Accept this Paper

(Economic Theory Seminar, UK, May 2023)

Lones Smith Andrea Wilson Mavi & Melsi Wilson
Wisconsin and Princeton

Princeton offers admission to 5.5 percent of Class of 2022 applicants

by Office of Communications

March 28, 2018, 4 p.m.

Selectivity as Excellence

- Colleges advertise "selectivity"
- U.S. News and World Report college rankings puts 12.5% weight on selectivity
- The Princeton Review weights it as one of seven factors
- "Columbia Drops From #2 to #18 on University Rankings As School Officials Admit to Misleading Data" (09/12/22)
- Intuition: Since rejection rates are the de facto prices of better schools, better colleges should have higher rejection rates!

THE DAILY PRINCETONIAN

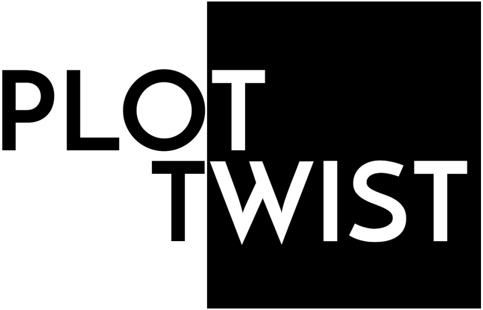
Princeton University accepts 0.00% of applicants to Class of 2027

Goal: Is Selectivity Excellence?

- Should the best colleges have the highest rejection rates?
- Should the best journals have the highest rejection rates?
- Better journals have higher standards, but get better papers.
- Which effect should dominate?

Goal: Is Selectivity Excellence?

- Should the best colleges have the highest rejection rates?
- Should the best journals have the highest rejection rates?
- Better journals have higher standards, but get better papers.
- Which effect should dominate?



- We show that selectivity *robustly fails* at elite journals
- We leave the harder college problem open
  - has initial college portfolio choice, and final student choice
  - Lately, early admissions also complicates the college problem

Journal / College Quality is Endogenous

- There are no absolutely good or bad colleges or journals
  - Alternatively, college qualities are fixed (maybe by faculty) — as is their student capacity
  - New journals face this problem all the time
  - Problem: Bad elite colleges can maintain high standards by shrinking enrollment [Chade, Lewis, and Smith (2014) "Student Portfolios and the College Admissions Problem"]
- For the purposes of valuing a college or journal:
  - A college is only as good as its students.
  - A journal is only as good as its papers

Matching as an Implicit Market

- Broad topic: Matching with incomplete information.
  - Asymmetry: journal qualities are known, paper qualities not
  - Complete information: use the deferred acceptance algorithm
- Journal Acceptance / College Admissions as Implicit Markets
  - Most elite journal money application fees are roughly similar
  - Acceptance bars and admission standards perform the allocation role of prices, and they adjust (highest for best journals and colleges)
  - This paper seeks to understand this market

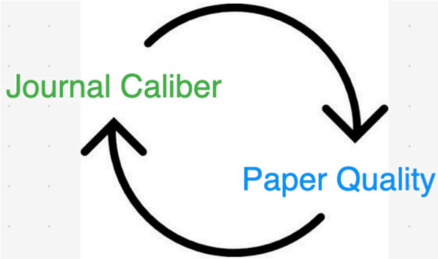
Steady State Story

- All players negligible $\Rightarrow$ games where journals move first then authors, or all act at once, have identical Bayes Nash equilibria

Step 1 *An endogenous capacity pool* of journals indexed by caliber publicize and commit to standards

Step 2 As a function of his paper quality, each author submits to a single journal, seeking to maximize caliber $\times$ admission chance

- Rational expectations: Acceptance decisions ensure that *average acceptance quality equals advertised caliber*



Model 1: The Author Knows His Paper Quality

- Continuum Mass of Authors
  - Each has a unique paper with some *quality* x
  - Density of paper qualities on $[\underline{x}, \infty)$
- Continuum Mass of Journals
  - Journal *caliber* is the average quality of accepted papers
  - Caliber is $$ units: a caliber v publication is worth v to the author
  - *Free entry / exit of journals* of any caliber (endogenous players)
  - When journals have market power, this invalidates our competitive logic, and is an open problem.
- Information and Actions
  - Seeing his paper quality, an author picks a journal to submit to
  - Seeing a noisy evaluation signal σ of a submitted paper's quality, a journal chooses whether to accept or reject it
  - Location family noise: quality x paper yields realized signal σ, where $\sigma - x$ is atomless with a probability density g.
    - Example: Gaussian noise $g(\sigma - x) = \frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2\phi^2}(\sigma - x)^2}$
    - Other distribution examples: (most) Gamma, exponential, extreme value, logistic, Weibull, and most beta distributions

