

Negotiation

Interactive Intelligence Group, TU Delft



Outline

- Why negotiate ?
- What Kinds of Negotiations Exist?
- Guidelines for Negotiation
- Negotiation Analysis
- Do it yourself !

Why Negotiate?

- Positive situation:
 - Win-win opportunities
 - Short term relations
 - Long term relations
- Conflict:
 - Power play (or war) will not lead to a solution
 - All parties need a solution
 - All parties need to at least pretend to be willing

Definitions (1)

- **Party or Stakeholder:** someone that has a stake in the outcome of the negotiation.
- **Mediator:** someone that has no stake in the outcome of the negotiation, guards the negotiation process, aims for a fair outcome to all parties.
- **Issue:** something that the parties need to agree on for a successful negotiation.
- **Open, closed or in between:**
 - Open: all parties provide full insight in their preferences and interests
 - Closed: only bids are exchanged

What Kinds of Negotiations Exist?

Negotiations Come in Many Different Kinds...

Number of Parties

- 1 on 1
- 1 on m
- n on m

Number of Issues

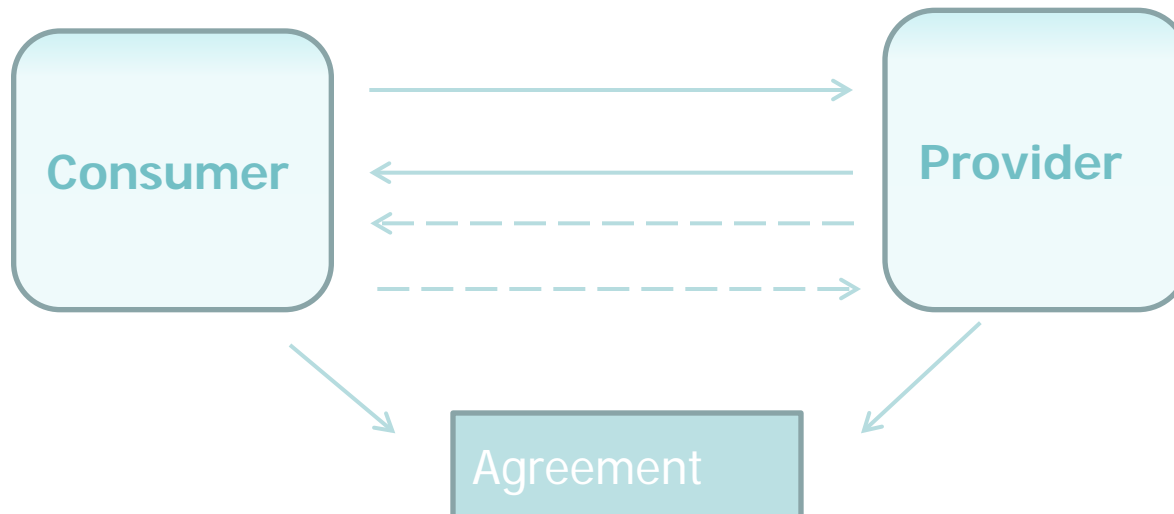
- 1
- $N > 1$

Mediated?

Open?

