

ORGANIZATIONAL BEHAVIOR AND HUMAN RESOURCE MANAGEMENT

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Lesson 02

how we frame problems

Exercise A

- Do you prefer:
 - A) to have 50% probability to win 20k euros?
 - OR
 - B) to be sure, at 100% probability, to win 10k euros?

almost everybody chooses B

Exercise B

- Do you prefer:
 - C) to have 50% probability to lose 20k euros?
 - OR
 - D) to be sure, at 100% probability, to lose 10k euros?

most people choose C

- We tend to be risk (uncertainty) takers when we expect a loss
 - Even small negative variations (losses) are perceived as very significant
 - We «desperately» try to avoid losses. Thus, we are more willing to accept uncertainty / risk if that gives us a chance to avoid the loss
- We tend to be risk (uncertainty) averse when we expect a gain
 - When expected gain increases, its perceived value decreases
 - Thus, if higher gain is associated with lower probabilities, we prefer a lower gain with higher probability

PROSPECT THEORY: AN ANALYSIS OF DECISION UNDER RISK

BY DANIEL KAHNEMAN AND AMOS TVERSKY¹

This paper presents a critique of expected utility theory as a descriptive model of decision making under risk, and develops an alternative model, called prospect theory. Choices among risky prospects exhibit several pervasive effects that are inconsistent with the basic tenets of utility theory. In particular, people underweight outcomes that are merely probable in comparison with outcomes that are obtained with certainty. This tendency, called the certainty effect, contributes to risk aversion in choices involving sure gains and to risk seeking in choices involving sure losses. In addition, people generally discard components that are shared by all prospects under consideration. This tendency, called the isolation effect, leads to inconsistent preferences when the same choice is presented in different forms. An alternative theory of choice is developed, in which value is assigned to gains and losses rather than to final assets and in which probabilities are replaced by decision weights. The value function is normally concave for gains, commonly convex for losses, and is generally steeper for losses than for gains. Decision weights are generally lower than the corresponding probabilities, except in the range of low probabilities. Overweighting of low probabilities may contribute to the attractiveness of both insurance and gambling.

1. INTRODUCTION

EXPECTED UTILITY THEORY has dominated the analysis of decision making under risk. It has been generally accepted as a normative model of rational choice [24], and widely applied as a descriptive model of economic behavior, e.g. [15, 4]. Thus, it is assumed that all reasonable people would wish to obey the axioms of the theory [47, 36], and that most people actually do, most of the time.

The present paper describes several classes of choice problems in which preferences systematically violate the axioms of expected utility theory. In the light of these observations we argue that utility theory, as it is commonly interpreted and applied, is not an adequate descriptive model and we propose an alternative account of choice under risk.

