Credibility and Reputation

UNITE 2022-2023

Our question

What makes a promise or a threat credible?

Monopolists

Monopolists are rarely the object of sympathy or pity.

After all, according to the standard theory of monopoly, a monopolist examines the demand function for its product, determines which price maximizes profit, declares this to be the price, then watches profit roll in.

The life of a real monopolist is not so smooth, though.

Monopolists

- When the 086 chip, the central processor of the original IBM PC, was first developed and sold by Intel, personal computer manufacturers were wary of designing computers that would use the chip.

- They were concerned that once they built a product around the 086 chip, had software developed for it, and established a base of customers who used the chip, they would be at the mercy of Intel, which could raise prices and thereby extract any profits the manufacturer might earn in the PC business.

- How could Intel convince computer manufacturers that, once they were hooked on the 086 chip, they would not be subjected to rising prices?

Monopolists

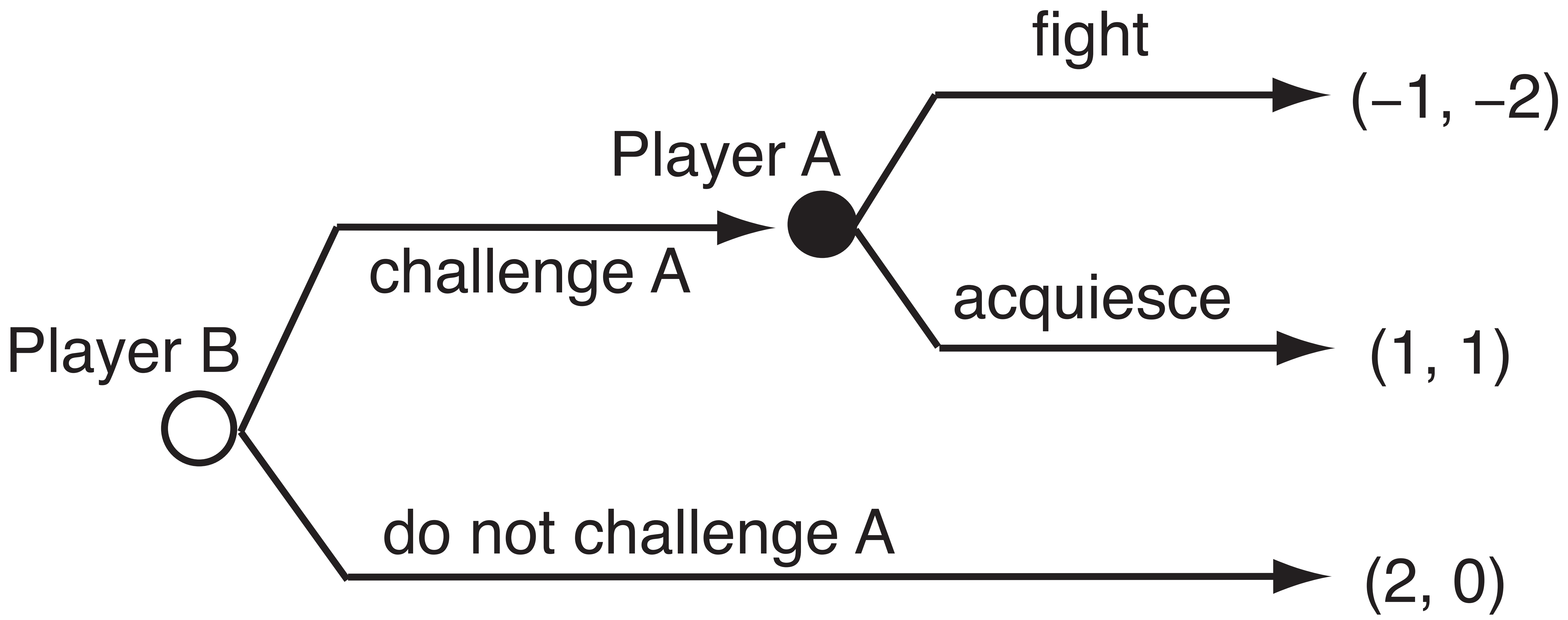
- In the early days of the copier business, Xerox had a virtual monopoly on the manufacture and sale of plain paper copiers.
- The technology was vastly superior to available alternatives and some potential users, such as high-end law firms, were willing to pay a premium price for a copier.
- But Xerox encountered some resistance: Potential customers anticipated that Xerox, having sold its copiers to such high-end users at a premium price, might then cut prices for the next tier of users. Anticipating this, many high-end users waited for prices to fall.
- *How could Xerox convince its high-end customers that it would not lower prices once it saturated the high-end-customer segment of its potential market?*