A Robust Assumption on Signal Noise

- Information economics is prone to striking results that hold for one distribution and not others
  - e.g. main finding cascade finding of herding literature (9000+ cites) depended on multinomial signals, and usually fails
  - The problem arises when you learn from people's actions
- Signal density g is log-concave on $[0, \infty)$ or $\mathbb{R}$

$\Rightarrow$ No signal is perfectly revealing
$\Rightarrow$ every paper has a positive chance at every journal

$\Rightarrow$ The density is positive on a connected interval

- Prekopa: signal cdf G is log-concave (and thus continuous)

$\Rightarrow$ hazard rate $\frac{g(t)}{1-G(t)}$ is increasing.

Journal Motivations

- Rational Expectations Equilibrium: promised caliber is realized
  1. Ours is an intuitive *long-run steady-state journal reputation*
  2. Bayesian persuasion sender-receiver story
     - Journals can publicly commit to acceptance standards
  3. Mercenary journal story:
     - Journal *profit* is average accepted paper quality minus caliber
     - Declining (eg predatory) journals reimburse authors for deficit between promised and delivered caliber
     - There is free entry of any journal that expects to earn profits
  - We use story 3 in order to quantity payoffs after deviations
- Journal v accepts when signal $\sigma \geq \theta(v)$, *acceptance threshold*
  - Accepting papers over the bar is optimal in the short run story

Author Payoffs

- Author's payoff is caliber times acceptance chance
  - We ignore journal application fees.
  - The opportunity cost (only one submission) is the critical one.
- Quality x paper submitted to a caliber v journal with threshold θ pays

$$(1 - G(\theta - x)) \cdot v$$

- This subsumes dynamic case with resubmission and discounting when the author cares about $(1 - \delta)$ times this
  - Author resubmits to the same journal.

Distinct Papers are Sent to Distinct Journals in Equilibrium

Lemma

Every author submits to a journal equal to his caliber.

- Rational expectations $\Rightarrow$ suffices to show that no journal v_1 attracts paper qualities $x < v_1$ and $x' > v_1$
- If so, a new journal $v_2 > v_1$ can skim off best papers at v_1
  - Let the new journal promise higher caliber $v_2 \in (v_1, x')$, where x' is indifferent, given the acceptance thresholds θ_1, θ_2:

$$[1 - G(\theta_2 - x')]v_2 = [1 - G(\theta_1 - x')]v_1 \qquad (\diamondsuit)$$

  - Then journal v_2 has higher standards than v_1. For logging $(\diamondsuit)$:

$$\log(1-G(\theta_2-x'))-\log(1-G(\theta_1-x')) = \log(v_1/v_2) < 0 \qquad (\clubsuit)$$

  - Claim: $(\clubsuit)$ has a unique solution $\theta_2 > \theta_1$
    - Proof: $\log[1 - G]$ is concave $\Rightarrow$ left side of $(\clubsuit)$ continuously weakly falls in θ_2 from 0 at $\theta_2 = \theta_1$, tending to $-\infty$ as $\theta_2 \uparrow \infty$
  - Next, all papers $x'' > x'$ prefer journal v_2, and $x'' < x'$ prefer v_1.
  - Journal v_2 attracts only papers $x'' \geq x'$, but promises caliber $v_2 < x'$. So it earns profits. Contradiction (given free entry).

Journal Equilibrium

- A journal equilibrium is an acceptance threshold function $\theta(v)$ for which it is optimal for every author $x \in [\underline{x}, \infty)$ to submit to the same caliber journal $v = x$

Proposition (A Unique Equilibrium Exists)

There exists a unique equilibrium.

- Existence is an ODE result. More later...

The Worst Journal is not Selective

Lemma

The worst journal has caliber $\underline{x}$, and accepts all submissions.

