		Appendices. 0000

Endogenous Property Rights and a Culture of Self-Reliance.

Carmine Guerriero (University of Bologna)

EDLE PhD course, Bologna. 19/02/2018.



Class 3: The Law & Economics of Property Rights.

Preliminaries.
D&G (2015):
Theory.
Evidence.
Conclusions.
Appendices.

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Main Contributions: Theory ...

— How property rights protection is balanced against the enhancement of the reliance on contract? Differently from Guerriero (2016, 2017), we focus on cases in which an intermediary is needed—i.e., 30% of 2011 US GDP, studying in particular the instance of stolen movables.

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Main Contributions: Theory ...

— How property rights protection is balanced against the enhancement of the reliance on contract? Differently from Guerriero (2016, 2017), we focus on cases in which an intermediary is needed—i.e., 30% of 2011 US GDP, studying in particular the instance of stolen movables.

— More generally, we devise a theory of how societies, heterogeneous in their endowment of long run moral and enforcement capacity, balance the use of coercion against the one of markets to transfer property rights on movable goods (see for the formal proofs Dari-Mattiacci et al., [2016]).



Preliminaries.	D&G (2015): 000000000000000	Theory. 0000000	Evidence. 00	Conclusions.	Appendices. 0000	
The Role of the Intermediation.						
Evidenc	e.					

— We devise a unique dataset on the rules on the adverse possession of mobables prevailing in 126 jurisdictions between 1981 and 2011, available at http://www.sciencedirect.com/science/article/pii/S2352340917300811

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• We observe a wide legal variation ranging from full-original owner protection—e.g., U.S.—to full-potential buyer protection, e.g., Italy.



Preliminaries.					Appendices. 0000	
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• We observe a wide legal variation ranging from full-original owner protection—e.g., U.S.—to full-potential buyer protection, e.g., Italy.

— Consistent with our model and the idea that buyers tend to have higher valuations, original owners are protected the most in jurisdictions endowed with the strongest culture of morality and/or the weakest law enforcement, and both features are more relevant in more competitive trade environments.



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Remainder of the Class.

- Dari-Matttiacci and Guerriero (2015):
 - Preliminary Evidence: Stylized Facts.

Remainder of the Class.

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— Essay.



Preliminaries.			
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The Role of the Inter	rmediation.		

Dari-Matttiacci and Guerriero (2015), i.e., Law and Culture: A Theory of Comparative Variation in Bona Fide Purchase Rules.

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Is There Comparative Legal Variation?

— We sent the same questionnaire to 148 teams of experts in 126 jurisdictions, i.e., private law professor in leading universities and practitioners in prominent law firms, who had participated in comparative law projects. They are the bulk of http://nomography.wustl.edu/

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— The experts were asked to provide a detailed answer to the following main question and a number of follow-up questions: At what conditions does a good faith buyer acquire ownership of a stolen good? Please, indicate the legal sources, either law or judicial decisions, for you answer and summarize the history of possible reforms over the last 30 years, i.e., 1981-2011.

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Adverse Possession.



Adverse Possession: years needed for adverse possession by a good faith possessor of a movable good, where pure owner protection = 30. USA = 30; Germany = 10; Russia = 8; England = 6; Turkey = 5; France = 3; Italy = 0.



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Property Private.



Property Private: years after which a good faith buyer definitively acquires ownership of a stolen movable good purchased within a private sale.



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Property Market



Property Market: years after which a good faith buyer definitively acquires ownership of a stolen movable good purchased within a public market.

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Property Professional



Property Professional: years after which a good faith buyer acquires ownership of a stolen movable good purchased from a professional seller.



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Property Auction



Property Auction: years after which a good faith buyer definitively acquires ownership of a stolen movable good purchased within an auction sale.



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Good Faith



Good Faith: dummy equal to 0 when good faith is presumed.



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Culture



Culture: first principal component extracted from norms of trust and respect.



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Enforcement



Enforcement: first principal component extracted from the numbers of police personnel and professional judges.



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Adverse Possession, Culture, Enforcement





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Property Private, Culture, Enforcement





Country	Denmark	France	Italy	Turkey
General term of adverse possession in good faith (years)	Never	3	0	5
General term of adverse possession in bad faith (years)	Never	Never	20	Never
Definition of good faith	Objective	Subjective	Subjective	Objective
Presumption of good faith	No	Yes	Yes	Yes
General term of prescription of the owner's remedy (years)	Never	3	Never	5
Owner protection in private sales (years)	Never	3	0	5
Owner protection in public markets, with professional sellers and in auctions (years)	Never	3	0	5
Pro-buyer liability rule	No	Purchase price	No	Market price
Enforcement	Weak	Strong	Strong	Weak
Morality	High	High	Low	Low
Drop the first person pronoun	No	No	Yes	Yes
Different second person pronouns	No	Yes	Yes	No

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Class 3: The Law & Economics of Property Rights.

