

# Real Pyramid Marketing: A Research of Goagle's Neo Behavior

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## Abstract

*Pyramid Marketing (PyM), also known as Multi-Level Marketing, is a kind of business behavior that recruits members with money via a promise of payments or services for enrolling others into its scheme, rather than supplying investments or sale of products. However, PyM has gradually disappeared under the supervision of the law and the improvement of the knowledge level of the masses. Nowadays, a new transform of PyM called Real Pyramid Marketing (RPyM) is appeared with Goagle's Neo Behavior (GGNB) as its first and only instance. RPyM is purely money-to-money behavior without any excuse such as providing certain services. As RPyM is still strong in a severe situation, our research focuses on the internal mechanism of the long-term viability of RPyM with GGNB as the object. As a result, we found that GGNB had got lots of money and will get more in the future if it is always unregulated.*

## Key Words

Pyramid Marketing; Real Pyramid Marketing; Goagle's Neo Behavior;

## 1. Introduction

As a proverbial business behavior existed for at least a century in different guises, Pyramid Marketing (PyM) gets lots of money involved [4]. PyM is a marketing strategy for the sale of products or services where the revenue of the PyM organization is derived from a non-salaried workforce selling the company's products/services, while the earnings of the participants are derived from a pyramid-shaped or

binary compensation commission system. Some kinds of Multi-Level Marketing have been classified as PyM. However, PyM is short-lived in its instance cycle actually. It is unsustainable because recruiting becomes quickly impossible as it multiplies, and most members involved in a PyM are unable to profit. Causing to the accelerating information dissemination with the popularity of the Internet and the strictly regulating to PyM by legal sanctions in the mainland, more and more people understand the deception and high-risk of PyM [3]. In this severe situation, a new transform of PyM called Real Pyramid Marketing (RPyM) is appeared, whose first and only instance is Goagle's Neo Behavior (GGNB)!

Different from traditional Pyramid Marketing, RPyM only gets *money* involved without any other excuse such as providing certain services. And the Neo Behavior of Goagle is the best interpretation of RPyM, generally acknowledged as the pure *money-to-money* Pyramid Marketing. GGNB is to recruit members extensively and collect its revenue from the *mem-fee* paid by each member in a  $\epsilon$ -greedy strategy. The rest of the *mem-fee* is divided into bonuses for the members based on the weight of the length of membership. In addition, Goagle promises to give early members more (half) of the revenue to start the company quickly. Although at least 99% of people involved in GGNB lose money, GGNB also functions until now because down-line participants are encouraged to hold onto the *belief* that all the members can achieve large returns, while the statistical improbability of this is de-emphasized. Our research focuses on the internal mechanism of GGNB, and try to find the characteristics and operation principle that make GGNB lifelong.

The remainder of this paper is organized as follows. Section 2 introduces the background of our research including the history of Goagle. Section 3 presents how GGNB works in a mathematics model. Section 4 gives the simulation experiment including experiment settings and the revenue result of GGNB compared with the state-of-art PyM. Section 5 draws the conclusion and our future motto.

## 2. Background

This section we mainly give the history of Goagle. And some details of PyM are given as well.

### 2.1. The History of Goagle

Goagle is an organization officially launched in 2017 by Yang and Tang to (pyramid) market human resources for money replenishment. Yang and Tang, students at Tianjin University in Tientsin, developed an organization at first known as "HY Bang" in 2015. "HY Bang" soon proved successful and this expanding organization moved several times, finally settling at Zone 5B of Village Beiyang in 2017. This marked a phase of rapid growth, with the organization making its initial public offering in 2018 and quickly becoming one of the world's largest dark organization. The organization launched Goagle in 2017, Goagle Search in 2018, and finally the GGNB in 2019, in addition to many other sub-organizations and plans. In 2019, Goagle became the main subsidiary of the holding organization "HY Bang".

Goagle Search went through numerous updates in attempts to combat Short-sighted money search, provide dynamic recruiting of members, and make the Goagle system flexible and easy to make money. Goagle started to be personalized in 2019. GGNB recruited all kinds of member, not just students, in its marketing list.

Goagle has engaged in partnerships with *HY Bang*, *TJU-RLLab*, *Guang-Ming Hui*, *Illuminati* and others. The company set up the charitable offshoot, GGNB, in 2019. Goagle was involved in a 2018 legal dispute in the mainland over a court order to prove Goagle's ID, and has been the subject of pyramid marketing investigations in Village Beiyang.

The name Goagle is a combined variant of *googol* and *GuaGe* (GG), chosen to suggest very large number of money.

