## Part 1: Thesis about Interest Graph

# Research on success factors of interest graph in social network.

— A case study of Pinterest

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## **Abstract**

With the development of social networking sites, emerged variety of network applications. New users' demands are generated even though they are satisfied with the network services. As currently SNS has entered a stable stage of development. Finding new thinking, improving the user experience becomes an urgent problem for web application management to be solved. At the same time, emerged many new SNS make it possible.

As the representative of Pinterest, the interest graph SNS redefined the functional characteristics of the SNS. The trend is also become popular in China. Moreover, as Italian products popular in the Chinese market, hide the huge commercial value and development potential.

This thesis aims to interpret the user's internal needs, understand the inner motivation of the interest graph operation in SNS to better promote the development of the interest graph websites, providing products and services for users.

"The interactive relationship between SNS and users" is the research theme. Functional studies based on Interest graph, by using interest graph SNS Pinterest as a case study. Analysis success factors and the development trend of the interest graph type sites.

The main research results are:

- 1. Classification and comparison of social networking sites, analysis the limitations of social graph and the new opportunities of interest graph pattern.
- 2. Through the case of Pinterest, analysis the main areas on Pinterest--Food sharing, concluded the success factors of the interest graph.
- 3. Based on the new structure of the interest graph, the interest marketing ideas will bring SNS more possibility: Interest targeting users; opinion leaders and consumer circles; interest sharing.
- 4. Interest graph is and will be an important graph of SNS. By using it wisely, it could stimulate user's interest effectively. I want to introduce sushi that the food we have interest but don't know it well, use interesting photos to give people especially memories. In order to understanding it and share sushi pictures with others who also like it. Interest graph SNS will constantly maintains the positive interactive relationship between website and user.

**Key words:** Interest graph, SNS, Pinterest, Sharing, Sushi.

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## 1 Preface

1

#### 1.1 Research Background

#### 1.1.1 The Rise of Visual UGC

Nowadays with the quick development of Internet, SNS go into most people's daily lives with mobile Internet and terminal equipment. Like the social fanaticism within the globe from the American Facebook and Twitter. SNS is not only a platform for users to communicate, but also become an important way for people to get information and enjoy network life.

But it should be noted that the concept of SNS which is known by people is relatively narrow. The concept is mainly the SNS is as the representative of Facebook and Twitter, mainly to maintain and extend user interpersonal relations, the network sites and platforms to meet the "social purpose". But in fact, SNS is the socialization of network application services which contains both "social graph" and "interest graph". For example, Youtube, the video sharing site, and Flickr, the photo sharing site.

Rise up with the concept of Web2.0, It has been 10 years since UGC (User Generated Content) was initially defined. The main features are to promote personality. Compared whit other kinds of platforms, It is a new way to use the Internet. Change from the original way which mainly to download into both downloads and uploads. With the development of Internet applications, network user interaction is embodied. Users are not only web content viewers, but also the creators of web content.

With the launch of video sharing site YouTube in 02/2005, UGC pattern rise and rapid development in the Internet. Internet practitioners are becoming increasingly takes the UGC, UGC products gradual transition from PC-to-mobile, converted from text and image to audio and video.

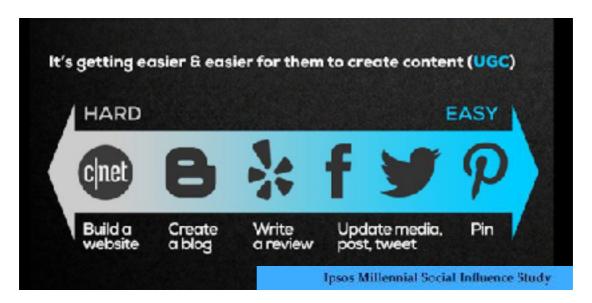


Image 1-1, Ipsos Millennial Social Influence Study, 2014

From image 1-1 is easy to find that UGC make communicate easier, and UGC is posted the content added with users thinking from public demand on SNS. The biggest difference between the UGC and the general Internet products is different content sources: General website content applications are often provided by the operator (such as editing, Content Provider), and UGC content products are mainly from the majority of the users themselves. Because of the source is often made by themselves, so user always think it is more trusted, from the image 1-2.

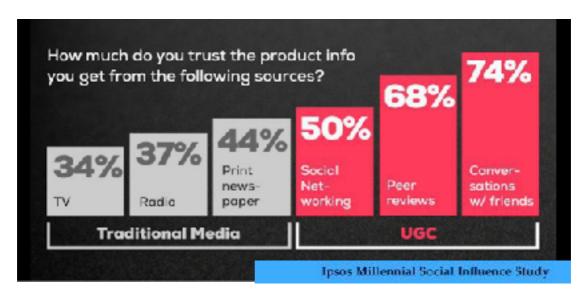


Image 1-2, Ipsos Millennial Social Influence Study, 2014

In 2007, in the report of the World Organisation for Economic Co-

operation and Development (OECD) "Participative Web and User-Created Content: Web 2.0, Wikis and Social Networking" made a more influential definition for UGC. This definition describes 3 features of UGC: Publication requirement; Creative effort; Creation outside of professional routines and practices.

#### 1.1.2 From social graph to interest graph

To know the transfer from "Social graph" to "interest graph", first I should understand what "Social graph" is.

#### (1) The definition of social graph

"Social graph" is based on the relations of the people I already know. It is based on personal communication circle, which is a simple mapping of the relationship between people online and offline.

The social graph has been referred to as "the global mapping of everybody and how they're related".

Social Graph is the concept Facebook put forward in 2010 to promote its open platform. The purpose is to let other Internet products embrace the social networking trend and introduce the social relationships of Facebook, to let Facebook become Internet infrastructure.

Zuckerberg talked about how Facebook intends to connect parts of the Web that other social sites are building<sup>1</sup>, part of what he described as the "Open Graph." This is spinoff of a term Facebook popularized to describe its social network, the social graph, which essentially refers to the global mapping of everybody and how they're related.

#### (2) The definition of interest graph

(August 23, 2012 05:10 pm) Interest Graph is noted by Dick Costolo (twitter CEO) on Twitter Developer Conference.

"Interest" on the Internet, is to organize user groups, a tool to organize the information groups.

Based on interest, constitute a specific user groups, and to achieve the classification of information processing. Brings tremendous value for users identify and deal with various types of disordered Internet information.

4

<sup>&</sup>lt;sup>1</sup> April 21, 2010, 2:30 PM. The annual conference for software developers in San Francisco

"Interest Graph" is the network graph based on interpersonal Common interest. Still further, Facebook as the Social Graph is set up based on an individual's social relationships (family, friends, classmates, colleagues, etc.); and then Twitter and Pinterest as the interest graph is built based on personal interests (food, movies, travel, fashion).

The characterized of Interest Graph:

- 1. Emphasis on interest: interest-core, allowing users to find and share the things they are interested in,
- 2. Powerful Information Classification: different from social graph one person as a unit, interest graph classify to each interest. So that the user classification groups naturally formed, huge information is classified according to certain rules.

#### 1.2 Research objectives

The first time I want to do this research is when I wanted to make an application work based on food. I found these years (the years I am aboard). Appears many applications not like Facebook anymore, there are many interesting photos, many popular sharing from the people I don't know before. The Internet meme!<sup>2</sup>

We are talking about the food we never eat but it seems that everyone know it's delicious. How is it comes? Then I understand the name of this system: Interest graph.

I want to make an application based on this kind of interest graph for the food we are interested in but is hard to recognize. Let user remember it better and to find users with same interest.

So, the main research objectives of the thesis in the following three aspects:

- 1. By comparing the features of social graph and interest graph, presentation and research the new structure forms of interest graph, and attempt to change the stereotype of the social networking site to open new ideas.
- 2. Through the case studies of Pinterest to qualitative research on the success factors of interest graph in social network, thus providing reference

<sup>&</sup>lt;sup>2</sup> The reference of "meme": Limor Shifman. Memes in Digital Culture[M]. MIT Press. Oct 4, 2013

for other similar SNS.

3. Through summarizing the revolution of interest graph to brands network marking, to better help companies understand targeted marketing tools and methods. to introduce sushi that the food we have interest but don't know it well, use interesting photos to give people especially memories. Interest graph SNS will constantly maintains the positive interactive relationship between website and user.

#### 1.3 Research methods

#### 1.3.1 Referral traffic

I want to obtain and compare the traffic of the most popular social media platforms. Different form the sites with source tracking code grasp that users click on the URL directly. SNS website traffic is generally brought from the third party sites, belonging to referral traffic.

User through the third party sites to website, the traffic defined beyond the search engine site. Such as general navigation URLs or what we said "portal", like Yahoo, Google and hao123 in China which the landing page of Superior page is from the third party sites and the search results are not belonged to it.

Shareaholic, social content discovery and sharing platform, which released April 2014 Traffic Sources Report showed:

Source	Share of Visits - January	Share of Visits - February	Share of Visits - March	Share of Visits- April
Google (Organic)	48.9%	48.81%	48.48%	48.88%
Direct	19.44%	18.20%	18.32%	18.44%
Facebook	6.92%	6.38%	6.08%	6.10%
Yahoo	1.60%	1.61%	1.67%	1.67%
Bing	1.24%	1.21%	1.27%	1.29%
StumbleUpon	1.30%	1.29%	1.05%	1.13%
Google (Referral)	.68%	0.91%	.99%	1.05%
Twitter	.88%	.82%	.85%	.85%
Pinterest	.85%	1.05%	.80%	.74%
			Presented by	Shareaholic

Image 1-3, Traffic Sources Report, April 2014

Pinterest has been particularly interesting to watch. It referred more traffic than LinkedIn, YouTube and Google+ combined. In February, it surpassed Twitter for referral traffic. Pinterest grew from 2.5% of referral traffic in December to 3.6% of the referrals in January. That's impressive growth from just owning .17% of the traffic back in July.

### Shareaholic Social Media Traffic Referrals

Source	Dec-11	Dec-12	Dec-13	Dec-14	Change Dec'11-	e from Dec'14
Facebook	6.53%	7.76%	15.44%	24.63%	277.26%	18.10 pp
Pinterest	0.65%	2.84%	4.79%	5.06%	684.86%	4.41 pp
Twitter	1.08%	1.08%	1.12%	0.82%	-24.41%	-0.26 pp
StumbleUpon	1.63%	0.69%	0.86%	0.50%	-69.41%	-1.13 pp
Reddit	0.28%	0.33%	0.21%	0.15%	-47.71%	-0.13 pp
Google+	0.06%	0.05%	0.05%	0.04%	-34.68%	-0.02 pp
LinkedIn	0.05%	0.06%	0.05%	0.03%	-34.31%	-0.02 pp
YouTube	0.24%	0.18%	0.19%	0.01%	-94.76%	-0.23 pp

Presented by: Shareaholic

Image 1-4, Traffic Referrals from 2011 through 2014

- 1. Facebook drives a 1/4 of overall traffic. As a platform that knows everything about us (our lives, interests and friends), Facebook dictates the news we read, enables brands to promote targeted messages and offers.
- 2. Pinterest hit its plateau. Pinterest, one of the fastest growing social networks in history and the preferred platform for American women, may have lost its momentum.

Since December 2011, Pinterest's share of traffic has skyrocketed 684.86% (4.41 percentage points). In 2012, it overtook Twitter and StumbleUpon, rising to 2nd place and has dramatically increased its lead over 2013 and 2014.

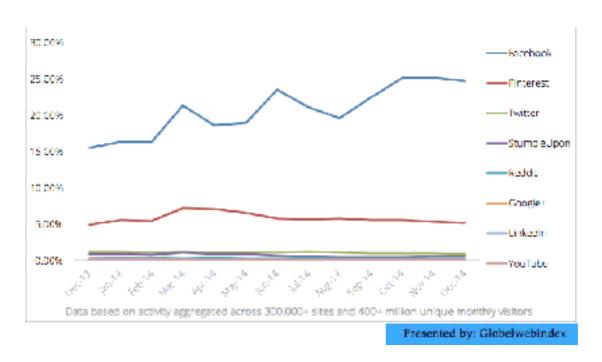


Image 1-5, Social Media Traffic referrals (December 2013-2014)

The remaining six (Twitter, StumbleUpon, Reddit, Google Plus, LinkedIn, and YouTube) saw their shares dip year-over-year by more than 25%. YouTube was the year's biggest loser; its share was annihilated, dropping 93.24% (0.18 percentage points). It currently clings onto a 0.01% share of overall traffic.

Both Facebook and Pinterest have demonstrated the potential of their respective platforms to marketers, publishers and site owners. Year-over-year, they've been the only social networks to experience growth in their "share of traffic."

#### 1.3.2 User

#### (1) Quantity and Active users

From the data of GWI (globalwebindex), we can easy to the see active users of these main social networks.

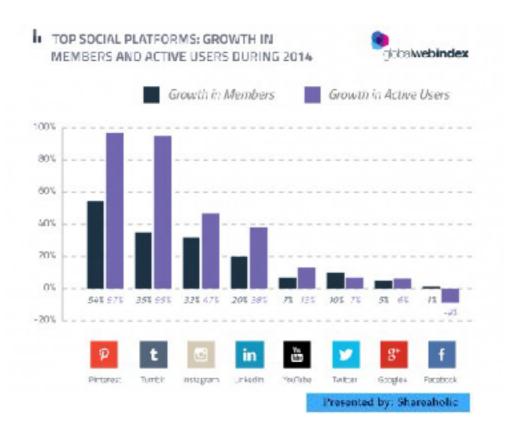


Image 1-6, Top social platforms: growth in members and active users (2014)

From the data of 2014, Facebook active usage declined slightly; other social networks, such as Twitter, YouTube and Google+ increase modestly; But Pinterest active users are showing a trend of rapid growth (+ 97%), some new SNS like Tumblr (+ 95%) and Instagram (+ 47%) are also showed a trend growth.

Facebook 2014 active users decreased by 9% are consistent in all regions and of all ages, especially the 16-24 years (down 11%), 25 to 34 years old (down 12%), and the Asia-Pacific region (down 12%).

And from the news of "The New York Times": 2015 Pinterest monthly active users exceeded 100 million.

These data highlight the trends that we started to become multi-Network users. Users hold multiple social platforms accounts.

#### (2) Age and average number

Nowadays, 1/3 Internet users visit YouTube, Facebook and Twitter. The concept that mainstream social media without overlapping users has disintegrated.

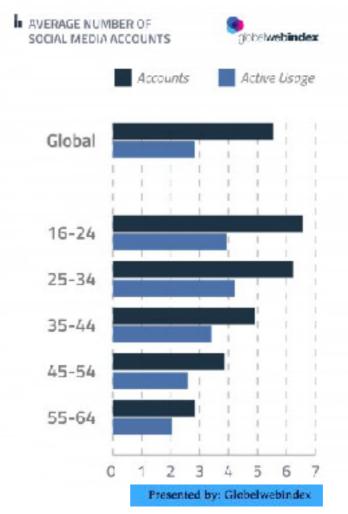


Image 1-7, average number of social media accounts, 2015

In image 1-7, from the date of January 29, 2015. 16-24 year-old user has an average of 6.55 accounts each person, on the contrary, 55-64 year-old user average holding accounts is 2.85. On the side of active usage, 25-34 year-old users are more loyal to Facebook, 16-24 year- user willing to use the new SNS, they are Instagram, Pinterest and Tumblr's main user groups.

## 2 State of the art

In the last three years (from 2014 to 2016), users can put their community members into one or more graph easier and easier; and these graphs are based on a common hobby or sharing content. At the same time, Facebook has also begun to increase their social graph properties.

The following analysis discusses the state of the art of each of the main social media platforms: Facebook, Twitter, Instagram, Pinterest.