- Proof: Since we ruled out pooling in equilibrium, the least caliber journal cannot exceed $\underline{x}$
- If the least journal $\underline{x}$ sometimes rejects, a new journal can enter, always accept, and attract all paper qualities just over $\underline{x} > 0$ (making profits). Contradiction. □

Equilibrium and Its First Order Condition

- *Author optimality*, given paper of quality x:

$$\max_v (1 - G(\theta(v) - x))v$$

  - Unlike with auctions, different authors have the same payoff from a given journal, but produce different signal distributions

Equilibrium and Its First Order Condition

- *Author optimality*, given paper of quality x:

$$\max_v (1 - G(\theta(v) - x))v$$

  - Unlike with auctions, different authors have the same payoff from a given journal, but produce different signal distributions
- FOC:

$$(1 - G(\theta(v) - x)) - g(\theta(v) - x)\theta'(v)v = 0$$

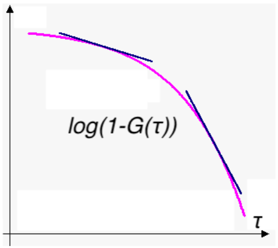
- *The SOC holds, given log-concavity of G*
- By rational expectations, the FOC holds at quality $x = v$:

$$\text{equilibrium FOC} \quad \Rightarrow \quad \theta'(v) = \frac{1}{v} \cdot \frac{1 - G(\theta(v) - v)}{g(\theta(v) - v)}$$

- On the right side is the inverse hazard rate of evaluation noise:

Journal Rejection Rate is Hump-Shaped

- toughness $\tau(v) = \theta(v) - v$
- We argue toughness is hump-shaped



$$\boxed{\text{acceptance rate} \times \text{caliber}}$$
$$= [1 - G(\underbrace{\theta(v) - x}_{\text{toughness}})] \times v$$

- Optimality: 1% caliber rise is balanced by 1% acceptance fall
- Log-concavity: 1% falls in $1 - G \Rightarrow$ toughness % increases fall
- Eventually, $\theta(v) \uparrow$ less % than caliber $v \Rightarrow$ toughness falls

Proposition (Hump-Shaped Selectivity)

The equilibrium rejection rate $R(v) = G(\tau(v))$ is hump-shaped in journal caliber v, for all small $\underline{x} > 0$

Proof of Hump-Shaped Journal Selectivity

- Since $\tau(v) = \theta(v) - v$, we can rewrite equilibrium FOC as:

$$\tau'(v) = \theta'(v) - 1 = \frac{1}{v}\frac{1 - G(\tau(v))}{g(\tau(v))} - 1 \qquad (\bigstar)$$

- Idea: $\tau(v)$ is hump-shaped, declining once $\frac{g(\tau(v))}{1-G(\tau(v))} \geq \frac{1}{v}$
- Proof: By log-concavity, the hazard rate rises in τ
  - $\Rightarrow$ If $\tau(v)$ is weakly rising, then $\tau'(v)$ is strictly falling, by $(\bigstar)$
  - $\Rightarrow$ any critical point is a max: $\tau'(v) = 0 \Rightarrow \tau''(v) < 0$
  - If $\tau(v)$ rises forever, RHS of $(\bigstar) \to -1 < 0$. Contradiction!
- Finally, $(\bigstar)$ implies that $\tau'(\underline{x}) > 0$ for small enough $\underline{x}$

Rejection Costs and Caliber

- How does *rejection cost* $C(v) = G(\tau(v)) \cdot v$ vary in caliber?

Proposition

Rejection cost is hump-shaped in journal caliber v.

- Proof: Since toughness rises initially, so do rejection losses
- Rejection costs fall in v once

$$C'(v) = G(\tau(v)) + vg(\tau(v))\tau'(v) < 0$$ ()

- Eq'm FOC (★) iff $vg(\tau(v))\tau'(v) = 1 - G(\tau(v)) - vg(\tau(v))$.

$\Rightarrow$ Rejection losses fall () iff $vg(\tau(v)) > 1$.

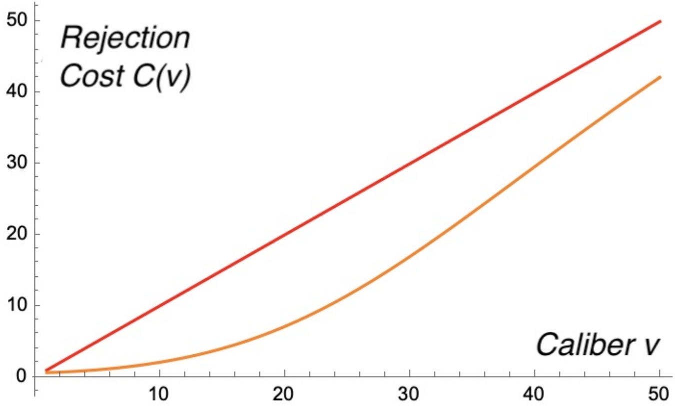
- We claim $vg(\tau(v)) - 1$ upcrosses (through 0)
- Given (★), when $vg(\tau(v)) = 1$, we have:

$$\begin{aligned} \frac{d}{dv} vg(\tau(v)) &= g(\tau(v)) + vg'(\tau(v)) \left(\frac{1 - G(\tau(v))}{vg(\tau(v))} - 1 \right) \\ &= g(\tau(v)) - G(\tau(v)g'(\tau(v))/g(\tau(v)) \geq 0 \end{aligned}$$

