

# **Best-Answer Selection Criteria in a Social Q&A site from a User-Oriented Perspectives**

**SILS CRADLE Brown Bag Talk**

**Sanghee Oh**

**(2007/09/28)**



# What is Social Q&A?

- Internet Q&A, Knowledge Search
- Community-driven
- Collaborative information sharing
- Voluntary participation of people to ask and answer questions, and share information with other people
- No intermediary quality control from authorities
- Free services
- Questions, answers, comments, voting, rating, etc.
- Comprehensive topic coverage (25 subject categories)

# People's attitudes toward social Q&A

- 33% of online users have used a Q&A site, and the half of them (52%) say that information from a Q&A site has influenced to make decisions.
- 81% say that they are likely to get answers to specific questions if the service was free.
- 79% believe that they could get answers in minutes in social Q&A.
- 77% need an answer to something unfamiliar to their friends or family.

(Yahoo! Answers survey, 2006)







# Research Questions

- How do people evaluate the answers and filter them out to fit their information needs?
  1. What relevance criteria do people employ in selecting best answer to their questions?
  2. What correlation does exist between these criteria and the types of questions people ask?
  3. How do the criteria distribute differently depending on the subject categories?

# YAHOO! ANSWERS

- Launched Dec 13<sup>th</sup> , 2005
- 96% of market share of visits (Hitwise.com, 2006)
- 16.6 million users & 60 million answers (Yahoo! Answers survey, 2006)

Answer Sites Ranked by US Market Share of Visits to Custom Category, week ending December 23, 2006

Rank	Website - [Show domain]	Market Share
1.	Yahoo! Answers	96.10% 
2.	Answerbag	2.04% 
3.	Windows Live QnA	1.02% 
4.	Wondir	0.71% 
5.	Askville	0.11% 
6.	Yedda.com	0.02% 

Source: Hitwise USA

- Community building
  - “Share knowledge,” “Help others”
- Reputation building
  - “Earn points,” User profile analysis
- User roles: Questioners, Answerers, Viewers, Voters, etc.

## ask.



Can't find it with search? **Ask**

**Post Question**

## answer.



**Share** knowledge  
**Help** others  
**Earn** points

What people think of Answers  
How does it work?

## discover.



be a better  
**Foodie**

see  
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& Drink** ▶

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Still have questions about community moderation? Read [answers to some FAQs](#) in our blog.



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### Yahoo! Answers On the Street



#### How can I look like a good dancer... even if I'm not?

If you've ever been self-conscious about your dance moves, you're not alone. J. Keith van Straaten is looking for the key to looking like a good dancer - even if you have two left feet. See what tips people on the street and dance instructors had to offer.

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### Answer Questions

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**I Misplaced my recipe for the brine that you use to corn beef at home. You soak it in a solution for 2 weeks.?**

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## Ask Mike: Taking Stock in Bonds

It's amazing (but not surprising) how quickly current events are reflected in Yahoo! Answers. Take the recent hubbub surrounding Barry Bonds' record-breaking home run ball. Designer Marc Ecko, who bought #756 for around \$750,000, has put the ball's fate in the hands of baseball fans.

[Read the Answers Blog >](#)



## Answer Questions

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Popular



**I Misplaced my recipe for the brine that you use to corn beef at home. You soak it in a solution for 2 weeks.?**

★ In [Cooking & Recipes](#) - Asked by [leaside](#) - 1 second ago



**The legendary 205 gti?**

★ In [Other - Cars & Transportation](#) - Asked by [m4d\\_mike](#) - 1 second ago



**What is the role of a venture capitalist in helping to secure funding for a business?**

★ In [Corporations](#) - Asked by [business mouse](#) - 9 seconds ago



**Has anyone been to a mercury concert?**

★ In [Other - Music](#) - Asked by [cazza 64](#) - 11 seconds ago



**Is satellite radio already available in the Dominican Republic?**

★ In [Dominican Republic](#) - Asked by [El Chapulin Colorado](#) - 11 seconds ago



**Switch language to english?**

★ In [Yahoo! Search](#) - Asked by [Chris G](#) - 11 seconds ago



**Access denied after downloading torrent?**

★ In [Software](#) - Asked by [STEVEN B](#) - 13 seconds ago



**When is the nokia n97 is going to come out? What is the price of it? what does it have on it?**

★ In [Yahoo! Answers](#) - Asked by [brian s](#) - 14 seconds ago



**Which national company should I apply to?**

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### Can i get back to normal?