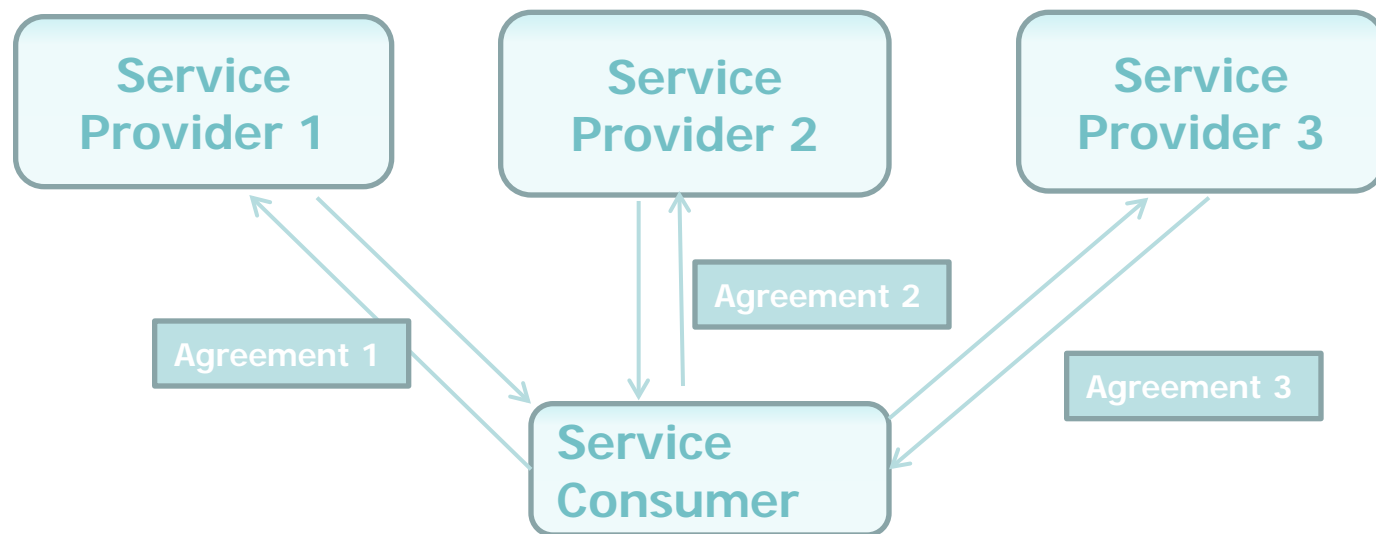
Bilateral Negotiation

- Negotiation between two parties
 - A buyer and a seller negotiate over cost and delivery time
 - A wife and husband negotiate over the details of the party that they will organize next week



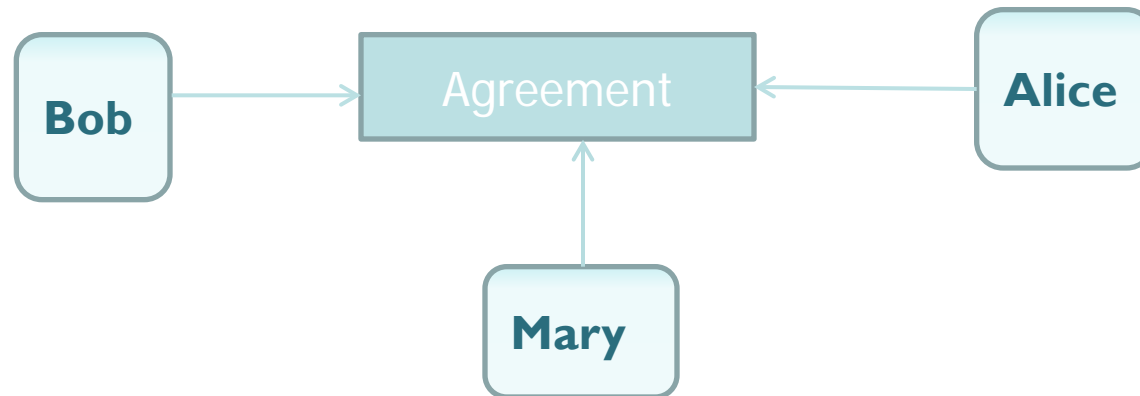
Multiple bilateral negotiation

- One party may negotiate with different parties simultaneously.
 - E.g. one buyer negotiates with multiple sellers
- The negotiation with one party may have an influence on the negotiation with another party.