- . . . by log concavity of G. Finally, losses do eventually fall!

Gaussian Example of Rejection Losses

- As caliber v rises, rejection costs $C(v)$ — the gap below — initially rises and eventually falls



(Gaussian signals with variance 10)

Fully Solved Example with Exponential Referee Noise

- $G(t) = 1 - e^{-\lambda t}$: The equilibrium FOC at interior solution is:

$$\theta'(v) = \frac{1}{v} \cdot \left(\frac{1 - G(\theta(v) - v)}{g(\theta(v) - v)} \right) = \frac{1}{\lambda v} \Rightarrow \theta(v) = \frac{1}{\lambda} \log v + C$$

- Sure acceptance at journal $\underline{x} \Rightarrow \theta(\underline{x}) = \underline{x}$ and $C = \underline{x} - \frac{1}{\lambda} \log \underline{x}$

$\Rightarrow$ Acceptance threshold $\theta(v) = \underline{x} + \frac{1}{\lambda} \log \frac{v}{\underline{x}}$ provided $\theta(v) > v$

  - $\theta(v) = v$ at any journal $v > \bar{v}$

$\Rightarrow$ Equilibrium rejection rate at interior solution at $v < \bar{v}$ is

$$R(v) = G(\theta(v) - v) = 1 - e^{-\lambda(\theta(v) - v)} = 1 - \frac{\underline{x}}{v} e^{\lambda(v - \underline{x})}$$

$\Rightarrow$ Rejection cost at $v < \bar{v}$

$$C(v) = vR(v) = v \left[1 - \frac{\underline{x}}{v} e^{\lambda(v - \underline{x})} \right] = v - \underline{x} e^{\lambda(v - \underline{x})}$$

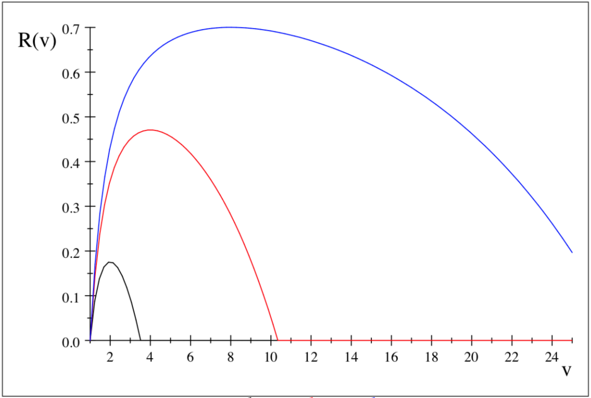
- Higher caliber journals $v \geq \bar{v}$ accept everything at zero rejection cost

Fully Solved Example with Exponential Referee Noise

- Case 1: Precise signals: $\lambda > 1/\underline{x}$
  - corner solution $\theta(v) = v$, and zero rejection chance *in equilibrium* for all paper qualities.
- Case 2: Noisy signals: $\lambda < 1/\underline{x}$
  - A hump shape emerges
- low and high quality refereeing

Increasing Dispersion with Exponential Noise

As Signal Noise Rises, Rejection Rates Rise & Peak Later



$\lambda = \frac{1}{2}$, $\lambda = \frac{1}{4}$, $\lambda = \frac{1}{8}$

Plots assume a worst paper $\underline{x} = 1$.

