In the previous post we mentioned the "Keynes Beauty Contest" analogy when discussing sentiment.

Today we're going to dig deeper into this idea and learn how it relates to George Soros' Theory of Reflexivity.

Both of these concepts are crucial in explaining how and why we analyze market sentiment

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All things are subject to interpretation
whichever interpretation
prevails at a given time is a function
of power and not truth.
~ Friedrich Nietzsche

Well said Nietzsche, it's a shame you went mad… you sure made a lot of sense.

Today we're going to talk about some very fundamental Truths about the Reality of Markets… which is necessary to set the foundation for our discussion on how we can more *effectively* align ourselves with this reality.

Let's kick this party off with some wisdom from the founder of modern economics himself; Lord Keynes.

Keynes, ever the deep thinker, knew that markets were anything but rational and efficient. He was too aware of our human nature and particularly the nature of those who drove markets; the people of wealth, the men of industry, and the managers of money.

He knew that far from being prudent, these people were prone to long spells of irrationality and

herd-like behavior. Keynes was the first to codify the truth about the risks of being a contrarian when he said, "worldly wisdom teaches that it is better for the reputation to fail conventionally than to succeed unconventionally."

Since he understood the nature of man, he understood the nature of markets better than most and made a sizable fortune because of it.

And there is probably no better analogy on the game of successful market speculation than Keynes' "Beauty Contest."

Keynes likened profitable investing to a common newspaper game of the time in which:

> "The competitors have to pick out the six prettiest faces from 100 photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole: so that each competitor has to pick, not those faces that he himself finds prettiest, but those he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view…

> "We have reached the third degree where we devote our intelligence to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth, and higher degrees."

It doesn't matter if you're a value investor, a technical trader, or you use sun cycles and Fibonacci lines… the goal is all the same. You buy an asset because you <u>think</u> it will go up. And it will only go up if others also, at some point, <u>think</u> it will go up.

Therefore, to be a successful investor/trader, you need to be good at <u>not</u> just identifying what you think are attractive assets, but rather at identifying what <u>other</u> market participants will think is an attractive asset in the future but are underestimating now. And as Keynes said, this is only the "third degree" level of thinking. The real masters are practicing the "fourth, fifth, and higher degrees."

> **Fact**: *There is no such thing as market equilibrium or intrinsic value. That's all Ph.D. constructed mumbo-jumbo. They're predicated on the grossly asinine assumptions of rational participants and perfect information which do not exist in the simulation we're all trapped in.*

Markets, value and price are dynamic; meaning they're ever-changing. They are constantly fluctuating, trending, reverting, and then trending some more; all on the whims of man (and now machine), who're all playing the "Beauty Contest" game.

Another way to explore this analogy is to try out this logic puzzle (via FT):

> *Guess a number from zero to 100, with the goal of making your guess as close as possible to two-thirds of the average guess of all those participating in the contest. To help you think about this puzzle, suppose there are three players who guessed 20, 30, and 40 respectively. The average guess would be 30, two-thirds of which is 20, so the person who guessed 20 would win.*

> *If you did not enter the contest, you might consider what your guess might have been. Now that you have thought, consider what I will call a zero-level thinker. He says: "I don't know. This seems like a math problem. I will just pick a number at random." Lots of people guessing a number between zero and 100 at random will produce an average guess of 50.*

> *How about a first-level thinker? She says: "The rest of these players don't like to think much, they will probably pick a number at random, averaging 50, so I should guess 33, two-thirds of 50."*

> *A second-level thinker will say: "Most players will be first-level thinkers and think that other players are a bit dim, so they will guess 33. Therefore I will guess 22."*

> *A third-level thinker: "Most players will discern how the game works and will figure that most people will guess 33. As a result, they will guess 22, so I will guess 15."*

Where the hell do you get off this deductive train? Well, if you take this higher-level thinking to its logical conclusion you arrive at the Nash Equilibrium (named after the mathematician, John Nash, from *A Beautiful Mind*).

