

**“Amazing!” (Joel Barker)**

## **An Implications Wheel™ – ChatGPT Experiment**

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From a strategic exploration viewpoint, interest in AI has been an important consideration. With the current explosion of interest, applications, debate, and controversy because of ChatGPT and other chat bots, a rather interesting question must be posed:

### **Can ChatGPT contribute to an Implications Wheel™ strategic exploration?**

#### **Background**

When Big Data began its emergence into the discussions about the future, two elements stood out for the field of strategic exploration – what you do before you plan. The first was futurist Daniel Burrus, who labeled Big Data as the #1 trend that will transform “how we sell, market, communicate, collaborate, educate, train, innovate, and much more:”

**Rapid Growth of Big Data.** *Big Data is a term used to describe the technologies and techniques used to capture and utilize the exponentially increasing streams of data with the goal of bringing enterprise-wide visibility and insights to make rapid critical decisions. This new level of data integration and analytics will require many new skills and cross-functional buy-in in order to break down the many data and organizational silos that still exist. The rapid increase in data makes this a fast growing hard trend that cannot be ignored.* (Emphasis Added)

The second element, in the introduction to fascinating examples presented by Rick Smolan, in **The Human Face of Big Data:**

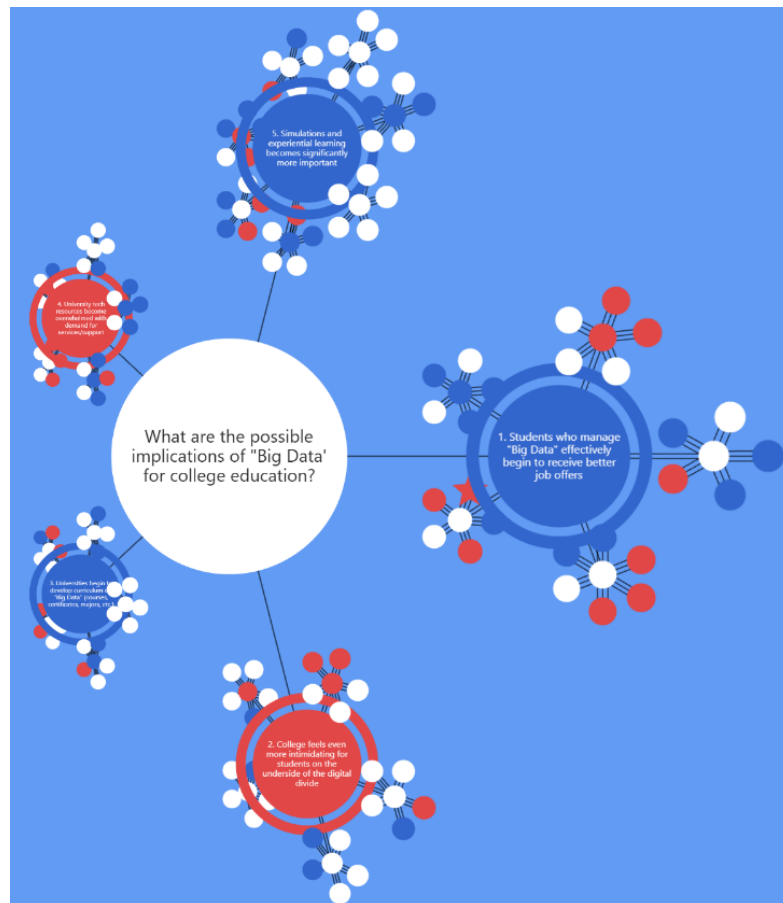
- “The world is about to change forever because of this sudden ability to measure and sense the world in real time.”
- “We need to have the smartest people on earth aware of, and talking about this.”
- “...the potential and consequences of which few have even started to contemplate.”
- **“Like all new tools, Big Data carries the potential for unintended consequences.”**

*“Big Data is a resource and a tool. It is meant to inform, rather than explain; it points toward understanding, but it can still lead to misunderstanding, depending on how well it is wielded. And however dazzling the power of Big Data appears, its seductive glimmer must never blind us to its inherent imperfections.”*

“Big Data” as an issue became a more prominent subject, with publications like “**The Human Face of Big Data**” (Smolen, 2012) and “**Rise of Big Data, How It’s Changing the Way We Think about the World,**” (Cukier and Mayer-Schoenberger, 2013). This prompted the need to examine the implications of these developments on strategic exploration and particularly the Implications Wheel™.