2. CRITIQUE

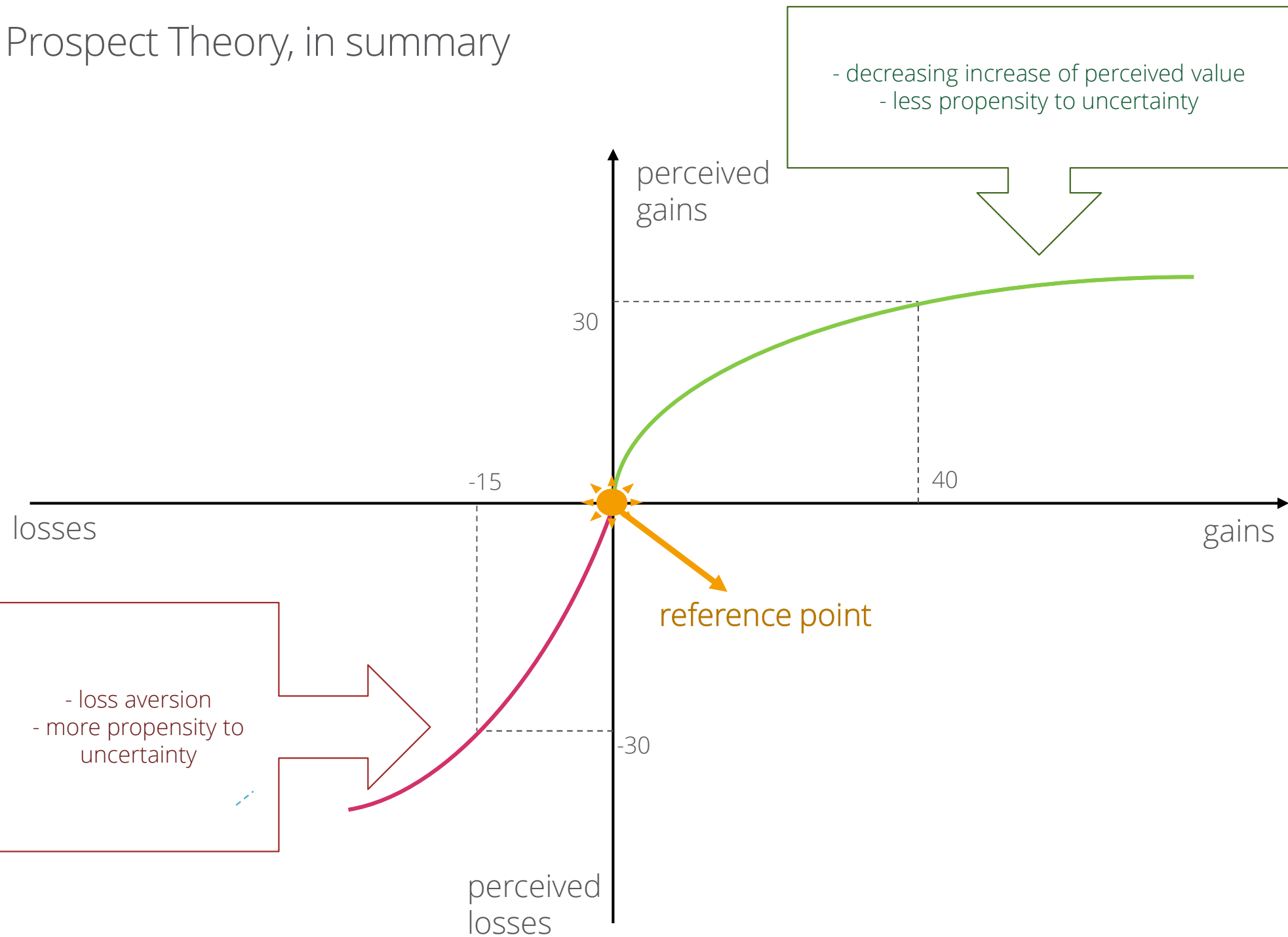
Decision making under risk can be viewed as a choice between prospects or gambles. A prospect $(x_1, p_1; \dots; x_n, p_n)$ is a contract that yields outcome x_i with probability p_i , where $p_1 + p_2 + \dots + p_n = 1$. To simplify notation, we omit null outcomes and use (x, p) to denote the prospect $(x, p; 0, 1 - p)$ that yields x with probability p and 0 with probability $1 - p$. The (riskless) prospect that yields x with certainty is denoted by (x) . The present discussion is restricted to prospects with so-called objective or standard probabilities.

The application of expected utility theory to choices between prospects is based on the following three tenets.

(i) Expectation: $U(x_1, p_1; \dots; x_n, p_n) = p_1 u(x_1) + \dots + p_n u(x_n)$.

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Prospect Theory, in summary



REFERENCE POINTS

- The influence of reference points depends on how they are perceived
- And that depends heavily on how they are described
- You have to decide whether to pay with credit card or cash for a certain purchase. When the extra cost (for the use of the credit card) is described as “*surcharge for credit card payment*”, people are less likely to use the credit card, as compared to situations where the same cost is described as “*discount for cash payment*”
- In the FIRST case, the option is described in terms of an additional loss. In the SECOND case, the option is described as a missed gain
 - an «ADDITIONAL LOSS» is «more painful» than a «MISSED GAIN»
- Remember: we are loss averse !!!!

Exercise 2A

You are an oncologist. You have to choose the best cure to treat liver tumor. Actual, reliable statistics show that:

Out of 100 people subjected to surgery, 10 die during the operation, 32 die within 1 year, and 66 die within five years.

Out of 100 people subjected to radiations, no one dies during the treatment, 23 die within 1 years, 78 die within five years.

What do you suggest to your patients?

SURGERY

RADIATIONS

Exercise 2B

You are an oncologist. You have to choose the best cure to treat a liver tumor. Actual, reliable statistics data show that:

Out of 100 people subjected to surgery, 90 survive the operation, 68 survive for at least 1 year, and 34 survive for at least five years.