#### 2.1 The new features of social platforms

#### 2.1.1 Facebook features integrate

A recent Cornell study describes how Facebook users are increasingly dependent on its utility. In fact, the study asserts that users don't leave Facebook for lack of utility: they leave for fear of addiction.

While the propensity for Facebook to cause addiction is questionable, its utility most certainly is not. The Facebook ecosystem (which includes Instagram and WhatsApp) offer unprecedented social utility, and Facebook is expanding its native services substantially in 2016.

The changes to Facebook in 2016 are new to Facebook, but aren't new to the social landscape. Facebook appears to be borrowing the best aspects of other popular services and integrating them into Facebook as a central hub.

For communication professionals, this means that the ways that you can communicate on Facebook are expanding and are increasing in complexity.

#### 1. Live video:

Usage of these apps remains low, which may give Facebook Live Video an opportunity to become the go-to live-streaming app rather quickly. No additional app is needed to use this feature: the Live Video content prompt is located in the normal "Update Status" prompt in the mobile app.

Introduced in August for public figures only (this service is called "Mentions"), Facebook has started a small roll-out to US users, and just introduced the service to verified business Pages. Expect the service to expand to more users in 2016 and for brands to begin experimenting with more live video content.

Multiple studies have concluded that video engagement is higher on

Facebook than on any other platform (including YouTube and Instagram), so this is something to pay attention to in the coming months.

#### 2. Professional service

Facebook actively prompts you to review the places you've been. If people check in at or tag a location, odds are Facebook will ask you to elaborate about experience and this is purposeful.

Facebook wants to be a recommendation engine. Mark Zuckerberg alluded to this right before he rolled out the first iteration of Google Search suggesting that a Facebook user could search for a sushi restaurant and get inferred recommendations from their contacts.

Now it seems that the personalized recommendation may be generalized for a more Yelp-like experience. Facebook Professional Services recently did a soft-launch and the resulting product is currently more akin to Google reviews than to the robust reviewing community of Yelp.

That said, the utility is evident and for search (Indian Restaurants in the Cincinnati area), there were more Facebook reviews than Yelp reviews (Yelp's stock price decreased upon announcement of this feature).

#### 3. Improved search

When Facebook quietly dropped Bing as the search provider powering Facebook's Internet search, few people knew that Bing's replacement would be Facebook itself.

In October, Facebook rolled out an improved search function opening up all public posts as well as improved intelligence to inform personalized results.

For communication professionals, this means that public posts are more accessible to the Facebook community and that Facebook search may become a greater driver of activity in the future.

Some of their innovation may be derived from other platforms, but as is evident with Live Video – adding Facebook's distribution to a product gives it a lot more power.

#### 2.1.2 Twitter "list"

Twitter's feature "list" allows users on different themes to create a sub-list based on the people or brands from the different topics which he are interested.

Twitter List analysis provides insight on your Twitter list. See the location of the group, their language distribution and more. People can go one step further by analyzing the followers of the list accounts; this is what we call List influence Analysis.

List Influence Analysis:

People have created a Twitter List, and analyzed it. We are ready to go one step deeper and analyze the aggregate influence of that list. Get to know the followers of your list; the aggregate reach, language and timzeone and the maximum reach. Such as headlines, favorite celebrities, sports fan or admired authors.

Twitter, unlike many other social network services, does not require mutual consensus to make a connection between two people. Users just click the following button to make a connection with others, and this makes Twitter act as a news media service, in addition to a social network service. Therefore users who want to find more valuable information follow many other people, and thus their timelines may overflow with a flood of tweets. These situations lead users to group other users according to different categories. In our collected dataset, users use lists in various ways, and we found several different categories of lists.

Celebrities. One of the reasons that make Twitter popular is the existence of celebrities and their enthusiastic activities. The lists in this cate- gory take a large portion of the overall lists.

Friendly Relationships. As we mentioned before, users might miss tweets of their friends and family due to the flood of tweets. The list functionality prevents this from happening.

Organizations. This group of lists consists of companies, organizations, education facilities, etc. They use Twitter for public relations.

Interests. This category is used to organize people who have similar interests or expertise in specific areas.

#### 2.1.3 Instagram "interest-based feed"

Taking about the change of Instagram. First I remember is the introduction of new icon and app design.

In a move away from the outdated skeuomorphic<sup>3</sup> icon that has held sway on home screens for years, Instagram has overhauled its design, introducing a new icon based on a simple vector backed with an iOS-inspired psychedelic gradient. The icon will obviously stand out boldly on stock Android. Several icons presented in the video introducing the overhaul used Material Design styling, but these were ultimately discarded in favor of the more colorful alternative.

But what I want to talk is the interest-based feed. It turns out that Instagram is aware that you follow too many people and don't care about most of the things they share. In a blog post, the company stated that "you may be surprised to learn that people miss on average 70 percent of their feeds." You probably won't be that surprised if you follow 300 people and check the app twice a day, but, anyway, to combat this, it's introducing a feature that will optimize your feed based on your relationship with the person and the timeliness of the post.

Instagram is aware that the feature may not operate smoothly to begin with, saying that it's "going to take time to get this right", but you can expect to "see this new experience in the coming months."

#### 2.1.4 Pinterest search just got smarter

#### 1. Streamlined search suggestions

Before when you did a search, your results were buried behind different filters for Pins, Pinners and boards. Now you see all the closest matching options the second you start typing.

Notable people and brands are marked with check mark, so if you're looking for celebrity chef Alton Brown, you can find Pins of his recipes or follow Alton himself to keep up with his latest Pins.

Once you tap into your results, you can use the new filter button to switch between seeing boards, Pinners, Pins or just your Pins.

#### 2. See what's trending

When you first tap into search, you see the top trending searches (US only for now), to give you a glimpse of what creative new ideas are popping up today.

<sup>&</sup>lt;sup>3</sup> Skeuomorphic is a derivative object that retains ornamental design cues from structures that were necessary in the original.

#### 3. Check

About 12% of all searches on Pinterest include a spelling error, which can make for some disappointing results. But now, if you mistakenly thumb something in that doesn't sound quite right, we'll show results for what we think you're looking for. That way you see better results, and you don't have to waste time re-thumbing in your search.

Facebook based on social graph, but some friends get the relationship just because of a common interest. Twitter and Pinterest based on interest, but gradually you may find the people who have a lot of common interest, then you began to communicate all aspects of life with him. He is not the representative of a simple interest any more, but a person. Those you are unidirectional followed, indicate more that you are interested in what he is doing.

#### 2.2 The Demographics of Social Media Users

Here I want to analysis the demographic characteristics of each of the four social media platforms in the survey.

2.2.1 Facebook: 72% of adult internet users/62% of entire adult population

A new Pew Research Center survey finds fully 72% of online American adults use Facebook, a proportion unchanged from September 2014.

#### Facebook Demographics

Among internet users, the % who use Facebook.

	Internet users
Iotal	72%
Mon	66
Women	77
White, Non-Hispanic	70
Block, Non Hispanic (n=85)	67
Hispanic	75
18-29	82
30 49	79
50-84	61
E23	4!!
High achioni gmd or Icaa	/1
Some college	72
Co leget	72
Less than \$30,000/yr	70
\$30,000 \$49,999	72
\$50,000-874,999	66
\$75,000+	78
Urbon	74
Suburban	72
Hural	67
	PEW REASEARCH CENTER

Image 2-1 Facebook Demographics, March 17-April 12, 2015

Usage continues to be especially popular among online women, 77% of whom are users. In addition, 82% of online adults ages 18 to 29 use Facebook, along with 79% of those ages 30 to 49, 64% of those ages 50 to 64 and 48% of those 65 and older.

2.2.2 Pinterest: 31% of adult internet users/26% of entire adult population

From Image 2.2 we can see. In 2015, 31% of online adults use Pinterest, a proportion that is unchanged from the 28% of online adults who did so in September 2014. Women continue to dominate Pinterest, compared with online men. Those under the age of 50 are also more likely to be Pinterest users: 37% do so, compared with 22% of those ages 50 and older.

#### Pinterest Demographics

Among internet users, the % who use Pinterest

	Internet users
Intal	37%
Mon	16
Women	44
White, Non-Hispanic	32
Block, Non Hispanic (6785)	23
Hispanic	32
18-29	57
30 49	36
50-84	24
ER»	16
High school grad or less	25
Soma college	37
Cullege+	51
Less than 930,000/yr	24
\$30,000 \$49,999	37
\$50,000-\$74,999	41
\$75,000+	30
Urbon	26
Suburban	34
Hural	31
	PEW REASEARCH CENTER

Image 2-2 Pinterest Demographics, March 17-April 12, 2015

## 2.2.3 Instagram: 28% of adult internet users/24% of entire adult population

While there were no changes in overall usership on any site when comparing data from the fall of 2014 and the spring of 2015, a few social media platforms did see an increase in user engagement.

#### Instagram Demographics

Among internet users, the % who use Instagram

	Internet users
Iotal	28%
Mon	24
Women	31
White, Non-Hispanic	21
Block, Non-Hispanic (n=85)	47
Hispanic	38
18-29	55
30 49	98
50-84	11
ER:	4
High achool grad or less	95
Some college	32
Co leget	26
Less than \$30,000/yr	26
\$30,000 \$49,999	27
\$50,000-874,999	30
\$75,000+	26
Urbon	32
Suburban	28
Hural	189
	PEW REASEARCH CENTER

Image 2-3 Instagram Demographics, March 17-April 12, 2015

From image 2-3, some 28% of online adults use Instagram, a proportion that is unchanged from the 26% of online adults who did so in September 2014. Instagram continues to be popular with non-whites and young adults: 55% of online adults ages 18 to 29 use Instagram, as do 47% of African Americans and 38% of Hispanics. Additionally, online women continue to be more likely than online men to be Instagram users (31% vs. 24%).

#### 2.2.4 Twitter: 23% of all internet users/20% of entire adult population

Some 23% of all online adults use Twitter, a proportion that is identical to the 23% of online adults who did so in September 2014. Internet users living in urban areas are more likely than their suburban or rural counterparts to use Twitter. Three-in-ten online urban residents use the site, compared with 21% of suburbanites and 15% of those living in rural areas. Twitter is more popular among younger adults — 30% of online adults under 50 use Twitter, compared with 11% of online adults ages 50 and older.

#### 2.3 Frequency of Use on Social Media Sites

While there were no changes in overall usership on any site when comparing data from the fall of 2014 and the spring of 2015, a few social media platforms did see an increase in user engagement. The proportion of daily users on Instagram, Pinterest increased significantly from 2014.

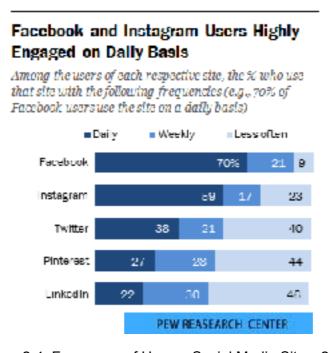


Image 2-4, Frequency of Use on Social Media Sites, 2015

According to image 2-4, 59% of Instagram users are on the platform daily, including 35% who visit several times a day. This 59% figure reflects a 10-point increase from September 2014 when 49% of Instagram users reported visiting the site on a daily basis. Similarly, the proportion of Pinterest users who visit the platform daily rose from 17% in September 2014 to 27% in April 2015, while the proportion of daily users on LinkedIn increased from 13% to 22% over the same time period.

Twitter saw no significant changes in its proportion of daily users. Some 38% of those on Twitter use the site daily, a figure that is statistically unchanged from the 36%.

Facebook continues to have the most engaged users – 70% log on daily,

including 43% who do so several times a day. This overall proportion of daily users, however, is unchanged from the 70% who used Facebook.

The leading social networks are usually available in multiple languages and enable users to connect with friends or people across geographical, political or economic borders. Approximately 2 billion internet users are using social networks and these figures are still expected to grow as mobile device usage and mobile social networks increasingly gain traction.

The most popular social networks usually display a high number of user accounts or strong user engagement. For example, market leader Facebook was the first social network to surpass 1 billion monthly active users, whereas recent newcomer Pinterest was the fastest independently launched site to reach 10 million unique monthly visitors. The majority of social networks with more than 100 million users originated in the United States, but European services like VK or Chinese social networks Weibo<sup>4</sup> and Renren<sup>5</sup> have also garnered mainstream appeal in their areas due to local context and content.

Social network usage by consumers is highly diverse: platforms such as Facebook or Google+ are highly focused on exchanges between friends and family and are constantly pushing interaction through features like photo or status sharing and social games. Other social networks like Tumblr or Twitter are all about rapid communication and are aptly termed microblogs. Some social networks focus on community; others highlight and display usergenerated content.

Due to a constant presence in the lives of their users, social networks have a decidedly strong social impact. The blurring between offline and virtual life as well as the concept of digital identity and online social interactions are some of the aspects that have emerged in recent discussions.

<sup>&</sup>lt;sup>4</sup> Sina Weibo as the Twitter of China, with more than twice as many users as Twitter, which is an essential platform to Chinese Internet.

<sup>&</sup>lt;sup>5</sup> It started with students and has since opened to all, always be though as China's Facebook.

# 3 The rise of Interest Graph SNS

#### 3.1 Overview: SNS social relation

The concept of the English original intent of SNS can be divided into three different connotations: Social Networking Software, Social Networking Services and Social Networking Sites. Defined the major Social Networking Sites aimed at establishing and maintaining community-based Social Interaction Sites. However I believe that with the continuous development of Social Networking Sites, the definition of Social Networking Sites should also be adjusted accordingly. Based on the concept of Social Networking Services, Social Networking Sites will play an effective expansion connotation.

Therefore, SNS in this article means the basis of Social Network Service site or platform, its main function is to provide the user for socialization networking, internet content services.

Through the research and observe on new SNS and the related theories. I believe that according to the difference SNS according to user configuration mode (mode structure graph). Social networking sites can be divided into two different categories: community-based graph and interest-based graph.

#### 3.1.1 Strong ties --- Community-based graph

Social graph reflects the in SNS users know someone else's by the way of social relations. April, 2010, the concept is the founder of Facebook presented in the General Assembly. It means according to people's social relations and links, use Network Information Service, networking people's real social relationships (or part of the relationship).

Specifically, the "community-based" is based on existing social relationships (family, friends, Classmates, colleagues, etc) as a linked factor, through the network to maintain and expand the reach of interpersonal communication.

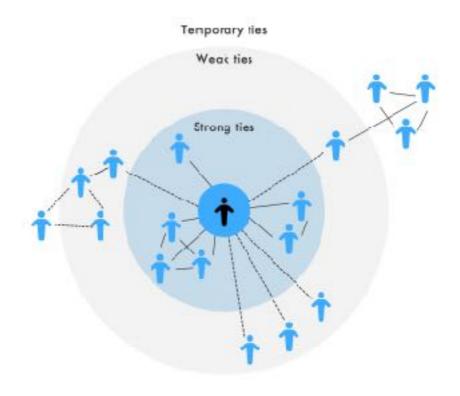


Image 3-1, strong ties and weak ties in social network

I made image 3-1 to explain the ties in social network. Community-based graph is the first SNS form and is still the most mainstream SNS structure. I considered the reason why people like to communicate with this kind of SNS graph, I think should because its main advantages features is to maintain its strong relationship. People extend the real social relations to the online world. Link the online and offline relationship. Due to the stability of the real social relationships, it will ensure a high frequency of use of the site gradually dependence of the site.

#### 3.1.2 Weak ties --- Interest-based graph

Interest-based graph is a new structural form of SNS. Compared to the social graph, the main mode of interest graph is to establish a network of weak ties. Users no longer need to maintain social relationships, but pay more attention to the content they need. No longer to communicate based on an existing relationship, but only focus on "Interesting" things.

#### 3.1.3 Conversion

Community-based graph presence of regional characteristics, emphasis on entertainment, life sharing. Interest-based graph has stronger media properties, emphasis on the value of information, efficient. It should be noted that these two forms are not necessarily independent of each other.