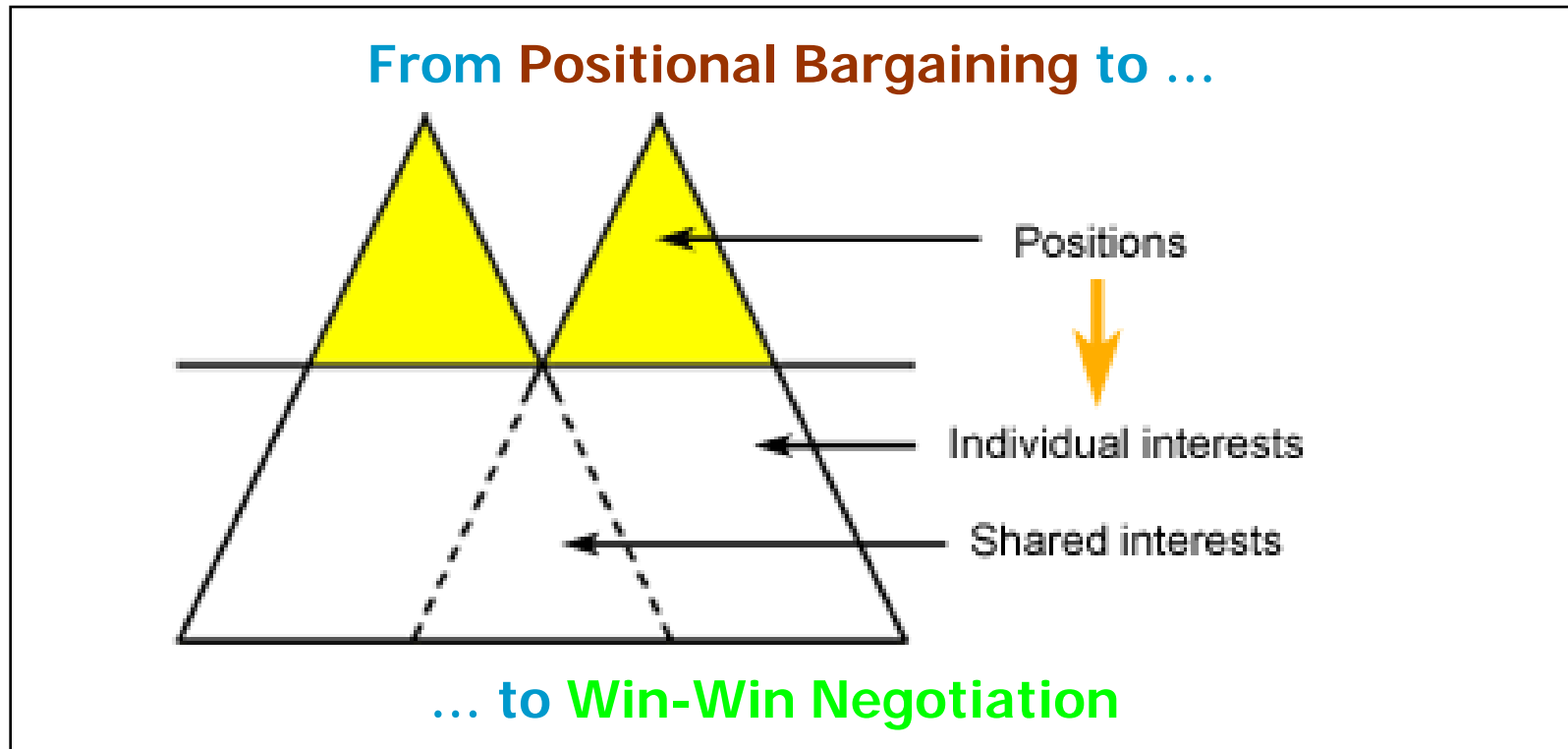


Multilateral Negotiation

- Negotiation among more than two parties
- All parties mutually agree on the final decision/offer
 - A group of service providers would like to give a service together and they need to mutually agree on some issues.
 - A group of friends are planning to go on holiday together and they need to find a joint agreement on some issues such as location, duration etc.



Principles That Help You Become a Good Negotiator



Position - the first demand of a party, often vocal and self-centered. Requests for cash (\$) compensation is often a position.

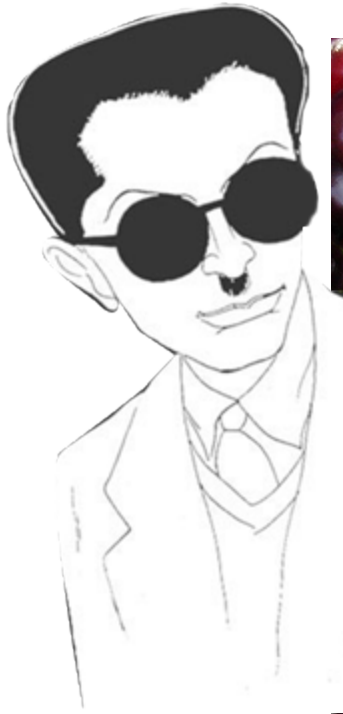
Interest - the deeper motivations underlying a party's position, and which offers greater room to explore a range of options from which to compile a solution that satisfies the most number of parties.

Positional Bargaining

- Holding a fixed position of what you want regardless of any underlying interest