Monopolists

- For many years,Polaroid enjoyed a virtual monopoly in the instant photog- raphy segment of the photography industry.
- Then, in 1976, Kodak announced that it was going to enter this line of business. Kodak tailored its entry strategy in a way that left Polaroid somewhat protected:
- Profits in instant photography come from selling film rather than cameras, and Kodak entered with a camera–film package incompatible with Polaroid's cameras and film and with a fairly expensive camera.
- Kodak was as much as saying that it wanted to share in the market and not drive Polaroid out.
- Polaroid had to choose: It could respond in "businesslike" fashion, accommodating itself to Kodak's entry, which would probably have left it with substantial profit. Or it could choose to go to war against Kodak, an expensive and uncertain proposition, especially given Kodak's immense financial strength.
- *Both to protect its monopoly against this incursion by Kodak and to forestall other entrants, how should Polaroid react?*

Credibility

The threat game



Credibility

The threat game

Player B (he) must decide whether to challenge Player A (she).

If there is no challenge, B nets 0, and A gets 2.

But, if A is challenged, then she must decide whether to fight or acquiesce.

Acquiescence nets 1 for A, while fighting costs her 1, so it seems likely that A would acquiesce if challenged.

Therefore, Player B can safely challenge A and get a payoff of 1.

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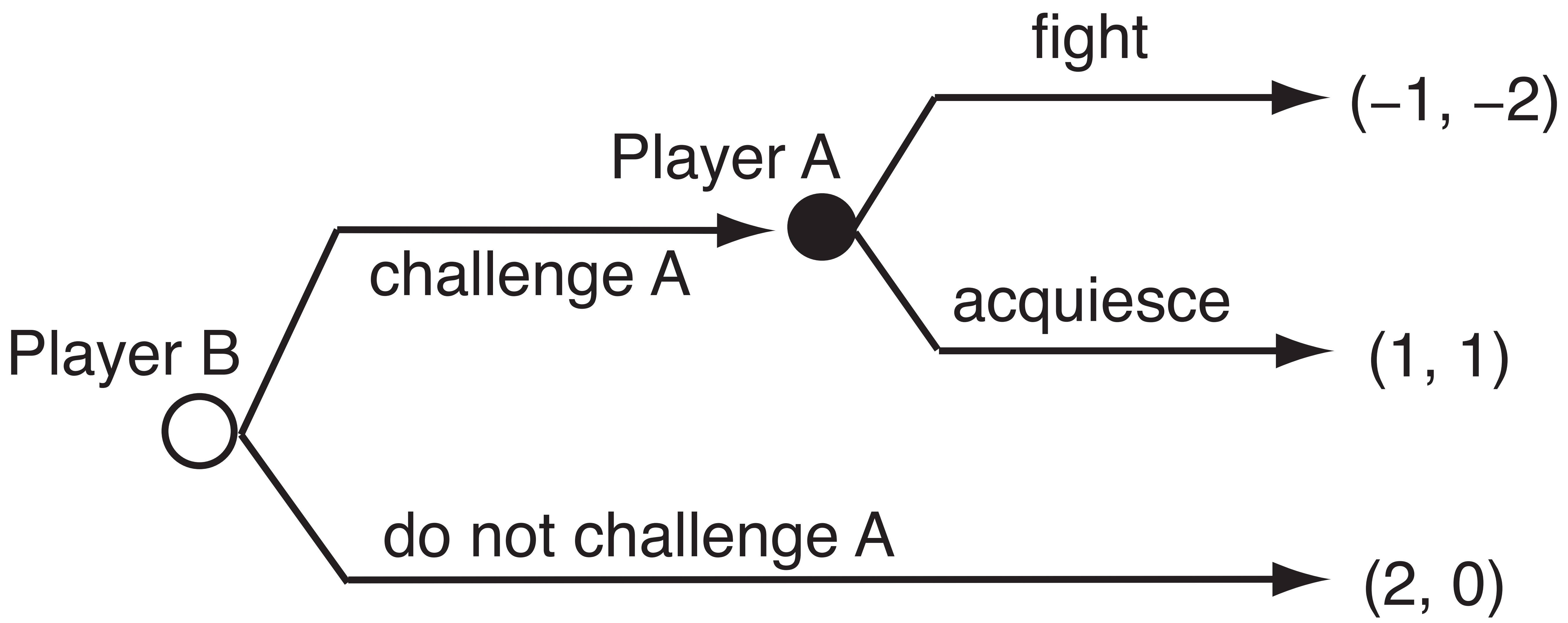