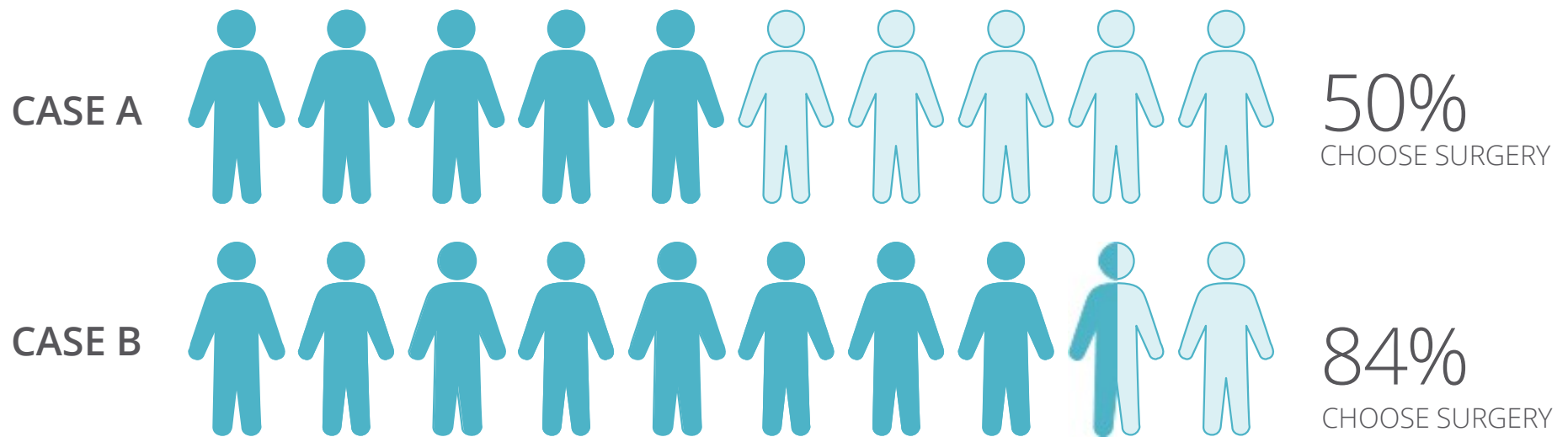
Out of 100 people subjected to radiations, all of them survive the treatment, 77 survive for at least 1 year, 22 survive for at least five years.

What do you suggest to your patients?

SURGERY

RADIATIONS

HERE'S HOW MEDICAL DOCTORS RESPOND



EXPERT PEOPLE CHOOSE DIFFERENTLY
WHEN ASKED THE SAME IMPORTANT QUESTION,
WITH THE SAME DATA !!!

FRAMING PROBLEMS

- When we try to solve a problem or make a decision, we have to «frame» it somehow, whether we are aware of it or not ...
 - *Carol has to put the food somewhere ...*
- We need to choose:
 - our goals
 - how we define or measure success / failure
 - the words we use
 - the measurement units
 - the metaphors
 - what is pertinent and what is not
 - etc.
- So, we need to be well aware about the consequences (in terms of thinking and choosing) of the kind of frame we choose

TWO CLASSIC MANAGEMENT FRAMES

different ways to think about the same problem



The “OPPORTUNITY” frame makes you think about a possible positive outcome



The “THREAT” frame makes you think about a possible negative outcome

• CHANGE MANAGEMENT

- Usually, the expectations of «gain» from a significant change in the work setting needs to be perceived as significantly superior to the status quo (1.5 to 2.5 times higher) to induce people to overcome their loss aversion (which, in this case, can be seen as **resistance to change**)
- **Loss aversion increases (not necessarily in a proportional way) with the stakes.** When the stakes are high, it is particularly important to carefully frame the proposed change, especially if the proposed change may lead to potential losses
- **Individuals matter:** different people (depending on personality traits, experiences etc) may be more or less resistant to change.

PROSPECT THEORY AND NEGOTIATION

- The behavior of negotiators changes dramatically depending on the frame (gain / loss) that they adopt
- in a loss frame, negotiators become more risk seeking, more aggressive, they make less concessions
 - the opposite happens with a gain frame
- in a loss frame, concessions are perceived as losses, so they are valued much more (about double!) than the value attributed by the counterpart (which perceives them as gains)
 - such a difference in framing makes reaching an agreement much more difficult
 - often, a gain frame on both sides helps reaching an agreement
- when a loss frame is present, buyers make lower counter-offers and the number of counter-offers increases. The process becomes longer.
 - buyers are more willing to accept the SAME price when that price is framed as a gain

PROSPECT THEORY, JOB SATISFACTION and MOTIVATION

- Heath, Knez, and Camerer (1993): **employees get “accustomed” to prices and financial incentives: when these are eliminated or reduced, a “loss” is perceived and motivation decreases significantly**
 - THIS IS EXTREMELY IMPORTANT; MORE ON THIS LATER DURING OUR COURSE
- van Buiten and Keren (2009): **language** is very important in framing
 - language evoking a loss is much more effective in convincing people to accept riskier options (and viceversa)
- Coughlan and Connolly (2001): **satisfaction** for a certain work performance is influenced by the type of **reference** that has been used
 - the same DECREASE / INCREASE in performance is perceived (in terms of DISSATISFACTION / SATISFACTION) more or less strongly depending on the fact that the reference (expectation) suggests a negative (loss) or a positive (gain) frame

EXAMPLES of LOSS AVERSION and FRAMING in HR MANAGEMENT (1)

- **Scenario:** HR may propose a new compensation system (e.g., shifting from fixed salary to performance-based bonuses).