Negotiation: bidding



Negotiation: underlying interests



Principles That Help You Become a Good Negotiator

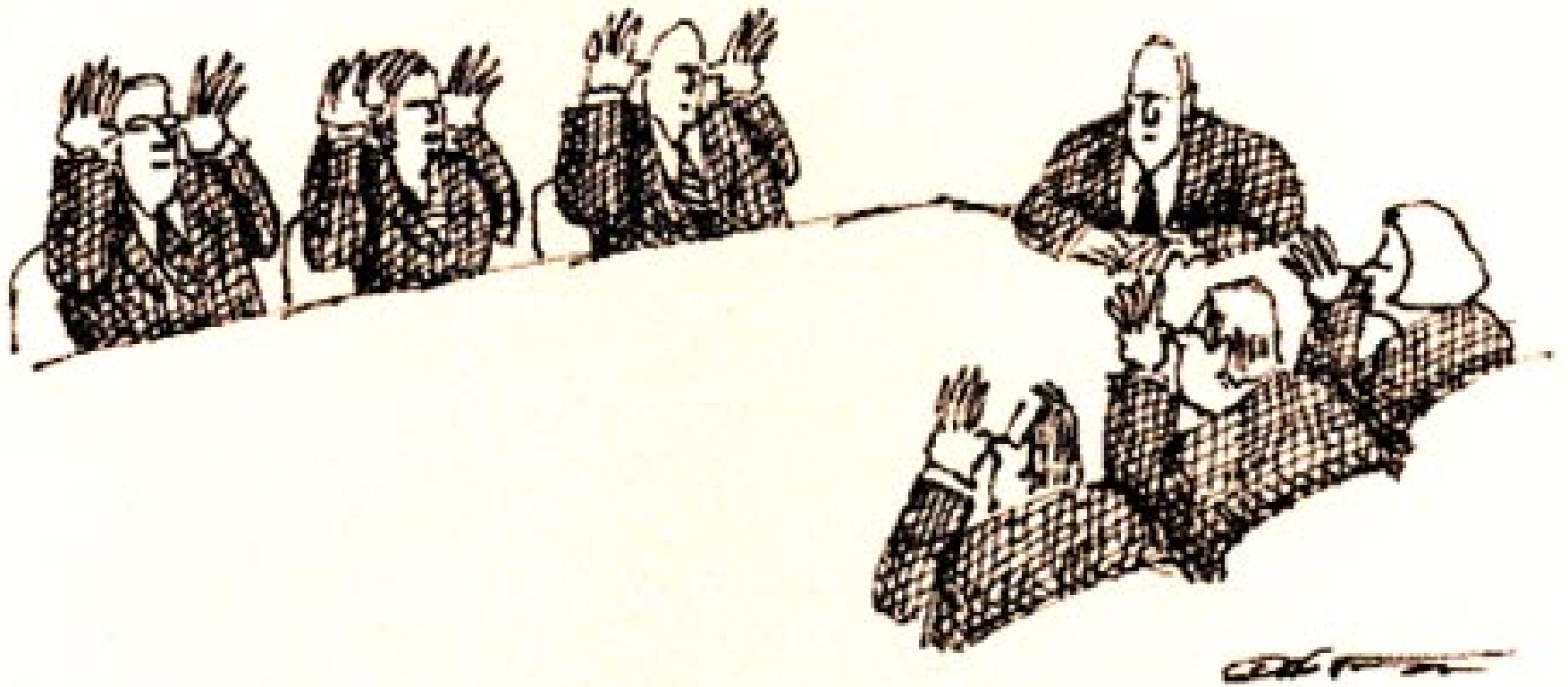
Principle 1

Build trust through mutual understanding and meaningful communication

How?

- Ensure that all parties are identified and represented
- Develop understanding through active listening
- Remember that perceptions can be real, since they may drive decision-making





The mediator sensed that the negotiations were in trouble.

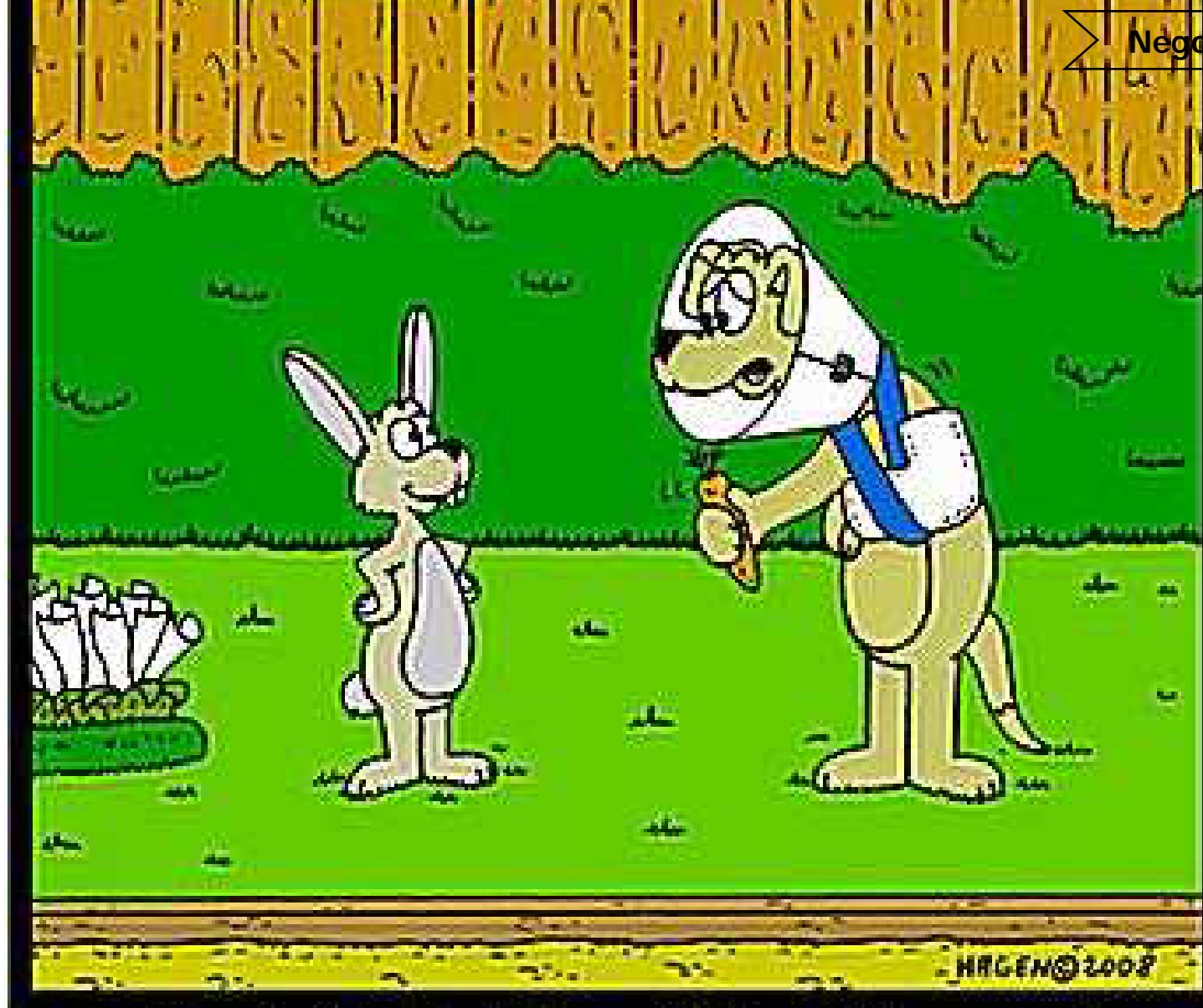
Principles That Help You Become a Good Negotiator

