Modern Economic Theory in the Talmud

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- **Incentives: Redeeming Prisoners** (Gittin 45a)

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  (Ktuvot 93a)

Incentives: Redeeming Prisoners

Rule (Mishna): Prisoners should not be redeemed for unreasonably high ransoms.

Discussion (Gemara): Why not? Because of (i) strain on the public coffers, or (ii) not to provide incentives to kidnappers? Listen to this [evidence for (i)]: Levi bar Darga paid 13,000 gold dinars to redeem his daughter *(roughly $50 million in today's money).* Abaye retorted: Who says the sages agreed? Quite possibly, they did not agree.

-- Gittin 45a

Prisoners should not be redeemed for unreasonably high ransoms, so that enemies should not pursue people to kidnap them.

-- Maimonides, Codex, Laws of Charity, Chapter 8, Section 12

Price Control and Competition:
The Unicorn

לא יהיה לך בכיסך אבן ואבן, גדולה וקטנה

לא יהיה לך בביתך איפה ואיפה, גדולה וקטנה

אבן שלמה וצדק יהיה לך

איפה שלמה וצדק יהיה לך

למען יאריכו ימיך על האדמה

אשר ה' אלוקיך נותן לך

דברים כ"ה, י"ג-ט"ו -

You shall not have in your bag a
  weight and a weight, large and small
You shall not have in your house a
  measure and a measure, large and small
True and just weights shall you have
True and just measures shall you have
So that your days may be long on the land
That Hashem your Lord gives you

Deuteronomy 25, 13-15

"Shall you have:" This teaches us that inspectors should be appointed for weights and measures, but not for prices. The governor's office appointed inspectors both for weights and measures and for prices; so Shmuel said to Horn, go, tell them that inspectors should be appointed for weights and measures, but not for prices. He went and told them, inspectors should be appointed both for weights and measures and for prices. So Shmuel said to him, what's your name? Horn? May a horn grow between your eyes! Forthwith, a horn grew between his eyes.

- Baba Bathra 89a

But not for prices: in order that they should not sell dearly. This is common sense; price control is not needed. For if one seller sells dearly, then someone who needs money will sell cheaply, and the buyers will go to him; and then the first one will also sell cheaply.

-- Rashbam (Rabbi Samuel ben Meier, 1085 -1174), loc. cit.

The authorities must appoint police … to go around the stores, check the scales and the measures, and fix the prices. … Anyone who raises prices should be beaten, and forced to sell at the market price.

-- **Maimonides (1135-1204), Codex, Laws of Theft, Chapter 8, Section 20**

If someone would be greatly helped by something belonging to someone else, and the seller not similarly harmed by losing it, the seller must not sell for a higher price: because the usefulness that goes to the buyer comes not from the seller, but from the buyer's needy condition: no one ought to sell something that doesn't belong to him.

-- **St. Thomas Aquinas (1225-1274), *Summa Theologiae*, 2-2, q. 77, art. 1**

Social Choice: The Three Appraisers

If one of three appraisers says [that the value is] 100, and two say 200, or, one says 200, and two say 100, then the majority rules. If one says 100, one says 80, and one says 120, then the judgment is 100.

-- Baba Bathra 107a

Both the one who says 80, and the one who says 100, agree that the value is at most 100; the other, who says 120, is just one, and one does not prevail against two. And, both the one who says 100, and the one who says 120, agree that the value is at least 100; the other, who says 80, is just one, and one does not prevail against two.

-- *Yad Rama,* Rabbi Meier Halevi Abulafia, 1170 – 1244, loc. cit.

Thus, according to the *Yad Rama*, the Talmud anticipated the median rule for amalgamating single-peaked preferences – one of the few cases where a reasonable social choice rule exists.

Moral Hazard: The Ten Stores

תשע חנויות, כולן מוכרות בשר שחוטה, ואחת מוכרת בשר נבילה, ולקח מאחת מהן, ואינו יודע מאיזה מהן לקח, ספיקו אסור; ובנמצא, הלך אחר הרוב.

- כתובות ט"ו ע"א

There are ten stores, all selling kosher meat, except for one, which sells forbidden meat. If one buys meat, but doesn't remember from which store, then the doubt renders the meat forbidden; but if it was found, go by the majority.

-- Ktubot 15a

Definition

A risky situation is said to be fraught with *moral hazard* if the outcome is determined (or may be affected) by the actions of an **interested** party.

Example: Insurance

Risk Aversion: The Perjurers

Rule (Mishna): We testify that John Doe divorced his wife and did not pay [the amount stipulated in] her marriage contract [when in fact, he did not divorce her]. But [in punishing the perjurers, one should take into account that] he may eventually have to pay anyway. So, one estimates how much a person would pay for [her rights under] her marriage contract, [taking into account that she will only be paid] if she is widowed or divorced, but that if she dies [before the husband], her husband is her heir [and the perjurers pay that estimate].

Discussion (Gemara): How does one estimate? Rabbi Khisda says, in accordance with the husband; Rabbi Nathan ben Oshaya says, in accordance with the wife.

-- Makkot 3a

Numerical Example

- Face value of contract: 200
- Probability that it will be paid: ½
- The husband sets aside property as a guarantee.
- So, both sides face a ½ - ½ gamble of 0 or 200.
- Rabbi Khisda: "One appraises by the husband."
- That is: Because of risk aversion, the husband values his position at less than ½(200), say 80, so the perjurers pay 80.
- Rabbi Nathan: "One appraises by the wife."
- That is: Because of risk aversion, the wife values her position at less than ½(200), say 80, so the perjurers pay 120 = 200 – 80.

Consistent Fair Division:
The Three Widows

If a man with three wives dies, one has a ktuva of 100 zuz, one of 200, and one of 300, and there is only 100 in the estate, then they divide equally. If there is 200, then the one of 100 takes 50, and those of 200 and 300, 75 each. If there is 300, then the one of 100 takes 50, the one of 200 takes 100, and the one of 300 takes 150.

- Ktuvot 93a

	Ktuva		
	100	**200**	**300**
Estate			
100	33⅓	33⅓	33⅓
200	50	75	75
300	50	100	150

!תודה

Thank you!

And,

Happy birthday,

Yakar