How would you design / frame this proposal to make it more acceptable, given what you just learned about loss aversion and framing?

- Some employees may resist the change because they **fear losing their guaranteed salary**, even if the new structure could lead to higher overall pay if performance targets are met.
- **Loss Aversion:** People tend to prefer the **certainty** of their current, known salary over the **uncertain but potentially better** earnings under the new system. The fear of losing what they currently have outweighs the potential benefit. So, how would you avoid that resistance?

EXAMPLES of LOSS AVERSION and FRAMING in HR MANAGEMENT (2)

- **Scenario:** During organizational restructuring, managers may resist eliminating redundant roles because of **fear of losing important knowledge or the risk of impacting team morale**. Even though restructuring could lead to **better efficiency and cost savings**, the perceived loss of knowledge and morale generates reluctance and inertia.
- **Loss Aversion:** The potential short-term loss (reduced knowledge and morale) is weighted more heavily than the long-term gains (greater efficiency). This leads to the retention of redundant roles longer than necessary.

EXAMPLES of LOSS AVERSION and FRAMING in HR MANAGEMENT (3)

- **Scenario:** Managers may avoid having difficult conversations with employees about their poor performance because of **fear of damaging relationships or causing discomfort**. Even though confronting the issues with employees **could improve team productivity**, managers may fear the loss of goodwill, harmony, or employee engagement.
- **Loss Aversion:** The potential "loss" of a good relationship or team cohesion seems **more immediate and painful than the potential long-term gains** of improved performance through honest feedback.



- *J. O'Toole research on General Motors' frame in the 70s*
 1. GM "is in the business of making money, not cars"
 2. Success do not come from technological leadership, but from quickly adopting innovations developed by others
 3. Cars are status symbols. Style is more important than quality. Users trade up well before quality becomes a problem
 4. US market is isolated. No foreign competitor will never be able to acquire more than 15% of the US market
 5. Energy will always be abundant and cheap
 6. Labor does not have a significant impact on production quality
 7. Social and environmental concerns are not relevant in the US market
 8. Central government is an enemy
 9. Tight central control is the secret of good organization
 10. Managers should be trained internally

THE ENDOWMENT EFFECT (Knetsch, 1989)



50% of randomly selected people given a mug, and 50% a candy bar

- objects of similar value

when asked if they wanted to switch, almost nobody did

- mug owners valued mugs much more than candy bars
- candy bar owners valued candy bars much more than mugs