Principle 2

Focus on revealing underlying interests rather than positions

How?

- Adopt consensual negotiation style, not a positional
- Identify peoples underlying concerns, fears, motivations, deadlines, aspirations & values
- Create room to explore a wide range of options



Here's the deal: I can't dig right now and can't trust other dogs... So, there's a carrot for you each time you dig out one of my bones...

Principles That Help You Become a Good Negotiator

Principle 3

Widen the options for finding a solution

How?

- Use creativity and engage in joint problem solving
- Apply brainstorming techniques
- Assess the uncertainty and risks arising from the proposed solution

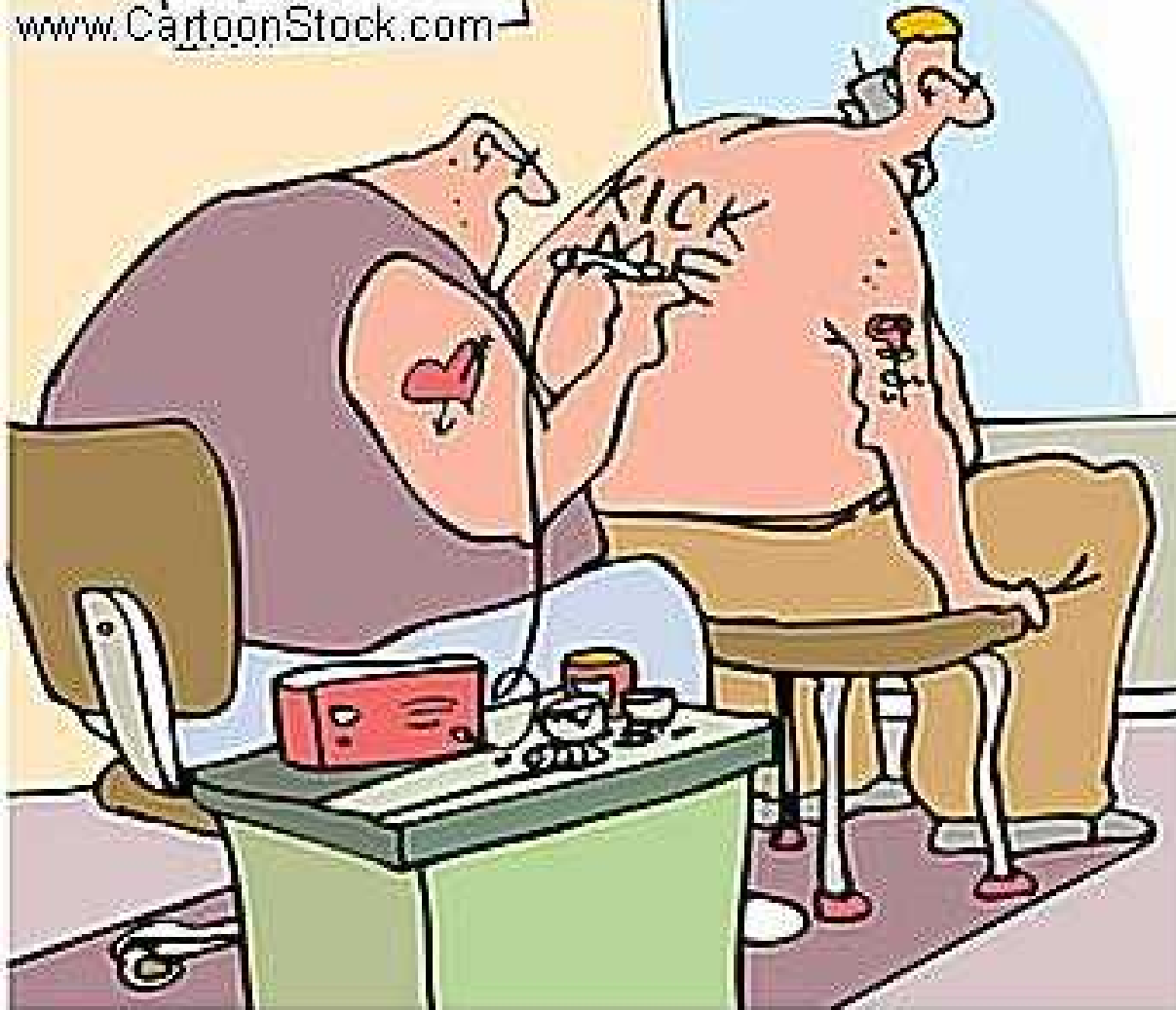
Principles That Help You Become a Good Negotiator

