Game playing is a perfect tool to practice strategies and experience the result of rules on behavior. We play games with our children, in education and for fun.

Every game has its rules. Typically we start off by reading the rules. Then we think of a strategy to increase your chance to win. You also think about the strategy that your opponents may deploy; maybe you even consider the strategy that your opponent believes that you will play and how that affects his behavior, etc.

> *Every game has rules to determine the winner of the game.*

Most people play a game to become the winner of the game; extreme versions of such people are characterized as competitive. They typically don't like to play with people who see a game as a social process of interaction or learning; that is, the non-competitive people. I am in this latter category and confess:

> *I may pretend to care about losing the game just to make the competitor feel good.*

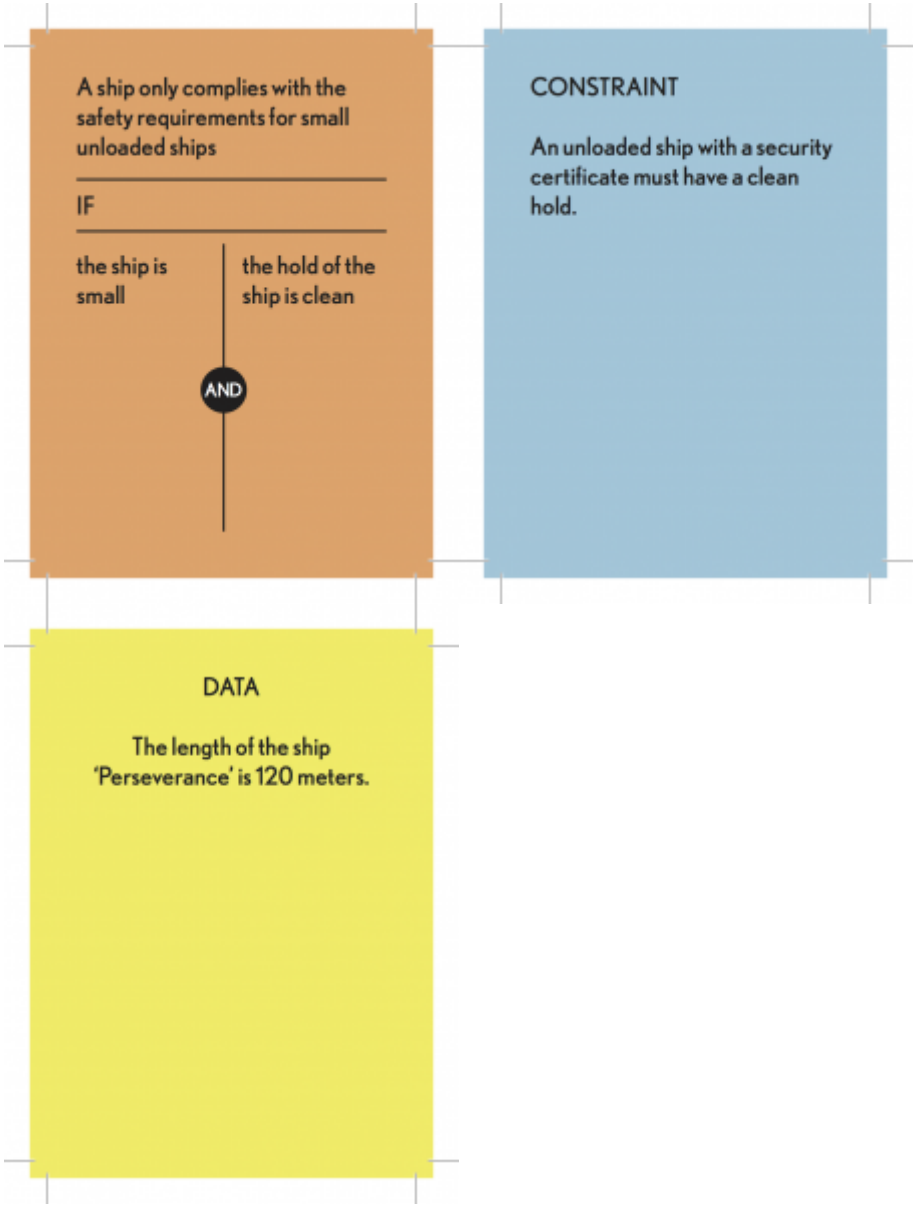
This reasoning leads me conclude that most people prefer to play against a human being because they care if they lose and a computer does not care.