The Role of Grammatical Rules.

— Pronoun-Drop equals one when the language spoken by the plurality group in the jurisdiction does not forbid dropping the first-person pronoun → emphasis on the individual relative to her social context and, therefore, stronger norms of individualism and, in turn, morality!!!

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- Self-Reliance is 1 if none of the two features is present, 2 if either one of them is, and 3 if both are \leftarrow See tables II and III.



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Self-Reliance



Self-Reliance: 3 if neither pronoun drop nor difference, 1 if both, and 2 o/w.



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Class 3: The Law & Economics of Property Rights.

Preliminaries.	D&G (2015): 000000000000000	Theory. ●000000	Evidence. 00	Conclusions.	Appendices. 0000
Set Up.					

Consider a mass 1 of intermediaries and two slightly larger groups of original owners of an homogeneous good and potential buyers.



	Theory. ●000000		Appendices. 0000	
Set Up.				

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 $\rightarrow~$ Intermediaries have full bargaining power.

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Owners value the good at U, buyers at the known valuation V. We consider either the $\underline{V} \equiv U - \Delta$ or the $\overline{V} \equiv U + \Delta$ case.

	Theory. ●000000		Appendices. 0000
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Transfers require intermediaries, who value the good at 0 and can either buy or steal at most one good and meet at most one buyer. Moreover, they can either be with probability $1 - \mu$ "moral," and thus bear a cost of stealing equal to m > U (A1) and so sufficient to discourage them, or be "immoral," and thus insensitive to guilt. The intermediaries' type is private information.



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 t_1 : Each intermediary first decides whether to steal, buy, or exit the market, and then possibly announces a selling price p to the original owners.

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 t_1 : Each intermediary first decides whether to steal, buy, or exit the market, and then possibly announces a selling price p to the original owners.

 t_2 : Buyers are randomly matched to intermediaries, get a costless signal informative only if the good is stolen and with odds s, and possibly buy.



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*t*₃: With probability $q < \min \left\{ s, \frac{U}{\Delta + U} \right\}$ (A2, A3), the legal system observes the title of each good and enforces the law under the prevailing regime.


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Set Up.			

Property Rights Regime.

— Under owner protection, a good recognized as stolen is given back to its original owner. This happens with probability q.

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	Theory.		Appendices.
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— Under buyer protection, everybody keeps goods identified as stolen.



	Theory. 000●000		Appendices. 0000
Set Up.			

1. Because of competition among owners, intermediaries buy at U.



	Theory. 000●000		Appendices. 0000
Set Up.			

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- 1. Because of competition among owners, intermediaries buy at U.
- 2. Being matching unique, prices must leave buyers indifferent.
- 3. A1 \rightarrow moral intermediaries exit (buy at $\overline{p}^h \equiv \overline{V}$) for $V = \underline{V}(\overline{V})$.
- A3 → (1 − q) V > V − U → for V = V immoral intermediaries always prefer stealing, announcing p
 ^l ≡ (1 − q)V, and thus selling for sure to buying, announcing p
 ^h, and possibly selling.



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Set Up.			

Characterization for $V = \overline{V}$ and ...

L1: Under A1-A3, for $V = \overline{V}$ moral intermediaries buy at U and immoral ones steal. Under both O and GF, the only equilibrium is separating, i.e., legitimate goods are sold at \overline{p}^h and stolen ones at \overline{p}^l . Under B, the only equilibrium is pooling and the unique price \overline{p}^h . The expected trade-related social welfare is the highest (lowest) under B (O).



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Comparative variation: since culture assures that most transactions are legal, condoning some non-consensual transfers is less useful.
 Similarly, a stronger enforcement assures that a larger number of goods is returned back and should be balanced by weaker owner protection.

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and $V = \underline{V}$.

L2: Under A1-A3, for $V = \underline{V}$ only immoral intermediaries stay in the market. They steal, and they sell at $\underline{p}^h \equiv \underline{V}$ under B and $\underline{p}^l \equiv (1 - q) \underline{V}$ o/w. The expected trade-related social welfare is highest (lowest) under O (B).

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Robustness



Preliminaries. 0000	D&G (2015): 00000000000000	Theory. 000000●	Evidence. 00	Conclusions.	Appendices. 0000
Set Up.					

Testable Prediction.

Proposition: Given A1-A3, the probability that society selects a stronger protection of the buyer: 1. decreases with the share of moral intermediaries μ and increases with the quality of law enforcement q when the potential buyers have high valuation; 2. increases with μ and decreases with q when the potential buyers have low valuation; 3. increases with the scope of trade Δ . 4. The higher Δ is, the stronger are the impact of μ and q.