Credibility
The threat game

Player B must decide whether to challenge A.

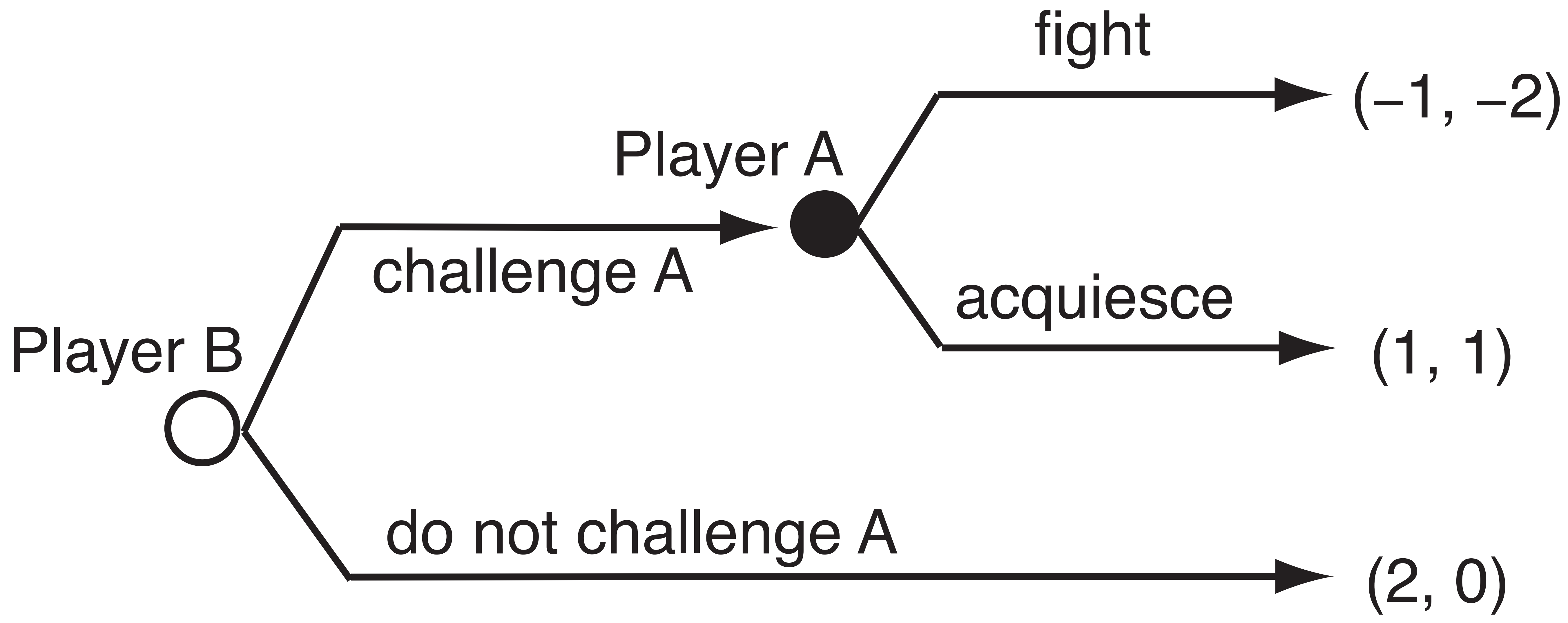
If B challenges A, A must decide whether to acquiesce or to fight.