Within a few months, explorations were launched exploring the possible implications of:

- “Big Data” for college education?
- Growing trend of collecting and using "Big Data" to influence consumer behavior?
- An organization starting a "Big Data" initiative?



## Fast Forward

And now, the explosion of the AI-Bots, e.g., ChatGPT, prompts the question already posed:

**Can ChatGPT contribute to an Implications Wheel™ strategic exploration?**

The experiment has several components from initially experimenting with ChatGPT to learn its operation, then crafting a specific experiment. The experiment involved selecting a completed Implications Wheel exploration so a comparison of results would be possible. The issue selected, **the possible implications of youth sports gambling**, was selected because of its current relevancy plus that fact that an exploration with 372 specific implications had been created in 2013 with participation of college students and facilitators with knowledge of counseling and compulsive gambling.

## Creation of the “Center”

The “center” of an Implications Wheel exploration is the starting point, the point from which the exploration begins.

### The “Original” Center

Adolescents who believe gambling involves a high degree of skill are more likely to be pathological gamblers than those who correctly identify gambling as being mostly chance related.

Levels of probable pathological gambling among high school students are more than 3 times higher than the prevalence rates for adults. 7 million American children gamble regularly and 1 million experience gambling problems.

Teenagers often fantasize about the material goods that large sums of money can buy. They desire to become rich quickly, and gambling is seen as the method of reaching that desire.

Youthful gamblers are more vulnerable emotionally than adult gamblers and may integrate excessive gambling into their lifestyle as a regular and repetitive pattern.

Youth gamblers report:

- Worrying about their gambling
- Feeling guilty about their gambling
- Unable to stop gambling when they wanted to
- Experienced family problems because of their gambling
- Been in trouble at school or work because of their gambling
- Neglected their school or work obligations for two or more consecutive days because of gambling.

## The “ChatGPT” Center

### **"What are some key points of youth involved in sports gambling?"**

Youth are at a greater risk for developing gambling problems due to their vulnerability and lack of life experience.

Sports gambling can be particularly appealing to youth because of their interest in sports and the social aspect of betting with friends.

The easy access to online sports betting platforms can make it more difficult for parents and guardians to monitor their children's gambling activity.

Youth who engage in sports gambling may be more likely to experience negative consequences such as financial problems, academic difficulties, and mental health issues.

### **"What are some key statistics on youth sports gambling?"**

There is limited research on the prevalence of youth sports gambling specifically, but some studies suggest that:

According to a 2018 study, nearly 10% of 8th graders and nearly 20% of 12th graders in the United States reported gambling on sports in the past year.

A 2019 study found that around 15% of youth aged 14-21 in the United Kingdom had placed a bet on sports in the past year.

A 2020 survey found that around 4% of adolescents aged 12-17 in the United States reported gambling on sports in the past year.

A 2021 study found that around 9% of college students in the United States reported gambling on sports in the past month.

It's important to note that these statistics may vary depending on the region, the population being studied, and the definition of youth used in the research. Also, these statistics may have changed due to the knowledge cut-off of my data.

**Note:** ChatGPT data has "limited information after 2021" at the time of this experiment.

The “test” of a center is simple:

- Is the information “enough” so that participants are ready to explore the topic?
- Are participants ready to contribute implications to the exploration?
- Are participants ready to “scout the future?”

## First-Order Implications

For most explorations, the “first-order” implications are created – and selected – by the leadership of the organization or by the “owners” of the exploration. For a completed exploration, 10-12 explored first-orders or “arcs” are considered a quality exploration. There are no “right” first-orders. The selection by leadership can be based on a variety of strategic reasons plus a guide that both “positive” and “negative” examples be included in the exploration.

The question posed to ChatGPT was: ***What are the possible implications of the continued increase in youth gambling?*** The first implications generated were all “negative,” so there was a second question posed: ***What about positive implications?***

(The complete ChatGPT results are available upon request.)

It is notable that “ChatGPT” generated 7 first-order “identical” to the “Originals.” It is also important to note that all of the “ChatGPT” first-orders (with some editing) are quality possibilities that could be explored.



An Implications Wheel exploration is “qualitative” not quantitative. The “matching” of 7 first-orders was an “interesting surprise.”

