Teaching Tool description	
Title	The Beauty Context – Experiencing unpredictability (an introductive tool to the misteries of communication)
Language	English (also available in Italian)
Audience	Undergraduate students
Goals/educational objectives Link with Core curriculum	Raise awareness of exploring the fantasies, ideas, concerns, etc of the patient prior to attribute to him our own ideas The tool addresses the Core Curriculum's objective A5 and A7
Type of tool	(wide) group experiment
Brief description	A wide group of healthcare students are requested to anticipate the average group opinion, experiencing true difficulties. This could be a good starting point to translate these findings into the clinical practice: how can we be confident that we may correctly anticipate the patient's thoughts?
Practical resources	Paper, pencil and a pocket calculator.
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List of tool files	Politi_beauty context_en_130613.pdf

The Beauty Context – Experiencing unpredictability (an introductive tool to the misteries of communication)

In general, healthcare students are not familial with economics and mathematics.

It is my opinion, however, that maths may be a useful aid for introducing – in a somewhat puzzling and involving manner – some crucial concepts of communication in healthcare.

Keynes described some aspects of market using an analogy based on a fictional beauty contest, in which entrants are asked to choose a set of six faces from photographs of women. Those who picked the most popular face are the winners. Keynes wrote, "It is not a case of choosing those [faces] which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest.We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be".

From the original keynesian beauty contest, other scenarios have been created. Let's take the following as an example (Moulin 1986):

pick a number between 0 and 100, trying to pick the closest number to p
where $p = 2/3\ a$
and a = the average of all numbers submitted

Let's examine some basic levels of reasoning about others' choice:
− Level 0: players choose numbers randomly from the interval [0,100]
− Level 1: players believe that all other players are Level 0. These Level 1 players therefore reason that the average of all numbers submitted should be around 50. If p=2/3 these Level 1 players choose, as their number, 2/3 of 50, or 33
− Level 2: the average player believes that all other players are Level 1 players. These Level 2 players therefore reason that the average of all numbers submitted should be around 33, and so they choose, as their number, 2/3 of 33 or 22.
− Similarly, the next higher 'Level 3' players play a best response to the play of Level 2 players and so on.

In my empirical experience, in a single round of the game played by medical students, the typical finding is that most participants can be classified from their choice of numbers as members of the lowest level types 0, 1, 2 or 3, in line with Keynes' observations.

This may often represent a good starting point to translate these findings into the medical practice.

How can we be confident, as doctors (dentists, nurses, psychologists, etc), that we may correctly anticipate the patient's thoughts, opinions, feelings on his/her illness?

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