How Evaluation Noise Impacts Rejection Rates

- *Dispersion* measures how "spread out" a distribution is
- G is *more dispersed* than F
  $\Leftrightarrow G^{-1}(b) - G^{-1}(a) \geq F^{-1}(b) - F^{-1}(a)$ for any $b > a$
  $\Leftrightarrow g(G^{-1}(a)) < f(F^{-1}(a))$ for any $a \in (0, 1)$, with a density
- For many distributions, e.g. exponential and Gaussian, higher dispersion $\Longleftrightarrow$ higher variance

Proposition (Increasing Dispersion)

The rejection rate rises and peaks later if G grows more disperse

- Low quality refereeing leads to higher rejection rates

Rejection Rate Rises in Evaluation Noise Dispersion

- Comparative statics for the rejection use operator methods
- Recall the equilibrium FOC

$$\theta'(v) = \frac{1 - G(\tau(v))}{vg(\tau(v))} \qquad (\bigstar)$$

- The *rejection rate* $R(v) = G(\tau(v))$ has slope

$$\begin{aligned} R'(v) &= g(\tau(v))\tau'(v) \\ &= g(\tau(v))[\theta'(v) - 1] \\ &= \frac{1 - R(v)}{v} - g(G^{-1}(R(v))) \qquad (\spadesuit) \end{aligned}$$

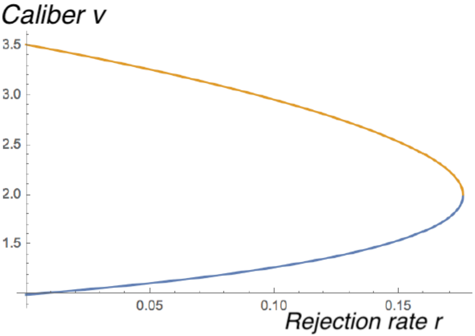
- The equilibrium rejection rate is a fixed point of the operator:

$$TR(v) = \int_0^v \left(\frac{1 - R(s)}{s} - g(G^{-1}(R(s))) \right) ds$$

- The T operator is neither a contraction nor monotone, but is a contraction on small enough intervals.
- We then paste together the unique fixed points

Comparative Statics via an Inverse Operator

- For comparative statics, invert $R(v)$ to get $V(r)$
- As $R(v)$ is hump-shaped, we invert its pre- and post-hump segments — the blue curve $V_L(r)$ and orange curve $V_U(r)$



- By the Inverse Function Theorem and (♠), we have

$$V_L'(r) = \frac{1}{R'(V_L(r))} = \frac{V_L(r)}{1 - r - V_L(r) \cdot g(G^{-1}(r))}$$

Dispersion and the Lower Inverse

- The fixed point $V_L(r)$ of $\hat{T}$ obeys (since $\underline{x} \equiv V(0)$):

$$\hat{T} V_L(r) = \underline{x} + \int_0^r \frac{V_L(s)}{1 - s - V_L(s) \cdot g(G^{-1}(s))} ds$$

- If G grows more dispersed, the function $g(G^{-1}(s))$ falls

  $\Rightarrow$ The operator $\hat{T}$ shifts down

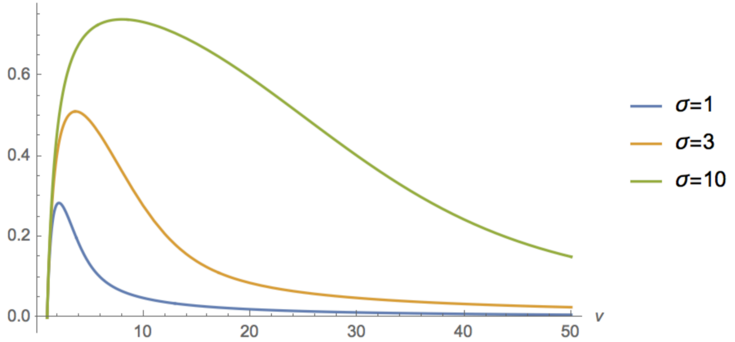
  $\Rightarrow$ Its fixed point V_L shifts down

  $\Rightarrow$ Also, orange curve V_U shifts up, meeting V_L at a higher v

  $\Rightarrow$ Its inverse, the rejection rate $R(v)$, shifts up (and peaks later)

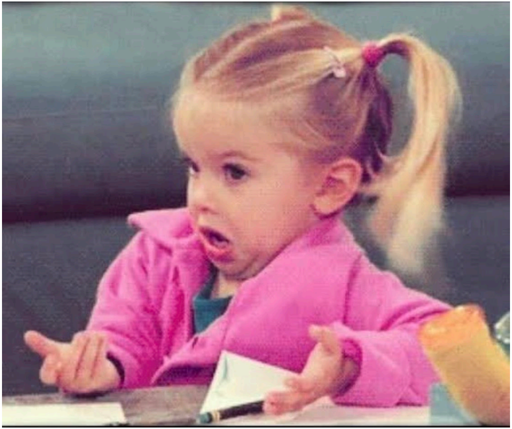
Rejection Rates with Noisier Gaussian Signals

- As Signal Noise Rises, Rejection Rates Rise & Peak Later



What if Authors Do Not Know Paper Quality?