People need strong ties to o protect their privacy, avoid becoming a laughing stock of others. People like weak ties more than the years before because it may be a fair platform to show your talent and get some opportunities and recognized which you haven't previously. And also we can find some amazing things of people we don't know. We want to show, we want to talk to sing, but afraid the evaluation and eyes of strong ties.

And with the time going, people with same habits or interest will know each others better and better, than their circles formed. It's a kind of strong ties.

These two relationships integrate and differentiate. However, this is the result based on the collective effect of website functional positioning, development of user requirements and demand and other factors

#### 3.2 The limits of social graph structure

From June 2008, Facebook with the rapid development momentum ranked as the world's largest SNS (refer to image 1-4). This form of transfer real human relationship to the network has become a sweeping global "network trend." China also conform this "hot social network," emerged such as Renren, Kaixin and a series of the same type of social networking sites. In the next few years, the SNS with a quickly and easily social interactive experience and unique marketing tools to maintain a sustained booming trend. But from 2013, the wastage in social networking site users began to clear (refer to image 1-6). In the user survey showed that the main reason of the loss user in these social networking applications is "waste of time", "tired", "friend updates less"

According to the literature research and theoretical analysis, I think the limitations of

social graph structure are: information redundancy and fragmentation; high costs from strong ties; content lack of personalization.

#### 3.2.1 Information redundancy and fragmentation

Social graph structure is the unit of human, quickly moved reality relationships to network platform. Because of the breadth of this reality social relation, resulting in the number of received information in individual users becomes huge. Faced with this increasing information production and propagation efficiency, while users get abundant information resources, they also faced with the stress caused by massive information. People's time and energy is limited, especially faced with the vast network members publishing status, review content, share resources. People according to their own situation absorb the "overload" information resources, but there are still a lot of information ignored. And because too much energy is wasted, resulting in reduced efficiency, affect the daily status and even affect sleep.

On the other hand, social graph exhibit information distribution fragmentation. The purpose people use it is to maintenance and expansion of social relations. Therefore, the dissemination of information showing features fragmented and fast-oriented. And because of its influence, people became accustomed to pursue "the latest" information. The requirements of information newness are becoming higher and higher. Information fragmentation make people come away from depth thinking.

#### 3.2.2 High costs from strong ties

Compared to the interest graph, social graph bring the relatively strong social relationships link. Its main feature is that the user can link the relationship mainly based on acquaintances (relatives, classmates, friends, colleagues, etc.), this relationship allows users to frequent spontaneous social behavior, maintained close "strong ties". This high degree of coincidence between online interactive network and offline real life, meet user communication needs but also had some negative effects.

The problem of this form is strong ties link is not users' spontaneously choose, it is established formation. Since the contents of the user's own interest in the breadth of concern, the information of strong network of

relationships does not meet this need. For example, a user has a strong resonance with his classmate on the exchange of information within the school, but this does not mean that they can form a common interests. Thus, in the "strong ties" social network, users need to spend more time looking for this intrinsic interest for information sharing.

#### 3.2.3 Content lack of personalization

Social graph relationship always formed a predetermined circle. People in predetermined circles to exchange and share information with predetermined people. But most of the information reflects the characteristics in different relationship circles, so they reflect the same characteristics more public. This makes difficult to find customized content according to their needs when users received homogenization information. Their personalized needs are not met, forcing the user to reduce the use of the website.

#### 3.3 The advantages of interest graph structure

In a survey conducted in September 2014, the Pew Research Center (American investigators) finds that Facebook remains by far the most popular social media site. While its growth has slowed, the level of user engagement with the platform has increased. Other platforms like Twitter, Instagram, Pinterest and LinkedIn saw significant increases over the past year in the proportion of online adults who now use their sites.

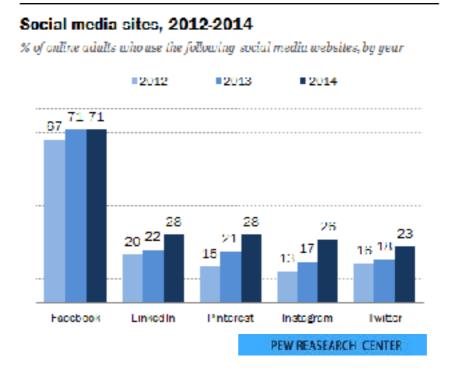


Image 3-2, Social Media Update 2014

Facebook continues to be the most popular social media site, but its membership saw little change from 2013. The one notable exception is older adults: For the first time in Pew Research findings, more than half (56%) of internet users ages 65 and older use Facebook. Overall, 71% of internet users are on Facebook, a proportion that represents no change from August 2013.

Every other social media platform measured saw significant growth between 2013 and 2014. Instagram not only increased its overall user figure by nine percentage points, but also saw significant growth in almost every demographic group. LinkedIn continued to grow among groups with which it was already popular, such as professionals and college graduates, while Twitter and Pinterest saw increases across a variety of demographic groups. Specifically, I think the advantages and consider of interest graph bring to the development of SNS in the following aspects.

#### 3.3.1 The information classification and logical

The SNS based on interest graph is forcing on users' interest. In this network structure, distribution of information is no longer human-unit but in the

people's interest or the things concerned. This is reasonable classification and diversion the huge flow of information in traditional SNS, users can obtain information according to the category of things of interest. At the same time, the information decentralization which cause by Interest extensive and diversity can also polymerized by an certain logic. For example, a user interested in water sport, so swimming, diving, sailing, etc. related interest content will recommend to user. In this form, the fragmentation of information obtained reasonable polymerization, people can be more comprehensive and intuitive understanding of some things of interest.

On the other hand, compared to the social graph, interest graph focus on the user interested content rather than the relationship. This change allows users to enjoy the fun of interest more directly, to achieve individual needs. Users' willing of receiving Information becomes more active. User interest in the discovery and content sharing will become deeply, in order to better achieve user stickiness in website and to continue expansion site content.

#### 3.3.2 Explore the "weak ties" content

Faced of the trouble may bring in "social graph", social relations in "interest graph" can avoid these problems well. In such SNS, the relationship among users initially do not know or unfamiliar. User exploring interest in the content, gradually generate willingness to share and exchange. In the role of common interests between user interest gradually forming a circle emerged "weak link" feature. In this relationship, the exchange between users tend to be weakened, you do not need to maintain frequent contact or sustained attention. But when the user selects immersed in sharing interest, will produce the "lightweight" social. Although not close "strong connection", since the existence of long-term in interest itself, this kind of "weak ties" tend to have better continuity.

#### 2.3.3 Focus on needs of individual users

"Social graph" to achieve social connections between users of the exchange of information, but "interest graph" is to achieve a personalized user information exchanges based on individual interests. In traditional SNS, People through information between users can maintain and develop social

relationships, to find solutions to certain problems through social relationships.

But more often, the individual user's area of interest often exceed the actual concept of social relations circles. Specifically, when people have a particular aspect of particular interest, they will be in-depth study and exploration in this area. When this interest becomes tend deeply, the knowledge of circles of friends is often no longer able to play as direct user assistance, so that users trying to find a more specialized or personalized help.

In this case interest circle formed by "interest graph", often they can be very good to meet these needs. At the same time based on the "interest graph", website can better classify the different interests of the user.

# 4 Based on Pinterest, the research on success factors

# 4.1 Application: Pinterest-like layout

## 4.1.1 Content consumption

In In my thinking, there are to many SNS based on relations. So every time when I think of a new social media, I unconsciously to analysis from the relational schema, the intensity of relationship. But when I am working on why Pinterest can make a different, why Pinterest can get a success. I found I can not think like this anymore.

The function of Pinterest, had already been clearly demonstrated in its name. Pin (pushpins) + Interest (interest), its own "interesting things" with "pushpin" nail in the nail plate (PinBoard) on.

Pinterest is more like a content network. It isn't care about the network of relationships. The most concerned is use interest for the guide, create and aggregate the best resources.

Why people loved in it? I think the most important thing is its user visually shock. The task of social is to Facebook, Pinterest only do the consumption of content and interest.

If Twitter simplify the spread of text, then Pinterest simplifies the dissemination of images. This is a high-quality photo-sharing website. It looks like a wall can give you unlimited inspiration wall, a wall full of nails neat visual picture of beautiful pictures. All its efforts, Interest or, relations, are only for a sole purpose, this purpose is: to make the world's best-looking picture website.

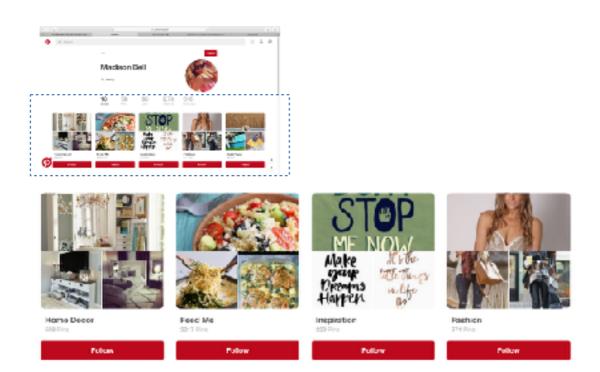


Image 4-1, screen shot of user page of Pinterest

In its only remaining related functions to relationships, is also strict cutting to relation network. From image 3-1, on Pinterest, when you follow people, is followed the following Boards (drawing board in the content), and the button is placed next to the content data, but not the same as the usual social networking sites on the head (of people). And its Follow, direct Follow is a separate Board. In this, the object it is Boards, but not the man behind it.

The content consumption: Pinterest has a very clear profit model, for example, I think, for the user going to get merry. They will list the goods need to buy for Wedding, and these companies can focus on this to build business models. Institutional investors are all interested in the commercial intent behind the pictures. Lot of pictures in Pinterest are directly from the e-commerce site. Some pictures even retain the price tag. Many businesses get a large number of orders through the import traffic of Pinterest.

## 4.1.2 Matrix arrangement to Strewn at random arrangement

Thinking of the reason of strewn at random arrangement. I Considered of its creative starting point. Like when I watch the American drama TV, many people pin the information of a topic together on the wall. So for me, the arrangement of Pinterest is like the product of this scenario simulation. And let

user feel more relax and interesting.

Before I felt only a fresh feeling of good-looking. But recently, when I make an album, I realized that the most reasonable reason is displayed. Users to upload images of varying height ratio, if all requested in the same size, they must be cropped or compressed, if keeping the same width, height scaling, so not only guarantee the original proportions, but also to maximize the display clear (relatively high the image can also be displayed). From the screen space, the lateral longitudinal space is more valuable, thus limiting the width and height of the display release is the best option.

Considered in a more reasonable way. From the differences between human eye perceives the text and image content. People reading a text is a serial mode, a word must be determined by the order of a word by word, reading linearly down. People watching the picture is a parallel mode, he can quickly glance at the numerous pictures, and then choose some of their own interest, in this way find the content of interest than the linear model is much more efficient.

Pinterest's first "waterfall" page form to show contents, bring readers really great browsing convenience.

#### 4.1.3 Fragmentation era

When the information revolution pass the digital economy, it's easy to miss those valuable "information fragmentation" which are often buried in the noise. People use SNS to get information as more as possible, but there is no deep understanding and memory, so what hey know has become superficial. And the knowledge gained just fragmented, incomplete, not profound.

I think the habit just like people like fast-food, they don't have enough time to read to understand the information. They also haven't patient to do it, or impetuous.

Talking about impetuous, it is a common problem throughout the network era, fragmentation is a concrete manifestation of impetuous. Scratch the surface and gone. Long distance relationship in the past, from writing a letter, sending a letter, waiting the letter, to read the letter. It's a lengthy process of waiting, elongated brewing the feelings and missing, have unforgettable memories. Now far apart lovers have various instant messaging tools sky

flying, there is only tools you do not know, never used, but there isn't you can not think, can not find. Whatsapp, Facebook, Facetime, Skype, a voice, a video. Variable horizon right close, it is really convenient, but tasteless and impetuous.

But I know there is no one to blame. It is the contradiction between the mass of information and divert attention. For example, people originally intended to receive e-mail on Internet ,when open the page there is a attracted news, after reading the news, found the link of celebrity gossip, and click on the link found new releases of entertainment . And then they began to look with great interest to open movies, to borrow a word is that, We went too far to remember why we start.

So, faced with such a complicated mass of information, Pinterest is thinking how to be more scientific and reasonable, calmly deal with Fragmentation era.

First is to sort out and integrate the information. Is to be arranged, discard the dross and select the essence. Advanced information technology to create a massive information and fragmentation, why not take advantage of information technology to be integrated in order, restore the nature of information worth it? And integrate information through more systematic, coherent and complete.

Pinterest fragment the "all good things" into a short description+a image+ a URL. Then organized by the "Board". This organization must be very free, any two fragments are likely to be grouped together. The more freedom the organization is, the faster information flow.

Second is to deep and lasting. Organization. So to the interested question event, to sustained attention, in-depth understanding. Change the random in fragments browsing, to deliberate, repeated deliberately. So we see that because of the time line is the freest form of organization, the information on twitter flow fastest, but the information will soon expire; Pinterest organized by the natural boundary limits, so the circulation is relatively slow. Information can precipitate a certain extent, dig out the "hottest" images to guide the "herd mentality" of the user.

Third, for my use. Re-organization. Information and the ultimate goal of reading is still use. So the face of a flood of information, know only far

enough, thinking only into their obtained, processing proceeds into their own words and speak out the truth. So that for their study, understand, true believers and use it for me to do all considered. To better guide their work and study.

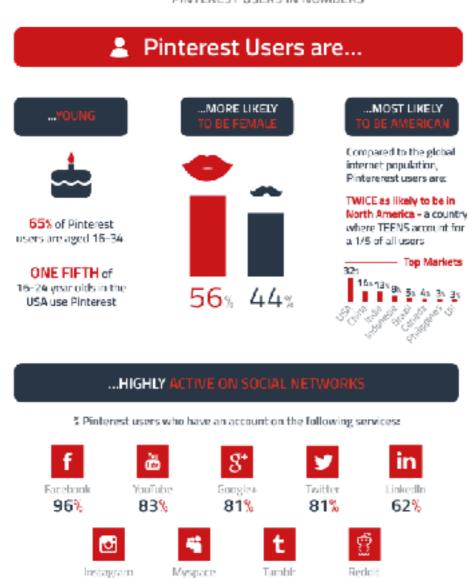
Pinterest's "Re-Pin" feature, people can put others original images to collect fragments easily to their own system, good organization to establish their own Board. The nature effects of re-organization is to reuse the limited content as fully as possible.

# 4.1.4 Mainstream users change from boys to girls

As we all know, social media users showed rapid growth. And main user change from boys to girls. In the post of GWI (GlobalWebIndex), preview data from Pinterest Infographic – taking a look at the demographics, interests and behaviors of its users.



#### PINTEREST USERS IN NUMBERS



obal

eb globalwebindex.net /// Sou

48%

60%

globalwebindex.net /// Source: GlobalWebindex Q1-Q2 2014 /// Base: Pinterest Active Users Aged 16-64

47%

Presented by: Globelwebindex

33%

Image 4-2, Profiling Pinterest Users, 2014
In terms of demographics, women have a lead over men and there's a

heavy skew towards the youngest age groups: two thirds of its active users are aged 16-34.

Pinterest is like a shopping platform with shop window, covered with food, clothing and other images, which is a major factor in promoting the rapid growth of women. May 2013, Pinterest cooperated with the United States retailers respectively launched three new "pushpin" (pin) for the food retailers, retail products and movie. including eBay, Wal-Mart. For the first time and including eBay, Wal-Mart. When the user clicks the pushpin can jump directly to the other platform for shopping. November, Pinterest announced its entry into the tourism industry, launched a service called Place Pins. Tourist share, tourism planning and cuisine and a roundtrip ticket and other train services to the user.