The Nash Equilibrium is the number that if everyone were to guess it, nobody would want to change their guess. Do you know which number that is?

The answer is **zero**.

Dinosaurs will explain below.
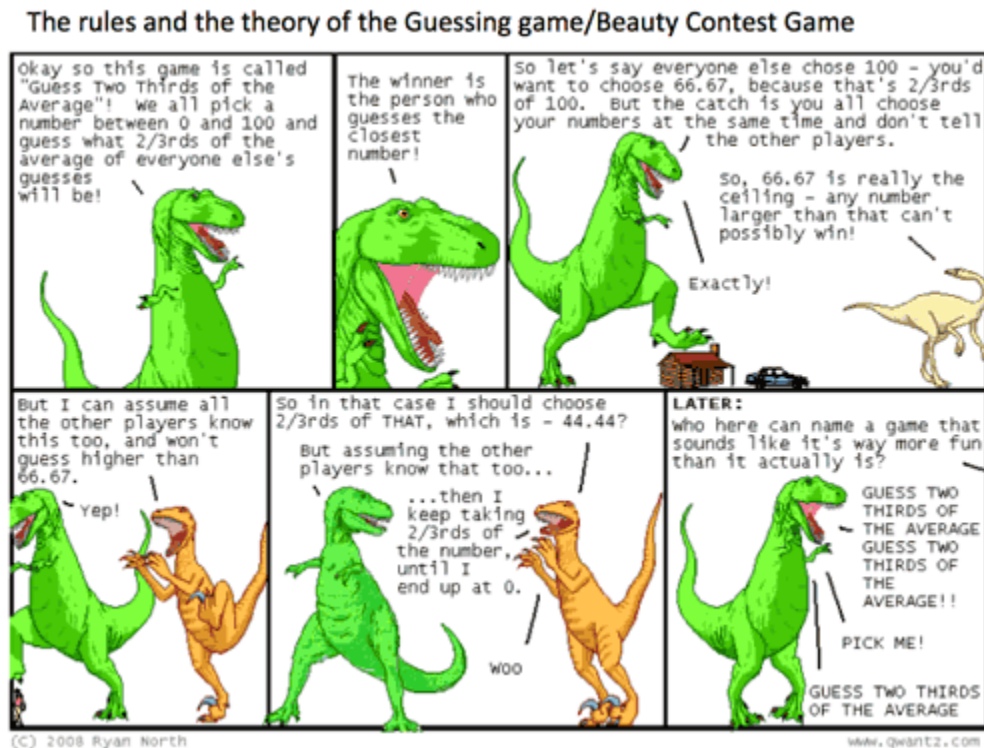
What does the Nash equilibrium have to do with markets? I actually don't know. I was hoping maybe you could tell me.

But, I digress... the point to take away is that markets are **dynamic systems** predicated on the iterative **guessing game** played by us fairly irrational humans.

If that doesn't make 'em seem complex enough. Just wait, as Billy Mays would say… *there's more*!

Though Keynes' beauty contest analogy is great it actually falls short of revealing the true complexity of markets and successful speculation.

Blue pill or red pill?

A more apt analogy would not only have participants trying to guess which face would be chosen as the most beautiful, but the beauty contestants' faces themselves would actually change in levels of attraction based on how participants were voting.

Meaning, the contestants' beauty would be affected by the observers/participants thinking about how others were voting, thus in turn affecting the participant's own votes.

Confused? That's okay. Let me explain.

What I am talking about is the "Theory of Reflexivity", as put forth by Macro legend George Soros (in actuality, the idea was first introduced by sociologist William Thomas and then brought to Soros' attention by Karl Popper, his mentor) but Soros was the first to apply it to markets — and with great success, obviously.

Anyways, Wikipedia defines reflexivity as the following:

> *Reflexivity refers to circular relationships between cause and effect. A reflexive relationship is bidirectional with both the cause and the effect affecting one another in a relationship in which neither can be assigned as causes or effects. In sociology, reflexivity, therefore, comes to mean an act of self-reference where examination or action "bends back on", refers to, and affects the entity instigating the action or examination.*

Reflexivity is centered around the idea of there being two realities; <u>objective realities</u> and <u>subjective realities</u>.