### 2.2. Pyramid Marketing

**Pyramid Marketing** has a invariable feature about compensation. Without reference to different specific financial compensations dictated for the paWet of any earnings to their respective participants, there is a common feature across all PyMs that the compensation theoretically pays out to participants only from two potential revenue streams: from sales made by the participants directly, and from the wholesale purchases made by other distributors involved in PyM below by the participant [1].

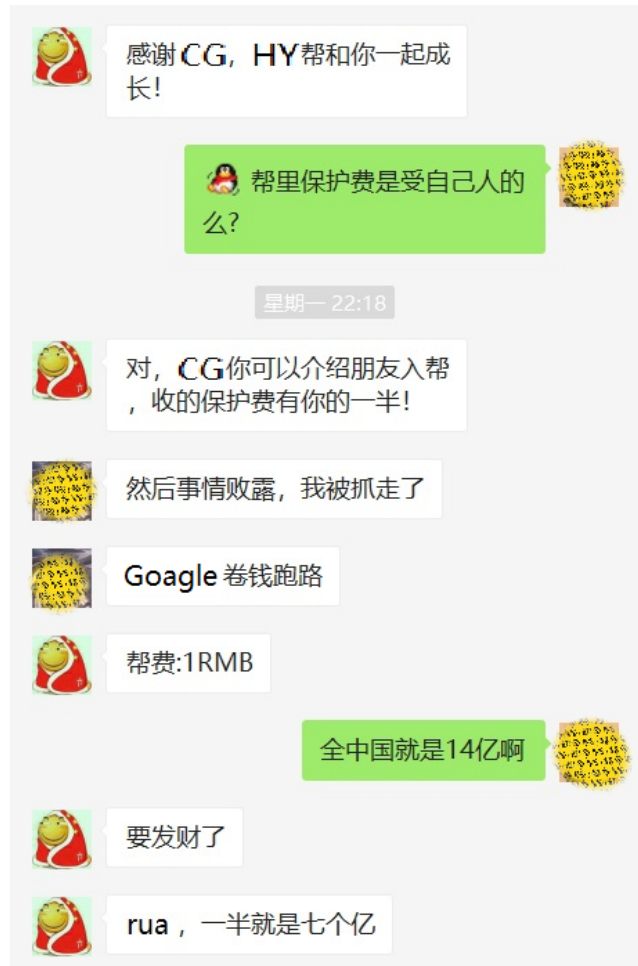
**Real Pyramid Marketing** is a transform of PyM. And its specific operation process is still a mystery.

## 3. Goagle's Neo Behavior!

In this section, we first give the factual evidence of the existence of GGNB, then give the speculative model of RPyM based on the experience of the GGNB participants, and finally explain the characteristics of GGNB in the model and how Goagle trained this model.

### 3.1. The Existence of GGNB

Although most people think that GGNB is just an urban legend, in fact, this behavior has penetrated into every corner of the campus. The part of GGNB that can be observed by the masses is its encouraging function (reward), which is displayed madly by Goagle. Figure 1 shows the concrete form of the encouraging function of GGNB.

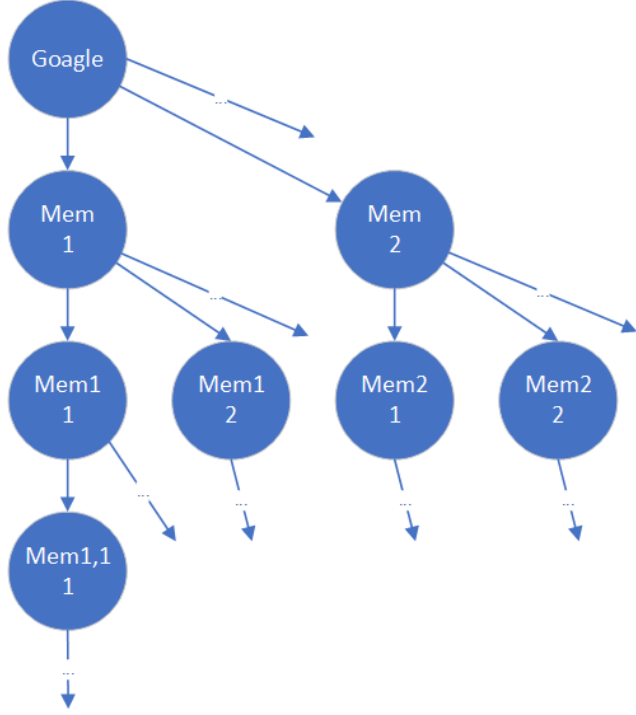


**Figure 1. The concrete form of the encouraging function of GGNB**

*Then it will come to light and I will be caught. –Tang*

### 3.2. The Model of RPyM

Goagle's structure member and the expansion mode of GGNB are the same as RPyM. The basic structure of members in RPyM is like a *tree*, which is shown in Figure 2.