Principle 4

Reach agreement that satisfies interests and adds value for all parties

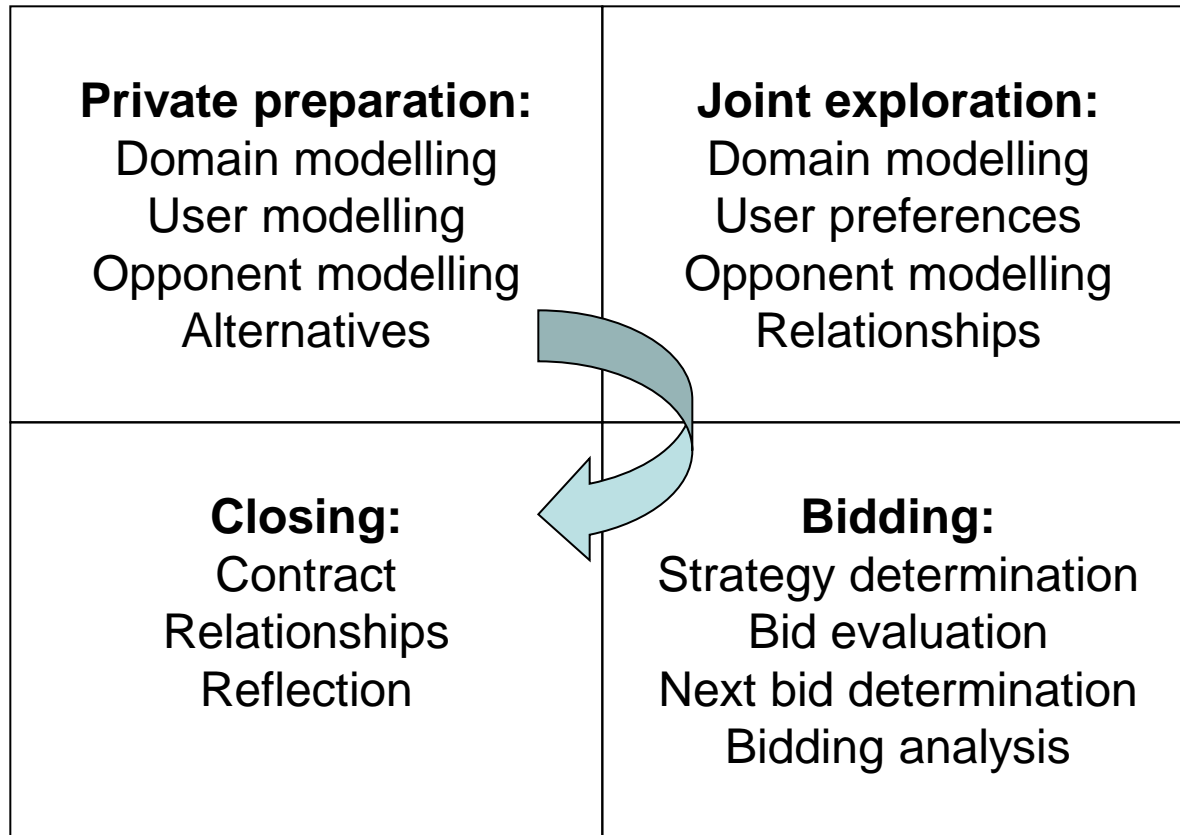
How?

- Ensure that parties implement commitments
- Incorporate a grievance mechanism to address concerns over implementation
- Evaluate resulting relationships and outcomes



"I'm getting the fire-breathing dragon with wings. He wanted \$200, but I talked him down to fifty bucks."

Phases of Negotiation



Definitions (2)

- **Position:** the first demand of a party, often vocal and self-centered. Requests for cash (\$) compensation is often a position.
- **Interest:** the deeper motivations underlying a party's position, and which offers greater room to explore a range of options from which to compile a solution that satisfies the most number of parties.
- **Preference profile:** the preferences an agent has regarding the possible outcomes of the negotiation. These refer to the importance of issues, but also to the values per issue. Preference profiles can be qualitative or quantitative.
- **Bid:** for a set of issues of the negotiation attach a proposed value
 - Partial bid: not all issues are assigned a value
 - Complete bid: all issues are assigned a value. To find the best possible outcomes, you are advised to only bid complete bids.

Definitions (3)

- **Utility function:** a quantitative representation of a preference profile. It maps bids to utility values. For easy of computation the range of utility values is often $[0, 1]$. Typically utility functions are only defined for complete bids.
- **Reservation value:** in terms of utility, it is a utility value below which bids are unacceptable. Each party should determine its reservation value.
- **BATNA:** Best Alternative To No Agreement – If the negotiation fails, this is what you can fall back on.
 - The better your BATNA, the higher you can set your reservation value.
 - The better your BATNA, the more relaxed you will be, the easier it will be creative, to think “out of the box”

Prepare!