Fighting is bad for A once A has been challenged, but if B is convinced that A would fight, B does not challenge A, which is good for A.

Therefore, A would like to threaten B that she would fight if challenged.

But is this threat credible?

(A’s payoffs are listed first and B’s second.)



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Credibility

The threat game

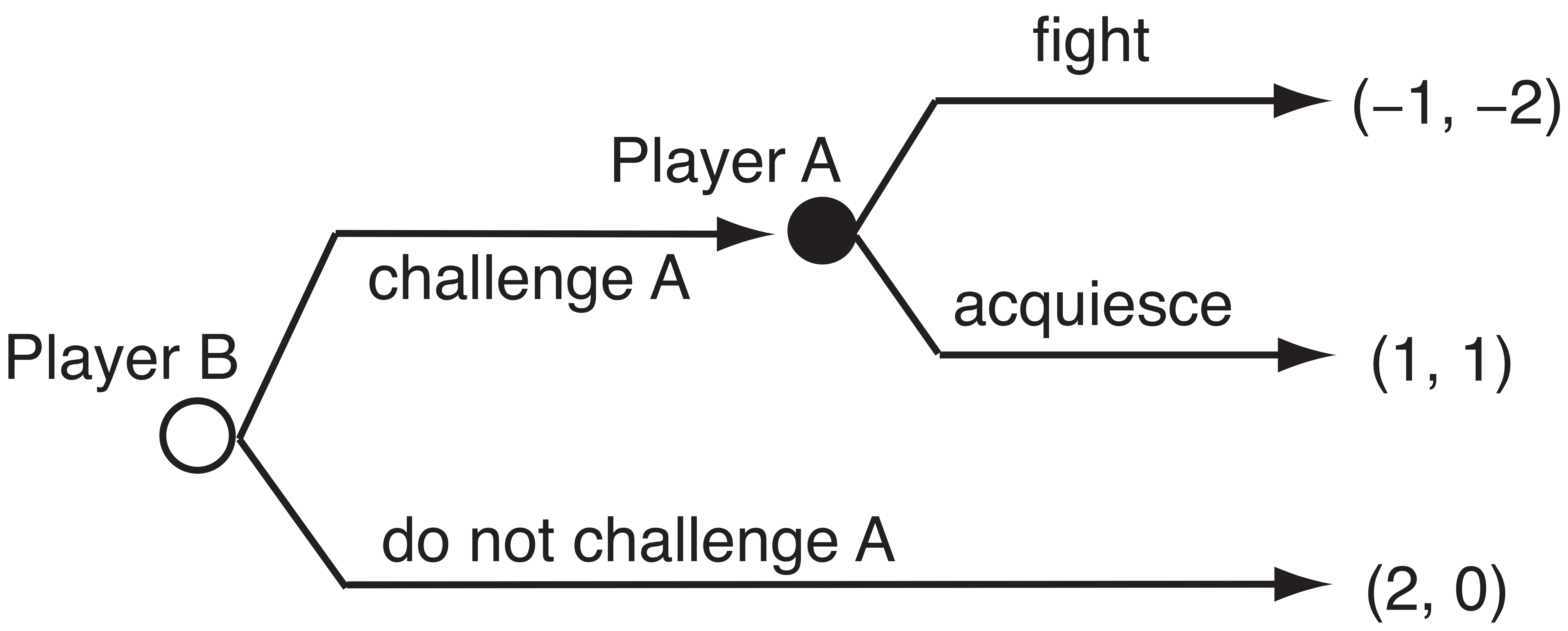
What if, as he starts to issue the challenge, A bares her teeth, growls, and issues a warning that, *even though* it will cost her 1 to fight, she will fight if challenged.

If he believes this threat, he stays out, and she gets 2.

Since it does not hurt her to make such a threat—talk is cheap—she can growl away.

