

Ordeals and Judicial Wagers

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Leeson's theory of ordeals

important features of ordeals

- A. Ordeal if agreed by defendant, only
- B. High success rate
- C. Manipulability
- D. Ordeal for doubtful matters, only
- E. Ordeal strengthened by rituals
- F. Non-application for nonbelievers

Three additional points (not addressed by Leeson) gleaned from Indian sources

- G. Ordeal for serious offences, only
- H. Negative consequences for accuser in case of success
- I. Ordeal if agreed by accuser, too

Texts

Ordeals only for doubtful matters, serious offences, non-believers (D, F)

- Nārada (on doubtful matters):
If payment cannot be obtained by any other means (document, witness, timely reminder, indirect proof), a creditor can try to make the debtor undergo ordeals.
- Pitāmaha (on non-believers):
“By the wise, the holy water is not to be given to liquor drinkers, women, immoral people, or players, and also not those living an atheist life” .

- Nārada:
 - “with the consent of the plaintiff, not otherwise”
 - *vādino' numatena nānyathā*
- Yājñavalkyasmṛti:
 - “The balance, fire, . . . are for serious accusations provided the accuser agrees to undergo punishment.”
 - locative absolutus *śīrṣakasthe 'bhiyoktari* where *śīrṣaka* means “head, helmet, verdict”
- Divyatattva: “The phrase “agrees to undergo punishment” refers to the head, the most important, the crown and fourth part of a legal proceeding wherein the victory, the defeat and the punishment is indicated.”

Yājñavalkya Smṛti II.18:

sapaṇás ced vivādaḥ syāt tatra hīnaṃ tu dāpayet |
daṇḍaṃ ca svapaṇaṃ caiva dhanine dhanam eva ca ||

If the dispute should be with a wager,
then he should make the defeated party pay
the fine and his own wager as well,
but only the contested amount to its owner.

Inconclusive findings by Lariviere:

- The wager may have been placed by one or by both parties.
- The recipient might have been the king (the court), the opponent, or even both.
- The size of the wager seems not to have been fixed and was probably up to each party.

Two puzzles

The incentive puzzle: “The paṇa seems . . . not to be a factor at all in deciding the case”

But then, why offer a positive wager?

Worse still, the king is tempted to rule against a party that has placed a high wager.

The scarce-evidence puzzle:

- “just the sort of thing which one would expect to find often repeated (or at least alluded to) in other basic smṛtis”
- “but these three verses are the only ones that we find in the whole corpus of dharma-śāstra”
- “. . . the verses . . . are found with a hodge-podge of more or less unconnected and general statements about legal procedure.”

Results

- Wagers will be risked only if king is assumed to be “just” .
For a just king, delivering a just verdict is more important than obtaining the wager.
- King is happy about separation outcome if he is “superjust” .
A superjust king values a just verdict higher than the wager together with a verdict that depends on his evidence.

Solutions to the two puzzles

The incentive puzzle:

By a separating outcome, wagers may signal honesty in a judicial case if the king is sufficiently just.

The scarce-evidence puzzle:

- Separation may be driven by more or less deep pockets.
- Financial reasons of king \longrightarrow undermine any confidence in the justice system.
- No good reason to write extensively (or to even mention) an institution long gone extinct.

Introduction

The parties to a legal conflict may try to underline the trueness of their respective assertions:

- Ordeals

Defendant:

“I am speaking the truth; this will be revealed by the fact that I successfully pass a specific test.”

- Judicial Wager

Any party or both:

“I am speaking the truth; if found otherwise by the king, I will pay the appropriate fine, and, on top, make a payment.”

Ordeals I

- *divya* (short for *divyapramāṇa*), *daiva* (fate is involved as in the Latin term *iudicium Dei*)
- *śapatha* (meaning both “oath” and “ordeal”)
- Manu 8.115: a defendant who successfully completed an ordeal
 - “should be judged innocent by reason of his oath”
 - *sa jñeyaḥ śapathe śuciḥ*

Ordeals II

- Derrett (1978) tries a physiological vindication
- Indologist Lariviere (1981) stresses the belief of ordeal administrators and ordeal takers
- Economist Peter Leeson (2012):
The officials responsible for the ordeal separate innocent and guilty people.
 - Innocent people undergo the ordeal and guilty people do not.
 - Accused need to be sufficiently convinced that ordeals correctly allocate innocence and guilt.
 - Ordeal officer himself
 - does not believe in the ordeal,
 - but manipulates the ordeal so that most of them are successfully passed.
 - not iudicium Dei, but iudicium cleri

Leeson's theory of ordeals

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Lekhapaddhati-Lekhapañcāśīkā:

- “O Varuṇa, you protector of people, the self of all life, o Lord. Save [me who is] innocent, o just one; make me sink [if] guilty”
- *varuṇa tvam prajāpālaḥ sarvajīvātmakaḥ prabho śuddham tāraya dharmmātmān aśuddham majjayaśva māṃ*

Nārada:

- “If he drops the iron ball out of fear, but appears to be unburned, he must carry it again.”
- Water and poison ordeals not to be inflicted on weak persons (women, sick, elderly)
- Nārada forbids the holy-water ordeal for people that are guilty with a high a-priori probability, i.e., those that are:
 - accused of grave offenses (*mahāparādhe*)
 - devoid of righteousness (*nirdharme*)
 - ungrateful (*kṛtaghne*)

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- Nārada (on serious offences):
mahāparādhe divyāni dāpayet tu mahīpatiḥ

Yājñavalkyasmṛti:

- “O Varuṇa, protect me by truth”
- *satyena mā 'bhirakṣa tvam varuṇa*

Lekhapaddhati-Lekhapañcāśīkā

- “Dharma wins, not adharma, truth wins, not untruth, patience wins, not anger, Viṣṇu wins, not the demons”
- *dharmo jayati nādharmah satyam jayati nāṅṛtam / kṣamā jayati na krodho viṣṇur jayati nāsurāḥ*

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The extended Leeson model I

We distinguish four cases:

- 1 Both agree to the ordeal.
 - Ordeal is undertaken.
 - The accuser will be punished if the defendant is cleared.
- 2 Only the defendant agrees.
 - Complaint inconsequential.
- 3 Only accuser agrees.
 - Defendant is punished.
 - The accuser obtains his claim.
- 4 Neither defendant nor accuser agrees.
 - Defendant is punished.
 - The accuser does not obtain his claim.

Conclusions on ordeals I

- Many important law texts have some sections on ordeals. Notable exceptions are the dharmasūtras due to Baudhāyana and Vasiṣṭha and also the Arthaśāstra.
- Schlagintweit (1866) reports Indian and other cases of ordeals in the late 18th century and mid 19th century and Lariviere has evidence of ordeals being carried out in the 20th century.

Conclusions on ordeals II

- Lariviere contra Leeson?
 - Leeson: “priestly manipulation of ordeals is not incompatible with priestly faith in ordeals as genuine iudicia Dei. According to the developing doctrine of in persona Christi, priests may have believed that they were acting in the person of Christ –that is, that God was guiding them – when they manipulated ordeals.”
 - Changing odds in favor of the ordeal takers could have been a long process.
 - Ordeal administrators who change success probabilities do not necessarily fully understand the effects
- Alternative interpretation
 - Not: ordeals are iudicia Dei with some probability.
 - But: the priest may come up with the correct judgement with some probability.

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Inconclusive findings by Lariviere:

- The wager may have been placed by one or by both parties.
- The recipient might have been the king (the court), the opponent, or even both.
- The size of the wager seems not to have been fixed and was probably up to each party.

The incentive puzzle

Lariviere: “The paṇa seems . . . not to be a factor at all in deciding the case”

A Lariviere king would simply ignore the wagers placed by the parties. But, then, no incentive to offer a non-zero wager:

- If the ruling goes in their favor, they do not have to pay the wager.
- If the ruling goes against them, they lose the case and have to pay the wager as an additional fine.

But, matters are even worse:

The king is tempted to rule against a party that has placed a wager.

Double loss:

- It increases the possibility of a negative ruling.
- It loses the wager.

Results

- Wagers will be risked only if king is assumed to be “just” .
For a just king, delivering a just verdict is more important than obtaining the wager.
- King is happy about separation outcome if he is “superjust” .
A superjust king values a just verdict higher than the wager together with a verdict that depends on his evidence.

The scarce-evidence puzzle

Lariviere:

- the texts “point out what should be an important point in the general description of legal procedure”
- “two categories”
- “just the sort of thing which one would expect to find often repeated (or at least alluded to) in other basic smṛtis”
- “but these three verses are the only ones that we find in the whole corpus of dharma-śāstra”
- “This is unusual.”
- “It might not be so unusual if the verses gave a thorough and complete description of the paṇa, but that is hardly the case.”
- “... the verses ... are found with a hodge-podge of more or less unconnected and general statements about legal procedure.”

The model

- Accuser and defendant place wagers
- King obtains the wagers (0 or w) from the losing party.
- Winning party obtains some payment from the losing party.
- Losing party pays its wager to the king.
- King is interested in
 - obtaining the wager
 - pronouncing a just verdict
- King has evidence of imperfect quality and may take the wagers into account

The solution concept (signalling game)

- The king may entertain different beliefs about how the honesty of the parties is related to the wager placements by the parties.
 - Wagers have no signal value.
 - A zero wager signals honesty.
 - A positive wager signals honest.