- Read books on negotiations!
- Which interests are at stake? For me, for other parties?
- Short term and long term interests?
- How important is success to the participants?
- Create preference profiles
 - What would I prefer?
 - What would the others prefer?
- Convert preference profiles to utility functions for all agents (overall function that assign a grade to a bid)
- What is normal in this domain (e.g., the going prices for real estate)?
- What is my reservation value?
- Make sure of a BATNA

Prepare (2)

- Aspects
 - Interests mentioned
 - Hidden agenda
 - Experience
 - Network
 - Emotions
- What do I know
 - about myself?
 - about other(s)?
- What is our relation?
 - Business
 - Friend / family/ enemy
 - One time, long term
 - Power differences
 - (unsolved) past
- Which parties participate?
- Which protocol?

To Be Open or Not To Be Open...

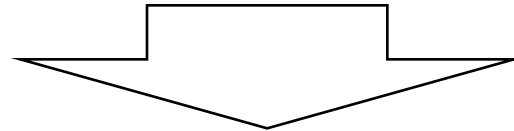
The Negotiation Dilemma: Share Information !/?

Being Open in a Negotiation:

- Putting all your cards on the table, sharing all information
- Outcome can be checked for fairness.
- But... danger of exploitation by other party!

Not Being Open in a Negotiation:

- Keep all your cards to yourself, not sharing any information.
- Outcome cannot be judged for fairness.
- But... how to reach a win-win outcome!?