- Authors may be unsure of their paper's quality — just as a student may not know how good he is
- Our results should still inform what happens in the stage game, but authors would learn over time
- But authors exploit optionality & submit more ambitiously



The Full Model with Incomplete Information

- Journal sees signal σ of paper quality x of any submission
  - $\sigma - x$ has a density $g(\sigma - x)$
- Author sees a noisy signal ψ of the quality x of his paper,
  - $\psi - x$ has a density $h(\psi - x)$.
- Paper quality density f is log-concave on $[\underline{x}, \infty)$ (say $\underline{x} = 1$)
  - Until now, the paper quality distribution was irrelevant for the conclusion, for neither authors nor journals needed Bayes rule
- We seek a pure strategy Bayes Nash equilibrium with
  - higher author types ψ apply more ambitiously
  - higher journal types set higher standards
- A separating equilibrium is (V, θ), i.e. a smoothly increasing
  (a) application function $V(\psi)$ yielding author optimality, and
  (b) acceptance threshold $\theta(v)$ yielding rational expectations.

Journal Equilibrium

- Inverting $V(\psi)$: author signal $\Psi(v)$ submits to caliber v
- The *density of accepted paper qualities* x at journal v:

$$\alpha(x|v) \propto f(x)h(\Psi(v)-x)(1-G(\theta(v)-x))$$

- The *rational expectations* (RE) condition reflects that journals now publish a variety of qualities:

$$\text{RE} \qquad v = \int_{\underline{x}}^{\infty} x\alpha(x|v)dx$$

- journal equilibrium (Ψ, θ) obeys RE & author optimality:

$$\text{FOC*} \qquad \frac{1}{v\theta'(v)} = \int_{\underline{x}}^{\infty} \frac{g(\theta(v)-x)}{1-G(\theta(v)-x)}\alpha(x|v)dx$$

  - The integrals reflects how authors don't know their quality x, and so journals cannot infer them from application

Equilibrium Rejection Rate

- The *density of submitted paper qualities* x at journal θ

$$\zeta(x|v) \propto f(x)h(\Psi(v) - x)$$

- The equilibrium *rejection rate* is now

$$R(v) = \int_{\underline{x}}^{\infty} \zeta(x|v)G(\theta(v) - x)dx$$

- Higher-caliber journals
  - use higher acceptance thresholds ($\theta \uparrow$), rejecting any given quality x paper with larger chance $G(\theta(v) - x) \uparrow$
  - get submissions from higher author signals ($\Psi \uparrow$), with a higher paper density ζ (stochastically), clearing the bar more often
- The rejection rate is hump-shaped if the first effect dominates at low calibers, the second effect at high calibers

Journal Equilibrium Equations, Reformulated

- *equilibrium toughness* $\tau(v) \equiv \theta(v) - v$ is again the excess of the journal threshold over its caliber
- *author's equilibrium sheepishness* $\xi(v) \equiv \Psi(v) - v$ is the excess of the author's type over journal caliber
- Define *caliber-quality gap* $z \equiv v - x$
- the accepted-paper-quality density α_v is

$$\alpha(v - z|v) \propto f(v - z)h(\xi(v) + z)(1 - G(\tau(v) + z))$$

  - f log-concave iff $f(v - z)$ is logsupermodular (LSPM) in (v, z)
  - So α is LSPM in (v, z) if sheepishness $\xi(v)$ is decreasing

Journal Equilibrium Equations, Reformulated

- *equilibrium toughness* $\tau(v) \equiv \theta(v) - v$ is again the excess of the journal threshold over its caliber
- *author's equilibrium sheepishness* $\xi(v) \equiv \Psi(v) - v$ is the excess of the author's type over journal caliber
- Define *caliber-quality gap* $z \equiv v - x$
- the accepted-paper-quality density α_v is

$$\alpha(v - z|v) \propto f(v - z)h(\xi(v) + z)(1 - G(\tau(v) + z))$$

  - f log-concave iff $f(v - z)$ is logsupermodular (LSPM) in (v, z)
  - So α is LSPM in (v, z) if sheepishness $\xi(v)$ is decreasing
- Rewrite equilibrium equations (replacing $\theta(v)$ by $\tau(v) + v$) as:

$$\begin{array}{lrcl} \text{FOC*} & \frac{1}{v\theta'(v)} & = & \int_{-\infty}^{v-1} \alpha(v-z|v) \frac{g(\tau(v)+z)}{1-G(\tau(v)+z)} dz \\ \text{RE} & 0 & = & \int_{-\infty}^{v-1} \alpha(v-z|v) z dz \end{array}$$