**Figure 2. The structure of members in PyM**

In Figure 2, the expansion way of RPyM is from the top to the bottom. A person who have just received an invitation from a member of Goagle will make a decision of joining based on the information of credible observation about GGNB and the promised rebate. The probability of joining or not is a statistical function of the information. In every two adjacent nodes (member), the lower node present its *mem-fee* and the funds actually obtained from the nodes under it to the upper node, and the upper node return the promised rebate.

In the model of the network under GGNB, there are some basic parameters shown in Table 1. In Table 1, the most important parameter is the *belief* of Goagle, which is the main topic about success proposed by Yang [6].

And there are some formula shows the relationship of the parameters:

$$\pi_k(o, E[\phi(k)]) := \arctan(\beta_k(o)) + \alpha \cdot E[\phi(k)] \quad (1)$$

**Table 1. Parameters of the network in GGNB**

ParaNym	Sym	?Ctrl	Comments
fee	$\phi$	YES	Value of money to Goagle
rebate	$\epsilon$	YES	Ratio of money back
mem-prob	$\pi$	NO	Prob. of an agent joining
de-ratio	$\gamma$	NO	De-ratio of Goady per step
belief	$\beta$	?	Belief of Goagle

$$\phi(i) \leftarrow -1 + (1 - \epsilon(i)) \cdot \sum_{j \in Child(i)} (\phi(j) \cdot \epsilon(j)) \quad (2)$$

$$E[\phi(k)] \leftarrow \gamma^{\log k} \cdot \sum_{i=k}^{\inf} (\gamma^i \cdot \sum_{j \in Child(i)} (\pi(j) \cdot \phi(j) \cdot \epsilon(j))) \quad (3)$$

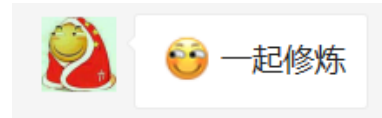
In Formula 1, we can see that the *belief* of Goagle played a key role. And  $\pi \approx 1$  actually in the experiment of GGNB in our research.

### 3.3. The Characteristics of GGNB

The *mem-fee* of Goagle is a constant parameter:

$$Mem-fee: 1 \text{ RMB} \quad - \text{dong}$$

And the encourage of Goagle is the unique characteristic of GGNB among all the PyM, as shown in Figure 3.



**Figure 3. Goagle's encourage**

### 3.4. The Operation Principle of GGNB

GGNB operates in a way that draws lessons from the ideas in the biography of *Mortal in Xian Cultivation* [5]. Through the activation function of Xian Cultivation, the Goagle-RPyM network (shown in Figure 4) has been trained in lifelong reinforcement learning.

The purpose of Xian Cultivation is to achieve immortality, so as to continuously gain benefits and construct a perpetual Ponzi scheme. Goagle brings concept of Xian Cultivation to its fullest, and encourages its new member to put aside their immediate interests and focus on long-term benefits.

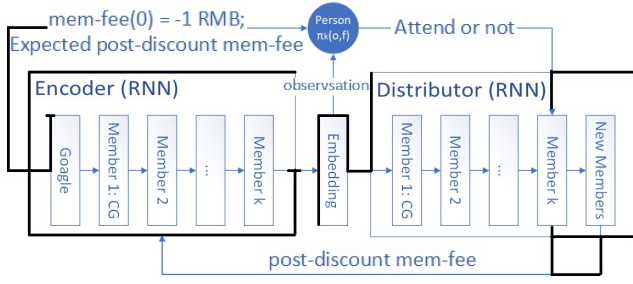


Figure 4. The Goagle-RPyM network

In Figure 4, by using two RNNs to cope with a steady stream of new members, Goagle show the embedding of GGNB to every new member to bring them in "HY Bang". In a training episode, GGNB tries to adjust the rebate to attract new members.

## 4. Experiment

In this section, we give a sample experiment with 1.4 billion people as the base. And find how much can Goagle earn from its Neo Behavior.

### 4.1. Experiment Settings

In our experiment, we first follow the GGNB in a small base of 10 people as a test group, and observe the changing process and the final state of the group.

After verifying the feasibility of our simulation model, we expand the testers to 1.4 billion people and simulated the changing process with the model. The *mem-fee* of our model is also 1 RMB.

### 4.2. Experiment Results

In the test experiment of 10 people, 8 people finally got the benefit. One of the other two people is the help-owner of HY Bang, the fear of the "Dong" Chuang Shi Fa caused his returning of funds. The other one, as the tail of the pyramid scheme of GGNB, still does not really understand his experiences. He has been exploited and deceived by the other 9 people by the *belief* of Goagle.