For this experiment, one first-order was selected for completion with both second- and third-orders. The first-order selected, ***“Increased risk for mental health problems, e.g., depression/anxiety,”*** was deliberately not one similar to those from the original exploration. For the remaining first-orders, only second-orders were added.

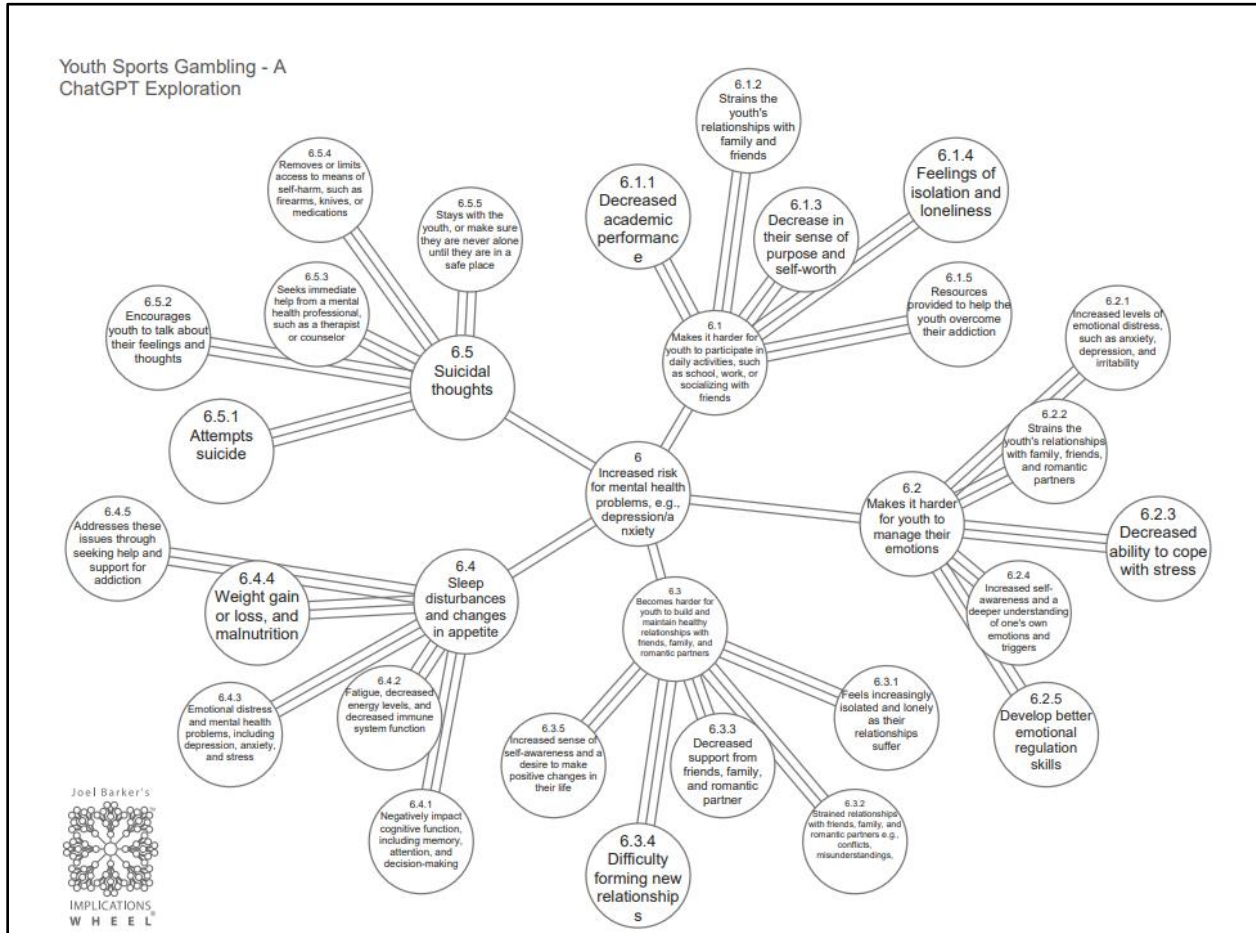
There was some notable similarity among the second-order implications for those “arcs” that had similar first-orders. Fourteen similar second-orders were identified.

While an Implications Wheel exploration is almost always scored for “Desirability” and “Likelihood” from a specific point-of-view, the experiment was created to focus on the possibility of ChatGPT contributing implications to the process. Therefore, there is no scoring included.