  - Rational expectations: the average caliber-quality gap is zero
  - sheepishness ξ decreasing function $\Rightarrow$ α LSPM $\Rightarrow$ expected caliber-quality gap is positive $\Rightarrow$ RE fails

Questions

1. Equilibrium toughness $\tau(v)$ hump-shaped?

2. Hump-shaped toughness $\Rightarrow$ hump-shaped rejection rates?

Quasiconcave Toughness is Tough

- We prove that any critical point $\tau'(v) = 0$ is a max, i.e. that $\tau'(v) = \theta'(v) - 1$ downcrosses through zero
- i.e. when $\tau'(v) = 0$, the following FOC* formula rises in v:

$$1/\theta'(v) = v \cdot \int_{-\infty}^{v-1} \alpha(v - z|v) \frac{g(\tau(v) + z)}{1 - G(\tau(v) + z)}$$

- This would be easy if $\alpha(v - z|v)$ were LSPM in (v, z), since:
  - the hazard rate $g/(1 - G)$ increases with z by log-concavity
  - by *monotonicity preservation*, its mean rises given a LSPM kernel increases with v (Milgrom's (1981) "Good News")
- But then $\int \alpha(v - z|v) z dz$ also increases, violating RE
- Likewise, $\alpha(v - z|v)$ cannot shift upward in FOSD in v (weaker than LSPM)

Decreasingly Log-concave Distributions

- We posit f, h are *decreasingly log-concave*:

$$(\log f)'', (\log h)'' \leq 0 \leq (\log f)''', (\log h)'''$$

  - Examples include most log-concave densities: Gaussian, exponential, uniform, Chi-squared, extreme value, etc.
- Let cdf $A(z|v)$ have density $\alpha(v-z|v)$ in z
- Decreasingly log concave $\Rightarrow -\frac{\partial}{\partial v}A(z|v)$ is *upcrossing* through zero in z (rather than everywhere positive, as FOSD yields)
- RE holds: increasing $v \Rightarrow$ mean-preserving spread in $A(z|v)$
- First case: convex hazard rates (e.g. Gaussian)
  - Mean-preserving spread raises mean of a convex hazard rate.
  - So when $\tau'(v) = 0$, the following rises in v

$$1/\theta'(v) = v \cdot \int_{-\infty}^{v-1} \alpha(v-z|v) \frac{g(\tau(v)+z)}{1-G(\tau(v)+z)}$$

  - This proves quasiconcavity of toughness

Quasiconcave Toughness

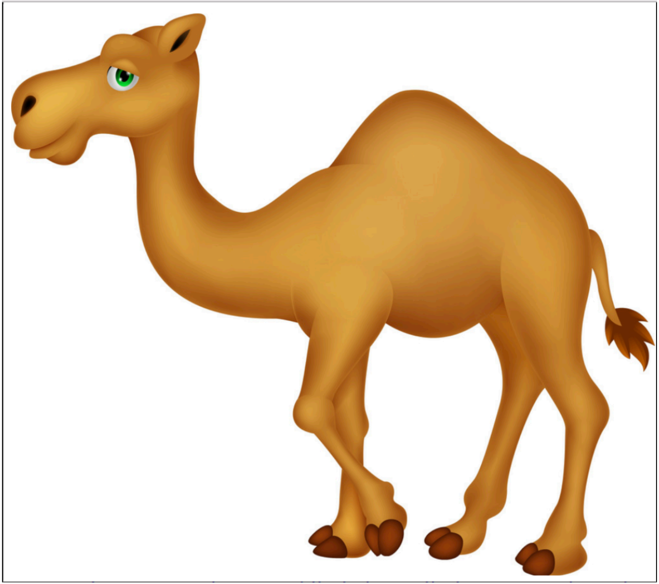
- We exploit richer properties to sweep in other distributions
- Does quasiconcave toughness ⇒ hump-shaped toughness?
- Hump-shaped toughness ⇒ hump-shaped rejection rates?
- With known author types, hump-shaped toughness was necessary *and* sufficient for a hump-shaped rejection curve, via

$$R(v) \equiv G(\tau(v))$$

Lemma

Equilibrium toughness is hump-shaped if author information is not too dispersed, and otherwise increasing