Pinterest is a independent website which monthly number of unique visitors reached 10 million. And now its monthly visitor volume has increased to 25 million. Pinterest users are such a large part of high quality users: female, young, well-educated, and have significant disposable income. Retailers are chasing these high quality users on their site to add Pinterest category, create their own Pinterest waterfall stream pages, but also come up with some marketing push to count them pushed popularity.

HelloInsights is a company which specializing in Pinterest usage behavior in Santa Monica, California. The company's CEO Keira Brennan (Kyla Brennan), said: "Pinterest is a great showcase of formula Shopping platform, which helps people find what they're really like. It is based on shared interests many users are encouraged to make image while shopping, in order to get a little impulsive."

#### 4.1.5 Psychological Aspects

What I'm talking about psychological aspect is trying to explore the psychology behind Pinterest. From reading habit to analysis the user psychology. Why it goes popular? Why people like use it?

There must be many reasons, such as the costs for users to participate in it is low, more flexible subscription mechanism reduces information noise, and the more attracted much attention is its unique "waterfall" picture layout. This arrangement criticized by many people, but I like it very much, because it

exactly in line with the law of human visual psychology.

Here I must first look at what is the influence factors of human eye glance paths. The understanding in this aspect taken from the research of "visual search" in cognitive psychology. Current psychologists consensus is that there are two main factors effect visual search efficiency: one is person existing experience and habits, it is a top-down influence; the other is picture own visual significance, is a bottom-up influence. For the former, we all know that people are generally from top to bottom, from left to right, so it is a matrix of multi-page image, its scan path almost influence by habit and have some rigid. For the latter, the picture itself is visually significant (dynamic, color and overall aesthetic, etc.) constituted a significant graph, the user's attention is the first drag by the most significant part of visually screen. So bottom-up factors (picture element itself) enables users to easily and efficiently select the high-quality visual content, while the matrix scanning habit interfere the bottom-up.

For example, in the result page of search engine's image search, if you have a good image at the bottom right position on the page, you might be hovering in the upper left of the page several times to gradually find such pictures; and in the waterfall layout, then you can find this picture more quickly.

Which better point in Pinterest is that the user can select a image visual search way according to their own preferences: Although default page images are five, But when you narrow a page, each image narrowed, while increasing the number of columns (up to 10). The showing number of each page increased, so some users can increase the efficiency of search.

Precisely because waterfall model is a very efficient image browsing interface, so it attracts a lot of users use it as a tool to collect and view pictures, and this is the greatest power why Pinterest quickly became popular.

#### 4.2 The guide of Interest in the subject

The initial inspired of Pinterest establish is from Ben Silbermann, when he is looking for an engagement ring fro his girlfriend: He found that there are a lot of styles favored online but they are hard to choice so he developed

Pinterest which can post all candidate images on a same page. Through a period of testing, he found the way of pining all the thing interested by network pin are more and more favorite by the people of all ages. It is because of this most essential way based on interest to communicate with the user, let Pinterest growing influence, and ultimately become the largest social picture sharing site in the world only in a short 3 years.

## 4.2.1 Interest contents and Customer relationship set

## (1) People-oriented content setting

Confucius<sup>6</sup> once said: "They who know the truth are not equal to those who love it, and they who love it are not equal to those who delight in it". Here to talk about is the role and importance of interest. This selective attitude and positive emotional responses people on a certain matter can make people focus attention to produce moderate tension and happy state. By this, people's initiative and creativity will continue to be inspired, thereby directly improve the quality and effectiveness at work.

Thus, by interesting things and experience to stimulate people's interest, continuing to create a relaxed interest environment. Allows people to get a sense of satisfaction and pleasure in things that interested in. Move in circles, people are more willing to actively engage in the contents of some interest.

According to the analysis report of ShareThis<sup>7</sup> (free sharing tools are easy to implement and will increase traffic and engagement on your site). Pinterest has become the fastest growing online content sharing platform. In the third quarter, content platform share increased 19.2%, over the social networking giant Facebook, content sharing increased 14.7%. Its success largely lies in its understanding of user needs and based on interest to meet those needs. The site engineer said in an interview: Fundamentally speaking, Pinterest's function is not used in interpersonal communication, but communication between the people and interests.

And the website of Pinterest, is not as other types of SNS aims to explore people's communication needs, based on real-life in various circles (such as home, circle of work, circle of friends, etc.) to maximize the creation of

 $<sup>^{6}</sup>$  Confucius: one of the most famous people in ancient China, a wise philosopher, circa 551-479 BC

<sup>&</sup>lt;sup>7</sup> ShareThis. Consumer Sharing Trends Report[EB/OL]. http://www.sharethis.com/blog

convenient communication environment. It is based on people interested, no matter people's interest of material (including the pursuit of the basic necessities for a comfortable material life), or need to develop the interest of spirit (such as learning, research, the pursuit of artistic, cultural and other knowledge). In the website, everyone can find various interesting content (images) to full realization of self-satisfaction.

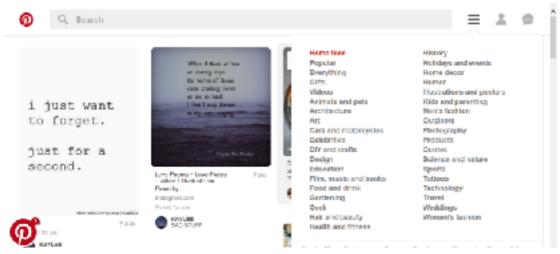


Image 4-3, Pinterest Interest navigation

Pinterest Interest Categories	
Popular	History
Everything	Holidays and events
Gifts	Home decor
Videos	Humor
Animals and pets	Illustrations and posters
Architecture	Kids and parenting
Art	Men's fashion
Cars and motorcycles	Outdoors
Celebrities	Photography
DIY and crafts	Products
Design	Quotes
Education	Science and nature
Film, music and books	Sports
Food and drink	Tattoos
Gardening	Technology
Geek	Travel
Hair and beauty	Wedding
Health and fitness	Momen's fashion

Form 4-1, Pinterest Interest Categories

Form 4-1 is I sort out from image 4-3, the main page of Pinterest which has the Interest navigation. The site provides the main interest categories, in each interest category has a large number of high-quality image resources, people can satisfy their personal interests by browsing the collection.

However, on the basis of meet the needs of people normal interest, even further to meet the people of intentional information retrieval needs!

For example, when people are prepared to organize a birthday party, we want to collect some of the venue decoration, active theme, activities food, event invitations cards, gifts and other comprehensive and creative practicality information. At this time, multi- interest Categories can be targeted to provide inspiration through a wide range of high quality pictures resources, in order to provide effectively help for the important moment of people's lives.

And the advantage of this is that, after repeated active accessibility, people will rely on this platform, and use it as an essential tool for life, thus extending the site usage time and usage frequency.

A common problem in today social networking sites is that the amount of information is too complex. People face huge information can not effectively filter the information, which will some time cause attention diverted. However, this kind of based on interest contents oriented and can effectively filter information content which users are not interested and excessive noise. This can effectively alleviate user's attention fast-moving, constantly keeping the interest in site content.

#### (2) Relaxed interest relationship

In psychology, people apart from personal survival and development needs, another important needs is communication needs. People desire to communicate, hope always maintaining communication with others, in a good position in the society relationships network. Social networking sites emergence of to adequately meet the needs of people, let it become one of the essential life of the network products.

The establish of social networking sites theory comes from Professor Stanley Milgram's "six degrees of separation", the professor in Harvard University psychology. The idea is that everyone and everything is six or

fewer steps away, by way of introduction, from any other person in the world, so that a chain of "a friend of a friend" statements can be made to connect any two people in a maximum of six steps. This powerful interpersonal role in the online world can be a faster way to diffusion: it can copy the offline real relationships to online; people can expand or maintaining existing relationships through interpersonal circle.

However, the interest graph is a challenge to the "six degrees of separation" theory. The intention of People entered the site is not to find friends, establish communication, but to find and meet their own interests. And the interest during the search and discovery process, and will gradually have the same experience with their interests, "enthusiasts", so that through a personal interest interpersonal intersection produced officially formed. It can be found that such relationships do not need to be based on past real circles, but a new stranger environment. People's social networking relationships can have a greater expansion and arbitrary.

In traditional social networking sites, people combined real interpersonal relationship with the network to form a huge network of social relationships, which brings many benefits but also there are some problems: with the increase in the number of information and the expanding, people's information processing capability is constantly being challenged; network pressures cause people to the reality of social relations need to spend a lot of energy relations costly maintenance; always difficult to meet people in a particular area based on the reality of the relationship between network circles It needs.

But It's very clear that Pinterest better deal with the problem. Interest graph social do not need based on real personal information, but rather to approximate the anonymity of personal interest to share and exchange. People liberate from the social pressure, fully enjoying the self-interest of the meet. The site of the one-way mode enables attention among users to maintain a friendly distance from the personal attention unit down to one person's interest; a friend recommended also entirely based on similar interests, which allows users to improve the autonomy, to fully experience "social light" fun. At last, based on comparisons of interests does not mean to show off, people pay more attention to the inherent taste and interest improving communication this relationship is reflected in the overall positive

and beneficial interest the exchange.

More lightweight humane social means, added simple interest communication purposes, Pinterest let people immersed in the things they loved and only communicate with like-minded people without a high communication cost, But enjoying this more pure, relaxing interest relationship.

## 4.2.2 The unity of Interest rules and user needs

Except fully take into account the user interest and the purpose of use on the content of the site. Another important feature is to create a site using rule which is formed around interest. I mainly want to discuss the rules of the site from three settings: first, fuzzy classification and graph logical; second, personal interest collecting and sharing; third, users share incentives.

## (1)Fuzzy classification and graph logical

Fuzzy classification:

With the continuous development of technology, network information dissemination rate has been continuously improved, the total amount of network information is growing rapidly, it produces dispersed state of disorder, make users often need to spend a lot of time to filter and sort information, it is difficult to easily obtain the required information. However Pinterest is based on the types of people's interest by setting interest categories, combined various types of information into different interest categories of interest.

This operation not only useful when users initiate content search, information showing the orderly classification; at the same time when the user input information, it is possible to make mandatory information packet, and from the source to reduce the information confusion and cause the high cost of filtering information. Current network information retrieval mainly form a variety of search engines. Through full-text index, category index, metasearch engines, vertical search engines, assembling search engines, etc. Combined information collected on the Internet organize and process, providing users to retrieve their results relevant content.

But these must be based on a relatively accurate keywords to expand. However, the user inner thoughts is not as precise as a computer operator, through unclear or ambiguous expressions, are often information needed is abnormal lack and obtain is broad and general information.

However, the introduction of "fuzzy information" concept can be more effectively solve this problem. Fuzzy theory originated from the "fuzzy math". This is Lotfi Aliasker Zadehn<sup>8</sup> proposed the mathematical methods in the University of California<sup>13</sup>. He believes that when people understand things, and produce things always be characterized through abstract and generalize the common features multiple things. However, the extension of this concept is described generally fuzziness, such as "tall" "sawed-off" between no specific boundaries, and therefore without requiring precise, hand grasp the essence of things from fuzziness statements, which will simplify complex issues.

This is applicable in the retrieval of network information in the face on the express very complex content or difficult to accurately express, this series fuzzy search which is approximation concept, it is possible to select a relatively satisfactory results faster. For Pinterest, the interest is such a relatively vague concept, it has a strong theme discrete. For example, people think that Christmas belongs to the category of the festival, but it can be classified as category gifts; Even through different specific gifts, and it can be belong to the classification of food and even clothing. However, due to the content of Pinterest, users autonomous reprocessing after the information collected.

It can be said that many fuzzy approximation content categories are based on extensive practical experience of people.

Through common decision of majority, people do not need a tangle of certain specific keywords, but may be interest through fuzzy interest, in which a more abundant resource use some relevance to obtain the required information. The so-called needs determine the value, Pinterest to a certain extent can be understood as classification information site. Through covering all aspects of people's lives around the image information, people can be more proactive, based on the demand to browse, become an really valuable practicality information tool in our daily life.

<sup>&</sup>lt;sup>8</sup> Lotfi Aliasker Zadehn is a mathematician, computer scientist. He is best known for proposing the fuzzy mathematics consisting of those fuzzy related concepts.

People is not only the user of the site, but also take the initiative to become the site's content creators. Using the network plug, people can save the contents of any site of interest to the Board you create. This Board looks simple, but actually, it creates many values.

First, the concept of Board (collection plate) can transferred the concerned on people to the specific interests of people in SNS. Such subdivision, can effectively avoid the content which user is not interested in and more focused to find common needs. Second, except site to provide interest classification, the audience can autonomously named collection plate. By this Board to form a secondary processing of information, but also information on the user spontaneous re-classification. Third, users create self-collecting plate, make the information any combination thereof. Seemingly different categories of information by classifying polymerized to form a new classification. The new value can be help users convey their "interest in view", creativity formed a unique "interest trend."

For example, I open Pinterest and input "sushi" (because this is my interest and is what I want to explore). And there are many beautiful images come out. I click on the one I'm interested in and go to the page of the owner of this image, her name is Amanda. She is one of the food lovers in Pinterest.

She owns 192 pieces of "Boards", 41.4k "pins". And in many different themes in this Board, we can observe her unique collection plate name: Cakes & more; Macaron; Drinks; Sweetness; Recipes with taste; Pastries; Puddings, Cremes and Panna Cotta etc.

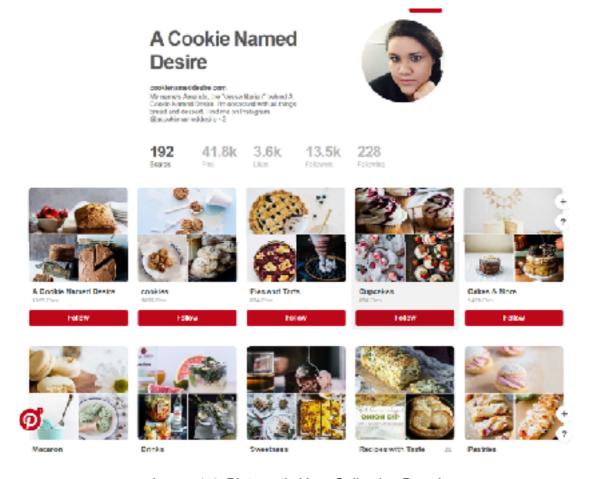


Image 4-4, Pinterest's User Collection Board

Such names can let other "enthusiasts" to quickly find the same subdivision interest with her, through the creative group, make their own unique interest perspective gain recognition from others

## Graph logical:

The categories set up based on interest is the first mean to solve sites information and make it more methodical.

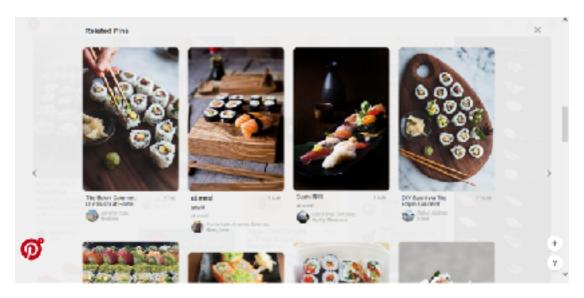
However, graph logical is the further important guarantee to make information ordered of the site.

Pinterest users operational fundamentals that ongoing content contributions, with the initial site of the primitive accumulation of high-quality user resources, so as to form an effective demonstration of the new user profiles popularity Pinterest logic of Categories. With this model, users gradually accustomed to the unique pattern logical way, let the other user's content "save" or through off-site resources "within the chain," is formed an exclusive collection of content. More importantly, in the board's role, the user

can take advantage of personal experience and perceptions, creatively achieve their own personalized maps logic. Of course, in order to better ensure that users use the convenience and well-organized, the site also provides users with tailored user behavior associated and reminder function.