**What are the possible implications of the continued increase in youth gambling?**

<b>First-Order Implications</b> <i>What Might Happen Next?</i>	
The “Original” First-Orders	The “ChatGPT” First-Orders
Gambles with friends as a source of entertainment	Creates problems with relationships and social connections
Gambling behaviors lead to becoming a problem gambler	Increased academic difficulties, e.g., poor grades, lack of motivation
Participating in gambling increases amount of money earned	Develop critical thinking and decision-making skills
Losing in gambling results in financial debt	More likely to engage in impulsive and risky behavior
Loses interest in non-gambling activities because of involvement with gambling	Becomes addicted to gambling
Becomes more social among peers who gamble	Increased risk for mental health problems, e.g., depression/anxiety
Becomes addicted to gambling	Turns to illegal activities to support a gambling habit
Family members disagree with participation in gambling activities	Wins a large amount of money
Participating in underage gambling attracts attention of local police	Becomes fun, exciting social activity with others
Enjoys the high-risk and thrill-seeking feelings of participating in gambling	Learns about budgeting, saving, and investing
Loses focus on academics because of involvement in gambling	Learn how to analyze information, consider different outcomes
Becomes involved with illegal activities, such as stealing, to finance gambling habit	Creates problems with trust and communications
	Develops strategic planning skills, e.g., with poker
	Increased financial problems

# Complete Sample "Arc"



An annotated ChatGPT session "practice" session using a different I-Wheel "center" appears at the end of this report. It features detailed commentary on the ChatGPT responses to the "What are the possible implications of...?" question.



## Key Observations

1. In general, the implications generated by ChatGPT were “good enough” (a key Implications Wheel standard).
  - a. For many, there was “direction,” e.g., “increases,” but lack of “intensity” (an I-Wheel Facilitator would ask “by how much?”)
  - b. Frequently, ChatGPT generated sentences with multiple, “compound” implications that were, or could be, broken into multiple implications.
  - c. For several contributions, ChatGPT needed to be prompted with “tell me more.” (*The #1 facilitator comment for improving implication quality.*)
2. ChatGPT had a noticeable tendency to offer only “negative” implications (not an uncommon facilitator issue), requiring a follow-up “what about positive implications?”
  - a. In one instance, the “what about positive implications?” was met with “there are no positive implications.”
  - b. This is not unusual in “live” I-Wheel explorations where the “at least one positive-one negative rule” is important (and sometimes challenging) to enforce.
3. In a typical Implications Wheel exploration, a team contributes 5 second-order implications for each first-order, then 5 third-order implications for each second-order, creating an “arc” with 31 implications in a 1 x 5 x 5 model. ChatGPT easily generated multiple possibilities when asked, only rarely requiring a request for “more.”
4. Because ChatGPT was asked, in all cases for “possible implications,” it clearly worded responses with “tentative wording.” “May lead to,” “can have...” were very common.
5. Coaching and editing implications for quality, e.g., specificity, is a very important element for facilitating an Implications Wheel. Noting this was required for the implications generated by ChatGPT was expected – actually welcomed.
6. Very noticeably, ChatGPT continually included references to “seek professional” help for a possible gambling problem or addiction. In addition, when asking for positive implications ChatGPT often responded with possibilities but with a “don’t overlook the negatives” or “gambling is often illegal for minors” warning.

7. A standard question asked at the end of an Implications Wheel exploration is: “Did someone on your team contribute an implication that you likely would not have thought of yourself?” My answer to this for ChatGPT’s contributions: “Definitely yes, frequently!”
8. In comparison to “live” and “online” Implications Wheel facilitation, the time/effort required was very similar.

## Two Key Comments

From Daniel Nelson, Implications Wheel Software Architect:

*“Wow! I keep being impressed by ChatGPT.”*

From Joel Barker, Implications Wheel Creator:

*“Amazing!”*

*“I could certainly build a useful Wheel with these implications used as exemplars and invite the workshop members to improve upon them as part of the discussion of improving them.”*

## Additional Information

- A sample from the “Big Data in Education” exploration can be viewed at the [Implications Wheel](#) website.
- An Appendix with the complete ChatGPT files is available on request. Contact [Jim Schreier](#).
- A special report from the Youth Gambling exploration is available at [hr-tracks](#) or contact [Jim Schreier](#).