Objective realities are true regardless of what observers/agents think about them. For example, if I remark that it's snowing outside and it is in fact snowing outside, then that is an objective truth. It would be snowing outside whether I said or thought otherwise — I could say it's sunny but that would not make it sunny, it would still be snowing.

Subjective realities on the other hand are affected by what the participants think about them. Markets fall into this category.

Since perfect information doesn't exist (ie, we can't predict the future and it's <u>impossible</u> to know all of the variables that are moving markets at any given time). We make our best judgments about what assets (stocks, futures, options, etc) should be valued at — we play the beauty contest game.
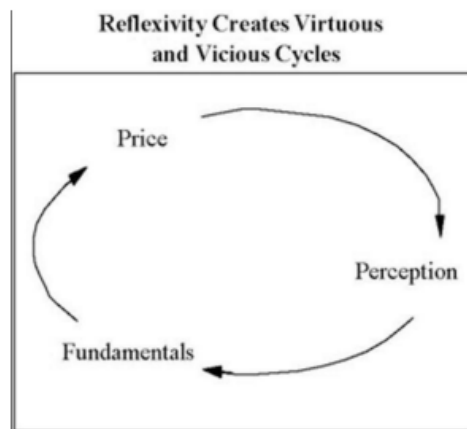
Our collective thinking is what moves markets and produces winners and losers. Meaning, what we think about reality affects the reality we are thinking about. And the reality we're thinking about affects our thinking about it.

Take a high-flying stock like Tesla (TSLA), for example. The company has made zero *true* GAAP income since its IPO. But, the stock continues to soar because people have formed a number of positive beliefs about the company/stock. These beliefs could be that maybe the company will make tons of money someday because it's innovative, eating market share, or has a secret profit switch that it can turn on whenever it finally chooses to; or maybe people continue to buy the stock because it's gone up for a long time and will, therefore, continue to go up.

In truth, it's probably many of these reasons. The reasons aren't important, what's important is that these positive beliefs have directly affected Tesla's subjective reality.

Here are just a *few* examples of how Tesla's fundamentals have been positively affected by investors belief:

- The high stock price has allowed the company to receive lower financing costs
- Attract exceptional talent which in turn has lead to increased innovation
- Hide costs by including stock options as a large portion of employee compensation
- Unconstrained by the need to produce profits, Tesla is able to undercut the competition and steal market share

It's not difficult to imagine another reality in which investors collectively had a more negative or neutral belief about the company/stock throughout its life. Tesla would look very different today. Forced to focus on profits — like most businesses — Tesla perhaps would not have had the explosive sales growth it's experienced. Maybe it never would have expanded outside of selling just high-end sport cars. Maybe a competitor would have run it out of business.

The point is, markets are reflexive and our beliefs about them directly affect the underlying fundamentals and vice-versa. And sometimes the reflexive mechanism forms a powerful feedback loop and prices and expectations diverge drastically from reality.
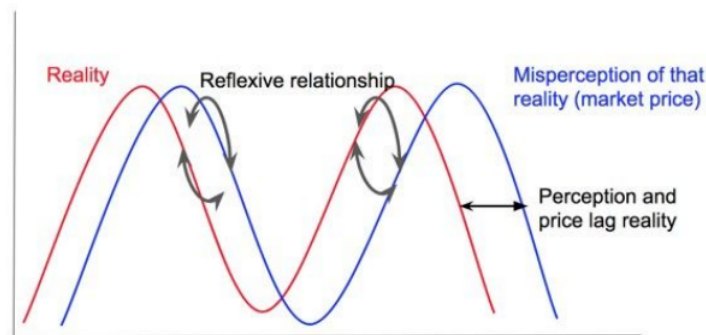
Here is Soros on the subject:

> *Every bubble has two components: an underlying trend that prevails in reality and a misconception relating to that trend. When a positive feedback develops between the trend and the misconception, a boom-bust process is set in motion. The process is liable to be tested by negative feedback along the way, and if it is strong enough to survive these tests, both the trend and the misconception will be reinforced.*

What Soros is saying is that markets are in a constant state of divergence from reality — meaning, prices are <u>always</u> wrong. Sometimes this divergence is tiny and imperceptible. Other times this divergence is large, due to feedback loop drivers. These are the boom and bust processes. And it is these large divergences that we as traders want to seek out because that is where the money is.

(Artwork by me)
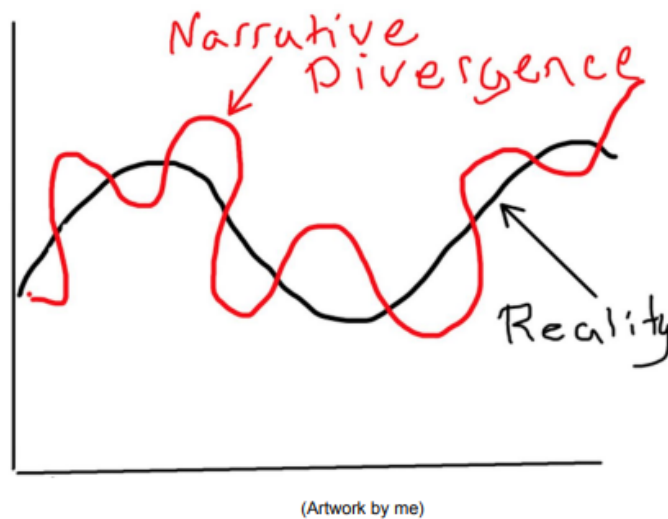
There are countless examples of large price/reality divergences in markets. Dutch Tulip-mania in the 17th century, the tech bubble of 2000, and the housing bust of 08' are just a few examples of this process at work. Here's Soros again:

> *Usually, some error in the act of valuation is involved. The most common error is a failure to recognize that a so-called fundamental value is not really independent of the act of valuation. That was the case in the conglomerate boom, where per-share earnings growth could be manufactured by acquisitions, and also in the international lending boom where the lending activities of the banks helped improve the debt ratios that banks used to guide them in their lending activity.*

So a lot of what investors consider to be "fundamentals" aren't really objective facts.

Except… That's not completely true either. Because eventually, underlying economics prevail. The narrative divergence between a "false-trend" and reality (real economics) eventually closes. And "fundamentals", once again become fundamentals — it's just a function of time.

The father of value investing, Benjamin Graham, hit the nail on the head when he said:

> *In the short run, the market is a voting machine but in the long run, it is a weighing machine.*

This means that we can go back and revise our beauty contest analogy one more time. Let's look at what our final version looks like:

- The key to winning the beauty contest game is not about picking the most beautiful girl. But, about figuring out which girls the average participant thinks the average participant will pick.

- The girls in the beauty contest will become more or less attractive to the voters in relation to how they vote for them. The voter's decisions on who to vote for will in turn be affected by the changing attractiveness of the girls.

- Investors operate in dog years (we have short time frames and fall prey to recency bias) and economies operate on, well, much longer time frames. Ugly stocks/assets/markets can be the right pick for a long time in the beauty contest game. But eventually, reality wins out and the dogs are exposed and the lookers get the roses.

Because we don't just want to win the beauty contest in the short-term, but also in the long run. We have to remain cognizant of when the market has voted the ugly stepsisters as the most beautiful.

This is a massive narrative/reality divergence. It's a boom. And all booms are followed by busts.

Sounds difficult right? It is… But luckily there's a number of practical frameworks and tools you can use to play this game at a higher level.

We'll dive into these in the next email as we continue our sentiment discussion.

Your Macro Operator,

Alex

P.S: If you have questions on any of this, or if you want to skip ahead, **check out our FAQ here**.