But precisely because talk is cheap, Player B probably should disregard this threat as mere posturing.

Assuming we have the payoffs right, Player A’s threat lacks credibility.



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Credibility

The trust game

This extensive-form game, called the *Trust Game*, has the same basic structure of moves as the threat game, but the payoffs (hence the names of the moves) are entirely different.

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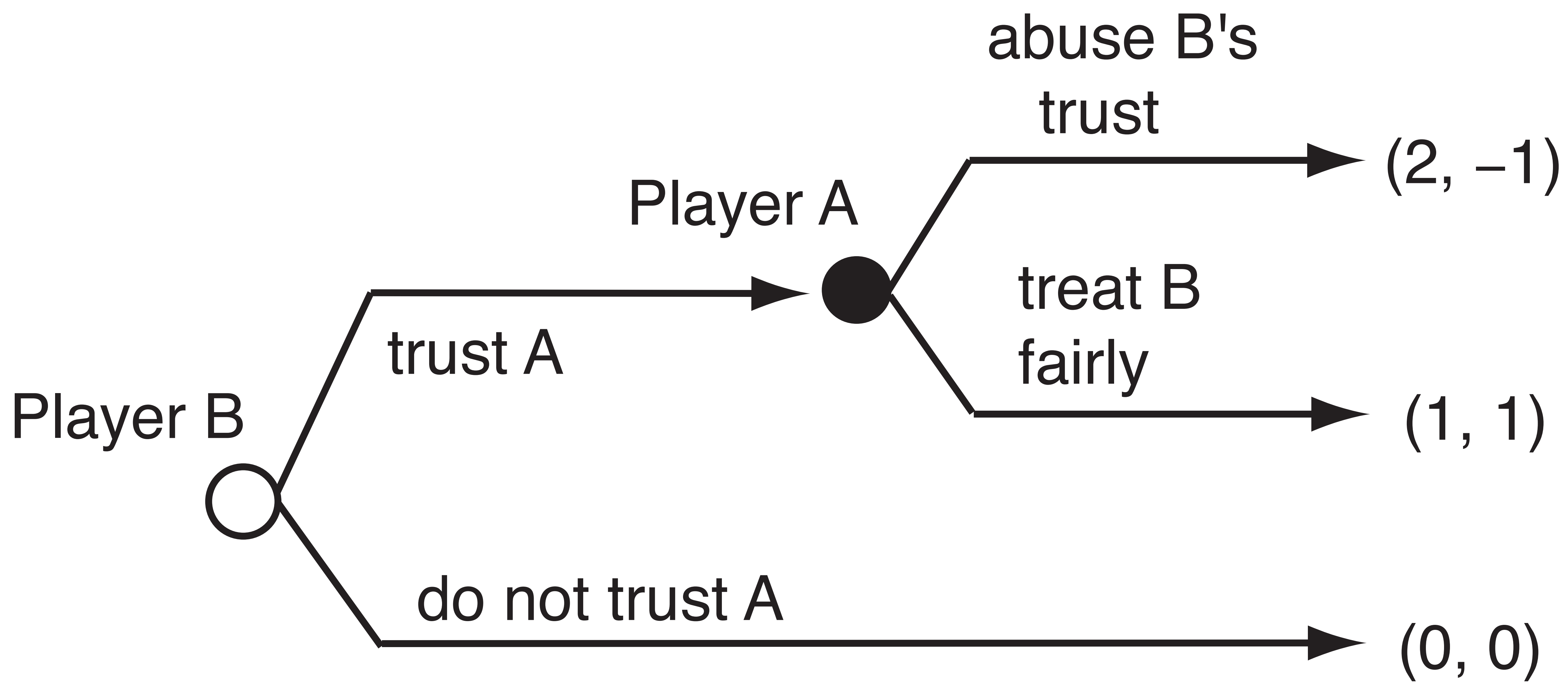

Credibility

The trust game

Player B must decide whether to trust A.

If B trusts A, A must decide whether to treat B fairly or be abusive.

Abuse is best for A once she gets B's trust, but if B anticipates this, he will refrain from trusting A, to the detriment of both.

Therefore, A would like to promise B that she will not abuse him.

