Why is a used scooter so cheap?

Half the used scooters on Coralia are good, half are lemons, and only the sellers know which. A buyer who cannot tell pays the average, the good sellers leave, and the market shrinks, unless a test, a warranty or a good name closes the gap. Insurance spirals the same way; moral hazard is the trap after the deal.

1 Hidden quality

Micro 1, Lesson 4 · Games 8

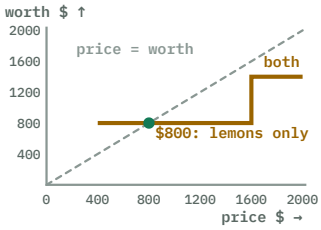
- **Asymmetric information** = one side knows more · the seller knows the scooter, the buyer does not
- **Lemon** = American slang for a used good that turns out bad
- Trade if buyer's value > seller's minimum (Micro 1, Lesson 4) ⇒ each kind leaves **$400** to share · **if** the buyer could see the kind
- Games 8 ⇒ a signal (the peacock's tail) shows the hidden type · a used scooter has no tail

Scooter	Worth to Nadia	Owner sells for ≥	Gain
Good	$2,000	$1,600	$400
Lemon	$800	$400	$400

2 The market unravels

Akerlof, 1970

- Blind pick, half and half ⇒ worth `(2,000 + 800) ÷ 2 = $1,400` ⇒ buyers offer the **average**
- $1,400 < $1,600 ⇒ good owners **keep** theirs ⇒ only lemons on sale ⇒ buyers pay **$800** ⇒ good scooters never trade
- **Adverse selection** = **before** the deal, a hidden **type** · those who accept the price are the ones the other side least wants · "the bad drives out the good"
- George **Akerlof**, American economist, "The Market for 'Lemons'", **1970** ⇒ Nobel **2001** with Michael Spence (signals, Games 8) and Joseph Stiglitz
- Practice · phones 300/240 · 100/40 ⇒ average $200 < $240 ⇒ **$100** · $60 lost per good phone · bikes 1,000/600 · 400/200 ⇒ half and half `$700 ≥ $600` ⇒ **holds** · 3 lemons in 4 ⇒ `$550 < $600` ⇒ unravels, $400



3 What brings them back

closing the gap

- **Screening** = the side that knows less **tests** ⇒ inspection, test drive
- **Signal** = the side that knows more **shows** it with something only its kind can afford ⇒ one-year **warranty** (a lemon's owner would pay repairs all year) · a seller's **good name** · reviews (Digital Economics) · practice ⇒ $30 certificate paid by a good phone's owner on a $60 gain ⇒ **$30** left
- Unravels only **if nothing** closes the gap ⇒ used markets exist

4 Insurance spiral

Finance 11

- Fair price = chance × loss · $1,000 scooter ⇒ careful 1 in 10 ⇒ **$100** · careless 1 in 2 ⇒ **$500**
- **Premium** = price of cover · insurer cannot tell ⇒ average `(100 + 500) ÷ 2 = $300` ⇒ careful pay 3× their risk ⇒ **leave** ⇒ premium **$500**, careless only
- **Adverse-selection spiral** = cheapest to insure leave ⇒ premium up ⇒ more leave · Michael **Rothschild** and Joseph **Stiglitz**, **1976**: a menu of deductibles (part of the loss is yours) sorts the types
- Practice · $600 phone, three groups ⇒ $60 · $180 · $300 ⇒ `$180 → $240 → $300`
- Insurers ask questions · some countries make basic cover **compulsory** (required by law, keeps the careful in) · others let people choose ⇒ **no verdict**

5 Moral hazard

idea 8 of 11

- **Moral hazard** = **after** the deal, a hidden **action** · insured ⇒ no lock ⇒ theft 1 in 10 → 1 in 2 · not a bad person: the cost moved to the insurer
- Cure ⇒ **deductible** (first $200 of the loss is hers) ⇒ she locks up again · or check the action (a speed box)
- **Eleven ideas behind the curves** · `1 · A demand curve is a chain of best bundles` `2 · A price change is two effects: substitution and income` `3 · Selling what you own is the same choice` `4 · Risk has a price: the risk premium` `5 · Cost curves come from the cheapest mix of inputs` `6 · A seller with many prices takes the buyers' surplus` `7 · Rivals answer each other's quantities: more firms, lower price` `8 · When one side knows more, the market shrinks` · next at university: contracts that sort types (separating equilibria)

Watch out: adverse selection = hidden **type**, **before** the deal · moral hazard = hidden **action**, **after** it · a market with hidden quality holds while the average covers what good sellers need