Refers to the so-called association rules discovery hypothesized relationships between seemingly unrelated data (if ... then ...) statement in a relational database or other information in the knowledge base.

I want to example for this: if the customer go to butcher's shop to buy prosciutto, then it is quite likely that he will buy a piece of cheese. When user search for content of interest, he may also need more similar content. But a time interest category did not show the content. Then the user can enter the site and click the Pin, look for similarities collection board in system automatic identification as well as by a large number of users to calculate the behavior of similar content. Thus, users do not need to re-set your search or adjust interest categories, but easy to jump through multiple implementation requirements.



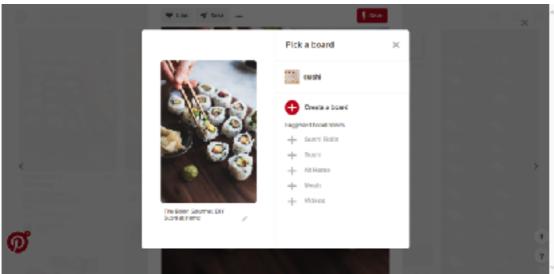


Image 4-5, Pinterest's Logical associations page

User behavior reminder function primarily as correct and prompt role. When the user performs "save" action, if he can not quickly be interested in image classifying, the lower end of a pin will display other users' classification and nomenclature, effectively solve user problems. At the same time when the user repeats "pin" action, the site will prompt the effective content which has appeared in a piece of Board to prevent confusion occur when there are too many collect contents.

## (2)Personal interest collecting and sharing

One of person's instinctive desire is to collect things that they are interested. For example, people love to collect football star poster, storing

favorite crafts in display cases.

In the Internet age, this way of appreciation and collection has been extended, the main form all kinds of Favorites for pictures and video links.

In the past, when I was a little child. When I collected appreciate images I need to do like this: In the process of browsing the site, downloaded images I liked to the computer; then through a network upload to site and saved. Such complicated network information processing methods and the various problems which may arise have prevented the enthusiasm for people to collect pictures and share.

However, the introduction of Pinterest is a step forward for such a network image information processing. Only by installing a Save plug-ins, people are free to collect their favorite pictures to any site. Through the picture, formed Board for their appreciation or forwarded to other users collection. Thus only a few coherent action to complete the collection interest information, which greatly reduces the threshold of the information collected, but also for the site to attract more people began to play a strong role in promoting the collection.

Through the collection of interest, people can gradually generated satisfaction from the identity of the site. By establishing interest graph, people began to pay more attention to increase their taste and internal, focus on the future to better express themselves. By further explore the interest in the collection, it makes people continue to extend their interests fulcrum, in order to establish a comprehensive and extensive interest. Through the establishment of a secret save also enables users to fully enjoy the exclusive privacy interest in space. Thus collection habits have been strengthened, the user is no longer the viewers of the website but they are also the content creators what is more interested and more inclined to do.

In fact, collecting and sharing interest are often combined. People are willing to enjoy the interesting image content and add to their own collection; also hope to get more recognition from the same interest partners. Therefore, in Pinterest every interest discovery is a process to discuss with others' interest. A person interest collecting content was limited, however, in the interest of the rich network of relationships in which people can get more extensive information. Similarly, as more people's interest will continue to share and to be shared and continue to extend. Find unknown interest in

interest relationships with other people, making personal interests continue to expand and consolidate.

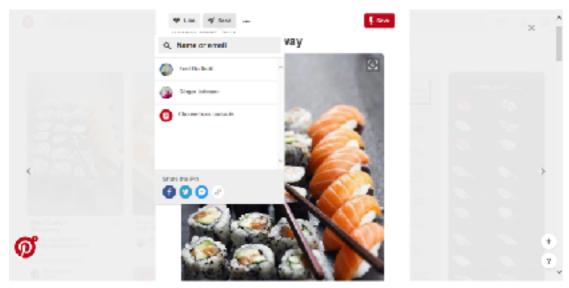


Image 4-6, Pinterest Send Page

In function of Pinterest is also fully encourage interaction between users. In version, user can directly send a pin to friends inside and outside the site, make it easy for users to share interests require. More interesting is the Board not only a personal interest the creation of a place, we can now invite friends and co-production of "partner board." Creation by several people, this will be gradually transformed into a common personal interest fun, users easily share from such relationships to get more inspiration, thereby increasing the frequency of use of the website and user loyalty.

## (3) Users share incentives

In 1943, the famous American psychologist Maslow<sup>9</sup> published in the "theory of human motivation", which is the first time talked about the hierarchy of needs theory. The theory divides human needs into five levels, respectively, corresponding to five different psychological levels. Lower levels of demand to meet the people will continue to develop into a high-level requirements. This five hierarchy of needs from low to high are: physiological needs, security needs, social needs, esteem needs and self implementation requirements. However, this order of five levels of need is not fixed, sometimes appear skip

<sup>&</sup>lt;sup>9</sup> Abraham Harold Maslow was an American psychologist who was best known for creating Maslow's hierarchy of needs, a theory of psychological health predicated on fulfilling innate human.

condition.

Physiological needs are the physical requirements for human survival. If these requirements are not met, the human body cannot function properly and will ultimately fail. Physiological needs are thought to be the most important; they should be met first.

Safety needs are relatively satisfied, their safety needs take precedence and dominate behavior. In the absence of physical safety. In the absence of economic safety, these safety needs manifest themselves in ways such as a preference for job security. This level is more likely to be found in children as they generally have a greater need to feel safe.

After physiological and safety needs are fulfilled, the third level of human needs is interpersonal and involves feelings of belongingness. This need is especially strong in childhood and can override the need for safety as witnessed in children who cling to abusive parents.

Esteem presents the typical human desire to be accepted and valued by others. People often engage in a profession or hobby to gain recognition. These activities give the person a sense of contribution or value.

Self implementation refers to what a person's full potential is and the realization of that potential. Maslow describes this level as the desire to accomplish everything that one can, to become the most that one can be. As previously mentioned, Maslow believed that to understand this level of need, the person must not only achieve the previous needs, but master them.

The establish of Pinterest is full respect for individual interests require, through resource consolidation and interest grouped into the user experience to develop their interest in providing a good soil. In the early establishment of the website, the website through encouraging the development of culture in the form of art and commerce, the initiative to invite the designers, artists, architects, high-quality content providers to participate, encouraged by the core group of users for the site has accumulated initial quality resources. For other users, the site was originally established that is fully understand and respect the needs of the user's interest.

Pinterest does not emphasize the number of fans rank, number of forwarding content, but simply focus on how to better meet the needs of interest, user-friendly use. Thus there is no group of wonderful words, not

good record enrich the lives of people found a way to get through the good taste and respect for the interest of expertise, become a niche hobby authority and expert. Respect to meet the demand, allowing users to more actively visit the Web site, which maintained this sustained and effective interaction.

However, after trying to meet the needs of respect, Pinterest also hope to better help people complete self-realization. Another success lies on the excitement and inspiration inspired in real life moments. For example, a user interested in handmade fabrics, she gets inspiration for weaving a Christmas hats for every member of the family through the website. She completed her creations on Christmas Eve, and the family is agreed that was the best Christmas gift. These can act directly on the real life of the important elements, So that users can get self-worth, to meet the practical form this line is obtained on the Internet can not match. Interest helping people find their loved ones, so that they go out from the network to practice in life.

## 4.2.3 Optimization of visual and experience

According to Brandz<sup>10</sup> released the world's most valuable brand rankings show that Apple has surpassed Google to become the world's most valuable brand, the brand value is estimated to exceed 100 million US dollars. Faced with such great success, there are two indispensable important factor is the approximate visual design of art and easy to understand the operation experience. The site and digital products exist a lot of commonality, to solve the visual design and improve the user experience will enhance the site has a significant effect.

So in this section, I want to discuss how the website can improve the user experience, mainly from the power of simplicity, the experience of continual optimization, the flow of reading and waterfall, and the interest of moving.

#### (1) Simple is power

Famous modernist architect Mies van der Rohe has a famous saying: less is more.

The so-called "little" is not blank but streamlined, "more" is not crowded

<sup>&</sup>lt;sup>10</sup> BrandZ is Millward Brown's brand equity database, the database is used to estimate brand valuations, and each year since 2006, has been used to generate a list of the top 100 global brands.

but perfect. This is a design concept that aims to promote simplicity and oppose over-decoration. Because simple things can often give people more pure enjoyment. As the German pavilion at the Barcelona World Expo, people can not see anything superfluous to the building, messy decorations, nonsensical changes, only the light and transparent building itself and his exception to contact the circulation of space. However, the impression is precisely this simple but full of agile experience, this is the site of the layout and user-friendly interactive design.

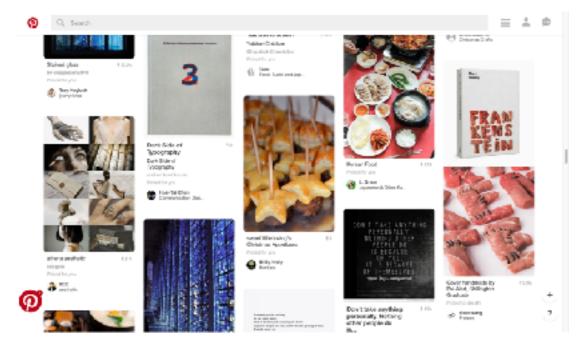
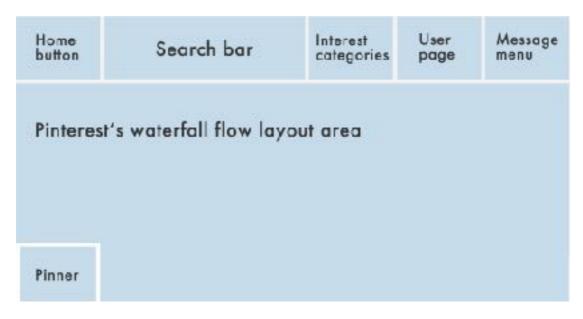


Image 4-7, Pinterest's Page Layout

Into the interest-center page, from the image 4-7 we can see Pinterest minimalist page layout. The entire page is divided into two parts by a menu bar at the top of the page. The menu bar consists of only a concise abstract symbols, the page occupies only a very small space, but its internal it contains rich functions: the home button, search bar, interest categories, user page, message menu and pinner. Because Pinterest is a pure picture (and video) sharing sites, the presentation of the picture content is very important. Therefore, the designers take the horizontal and vertical fixed width and infinite waterfalls flow layout, because the margins and just perfect picture frame spacing, the picture below remark away, the whole page showing a

<sup>&</sup>lt;sup>11</sup> Gan Lu. A Study on Contemporary Chinese Architectural Design Concept [J]. Modern decor (theory), 2013

fresh and smooth trend.



Form 4-2, Pinterest's Page Layout (sketch map)

At the same time, friendly interface design is another major feature of the site. Pinterest forced simplified interaction allows users to achieve visual "without-webpage-jumping" in the use of page.

First, according to the different size of the display window, the page image display area will be free to adapt, make full use of every inch of display space; second, waterfall flow display area infinite scroll and the bottom of the page automatically loading mode, through the simplification and not flip the interactive effects of user browsing process smooth feeling; Third, when the user selects the image, the mouse through the hidden button, click the image and quickly adapted to the best proportion in the page center; fourth, click on the image to enter the page, click around the virtual part of the exit, and always maintain the stability of the page frame, thereby forming a sense of the flow inside the page.

Through the simple intentions of the page layout, the interactive experience of human nature, let users in the use of convenience at the same time feel the beauty of the site simplicity. At the same time this minimalist form can make the information become more prominent and more concentrated, easy to grasp the user's attention, to reduce the extra time in user browsing may take.

## (2) Continuous optimization experience

Pin can be said to be the most important element in Pinterest. It can be a content of interest in their own Board through the action of pin. A pin covers a lot of information: images, links to the source web site, the user's description and the user's comments, the number of others save. When user clicks into a image can observe how many people were transferred the pin, how many people liked it, what the author wants to say. At the same time, if the content is particularly interested in, they can click the image to enter the link source website to get more information.

Pin, however, is well aware that the user's needs are constantly expanding, and that existing features seem to be not enough to meet the increasing demands of the user. Therefore, the function in the revision has been expanded, listed several functions which give me a deep impression of the optimization experience:

Products, food, films.

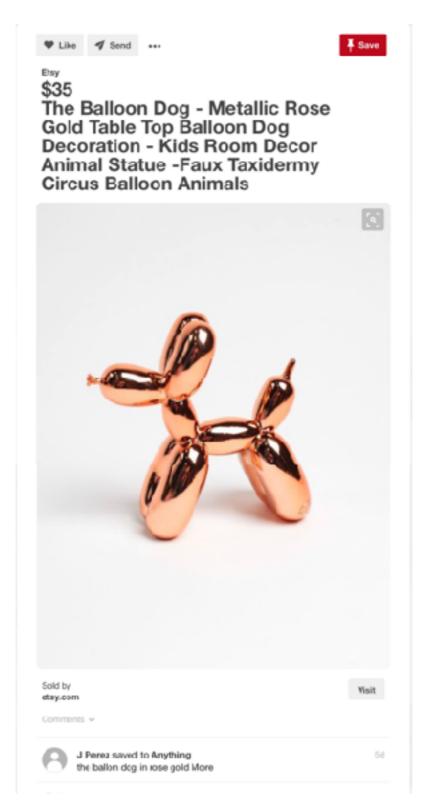


Image 4-8, Pinterest Products Pin

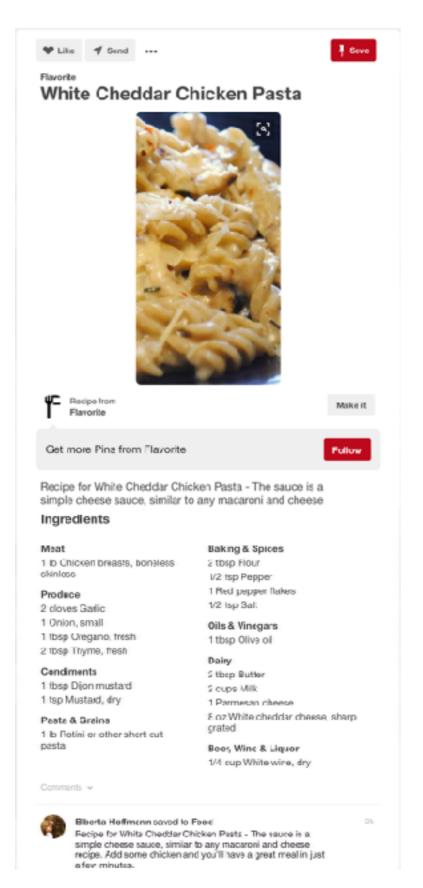


Image 4-8, Pinterest Food Pin



Image 4-8, Pinterest Film Pin

Product pin based on the original function to add price, product availability, purchase location information, at the same time related to e-commerce sites can also directly establish online shopping links, to facilitate the purchase of direct users. Food pin based on the original function to add ingredients information, cooking methods and production time and other information, really want to do it. Film pin is added to the film classification, grading, and other information, such as the actor's table, to help users better make the film selection.

And what I want to mention is the Recognition Graph function.