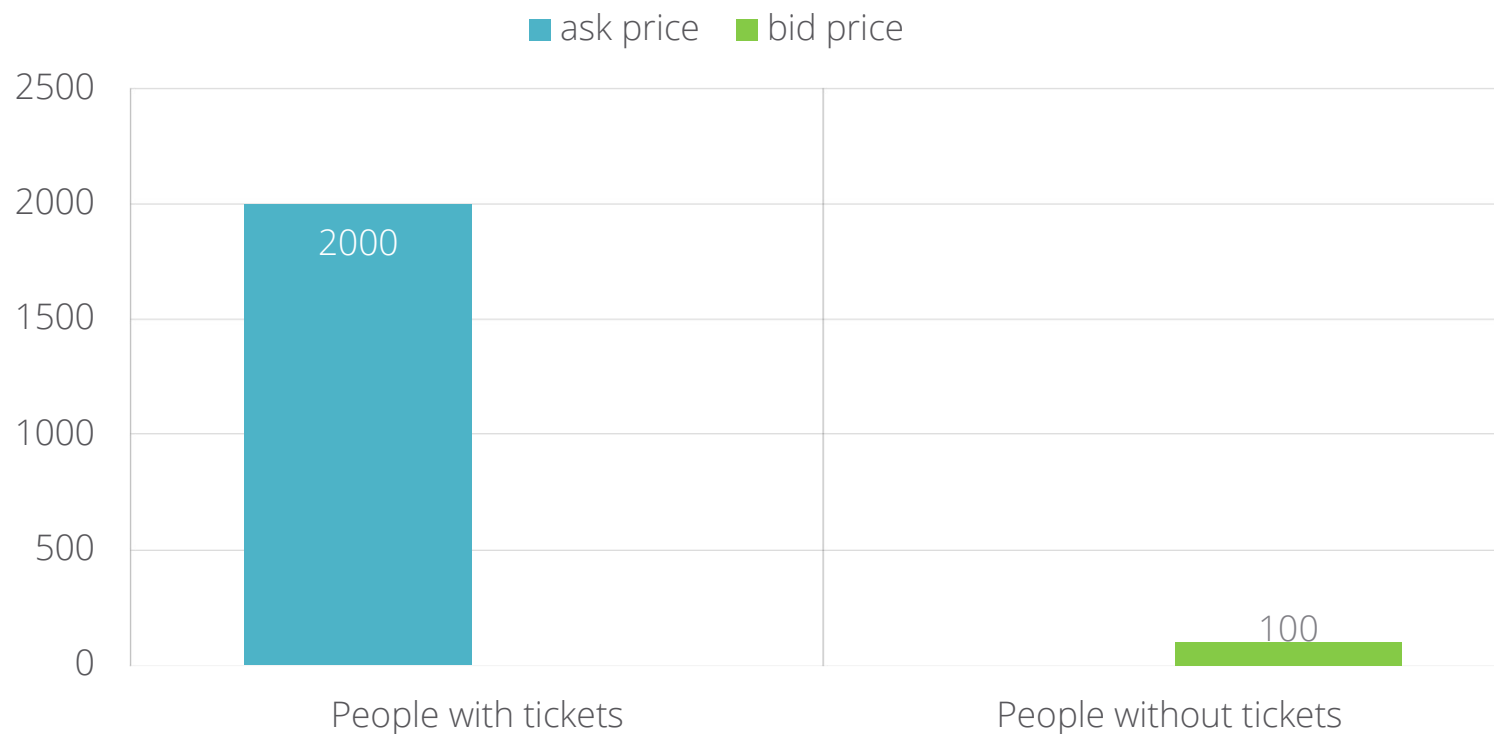


THE TICKET EXPERIMENT (D. Ariely)

explanations (rationalizations) wildly differed:

- people with tickets explained how valuable that experience would be for them, well worth a lot of money
- people without tickets explained that it was not worth too much for them, and experiencing the game in a different setting (at a bar, from tv etc) and saving money would be the most sensible choice