But is this promise credible? (A's payoffs are listed first and B's second.)

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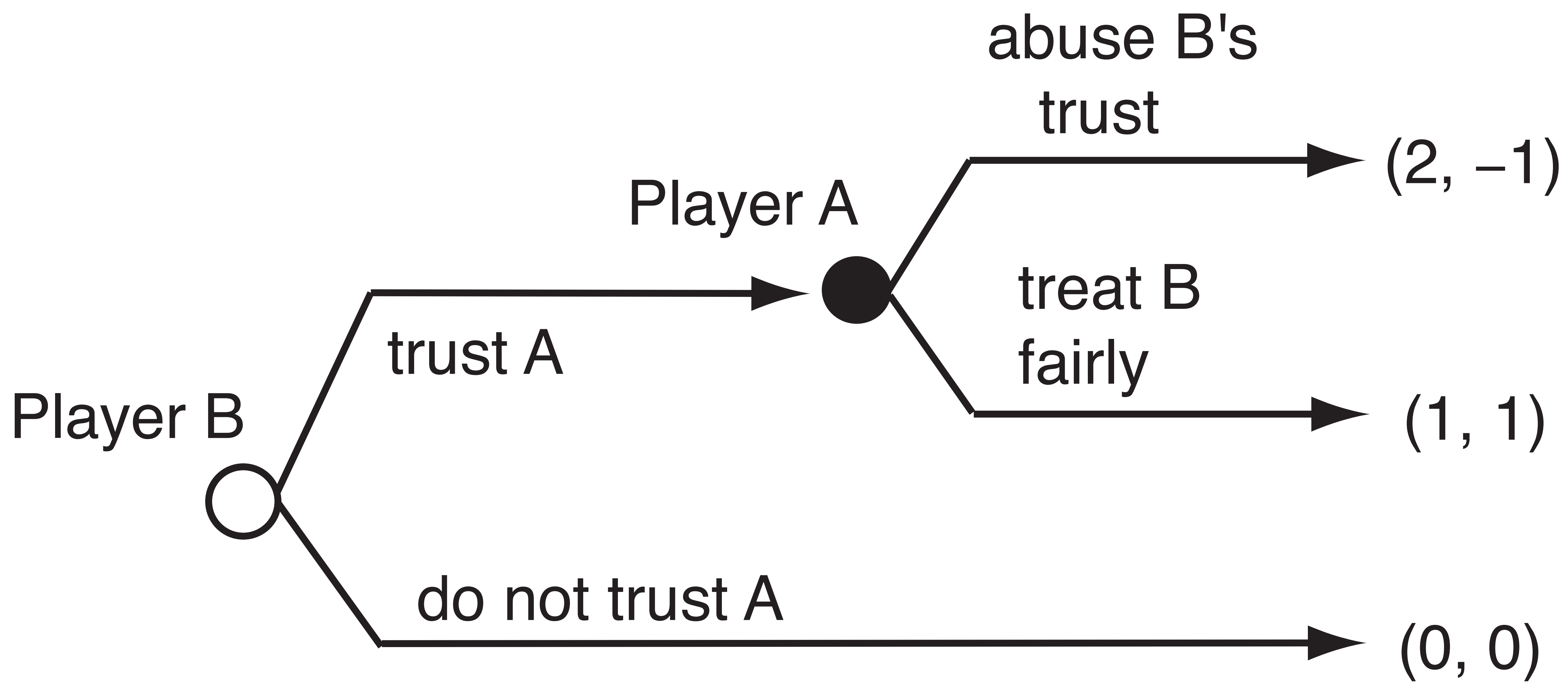

Credibility

The trust game

So, before B decides whether to trust A, perhaps A should smile at B, make soothing noises, and tell him that she promises no abuse.

Perhaps she can convince him to trust her.

But is this credible?

If A plans to abuse B, would she not smile and offer a promise of no abuse? This sort of promise is cheap talk once again, lacking credibility.

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Credibility

These two examples are very different, but they share a basic structure:

In each case, B must act, forecasting A's response. I

In each case, the best action for A once B has acted is clear.