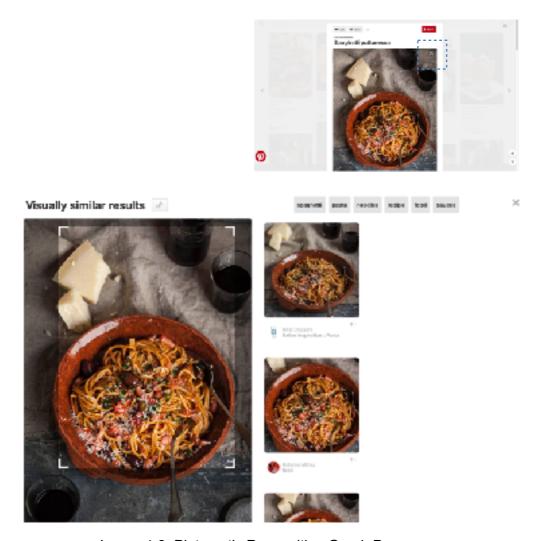


Image 4-9, Pinterest's Recognition Graph Page

When user click on the image, there will be a little magnifying glass icon on the right top of the image. And people can go to a page to see the similar results. It's really useful for me when I need to find some images of the same kind. What's more, user can choose the area of the image. It's much more

convenient then Google map.

Pin experience continuous optimization, represents the user interest is better understood. Through the continuous improvement of different interests branch of pin functions, user will be better in the site to enjoy the fun of interest.

## (3) Reading figure and waterfall flow

Reading figure has become one of the significant features of the current era. With a vivid image of the larger amount of information, add the intuitive visual effects make the image easy to understand, popular with people. Precisely because of these advantages, it rapidly changes the present form of the network application. It can be counted as the most typical website for reading figure, and overall site layout is mainly based on the waterfall flow pattern.

The so-called waterfall flow pattern refers to the layout method which is different from the traditional matrix pattern. The visual habits of action to carry out the design: the visual habits of people is from top to bottom, from left to right, then the picture arranged side by side screening can efficiently help the audience to choose images.

At the same time, in order to maximize the picture display and maintain the best proportion of the screen, it is clear that the fixed width page and the expandable height make it becomes the best choice; What's more, the well-proportioned images and picture frame of the space, make the user's line of sight to flow freely and hard to produce fatigue.

In this way, people can produce immersive effects into the picture of the world. Quickly browse the contents of your interest in many high quality images. This very user-friendly innovative view mode cancel the previous flip action, more efficiently and smoothly to select and share the contents through the senses which users are only interested in.

#### 4.3 The autonomy of interest in the object.

The success of a web site is that the site builder to develop accurate positioning, to provide content to meet the needs of, develop appropriate rules

and provide user the best experience. But at the same time, using behavior is from self satisfaction and from the passive acceptance into active communication, which from the other side of the promotion of the role of the site.

So in this section, I mainly analysis from this three parts: user-defined and self-classification; sentimental aggregate information; the effect in user's interest in collection. In order to describe the user autonomy behavior based on their own interests.

#### 4.3.1 User-defined and self-classification

Web site based on the subject of interest classification, if we say it is from the rules on the content of the site to limit and integration, then through the user defined in the form of a collection of the theme of the collection board is the complement and optimization of these rules. If we say the establishment of a web site need to rely on rules, then the site's continued success of operations requires users to fully use and develop under these rules.

User autonomy is obvious on the Pinterest, people can freely carry out the image of the collation and classification and in accordance with their own mind to collect or share. And the result of two kinds of different self classification standards will make the flow of the site's overall information is more reasonable.

#### 1. According to the classification of image properties.

Pinterest to provide users with the most basic picture finishing method, that is interested in the classification of the menu and collect Pin Collection board. Users can have a preliminary understanding of the image classification based on the user interest classification. For example, the category of interest can include art, architecture, gardening, food, education, manual, and so on, which is a comprehensive but very general category of classification. People can directly use such a collection of images to classify the image of interest, you can also customize the collection board to generate personalized classification.

People's understanding of things is often emotional, and there is no uniform answer to the distinction of some concepts. Therefore, according to the individual knowledge structure, practical experience of different, often will

produce different understanding of the classification.

For example, the same picture of a dog wearing red clothes, the user can be divided into pets, photography, humor and other categories of which. However, these show that the user's personalized needs, rich classification standards make the same understanding of the habits of users can interact with each other to form a good interest interaction.

## 2. according to the degree of interest classification.

In order to enrich the user's emotional sharing experience, providing a variety of different reaction function keys: such as Like, Pin, Send, Add a comment, Follow, Unfollow, these functions are actually user based on the classification of interest and emotion.

People in the process of browsing the images, when have a certain content interested, but the degree is not very high, often choose "Like". And when the degree of liking rises, and gradually become a need, "Pin" behavior immediately produce.

According to the needs of users will be placed in the public or private.

At some point the user will also make a "Comment". And when a user has a sustained interest in multiple content, "Follow" behavior is generated. People only in the station to generate more intimate contact with the user or a friend outside the station to the content of the special needs of the interest, will "Send to a friend".

For web site managers, through the understanding of the user's spontaneous logic classification and degree of interest to classify the logic, can better understand the needs of users. According to the degree of interest of the user to analyze the future direction of the construction site, more targeted to the content of the user's interest to push.

#### 4.3.2 Sentimental aggregate information

Pinterest web site is to some extent a knowledge sharing platform based on classification and pictures. However, it is different from the traditional meaning of knowledge sharing based on text information, all of the information is mainly produced by the fragmentation of the image integration. Through the picture information to express the view, cleverly circumvent many

difficult to describe through the text of the complex content or abstract concept. However, in Pinterest, users only need to use a picture of natural scenery photos, children smile photos, pictures of the artist's paintings and so on, will be able to know instinctively understand users want to express meaning through sensibility.

Communicate through this form of information, so that people no longer rely on the knowledge structure and cultural background of the traditional, but the approximate rely on intuition and emotional thinking form of appreciation, which greatly reduces the user participation threshold. From this, the user is able to break away from the habit of thinking, and really look at their own interests and hobbies, so as to better realize the value of self.

In the Pinterest's image waterfall flow, each one is the collection of pictures are relatively independent. In each block of board, although users are given a certain logical composition of interest, but this does not prevent other users interested in the image of the two processing, through these approximate fragmentation of information integration, the user can aggregate a new meaning, create a new value, to achieve the effect. By creating an interest in the way, people gradually find their own position, a way of life, taste and personal pursuit of expression.

Repin website of the content to show the taste and interest of others agree, through the independent complete collection board can be more understanding of self interest and future goals in the "better self". In the web site, people based on the real life of the picture, with the art of expression, close to life, but similar to art, the emotional exchange of interest from the formation of.

#### 4.3.3 The effect in user's interest in collection

The so-called circle of interest is a group of people who gather together for a common interest or for a particular purpose. Pinterest is through interest and hobbies to link people together, the user through the release of each interest in the picture and other users to exchange, and gradually generate a small circle of interest.

The discovery based on the personal interest can help the user product satisfaction, and there are certain stickiness of the interests, through two similar interests bound, users will gradually extend the original interest, have more hobbies, but due to the limitation of the individual, the amount of information available for browsing is limited.

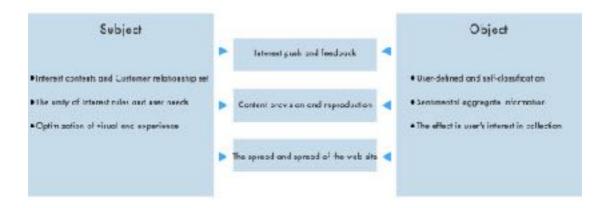
By the power of interest circle, People gather together to discuss common interests, at the same time interest knowledge and can continue to share with the supplement, so there is a passion but lack of knowledge of the relevant interests of users can get a good upgrade.

In general, personal development and personal fulfillment need to be met, interest and interest in knowledge needs to be respected, interest circles through constant sharing and discussion and become strong. Through the limited content to stimulate the creative ability of the circle of interest, so that the site continues to stay active and fresh.

#### 4.3 Interest interaction of subject and object

After the contents of the three sections before of this chapter, which mainly based on the interest site layout and introduction, the interest website construction (the main behavior) and user response (object behavior) respectively made a specific description and analysis, from the subject and object of the many elements of both the direct and effective way to promote the success of the site.

However, what I want to put forward further of the success of the site is still the interest interactive relationship between subject and object. This relationship is actually a prerequisite for the success of the site to create the environment, the subject and object of interest based on a variety of behavior in the environment can be better play, establish a close relationship: Subject through the contents itself, rules and other aspects of the "guiding interest" formed to effectively attract users, we can call the "pull"; and by attracting the interest of the website will also create UGC object, user relationship communication and other aspects of the "self interest", which can be called "push". In this "push and pull" between the web site and users are fully benefit, resulting in the formation of an interactive model of interest (see the form 4-3).



Subject: website Object: user

Form 4-3: Pinterest interest interaction model

I make this form to explain both the subject and the object have independent initiative. In the aspect of subject, content and function of the site through the construction of guide and attract users; in the aspect of object, the user is no longer in a passive state, but give full play to the initiative in its own interests, the content of the web site experience and feedback.

Specifically, the interactive relationship of this interest is mainly reflected in three aspects: the interest of the push and feedback, the content of the provision and reproduction and the spread of the site and be spread.

First of all, the subject according to their own position to complete the content of the division of interest and limited. After the completion of the initial interest in the quality of the precipitation, gradually push these content to more target user group. However, as the object of the user in the face of individual interest, or to meet the individual needs of information, often will be more active to respond to information. For example, in the Pinterest, users are often only interested in their own part of the click and interaction. The user feedback data is analyzed by using the user's interest content and the interest category, web site can clearly understand the user needs, so that the site can better guide the interests of the site to better achieve the user's "self satisfaction" in the website.

Secondly, the main content of the subject is to provide users with the content of the exchange platform. Web site launched after the initial core user resources, q larger range of new users access to these premium content. Due

to the relatively low share release threshold, the gradual expansion of the users began to spontaneously form the content of the production and provide. For example, in the Pinterest, a user in addition to enjoy the collection of paintings and other people's collection of paintings, she will continue to pass other sites or some of the reality of the art exhibition collection as a collection of content. This is from the original intention of interest, can let the user's "content reproduction" more active and lasting, so as to ensure the continued prosperity of the website.

Finally, the main object of interest interaction lies in the content of the web site based on the dissemination of interest. The main body will be the site of interest and quality content as the core of the spread of points, through the site to the user to spread out. And website users in the interest needs to be met, the expression will be satisfied to the site will be spread to a wider range of radiation. The object will take the initiative to carry on the word of mouth, the communication line and the line of communication. This interest as the core of the spread of the site will help to win more users outside the number of users to ensure the quality of the user.

Through this kind of interest based interaction, a good and stable close connection is formed between the subject and the object.

Node. The object (user), website set up easy and convenient access to environmental information, providing exclusive personalized content, meet their needs of self satisfaction and personal realization; and for the main website, the user interest feedback can better help network strategy adjustment of station, users can maintain the content of active contribution based on the basic website. This mutual encouragement, mutual benefit way can make both sides have a strong sense of participation and sense of belonging, and thus out of "the successful path of prosperity - website user satisfaction" cycle.

# 5 Interested marketing of Pinterest

#### 5.1 Interest positioning the user

When people are going through one of the important moments in life, such as planning a holiday, preparing for the wedding, decorating the new house, etc., Pinterest as a strong interest in the inspiration library can be a good way to help users to choose the relevant.

Usually these moments tend to produce a large amount of consumption, so Pinterest's first marketing strategy is to use interest in positioning the user, to help business partners for precision marketing.

I searched on Internet for a professional interpretation for Pinterest marketing way. Just like what I said at previous paragraph. It is called "precision marketing", which is based on the precise positioning, relying on modern information technology to establish a personalized customer communication marketing.

More clearly say, precision marketing first of all need to rely on the accurate market positioning technology (such as database technology) to determine the consumer groups, and then through the network communications technology to transfer the product information to those who really need people. Through the choice of consumer groups, so that they know the product, understand the product ultimately produce sustained buying behavior.

So for Pinterest first it needs to through the user's basic information, click on the web site, the use of habits and so on to collect data, and then through cooperation with the business to provide them with accurate classification of user content sharing platform, in order to achieve the ultimate user needs to meet the actual needs of the site and the profitability of their own.

Different from the traditional social networking sites is that Pinterest's precision marketing is rooted in interest, consumers tend to take the initiative to find the desired content in the site, which makes the site click to buy the conversion rate has increased significantly. At the same time based on the classification of interest, users naturally form a consumer groups, businesses do not need to face the complex and inaccurate user groups, effectively solve the marketing targeted.

As we all know, according to the different interests, or according to the user's habits of different temperament, every site forms a major user groups. And according to the characteristics of different groups, the website can be targeted to provide users with more personalized content services.

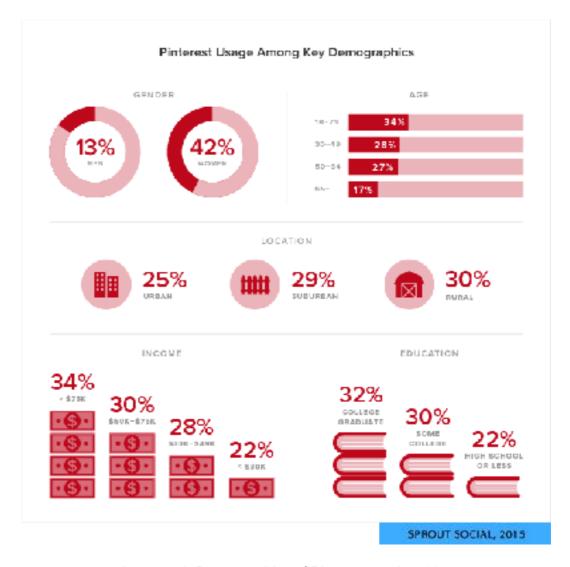


Image 5-1, Demographics of Pinterest study, 2015

According to the image 5-1, the data provided by the Sprout Social<sup>12</sup> Social Media Demographics, Pinterest's population demographics are mainly concentrated in the two ranges of age 18-29 years old and 30-49 years old; the number of female users accounted for site use; family income level mainly in the \$50 thousand to \$75 thousand and over \$75 thousand, education mainly focus on undergraduate education; according to the geographical division.

We can see that the main users are women, most of them have been married, with a high level of culture and a wealth of financial resources, they usually control the clothing, household consumer goods and gifts and other household expenses. At the same time, according to the different classification of interest (such as pets, food, women's fashion, etc.), the user group can be further natural subdivision.

Therefore, for the group of brands (such as clothing, food, cosmetics, furniture users) can be created through the brand account, set up all kinds of product pictures collected in the form of marketing information accurately classified content delivery. However, this kind of marketing by image content sharing forms into the user's view can not cause blunt advertising effect, through the sharing and exchange of content, allowing users to understand the products, select products in naturally, in order to enhance the user experience.

In addition to the content of the targeted groups put on, the user needs to be aware of the function will effectively help businesses to promote. Its' basic principle is through the user in the web site of the interested content of similar collection, which is based on the content of interest. Through this form of promotion, the content of the business product coverage has been more accurate and effective to expand. At this time, the incarnation of the assistant of the network shopping helper, in the user generated shopping needs to provide advice and help, but also can effectively guide the consumer online shopping decisions.

<sup>&</sup>lt;sup>12</sup> Sprout Social is a social media management tool created to help businesses grow their social media presence.

#### 5.2 "Opinion leadership" and consumption circle

The word "opinion leadership" was first proposed by the communication scholar Paul Lazarsfeld<sup>13</sup> in 1940s.

Opinion leadership is leadership by an active media user who interprets the meaning of media messages or content for lower-end media users. It refers to the "active" molecules that provide them with information, opinions, and comments on the interpersonal communication network. Because of its appearance, the formation of two-step of information dissemination.

Opinion leadership is in the mass media and the audience, in the formation of middle or the role of filter. They are the first or more frequent contact with the mass media, and will go through their own processing of information dissemination to other people. Due to their involvement in the mass communication, it has accelerated the speed of transmission and expanded the influence. These opinion leaderships are usually in the same relationship with the audience, and not on the relationship between the upper and lower levels. They can serve as opinion leaders in these areas by mastering the knowledge of a field or with a high reputation within a certain range. Due to the audience's understanding and trust, his views and opinions can be persuasive and quickly spread to the audience.