we tend to adjust our reference to what we have in the present moment



FRAMING AND PUBLIC POLICY

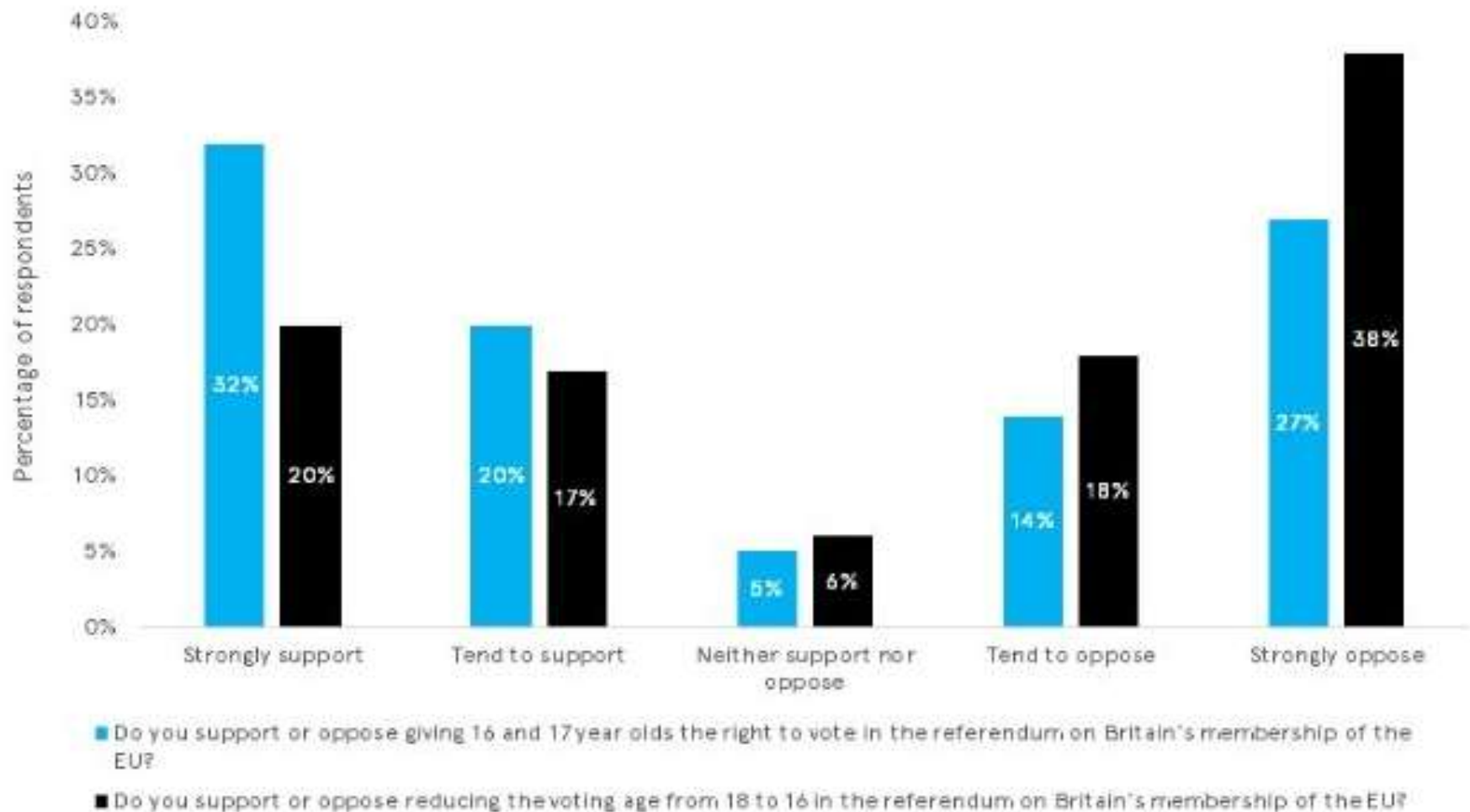
- A survey among British citizens, just before the BREXIT vote
- Do you support or oppose reducing the voting age from 18 to 16 in the referendum on Britain's membership of the EU?
- SUPPORT 37%, OPPOSE 56%
- Do you support or oppose giving 16 and 17 year olds the right to vote in the referendum on Britain's membership of the EU?
- SUPPORT 52%, OPPOSE 41%

a HUGE difference, enough to change the majority position !!!!!

- FIRST FRAME is mostly interpreted as a loss, a reduction, a «threat» to the status quo
- SECOND FRAME is mostly interpreted as a gain, an extension of rights

