May 22nd 2025 in Paris, France
Presented *Bot Got Your Tongue?*

AMSE Newcomer's Day
October 10nd 2024 in Marseille, France
Presented *Bot Got Your Tongue?*

EAYE (European Association of Young Economists)
May 24th 2024 in Paris, France
Presented *Bot Got Your Tongue?*

Kansas Workshop in Economic Theory (*Invited*)
May 3rd 2024 in Lawrence, Kansas
Presented *Too Much Information & the Death of Consensus*

SMYE (September Meeting of Young Economists – Now EAYE)
September 7th 2023 in Turin, Italy
Presented *Too Much Information & the Death of Consensus*

Languages:

English (Native), French (Advanced)

References:**Evan Sadler**

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