In the Pinterest, people are based on the interest to collect and share pictures content. In the process of collecting and discovering, some people usually have a good opinion of the content, and gradually communicate with them. Therefore, through the common interests and hobbies, the people gathered to become one of the interests of the circle. In the circle of people to discuss the love, the exchange of love of knowledge and emotion.

Due to the cluster effect, people can continue to expand the depth and breadth of personal interests in the interests circle, by the communication and recognition of personal interest, to obtain emotional resonance and self satisfaction. However, in the circle of interest, there will be the same in the above mentioned "opinion leadership", because themselves have a deep study for a class of interest, or is itself engaged in related industries (such as

<sup>&</sup>lt;sup>13</sup> Paul Felix Lazarsfeld (February 13, 1901 – August 30, 1976) was one of the major figures in 20th-century American sociology.

art, architecture, photography and so on), so they can be favored by people in the circle when they. The views of nature can produce effective influence on other audiences in the circle.

By the circle of interest in "opinion leaders", the audience (other users) can continuously gain more interest in the content which is more comprehensive, so as to ensure that the interests of the circle of activity and influence, and then to the entire site of interest content to have a greater impact.

Of course, interest circle not only can bring more rich content of the site and more users to participate in the content, but also become one of the ways to become a commercial website. In the interests of the circle of users based on shared interests to share the same time, around the business information generated by these interests also allows users to produce a higher degree of concern. For example, in the family circle of interior decoration, the user has a strong interest in furniture, display and all kinds of decorative furniture, and this kind of interest can be guided to become the actual purchase behavior. By the user spontaneous sharing some of the furniture brands of their favorite products to the site, causing concern and interest in other users resonate, and thus effectively help these products to effectively promote and directly guide the user to buy.

Therefore, through the formation of the user interest in the circle of the law, internal rules, such as the impact of the grasp of the habit of information, the site can effectively help businesses to promote the interests of the circle of special content. The content itself can be used as the content of the site of interest to spread, so as to be more beneficial to the product is successfully received by the user in the emotional to facilitate a better understanding of products and trust products.

At the same time, because of the specific structure of these circles and active brand products can be targeted directly to the core consumer group, and cause a wide range of discussion and concern, thus producing good marketing effectiveness. And in addition to the direct use of the spontaneous formation of the site's opinion leaders, businesses are also can be generated by a self generated service in the brand's exclusive "opinion leadership".

Businesses can through some user educations, encourage them to talk

about products and brands in the site, transfer product use feeling and experience in a wide interest in consumer circles, thus forming the opinion leaders recommended the high degree of concern. At the same time, as a two-way communication, the "opinion leaders" and other users of the exchange of products for the brand's further product marketing to make an effective reference.

For example, the opinion leaders will communicate with other consumers on the quality of some products, service experience, some good use experience can make marketers consciously strengthen the contents of the part, and for those who have not meet the expectations of unpleasant experiences and complaints can be processed quickly, thereby reducing the negative transfer and diffusion.

#### 5.3 Sharing Consumption

The role of the brand for the enterprise is self-evident. The purpose of brand building is not only to sell the product directly to the target audience, but also to let the consumers have a good impression on the use of the product. In the repeated purchase behavior and brand continued publicity, and gradually around the product and brand to form a consumer experience, thus provide help for future consumer decision making. This is endowed with a good emotional and cultural value of the brand image, can make consumers more likely to produce a better brand association. For example, "Volvo", when people see the car brand will can't help to associate it with "safety and quality", and "travel and the quest for peace" wish so when considering people agree without prior without previous consultation, automobile product safety outstanding, the Volvo brand has become the first choice.

SNSs are also the same, a communication way which is very suitable for enterprises to carry out the form of brand. For most enterprises, the important value of social networking sites is to bring it to create brand image and increased target consumer participation in SNSs between by the strong relationship chain, enterprises can be related information for targeted and effective fast diffusion. In the process of communication between the

enterprise and the user, by listening to the views of users, according to the current hot topic, to promote the content of creative, let consumers in the information gradually formed by the formation of the "long tail effect" in the formation of the brand awareness and understanding, constantly improve the brand of the degree of goodwill and spontaneous with the promotion and promotion of the brand.

However, in the traditional social networking site of the brand marketing process, it will also have some limitations. First, due to the effect of social marketing assessment criteria is very vague, so the business is generally concerned about the number of users of the brand (that is, the number of fans) and the content of the forwarding. However, this result is not effective for enterprises to target users to carry out brand promotion; at the same time, because of ignoring the user's quality and interaction effect, the enterprise may form the "one-sided" prosperity of brand marketing and the waste of marketing resources.

Second, the quality of the content directly affects the effect of social marketing. However, the enterprise is not a full-time content producers, so in order to maintain the enterprise account activity and the need for regular brand promotion, enterprises often need to spend a lot of effort to carry out the content of innovation and design. Even if there is a higher quality content, but also can not form a certain scale of users to spread the critical point and can not truly bring success to the enterprise brand marketing.

However, in the Pinterest, the aggregation method which is based on the interest graph and visual content can provide a new idea for the enterprise brand marketing.

#### 5.3.1 The vivid display of products and share

Through the presentation of the waterfall flow and the simple visual expression, Pinterest can create a vivid product display module for the enterprise. This kind of presentation which uses a single product as a single Pin to add into Board can meet the user browsing, selection of product buying habits, to better guide the user to understand and share product information and to achieve the final product purchase.

# Have you ever purchased a product/service after discovering it on a Pinterest?

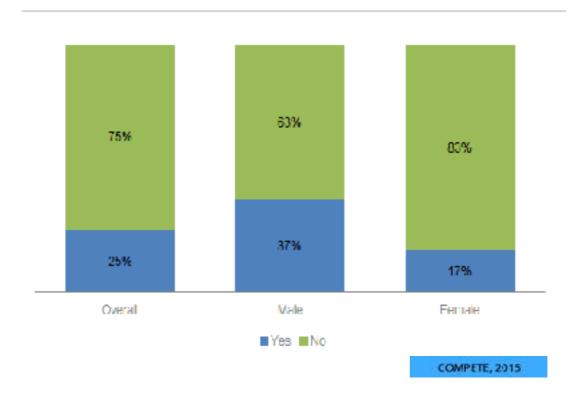


Image 5-2, user purchase behavior after browsing Pinterest, 2015

According to the data of the Compete network research institutions<sup>14</sup>. Pinterest is not just raising brand awareness but is also driving purchase behavior. About 25% of consumers reported purchasing a product or service after discovering it on Pinterest – that number jumped to 37% amongst males.

#### 5.3.2 The establishment of brand diversion model

Based on the low threshold way of image plus Pin can form a good brand with the brand interactive mode. People with interest will be stored to other web content to collect their own board, through the brand (product), price, picture introduces double return brand (product sales page) mode, effectively brand and product information to the target population. The circle of interest to discuss and share the brand information can directly help to quickly get a

<sup>&</sup>lt;sup>14</sup> Compete.com is a web traffic analysis service of Compete, Inc.

good impression of brand, then by the diversion channel is convenient to produce the actual purchase behavior.

#### 5.3.3 Brand intimacy created

In Pinterest, the spread of the brand more need to highlight the characteristics of the people. Based on the graph of the brand and the story, the enterprise can form a good sense of intimacy in the circle of interest. This intimacy is often able to allow users to have a more intuitive understanding of the brand, and more likely to be accepted.

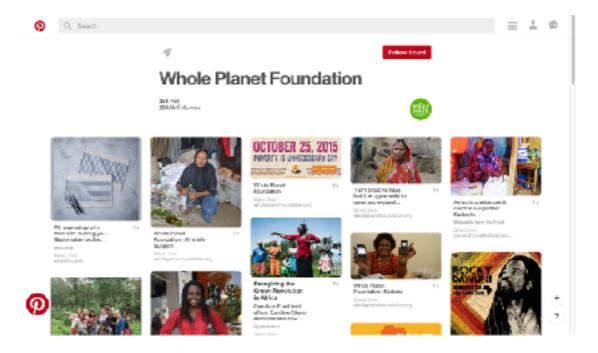


Image 5-3, Whole Planet Foundation Board of Whole Foods in Pinterest

For example, Whole Foods, an organic food brand has not only specially introduces the collecting plate of green food in Pinterest, but also has many such as the introduction of their favorite books, treasure hand classes, proud of the beauty tips, earth fund collecting board etc., Whole Foods, at this time changed from a single food brand image gradually enriched into a love of health, love themselves, care about the environment image. This through multi-dimensional three-dimensional image of the spread of the brand, can help enterprises to establish a close interaction with the target groups, enhance brand goodwill and trust.

# 5.3.4 The communication between brand and user depth based on interest.

Pinterest interest content settings, so that it can not only become a tool for users to meet online interest, but also be able to help guide the actual life and interest of the user line. And in which the brand can also be borrowed by this relationship, will be completed with the user online and offline interactive connectivity.

By focusing on the image of the brand temperament consistent with the views of leaders, to encourage and guide them to carry out the relevant brand of the next line activities. By the platform, other users began to learn, receive a line under the guidance of the brand recommendations, so as to share and spread interest in the relevant experience. For example, online crafts sales platform, which allows high-quality users to build a collection of boards.

In the collection board, the user can introduce a sense of interest in the arts and crafts and with their stories. Based on the same interest, users can deepen the understanding of brand familiarity, contribute to the maintenance of brand loyalty; another part can also help users understand their own interest but not familiar with the brand and products, the formation of effective brand promotion.

### **6 Revelation for food SNS**

#### 6.1 Revelation of Pinterest

Through the first 5 chapters, the analysis and research of interest graph and the based on interest graph SNS: Pinterest, I get the following 4 inspirations, trying to provide some new ideas and strategies for the food SNS what I want to do.

Revelation one: cultivate the UGC environment, highlight content differentiation.

The prosperity of the site, such as Pinterest, to a large extent is based on the prosperity of the user's original content. This mainly lies in the formation of network users and the formation of habits and related copyright, privacy protection policy implementation. At this stage, the user will gradually form a SNS, but also need to actively continue to guide the website. Through the users of the original content of encouragement, the content of the quality of the decision and the establishment of relevant network public opinion. Committed to the establishment of a suitable environment for prosperity, so as to ensure the continued prosperity of social networking sites content foundation.

Web site on the basis of the user's original content, but also should pay attention to the content of the sort and classification. The formation of content screening mechanism of the huge amount of information on social networking sites, while maintaining a website and sub category information in a logical order, on the other hand with the needs of individual users, push, the formation mechanism of user groups positioning and specific content. However, this must be based on the accurate capture of the user's individual characteristics and the characteristics of the group and the accurate judgment of the content characteristics.

Revelation two: the development of multi-level social functions, the establishment of immersive social environment.

At present, the development of social networking sites in a bottleneck stage, a large number of SNSs to focus on the user base, the user's social relations and the development of the entertainment oriented social environment. However, people's real social status is not flat organization, but is three-dimensional multi-level. In different social areas, users will present a different state, the exchange of different types of information, resulting in different degrees of social satisfaction. So in the framework of social networking sites, you can consider more different depth of the social ladder. Defining the relationship depth through the user's spontaneity, web site can be more comfortable to assist the user to maintain the relationship, rather than blindly emphasize the extension of the relationship. More targeted functions can also be carried out according to the depth of the different, so as to form a more close to the real "social environment".

At the same time, the stereotype of the entertainment environment can be changed by the structure and the content. Social networking sites in addition to the positioning of the entertainment can also be rendered professional (LinkedIn), knowledge (Quora), and so on.

By changing the traditional environment, to promote consumers from fragmentation, jumping to the use of habits, by the actual effect of the more powerful content, guide users to carry on the coherence, the depth of thinking, impetuous, easy to draw away from the social environment has gradually changed into the people's interest in the topic type of social circle.

This is not only to increase the actual availability of social networking sites, improve the user's frequency of use, while this difference will also significantly effect on the user's understanding of the site, improve the site can be identified.

Revelation three: insight into the actual needs of users, the site's own clear positioning

The core of a site's continued success is to clear their own positioning, to understand their own user needs, moderate depth or extend their own professional field. Only under the premise of full understanding of user needs, combined with the unique location of the site, in order to develop a suitable development strategy for the site. Specifically, users have a variety of needs, such as communication needs, access to knowledge and so on.

The site can not meet these needs exhaustive approach, but should focus

on the needs of some sub categories. By doing this type of deep doing fine, gradually clear their own positioning and the formation of a new impression in the user's impression. This does not mean that the relative user acceptance face narrow, but by a class of needs to continue to meet the needs of more areas, extending more suitable for positioning of product types and functions.

#### 6.2 Defect of Pinterest

Up to now, I used a lot of space to introduce the interest graph, and analysis of the advantages of Pinterest. But in the use of Pinterest, I found a lot of imperfection places, these imperfections places or defect functions affect the user's using sense.

So from this part of my thesis, I am focus on the analysis of the drawbacks of Pinterest, and the beginning of my work. As all products is produced for users, so my analysis is also from the view of product experience.

#### 6.2.1 The complicated naming and classification of boards

At first when user use Pinterest, it will give user some tips and help: Home furnishing, Books, Shopping list, Tourist spots, Fashion and so on. It is really good and convenient. But for a long time of using, when user want to add more board, then the classification becomes complicated and can not grasp the important key.

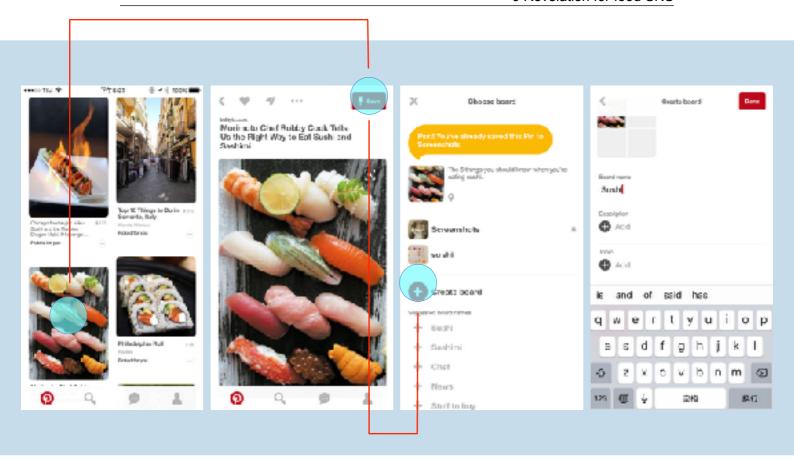


Image 6-1, Pinterest Board Action

#### Here is the action:

scan the images — see the details — save to board — create board User must go to 4 pages to finish a Save action.

But most time when user want to save a image, he don't want to think to much about which Board to save, which name for it. And what's more, the Save to Board action destroy the using felling of the application. It uses 20 seconds or more, and it must interrupt users' thinking, after the action, user may forget why he want this image.

Why can not save it just in one action? Why can not just touch one icon to finish it?

Then the problem comes: the exiting reason for Board is to organize images, without it how can user order the images?

This is an important point which I will solve in my application.

#### 6.2.2 The trouble of modifying a pin

When user want to modify a pin — edit or delete it is also more trouble. They need to point "edit" into the entry page to do the operation, and can not be directly carried out in the small figure mode. But when user edit contents, they are more liking to point the description following, directly modify, just like Flickr. Because when they do the delete is more like a small fork on the entry, you can go directly to the point.