Artificial intelligence research created world news when the first computing algorithm won against humans playing Chess, Go and Omnia. But humans are still unique in having the ability to play and learn any game on the basis of written rules and adjust their strategy based on the opponent's actions. It is unique because, in contrast to a computer, we have a general mechanism to play and win; namely, reasoning.

We differ from the computer that needs to be programmed with a new computing algorithm for

every game. Even a general rule engine or machine learning method needs to be adjusted and optimized for each game.

To better understand what a rule engine does we developed a game [2]. The game consists of cards that state a constraint or data and three different instructions on how to play the game.



Each instruction is related to a different rule engine strategy: code generation, forward- and backward- chaining and constraint satisfaction.

Here are some tips to play the Game of Rules that also applies to managing business rules in your organization:

1. Do not play alone.

- The game needs to be played with at least two, at most 20 and preferably 12 players.
- We need our rational skills to write good rules. Empirical research [3] in psychology demonstrates that when we reason alone we are likely to draw wrong conclusions. Our reasoning is systematically biased towards oneself (my-side bias), by false intuitions, expectations and an imperfect memory. But the good news is that these deficiencies are overcome when we reason in a group. Therefore, rule authoring is best performed by a group. Collaboration and conversations help us complete and validate rules.

2. Play all games.

- The game consists of three sets of instructions that illustrate three different ways of dealing with rules.
- The same set of rules is ideally used for different processes in your organization. For example, you use the same rules to calculate the total price, advise a product within budget, personalize the interview form for a customer and establish compliance with the policy. Be aware that you need different reasoning strategies for these different processes while working with the same set of rules.

3. Understand your terminology.

- The game is about a ship entering the Rotterdam Harbour and you may need to familiarize yourself with the terminology, like a double-hulled ship.
- Each organization has terminology. We all believe that we understand the meaning of the words we use in the same way but that is often not the case. Between different departments the meaning of the same word often differs and consultants with experience in other domains may accidentally attach a meaning from a previous client to your concept. Therefore terminology is best explicitly defined.

4. Don’t be biased by representation.

- We wanted to design a card game, so it was a logical choice to work with natural language rules: short statements that would fit on one playing card.

- Natural language rules is just one of the options to choose from. Don't forget that decision tables and decision trees may be useful as well. For example, they are helpful to check completeness (decision tables), to validate scenarios with experts, or to help users find their path in a set of rules (decision trees).

5. Learn from feedback.

- The game was intended to be played in a facilitated session. The facilitator's role is to give feedback on the group's performance and explain the experience.
- Likewise, when you want to grow as an organization in anything, you need to ensure you have a way of gathering feedback. It is one thing to translate policy in a set of operational business rules and work accordingly. It is another thing to put in place a feedback loop to ensure that the rules are not becoming a new burden in reacting to changing business conditions. Both are equally important!

Don't forget to tell if you read this article by liking this post [4].

References:

1. If you are interested in the idea of using games to change behavior continue to read this nice blog (in Dutch!) that I received from Car2Go with many Gamification examples related to improving traffic processes. Both for cars and pedestrians. https://blog.car2go.com/nl/2017/07/22/gamification-in-het-verkeer/
2. The Game of Rules is developed by the Dutch organization for business rules. BRPN organizes 5 meetings per year to share experiences with business rules related projects. See: www.brpn.org (Dutch). There is an English and a Dutch version of the game. Contact me if you have questions about it.
3. Mercier and Sperber are researchers who give an evolutionary explanation to the results of experiments of Khaneman and others about human reasoning. Their book *The Enigma of Reason* changed my way of thinking about business rules authoring.
4. If you liked this post you may also be interested in reading my post on decisions, "AI and Adaptive Case Management."

http://concept.librt.com/when-to-combine-decisions-case-management-and-artificial-intelligence

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