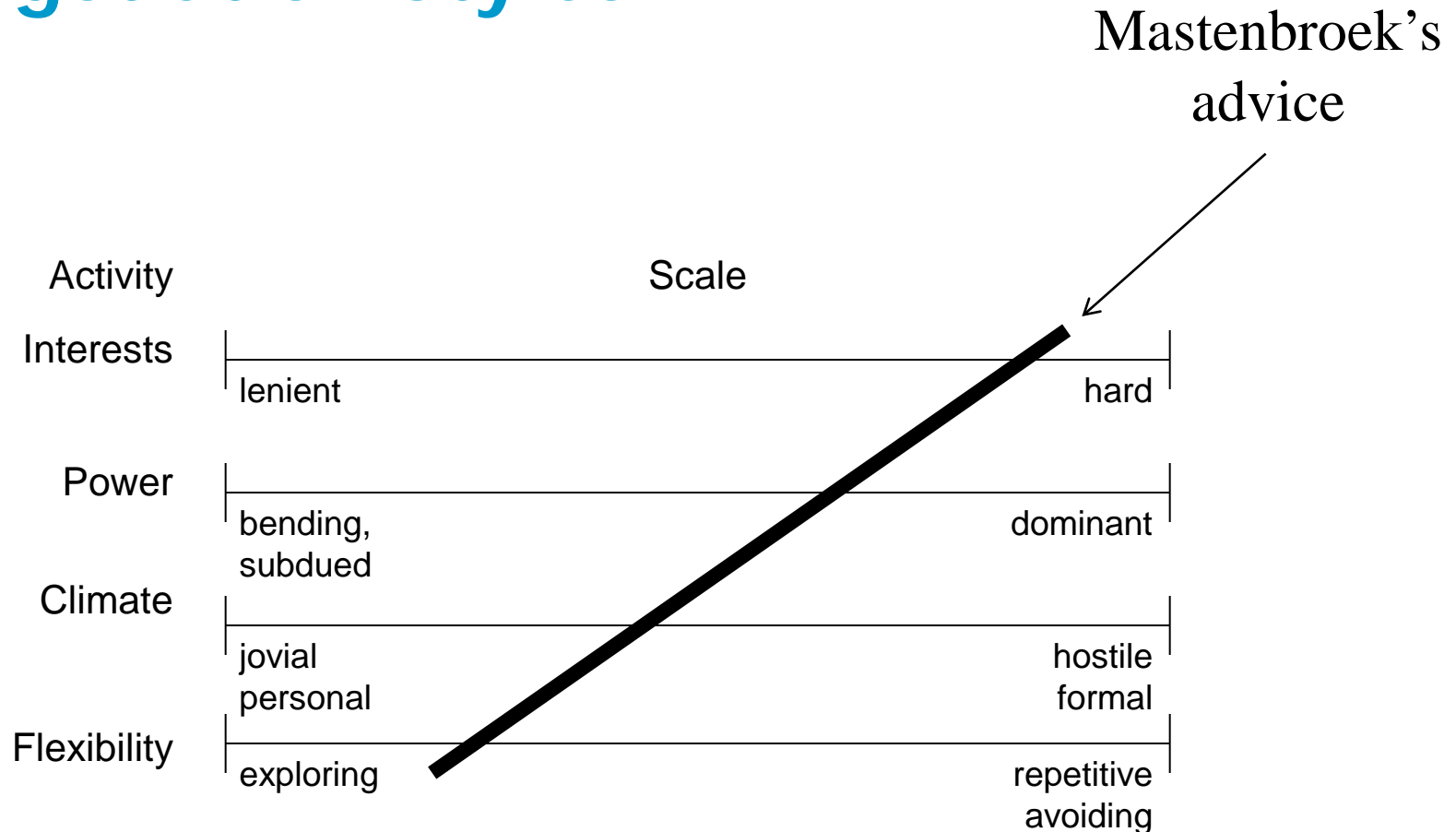


**Reciprocate:
Share Information if Other Reciprocates!**

Negotiation Atmosphere



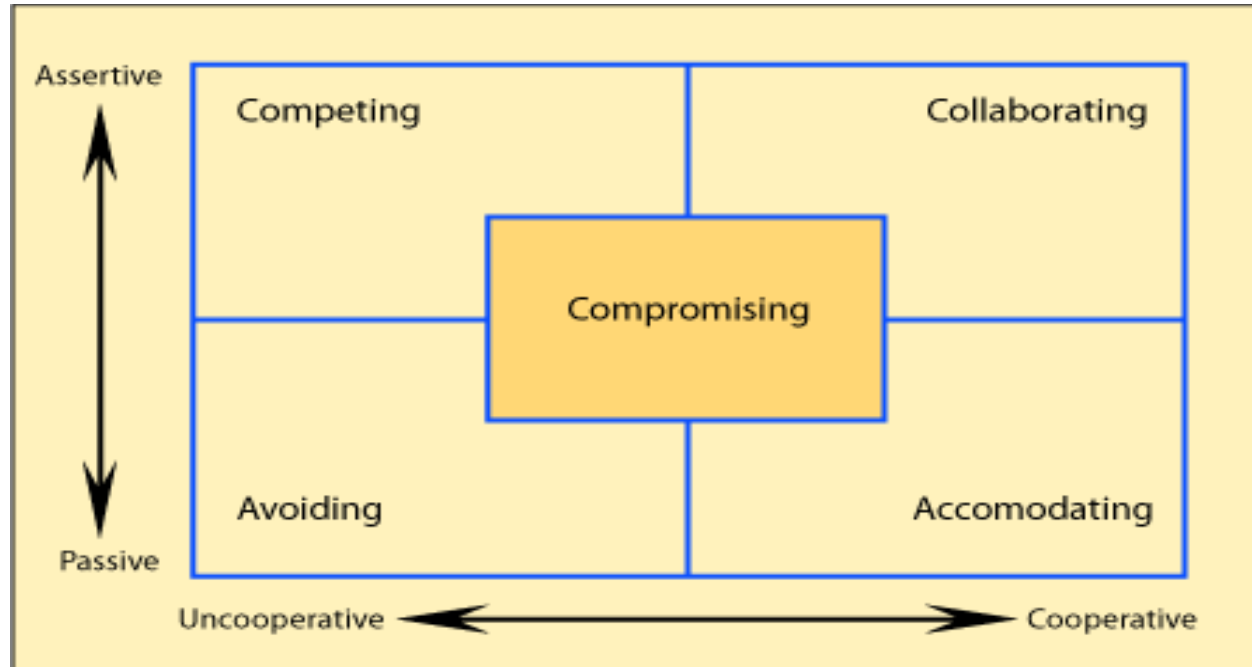
Negotiation Styles



What is your style?

Which Style does Your Opponent Adopt?

Conflict Handling Styles



Thomas-Kilmann Conflict Mode Instrument

What is your style?
Which is your Opponent's style?

Styles versus Tactics



"Don't let it throw you — It's just a negotiating tactic."

Relation to Artificial Intelligence

Negotiation Has Entered the Digital World:

- e-mail, e-commerce, ...

Artificial Intelligence:

- Intelligent decision making
- Engineering Heuristic Approaches for Machines
- Engineering Cognitive Skills used in Negotiation

Russell & Norvig: 2 – 6, 10, 13 - 22

The Future:

- Enhanced negotiations by using the Negotiation Support Systems

Some classics on negotiation from a human perspective

- Harvard Business Review Staff, (2003). Negotiation (Harvard Business Essentials Series). Harvard Business School Press.
- Lewicki, R.J., Saunders, D.M., and Minton, J.W., (1999), Negotiation: readings, exercises, and cases. Boston, McGraw-Hill/Irwin.
- Raiffa, H. (1982). The art and science of negotiation, how to resolve conflicts and get the best out of bargaining. Cambridge, Mass., Belknap Press of Harvard University Press.
- Shell, G.R., (2000), Bargaining for advantage: negotiation strategies for reasonable people. Penguin Books.

Classics on the way to automated negotiation

- Rosenschein, J.S., and Zlotkin, G., (1994). Rules of Encounter: Designing Conventions for Automated Negotiation Among Computers. MIT Press.
- Raiffa, H., Richardson, J., and Metcalfe, D., (2002). Negotiation Analysis: The Science and Art of Collaborative Decision Making, Cambridge, MA: Belknap Press of Harvard University Press.