And, in each case, to elicit a particular initial action from B, A wishes to convince B that she would not act in her own *ex post* best interests.

How can she do this credibly?

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Credibility

We shall use the term credibility as follows:

We are always concerned, as in these games, with what some parties (call them Bs) expect, anticipate, fear, or hope would be the future actions of some other party (A).

To induce desired behavior by others today, A wants to influence the expectations, anticipations, and, in some cases, fears or hopes of the Bs.

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Credibility

Intel wanted to convince potential clients that it (Intel) would not dramatically increase the price of its microprocessors, once it had “hooked” a client base.

Xerox wanted to convince potential high-end clients that it would not lower the price of its copiers in the future.

Polaroid wanted to convince prospective entrants such as Kodak, and especially Kodak, that entry into Polaroid’s domain of instant photography would be an unpleasant and unprofitable experience for the entrant.

Is any of this credible? Unless it is, Bs cannot reasonably be expected to adopt the desired expectations, anticipations, fears, or hopes.

So the question becomes, How can A make credible what she wants to be credible?

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Credibility

Consider, for instance, the problem facing Intel, which was to reassure its potential customers that it would not increase microprocessor prices once they were hooked.

Intel could write a contract guaranteeing customers access to a certain number of microprocessors at a certain cost, but such a contract would either be extraordinarily rigid (unable to adapt to changes in the cost conditions facing Intel, technological innovations, or changes in the demands of customers) or, if it attempted to be flexible to these things, too complex to be enforceable.

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Credibility

Instead of offering rigid or unenforceable contractual guarantees, Intel simply licensed production of its microprocessors to several competitors.

This reassured potential customers that *if* Intel raised prices or rationed supply, the customers would have alternative sources. Intel could not successfully hold up its clients, and so it had no incentive to try.

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Credibility

A second example involves the actions of James Casey, the founder of the United Parcel Service, the leading package delivery company in the United States.

When Casey first organized UPS, his plans for the business put a premium on getting the cooperation of the truck drivers, who would be largely unmonitorable, since they work out of the eye of any supervisors.

To reassure his employees that he would not take advantage of them once they entered employment and set down roots, Casey invited the Teamsters labor union to organize his workforce.

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Credibility

This happened at a time when management in the United States was generally extremely hostile to efforts by their workforce to organize.

But Casey reasoned that, by inviting the Teamsters in and, from the start, building a constructive relationship with the union, he would give his workforce a hammer with which to pound UPS if UPS management tried to take advantage of the workforce.

Therefore, the workforce could trust that UPS management would not try to take advantage, which in turn would benefit the company.

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Credibility

One way for A to make credible the actions she wants to be credible is to redesign the situation so that those actions are in her interests ex post as well as ex ante.

She can take steps that improve the payoff to herself if she takes those actions, or she can worsen her payoff if she does anything else.

Since it is typically harder to improve one's payoffs from one action than it is to worsen them from another, we look for steps A can take that effectively tie her own hands, by substantially worsening her payoffs if she takes the "wrong" action.

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Tying your hands, so you must fight!

Notions of contracts and the examples of Intel and of UPS concern situations strategically similar to the trust game: Party A wishes to ensure the Bs that she would not abuse them in the future.

On the other side of the coin are situations resembling the threat game, where party A wants to render credible the threat that she will fight any B that challenges her.

Tying your hands, in this context, means constructing the situation so that, when challenged, it is more costly to acquiesce than to fight. The idea usually is not that A makes fighting more attractive but that she makes acquiescing so unattractive that she must fight.

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Tying your hands, so you must fight!

This phenomenon arises in particular in the context of entry deterrence:

A potential rival (B) must decide whether to enter a market; and if it enters, the incumbent firm (A) must decide whether to accept the entry or fight, where fighting is costly to both firms.

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Tying your hands, so you must fight!

In this context, the incumbent firm might choose a production technology that has very high fixed costs; it might commit to irrevocable agreements to purchase expensive raw materials, turning variable costs of inputs into fixed costs;

Then, the incumbent firm's back is to the wall, and it will fight entry. And the potential entrant, seeing that this is so, will not enter.

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