When do Humps Emerge



Main Findings

Result 1

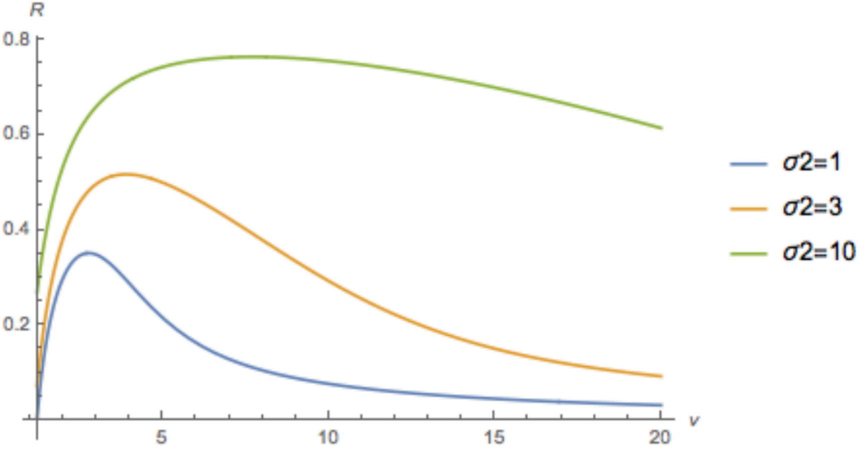
If the author signal is sufficiently less noisy than the journal signal, then the rejection rate $R(v)$ is hump-shaped; otherwise, it is everywhere increasing.

Result 2

The rejection rate rises as the journal OR author signal noise increases.

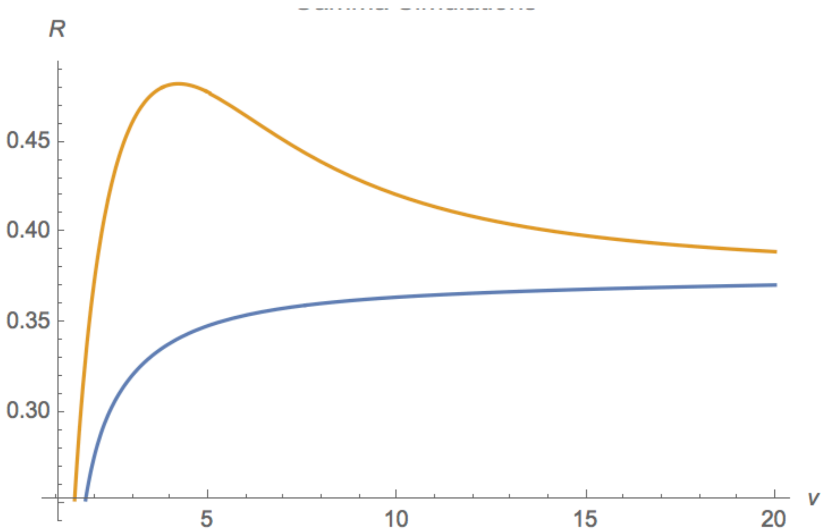
Gaussian Location Signals for Author and Journal

As journal signal noise rises, rejection rates rise & peak later



Assume an improper uniform prior f, standard normal author signal distribution, and journal signal as above.

Humps Emerge with More Precise Author Information



- both use paper prior $f = \Gamma[2,1]$,author signal $h = \Gamma[2,1]$
- journal signals $g = \Gamma[2,1]$ (blue) and $g = \Gamma[2,2]$ (orange)

Mavi’s Sheep

Journal Rejection Rates

Hamermesh (2008), "How to Publish in a Top Journal"

- QJE 4%, JPE 5%, AER 7%, APSR 8%, JoLE 8%
- Econometrica 9%, EER 9%
- Journal of Human Resources 10%, Economica 11%
- RAND 11%, REStat 12%, Economics Letters 17%
- Canadian Journal of Economics 18%
- Industrial and Labor Relations Review 18%
- Journal of Monetary Economics 20%

Stanford University	CA	**5%**
Harvard University	MA	**5**
Columbia University	NY	**6**
Yale University	CT	**6**
Princeton University	NJ	**7**
California Institute of Technology	CA	**8**
Massachusetts Institute of Technology	MA	**8**
University of Chicago	IL	**8**
Brown University	RI	**9**
University of Pennsylvania	PA	**9**