The king can only use wagers as a signal for truth-telling if the wagers differ.

- Are there beliefs such that all the agents maximize their expected payoffs given these beliefs?

Results

- If the king assumes that wagers have no signal value,
 - each of the two parties places the zero wager and
 - the king rules in line with the imperfect evidence.
- The king believes that a zero wager signals honesty,
 - each of the two parties places the zero wager and
 - the king rules in line with the imperfect evidence.
- The king believes that a positive wager signals honesty, two outcomes are possible:
 - a pooling outcome with both parties placing a positive wager
 - a separating outcome where the honest party places a positive wager and the dishonest party a zero wager.

The incentive puzzle

Wagers can be rationalised in the following manner:

- The honest party to a conflict is more willing to risk a wager than the dishonest party. Indeed, if both parties have placed a positive wager, the innocent one can hope to win if the quality of evidence is sufficiently large.
- Having the possibility of differing signals in mind, the king may be happy to choose relatively high wagers that make the honest party risk the wager and make the dishonest one choose the zero wager. This holds if the stakes are small in relation to the expected justice payment.

The scarce-evidence puzzle

- Leeson (2012) and Wiese (2016) show why ordeals might have been quite sensible institutions.
- However, separation in case of a cash-stripped party is not driven by
 - the honesty or truthfulness of the parties, but by
 - their more or less deep pockets.

This fact will surely make a king's subjects suspicious of that institution.

- Financial reasons of king —> undermine any confidence in the justice system.
- Of course, dharmaśāstra authors may not find good reason to write extensively about an institution long gone extinct. This is probably the solution to the scarce-evidence puzzle.

Leeson's theory of ordeals I

setup

- An accuser is accused of a misdeed (not having paid back a loan).
- Choice:
 - refusal to undergo the ordeal and implicitly confess wrongdoing
 - acceptance of ordeal so that
 - his innocence may be confirmed or
 - he is found guilty
- Ordeal punishment *OP* should typically be larger than the non-ordeal punishment *NOP*.

Leeson's theory of ordeals II

no problem for very strong belief

Very strong belief on the defendant's part that ordeal can find out whether he is innocent or not.

- If innocent, he will choose to undergo the ordeal and expect to receive zero punishment rather than suffering the non-ordeal punishment.
- If the accused is guilty, he declines the ordeal because the non-ordeal punishment is smaller than the ordeal punishment which he expects for sure.

Leeson's theory of ordeals III

risky decision in case of weak belief

Weak belief on the defendant's part

- An ordeal taker is cleared for one out of two reasons:
 - ① Fate will possibly reveal his innocence (probability ρ).
 - ② The ordeal's outcome is managed (manipulated) by the ordeal officer.

The defendant assumes a positive acquittal probability α .

From the defendant's point of view, his success depends on a mixture of 1. and 2.

- The ordeal will clear the guilty defendant with a lower probability than the innocent defendant, from defendant's point of view.

Leeson's theory of ordeals IV

separating outcome

Depending on

- the punishments OP and NOP
- the strength of belief in the ordeal ρ
- the assumed acquittal probability α

it may well happen that

- the innocent defendant voluntarily submits to the ordeal
- while the guilty one does not.

The stronger the belief in the ordeal, the more likely such a “separating” outcome.

Leeson's theory of ordeals V

formal model

Ordeal choice by innocent accused if

$$\rho \cdot 0 + (1 - \rho) \alpha \cdot 0 + (1 - \rho) (1 - \alpha) \cdot OP < NOP$$

or

$$\frac{NOP}{OP} > (1 - \rho) (1 - \alpha)$$

No ordeal by guilty accused if

$$\rho \cdot OP + (1 - \rho) \alpha \cdot 0 + (1 - \rho) (1 - \alpha) \cdot OP > NOP$$

or

$$\frac{NOP}{OP} < \rho + (1 - \rho) (1 - \alpha)$$

Separation in case of

$$(1 - \rho) (1 - \alpha) < \frac{NOP}{OP} < \rho + (1 - \rho) (1 - \alpha)$$

Leeson's theory of ordeals VI

Leeson's mistake

Leeson identifies acquittal probability α with probands' historical success rate σ . However, (in the long run, in equilibrium),

$$\begin{aligned}\sigma &= \gamma [(1 - \rho) \alpha] + (1 - \gamma) [\rho + (1 - \rho) \alpha] \\ &= (1 - \rho) \alpha + \rho (1 - \gamma)\end{aligned}$$

where γ equals the percentage of guilty ordeal takers. Note also

$$\alpha = \frac{\sigma - \rho (1 - \gamma)}{1 - \rho}, \rho < 1$$

with $\frac{\partial \alpha}{\partial \sigma} > 0$.