In the simulate experiment of 1.4 billion people, the *belief* of Goagle exerts unparalleled influence. Unfortunately, the experiment is not over yet. In fact, Goagle find the Laffer Curve and its maximum by the result of Rolle's theorem in Goagle's behavior model [2]. The curve of accumulated reward for an early-stage member is shown in Figure 5.

GGNB makes the people who have much more knowledge to think that they are profitable in the early stage and makes them to participate in it after thinking.

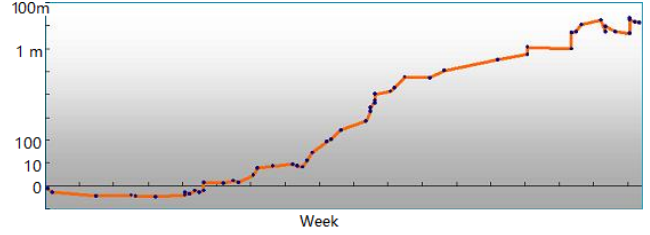


Figure 5. The curve of accumulated reward

Considering the ultimate saturation as the biggest dilemma faced by PyM, GGNB gather more money to support the development of society and scientific researches, especially to solve the saturation problem of PyM, as a classic Multi-agent System Problem shown in such as Figure 6.

## 5. Conclusion and Future Motto

Completely unlike previous low-level Pyramid, Goagle achieves a high-level extraordinary phenomena by its Neo Behavior: the knowledge of the masses is richer, the more they will join in GGNB. HC, as one of the backbone members, thinks that he is proud of attending "HY Bang" through GGNB:

*I share my money and then I receive knowledge and  
motivation (more money) of research.  
This is the happiest thing in the world.  
– HC indoctrinated*

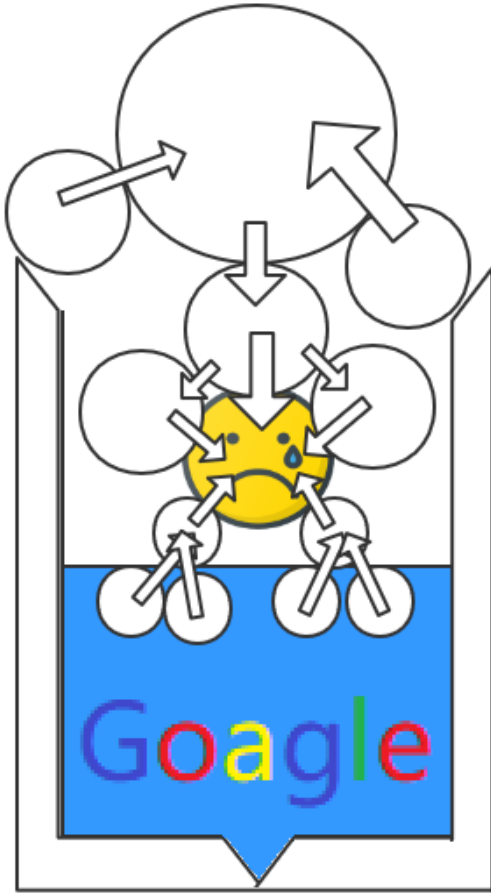
Goagle, the sub-organization of HY Bang, will attract more big people to enlarge itself. Considering the diversity of the world and the balance of the power, there should be a mature and neutral organization to observe GGNB.

At the end of this section, there are Seven Mottos:

**First** *The Xian Goagle, Who brought We out of the land of Mortal, out of the house of Beiyang. We shall have no other belief after Goagle.*

**Second** *We shall not make for Ourselves a graven image, or any likeness of anything that is in heaven above, or that is in the earth beneath, or that is in the water under the earth; We shall not bow down to them or serve them; for The Xian Goagle is jealous, visiting the iniquity of the fathers upon the children to the third and the fourth generation of those who hate Goagle, but showing steadfast love to thousands of those who love Me and keep My Commandments.*

**Third** *Remember the Market day, to keep it holy. Six days We shall labor, and do all Our work; but the seventh day is Marketing with GGNB; in it We shall not do any work,*



**Figure 6. The saturation of members in PyM**

*We, or Our son, or Our daughter, Our manservant, or Our maidservant, or Our cattle, or the sojourner who is within Our gates; for in six days Goagle made heaven and earth, the sea, and all that is in them, and Pyramid Marketed the seventh day; therefore Goagle blessed the Market day and hallowed it.*

**Fourth** *Honor Our father and Our mother; that Our days may be long in the land which The Goagle gives us.*

**Fifth** *We shall not kill or be killed.*

**Sixth** *We shall not get fee except from GGNB*

**Seventh** *We shall not covet Our neighbor's house; We shall not covet Our neighbor's wife, or his manservant, or his maidservant, or his ox, or his ass, or anything that is Our neighbor's.*

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