Framing and public policy

Figure 1. Respondents views on lowering the voting age in a 2015 Ipsos MORI poll



THE (SOMETIMES PARADOXICAL) INFLUENCE OF REFERENCE POINTS

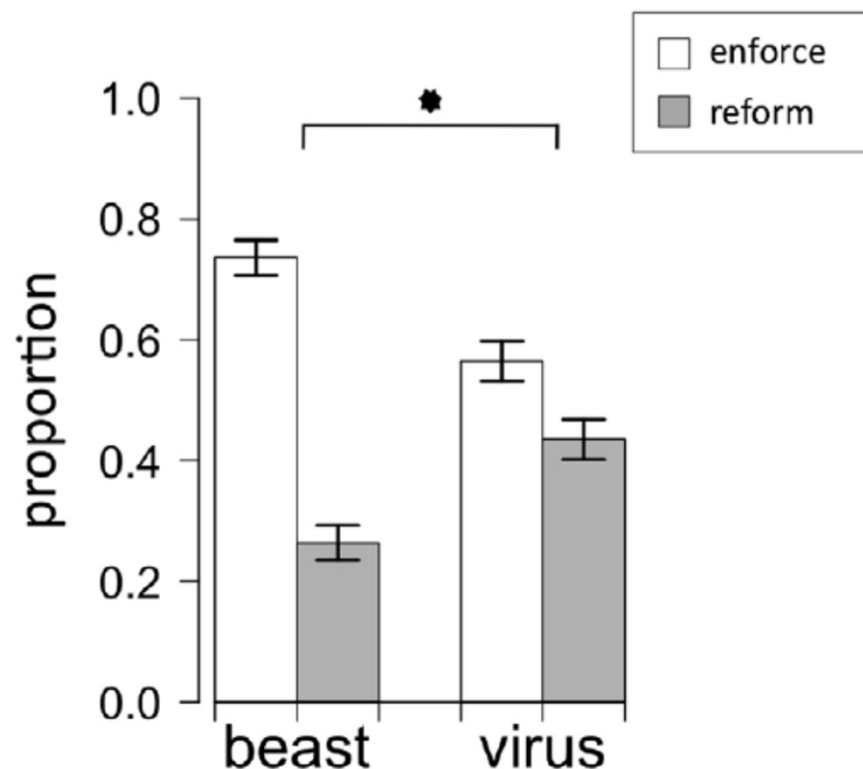


- A study by Camerer et al (1997) on New York taxi drivers
- Taxi drivers can freely choose how many hours to work each day
- Research shows that they use a specific income target (a reference) in order to decide when to stop working
 - Stopping below the target is very «painful» (loss aversion)
 - Stopping above the target is pleasurable, but the positive feeling is less intense (given the same difference between actual achieved income and target) than the negative feeling when the target is not yet achieved
 - EXAMPLE: TARGET = 500\$
 - » Stopping at 450\$ generates more intense negative feeling than the positive feeling generated when stopping at 550\$
- An unexpected, non rational consequence:
 - Taxi drivers are more willing to work longer hours when their hourly income is lower!!
 - Please notice: the same is LESS true for very experienced drivers

THE INFLUENCE OF METAPHORS IN FRAMING

- Crime is a {**wild beast preying on** / **virus infecting**} the city of Addison. The crime rate in the once peaceful city has steadily increased over the past three years. In fact, these days it seems that crime is {**lurking in** / **plaguing**} every neighborhood. In 2004, 46,177 crimes were reported compared to more than 55,000 reported in 2007. The rise in violent crime is particularly alarming. In 2004, there were 330 murders in the city, in 2007, there were over 500.

- **ENFORCE**: punish, sanction, policing, etc
- **REFORM**: prevent, change society, improve economic conditions, education, etc



HOW TO HELP NEGOTIATIONS THROUGH «REFRAMING»

- A public agency is proposing to develop an area of woodland near a town that has suffered low economic growth. The woodland is considered an area of natural beauty.
- The public agency's main frame is one of **economic stimulus**: by improving amenities, they may attract more people to the town, creating an economic multiplier effect.
- On the other side is a national environmental charity that has a strong presence in the region. Their frame is **environmental**: they want the development to protect the quality of the woodland against pollution and decay, so residents can continue to enjoy it for longer. They are concerned that privileging economic growth will harm the local environment.

The two frames are in conflict and are leading to dispute that seems intractable

HOW WOULD YOU TRY TO REACH AN AGREEMENT BETWEEN THE TWO PARTIES?

1. «FRAME INCORPORATION»

- Extending and / or “diluting” one (or both) of the frame(s) so that they incorporate elements of the other frame, in order to increase the likelihood of finding an acceptable solution for both subjects. Example:
- An important part of the environmental frame is the charity’s concern that this will set a precedent for future developments in the region: concern for economic growth, not the environment, would become the guiding principle.
- The public agency could emphasize the fact that this development is just a pilot that will be evaluated for its impact (including on the environment). That move would allow the charity to incorporate into its frame the idea that the development would target economic growth, but only in a provisional way.

2. «FRAME RECONNECTION»

- Both frames are preserved, but a new link is created between them, so they appear to be complementary rather than incompatible.
- EXAMPLE:
- One side would continue to see the policy through an economic frame, and the other through an environmental frame.
- But economic development could be re-framed as a means of improving the local environment – for example, by making it easier for local people to invest in sustainable technologies.
- If the public agency needed to go further, they could promise that some form of ‘tourist tax’ will be created and funnelled to a fund for this purpose.