Thus, the larger σ , the higher the probability for ordeal taking. This is also argued for by Leeson, despite the above mistake.

Leeson's theory of ordeals VII

the long run

- $\rho = 1 \rightarrow \gamma = 0 \rightarrow \sigma = 1$
- $\sigma = 1$
 - $\alpha = 1$ and $\gamma = 0$
unlikely case: benevolent officer lets some guilty hazard the ordeal
 - $\alpha = 1$ and $\rho = 0$
everyone succeeds (no separating outcome)
 - $\gamma = 0$ and $\rho = 1$
ordeals are *iudicia Dei*
- $\sigma < 1$ (some innocent accused are considered guilty)

The extended Leeson model II

- The best outcome for each agent is his agreeing to the ordeal while the other rejects the ordeal.
- Typical outcome: one agent agrees to the ordeal while the other does not. Then, the ordeal does not take place, contributing to ordeals being applied in rare cases, only.
- Both agents agree to the ordeal (which is then carried out)
 - if the ordeal punishments for the agents are relatively small
 - if the innocent party believes strongly in the ordeal
 - if the guilty party does not believe strongly.

The extended Leeson model IV

game theoretic analysis I

		accuser	
		agree	not agree
def.	agree	$(0, -OP_A)$, clearance $(-OP_D, C_A)$, no clearance	$(0, 0)$
	not ag.	$(-NOP_D, C_A)$	$(-NOP_D, 0)$

Note:

- If one does not agree, the other should agree.
- ...

The extended Leeson model IV

game theoretic analysis II

Note:

- If accuser agrees, the innocent defendant should agree if

$$\frac{NOP_D}{OP_D} > (1 - \rho)(1 - \alpha) \quad (1)$$

holds

- If defendant agrees, the guilty accuser should agree if

$$[\rho + (1 - \rho)\alpha] \cdot (-OP_A) + [1 - \rho - (1 - \rho)\alpha] \cdot C_A > 0$$

or

$$\frac{C_A}{OP_A} > \frac{\rho + (1 - \rho)\alpha}{1 - \rho - (1 - \rho)\alpha} \quad (6)$$

The extended Leeson model IV

game theoretic analysis III

Four cases:

- (1) and (6) hold
agree a dominant strategy for both
- (1) holds, (6) does not hold
defendant has agree as a dominant strategy, accuser will not agree
- (1) does not holds, (6) holds
accuser has agree as a dominant strategy, defendant will not agree
- neither (1) nor (6) hold
one agrees, the other does not (game of chicken)

- Introduction
- Ordeals (Bulletin of SOAS 2016)
 - from decision theory (Leeson's theory of ordeals)
 - to game theory (Extended Leeson model)
- Judicial wagers (JRAS 2023)
 - two puzzles
 - signalling model
- Conclusions

Conclusions on ordeals III

Lariviere (personal communication):

“A known rogue might be punished by the court not for the crime he is accused of, but for his long-standing reputation as a bad actor. In that context, the “correct” outcome of an ordeal is not in question. That is, even if a witness in the audience secretly knew that the accused is not guilty of the crime he is being tried for, the fact that the ordeal found him guilty is easily explained by some unknown karmic factors that made him “deserve” to be found guilty and thus punished.”

Conclusions on ordeals IV

- Sītā is accused by her husband Rāma who reproaches her of not having been faithful to him during her captivity.
- Pyre put up by Rāma's brother Lakṣmaṇa on Sītā's request and with Rāma's consent.
- Sītā is rescued by divine intervention.
- No “negative consequences for accuser in case of success”.
Rāma: “Had I not put the innocence of [Sītā] to the test, the people would have said: - ‘Rama, the son of Dasaratha is governed by lust!’ It was well known to me that Sita had never given her heart to another ...”.
- Here: two winners.

Final conclusions: Trial by battle

nearly 1000 years old English institution used to settle unclear land disputes

- Representatives of the opponents fought against each other with clubs, and the winning party obtained (or kept) the contested land. The opponents hire champions to fight for them and the outcome is mainly dependent on the money spent to hire a champion (or even several, in order to dry out the champions market for the opponent).
- There are important differences between a trial by battle and a trial with a wager. The important similarity consists in the fact that the opponents need to risk money.
 - In the Indian case, the paṇa is wagered and has to be paid only if the king's ruling is adverse.
 - In the English trials by battle, the money spent for champions is lost for both good or bad outcomes.