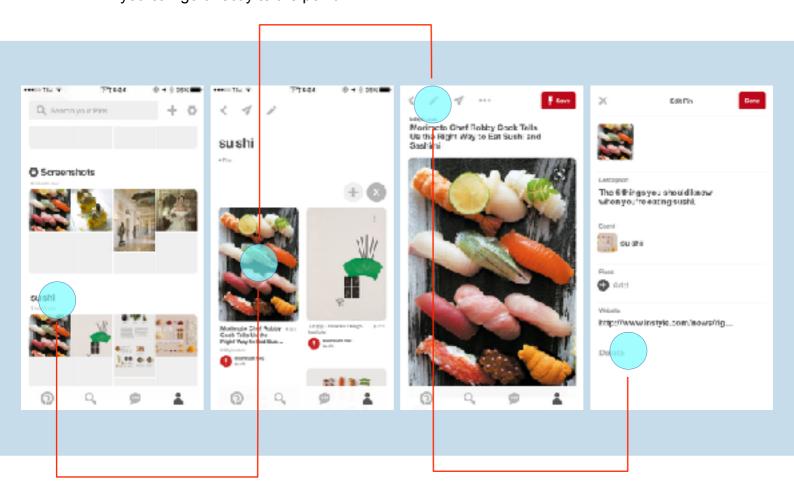


Image 6-2, Pinterest Delete Pin Action

From image 6-2, we can see, if user want to delete a Pin, the action is:

go to personal page — see the Board — point the edit — delete Pin

But this is just edit an image, users have to go to 4 pages, and then slide to the bottom to delete it. Why can't they go directly to delete?

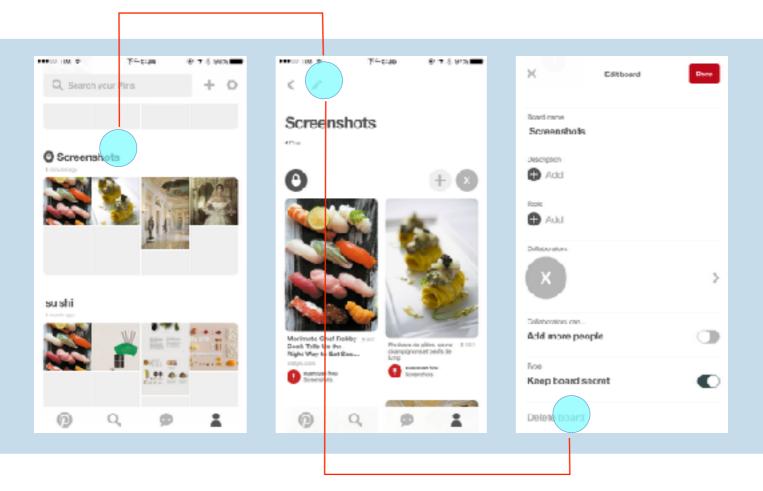


Image 6-3, Pinterest Delete Board Action

The same goes with Edit or Delete a Board:

go to personal page —- see the Board — delete Board

Edit and Delete use the same icon, and the icon looks unimportant un the full of beautiful images page.

I know, the original intention of Board and Pin are to make images more clearly, to let users quick select the images they need, but the too many operation steps instead make the effect just the opposite.

This is an important point which I will solve in my application.

#### 6.2.3 Repin trouble

All the Pins can be Repin, even between different boards.

Users can both Repin others' images and can also Repin their own. If it is the former (and you Save other person), at least there is a little vanity of fun, but if it is the latter, in your personal page will appear the same pins.

It looks like: Spam!

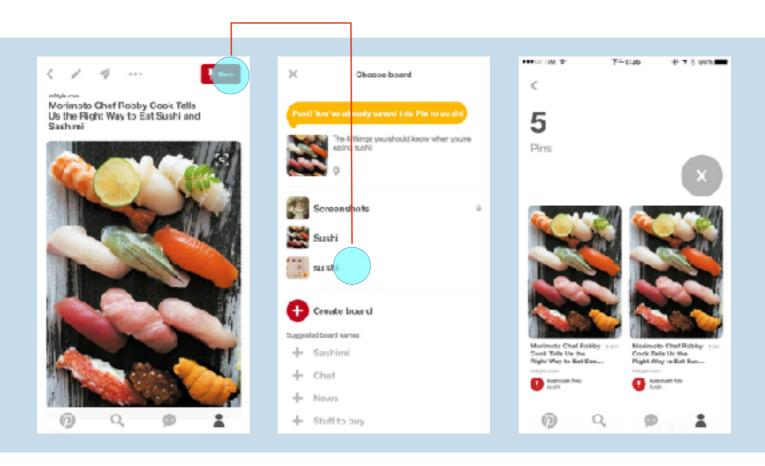


Image 6-4, Pinterest Repin Action

I told about so many advantages of Pinterest. But now, I figure out 3 defects of the Application of it. It is not means I I think it is not good any more, or overthrow my conclusion.

Just because for the application operation, users need a more simple and efficient using steps. And the existing defects which exposed in the original web page version of Pinterest go more obviously in the application of it. So it is the most important reason why I want to redesign.

What I want to do is based on the Pinterest which represents the interest graph SNSs, but is more than existing interest graph SNSs.

Is a quick and easy photo sharing and classification of application.

#### 6.3 General defect of food SNS

With the development of SNSs, as well as the continuous improvement of the picture sharing SNSs, interest based SNSs have maintained a strong growth rate and user stickiness. However, with the continuous deepening of the field of business and expansion, many of the problems are gradually presented in front of the user. Therefore, I through the study of the food category of SNSs, analysis of the general defects of these sites exist.

First, in the content level:

Not professional.

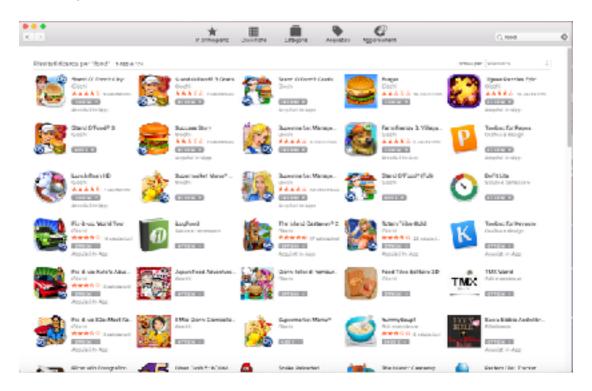


Image 6-5, App store search page (English vision)

When you search "food" in Appstore, the results come out with a lot of games which about food. But there are almost nothing about real food. The similar results when I search "cibo" in the region of Italy.

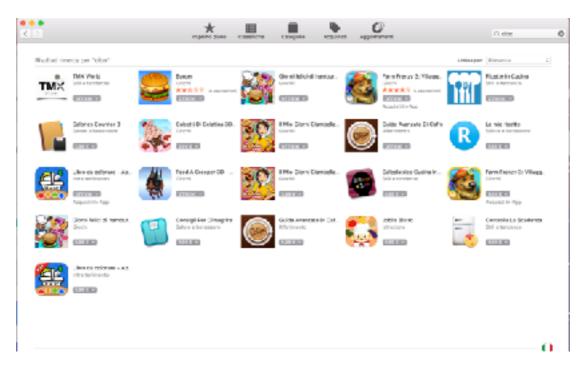


Image 6-5, App store search page (Italian vision)

I guess maybe my search key word is not collect enough, what I am looking for is the food image sharing applications. So I changed the word from "food" to "image sharing".

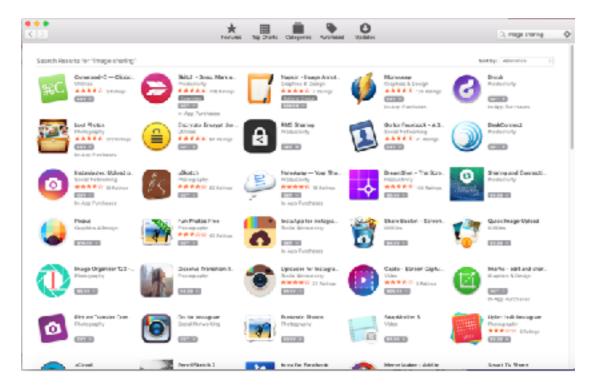


Image 6-7, App store search page2 (English vision)

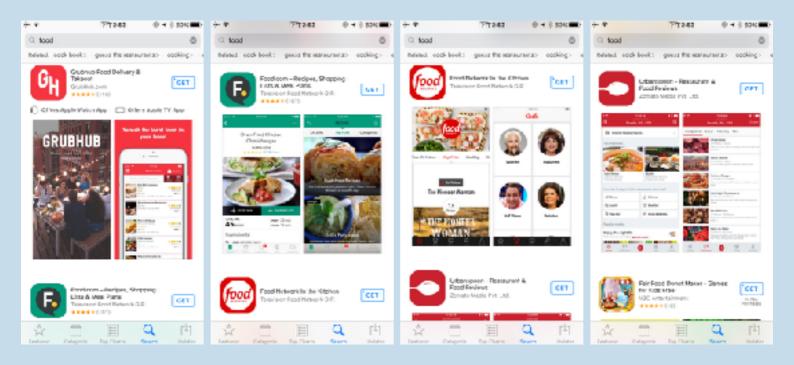


Image 6-8, App store search page in iPhone

The contents in iPhone are much more better. At least all the applications is about food. In image 6-8 shows the Top 4 search results. But if we look more carefully, we can easy find out all the results are about food recipes.

Now the popular food app market are mainly focused on the sharing of recipes, food recommendation, healthy diet management, health care etc. Everything has been done more perfect. Most of them are suitable for cooking delicacy has a strong interest in this enthusiastic crowd, such as housewives, the elderly, and the young people have a lot of time,

But we tend to overlook such a group of people ---- the food is not enough to understand or simply to seek the United States figure of the crowd, and the choice of dishes and restaurants for the majority of young people have a choice of difficult to become a problem.

On the other hand, the commercial marketing content also gradually filled with social networking sites. In addition to a part of the production of exquisite, creative and social marketing content, more rigid, monotonous advertising began to appear in the user's browsing interface. Due to the lack of effective

screening of businesses, more and more users begin to produce these commercial products disgust, so that the reduction of the use of the site time, reducing the user's viscosity on the site.

So a beautiful interface is needed, easy to operate the app to solve the problem. Like Pinterest, but the contents are only about food.

But, it has to solve Pinterest's complicated Board problem as well.

Second, at the level of the communication environment:

Social function has not been fully developed, users tend to shallow level. At present, the SNSs in the search and expand social relations more attention, but for the maintenance and consolidation of the relationship is slightly weak. Since the user information associated with a friend push function, the user can maximize the relationship between.

But the lack of effective relationship between the carding and the continuous overlap of interpersonal relationships, still formed a close relationship between the frequent interaction with the strange relationship of the polarization of the sustained. In the maintenance of the relationship, the daily life of the exchange of information in the first place, and more in-depth resonance of the content of information exchange is still less reflected, and this has also affected the further pleasure of social relations.

Third, at the level of functional orientation:

Website localization is not clear, the function of complex impact on the user experience. With the increase in the number of social networking sites and increased competition, the traditional single social function positioning obviously can not meet the needs of users, from the social networking sites began to appear with the integration of various network applications. However, this integration is more extensive, and not based on the site

The user's specific needs are introduced to meet their own characteristics and the core competitiveness of the function. More and more functions are not only can not effectively arouse the user's interest, but fuzzy the user's attention, reduce the user's perception of the image of SNSs.

## 7 Conclusion

Interest graph, which is born with Twitter, this born in the United States of Internet products, widely developed in the world, and integrated into the characteristics of different audiences. However, in this rapidly changing Internet field, only good at absorbing the latest model from all aspects, to be able to continue to maintain its leading position.

First, segmentation and coherence of niche market<sup>15</sup>

Pinterest is an American style network success: active, with expression of the will of the user population, policy and environment to encourage original content, communication social network model plus a wide range, all this contributed to it has become a successful example of interest map website. Many site builders trying to imitate and copy to copy this model, but they did not understand the development model will have a difference in different environment, so only understand the essence of the operation to maintain the attraction to the user.

In fact, a wider range of network service products including SNSs, Pinterest value lies in its correct understanding of the market and the subversion of the stereotype of a certain network products. The correct understanding of the market lies in the understanding of the potential user needs, matching the appropriate pattern, the construction of a smooth user relationship, the formation of a joint market positioning. It is not directly in the face of existing user needs (or the public market), but through the demand (or the mass market) to sort out, to find and open up a niche market development space.

Based on the market segmentation and long-term intensive and meticulous farming precipitation user, the network application gradually formed the vertical specialization and the image in the minds of users. Subversion of the stereotype of online products is another innovative way of thinking, taking social networking sites as an example, this type of network products do not necessarily need to consume a large number of users, to maintain a high frequency.

But can become a user in a particular need and a particular moment of a habit, when the need to germinate, the user will be used to choose the

<sup>&</sup>lt;sup>15</sup> The market niche defines as the product features aimed at satisfying specific market needs, as well as the price range, production quality and the demographics that is intended to impact.

product. Of course, this must be based on the niche market segments maturity.

Second, the continuous combination of social graph and interest graph

At present, the mainstream of SNSs are still the core of the structure of social networks, and interest graph in SNSs also maintained a strong momentum of development. So I believe that this two types of social networking sites are complementary nature will lead to the future of social networking products to form a trend of integration of social graph and interest graph. Through interest graph, SNSs to attract users to explore and share content, maintain website stickiness and bring more high quality website; through SNS graph can more quickly expand the user groups by the existing social relations have maintained stable and good relationship between the fixed site. All kinds of SNSs can choose according to their own location of the social graph and the combination of the proportion of interest map, so that the content of the two parts of the contribution and the user base to achieve a certain balance.

For example, based on the interest graph, the user is mainly interested in the content of social networking, but also some social reality has a common interest in the hobby of friends can also be invited to enter the site. Weak ties help to maintain a social sense of ease, but the strong relationship that has been selected can play a better role. And as Facebook, which based on social graph, students, working relationship is mainly set up user communication link, through similar aggregate interests, can be further simplified relationship between groups, the formation of more stable and active social relations. Not only that, the future of more new graph architecture will further optimize the current SNSs, from the construction, function better to meet the changing needs of users.

Third, innovation to meet the user' needs

January 6, 2016, the organized by the American International Consumer Electronics(CES), the introduction of all kinds of new products and new technology indicates that the next period of time the global technology trends will focus on wearable devices, intelligent home furnishing, smart car and so on. All this means that the application of social networking sites will have more space to expand, because the potential needs of web users and these new

technologies and products have a high degree of fit.

Looking forward the Interest graph SNSs, the pattern before no longer meet user' needs anymore. User need is not only beautiful pictures, strong social network. They need these new technology to really make their lives easy and comfortable.

So, after these pages of thesis, after analysis the advantages of Pinterest, I want to design to simplify the process of scanning masses of images, and provide a simply way to scan food images.

#### **Thanks**

When writing these words represents my two years of graduate career is nearing completion, in full of expectations, but have begun to miss. This graduation thesis is good for me: it is the project which I paid most attention during my master degree study, from the topic to the first draft, from the first draft to another draft, and a reflection of my time.

Each section is the result of painstaking efforts of the instructor's guidance and my a lot of thought. I am very glad, in the experience of these hard working days, I finally succeeded in the completion of it, it has become a witness in this period of my life.

Of course, the witness my wonderful and exciting two years time is not only this thesis, but also those who I met and experienced with.

Polimi, where I met many predecessors and friends; here, I went with them, designing projects, learning manual, every time dine together and to talk with pleasure; I have the feel of home. Thank you!

Thanks for the exchange experience Polimi gave me. Exchanged to Musashino Art university for half a year, exposed to different cultural characteristics, especially the Wabisabi culture which comes from China but different from China, gave me a great shock.

Grateful to Professor Ciastellardi Matteo, as my relatore docente, has been to give me a lot of help, and give me a very valuable advice. He is such a confident and a man full of personal charm. In his words, I always feel free and full of aura. In the communication with him, let me slowly sort out the logic, let me understand that thinking and communication are both important.

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#### **Links of Images**

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