	Theory. 000000●		Appendices. 0000
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 $\leftarrow \text{ The rule that most often allocates the good to highest valuation agents} \\ always prevails \rightarrow \text{Insecure property rights can enhance welfare when} \\ \text{tackling value misallocation (Calabresi and Melamed, 1972).}$



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Set Up.			

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← The rule that most often allocates the good to highest valuation agents always prevails → Insecure property rights can enhance welfare when tackling value misallocation (Calabresi and Melamed, 1972).

We focus on high-valuation buyers since the intermediaries' objective is to match original owners with them and the gains are the highest for $V = \overline{V}$.



Other Robustness Checks.

The basic 2SLS estimates are robust to controlling for



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The basic 2SLS estimates are robust to controlling for

- pro-owner attitude, i.e., population share of Catholics and Muslims; a continuous measure of legal tradition in 2000 (Guerriero, 2016).
- colonizers' strategy, i.e., pathogen load and identity of colonizers.
- enforcement capacity, i.e., inclusiveness of political institutions, corruption, and share of years between 1816—or independence–and 1975 during which the jurisdiction fought an external military conflict.



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Do Correlations Uncover Causal Effects?

Property Private and Self-Reliance in 22 Jurisdictions.



Before 1815, these countries were under the seizure of a foreign power and therefore picked rights when the language had crystallized.



			Conclusions.	Appendices.
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Main Achievement	8.			

Conclusion: Explaining Comparative Variation ...

 We further "unbundle" institutions by overtaking the "property vs. contracting" institutions comparison (Acemoglu and Johnson, 2005);

			Conclusions.	Appendices.
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Main Achievemen	ts			

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- By endogenizing prices, we stress the primacy of "misallocation" over "incentives" (Schwartz and Scott, 2011). Misallocation

— We document that legal variation is rational (Levmore, 1987).



Informing Legal Harmonization.

— We provide predictions relevant for several fields of law, such as financial regulation, and in general the process of international legal harmonization.

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— If comparative variation is random, harmonization is beneficial, since it curbs legal uncertainty. If instead comparative variation is an optimal response to long-lasting differences across jurisdictions, as in this case, then harmonization induces unqualified elimination of legal differences.



			Appendices. ●000	
Appendix 1.				
Moral E	Buyers.			

			Appendices. ●○○○	
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Moral E	Buyers.			

1. for $\theta \equiv (1 - q) q^{-1}$ large, the prospect of being matched with a moral buyer and not selling induces immoral intermediaries to buy the good;

			Appendices. ●○○○	
Appendix 1.				
Moral E	Buyers.			

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- 2. moral buyers incur a loss that under a slightly stricter version of A2 affects proportionally and symmetrically all rules.



			Appendices. ●000	
Appendix 1.				
Moral B	luyers.			

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- 2. moral buyers incur a loss that under a slightly stricter version of A2 affects proportionally and symmetrically all rules.
- \rightarrow Testable predictions remain essentially unchanged.

			Appendices.
Appendix 1.			

The Original Owner Has a Buyback Option.

None of the legal systems in our sample gives "liability-rule" protection to owners, some instead grant them to buyers \rightarrow under *GF* the good faith buyer receives a compensatory award—purchase or market price—if the owner decides to exercise his buy-back option and retains the good otherwise.

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If $V = \overline{V}$, the owner does not exercise the buy-back option unless compensation equals $\overline{p}^l = (1 - q) \overline{V} < U$. When instead $V = \underline{V}$, original owners always exercise their buy-back option and the trade-related social welfare under *GF* equal that prevailing under *O*.



The Original Owner Has a Buyback Option.

None of the legal systems in our sample gives "liability-rule" protection to owners, some instead grant them to buyers \rightarrow under *GF* the good faith buyer receives a compensatory award—purchase or market price—if the owner decides to exercise his buy-back option and retains the good otherwise.

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 \rightarrow Testable predictions remain essentially unchanged.

			Appendices.
Appendix 1.			

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- If A2 is relaxed, a separating equilibrium does not exist and there can be an equilibrium in which moral intermediaries buy, immoral ones steal, and the pooling price is such that uninformed buyers buy.
- If A3 is relaxed, immoral intermediaries also buy.



			Appendices. ○○○●
Appendix 2.			

Misallocation vs. Incentives.

Protecting original owners lowers the benefits of private protection but also its costs, because goods can be resold only at lower prices and hence thieves are less aggressive. Thus, private protection does not monotonically decrease with legal protection of original owners.
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The law has little impact on incentives but a great one on allocative efficiency. Consistent with this idea, no observed rule conditions ownership on the incentives to protect (inquiry) property (into the title).



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