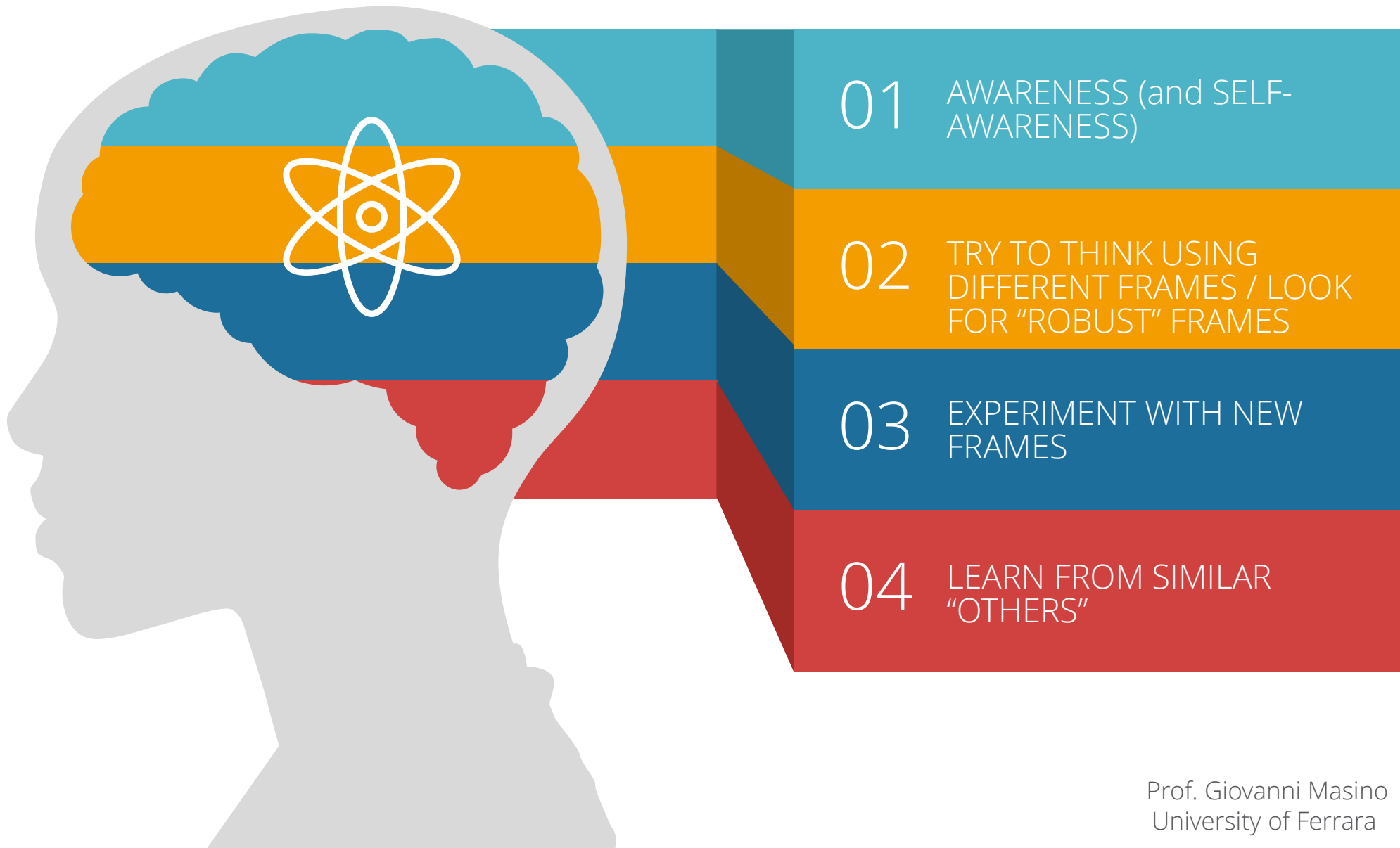
3. «FRAME ACCOMMODATION»

- This is where one side (or both) changes their framing to accommodate aspects of the opposing frame.
- EXAMPLE
- The charity succeeded in re-framing the idea of economic development to include wider concepts of value. For example, the charity could make the case that people would have better mental health and social capital if they had better access to the environment. They could point out that quality of life already forms part of the economic assessments in healthcare (as in 'quality-adjusted life years').
- The public agency might then re-frame its idea of what 'economic development' means.

4. «FRAME SYNTHESIS»

- Negotiating subjects try to design policies and decisions in a way that delivers multiple outcomes, so that different they provide acceptable outcomes for different frames.
- EXAMPLE
- It might be possible to capture the development gain from developing part of the wood, use it to enhance the biodiversity of the remaining wood, and improve access for local residents so they can enjoy the benefits more – which would deliver greater social benefit than the initial proposal.

HOW TO IMPROVE OUR ABILITY TO FRAME DECISIONS?



HOW TO CONSIDER / CREATE DIFFERENT FRAMES?

TRY TO:

1. Become aware of your habitual frames and challenge them
2. Look for other points of view
3. Role-play your competitors
4. Look for diversity
5. Use brainstorming techniques
6. Try using different perspectives / points of view
7. Think by analogy
8. Think using different metaphors
9. Investigate about how others solved similar problems
10. Monitor external changes and trends

PROSPECT THEORY AND FRAMING: SUMMARY

- We always frame, in one way or another, our decisions
- This is not only unavoidable, it is also useful, as it helps us to reduce the complexity of choices
- However, we have to be very careful about how we frame problems for ourselves or others, because our frames have a large influence on our decisions
- We need to be particularly careful if our frame leads to thinking in terms of «gains» or in terms of «losses», because that will influence our attitude towards uncertainty and risk
- We have to be careful not to value too much what we already have, or the situation we're in, or the status quo, in relation to possible changes
- We have to be careful about what references / expectations we use in order to evaluate our potential outcomes