☆ In [Diet & Fitness](#) - Asked by [sammi](#) - 0 answers - 3 minutes ago



### Aneuploidy screening?

☆ In [Women's Health](#) - Asked by [Jeannette L](#) - 0 answers - 4 minutes ago



### How does grapefruit effect estrogen?

☆ In [Other - Health](#) - Asked by [junebugbaby83](#) - 0 answers - 4 minutes ago



### High Pulse Problem?

☆ In [Men's Health](#) - Asked by [horation](#) - 0 answers - 4 minutes ago



### Is surgical stainless steel allergy free? (someone with knowledge on this answer)?

☆ In [Allergies](#) - Asked by [TrustNo1](#) - 0 answers - 4 minutes ago



### Im drinking loads of water but my stomach keeps growling afterwards why is that?

☆ In [Diet & Fitness](#) - Asked by [L](#) - 0 answers - 4 minutes ago



### Is this too much breakfast?





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**Back injury from weight lifting....advice sought ....?**

☆ In [Injuries](#) - Asked by [J.C.](#) - 2 answers - 5 hours ago



**How do i go about the feeling of a 50 year old trapped in a 20 year old body?**

2 ☆ In [Mental Health](#) - Asked by [sickdeathshappen](#) - 23 answers - 6 hours ago



**Goddamn mosquitoes!!!?**

☆ In [Skin Conditions](#) - Asked by [Mrs. Vesic](#) - 3 answers - 7 hours ago



**I am addicted to tampons, is it harmful?**

☆ In [Women's Health](#) - Asked by [Night Crawler](#) - 25 answers - 8 hours ago



**I am worried...?**

☆ In [Women's Health](#) - Asked by [keti93 m](#) - 6 answers - 8 hours ago



**Why does it sometimes smell very horrible when people sneeze?**

☆ In [Respiratory Diseases](#) - Asked by [waheed k](#) - 7 answers - 8 hours ago



**Can i lose wight by any pills or tablets without side effects plz help me?**

☆ In [Diet & Fitness](#) - Asked by [alisha](#) - 10 answers - 9 hours ago



**Is there a way to "slow down" Dementia in elderly by having them work on simple puzzles & build up from there?**

☆ In [Other - Diseases](#) - Asked by [Yzabeaux](#) - 1 answer - 9 hours ago



**How long does it take high levels of salt to leave a person's bloodstream?**

☆ In [Diet & Fitness](#) - Asked by [Michael S](#) - 2 answers - 9 hours ago



**How to find a doc?**

1 ☆ In [Skin Conditions](#) - Asked by [Sim](#) - 4 answers - 10 hours ago



**Quitina Ciaarettes?**





Ready to Participate?  
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MERCURY | NEW DOORS OPENED

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- Alternative Medicine
- Dental

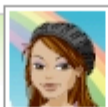
» **Diet & Fitness**

- Diseases & Conditions
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- Men's Health
- Mental Health
- Optical
- Women's Health
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## Resolved Question

[Show me another >](#)

### Closed to new answers



alisha

**Can i lose wight by any pills or tablets without side effects plz help me?**

i want to loose weight so plz suggest me any tab or pills of any king homeopathy will also do but should results with out any side effest or tell some exercises to loose weight very very very fast plz i need help plz help me

9 hours ago - 10 answers - [Report It](#)



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Vate

**Best Answer - Chosen by Asker**

Homoeopathy liquid Phytolacca Berry helps to reduce weight. Take 20 drops in half cup water before meals twice a day. My advice is, do not go for short cut. Go for brisk walking in the morning for 30 minutes every day. Drastic weight reduction with the help of medicine will create problem to you at later age. Dieting and exercise are the best and safest.

0



0



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Asker's Rating: ★ ★ ★ ★ ★

thanks for the reply infact tell me how much of water that is how many ml to add with the liquid thanks.

[Add/View comments \(1\)](#)

## Other Answers

Show: Total rating higher than -5

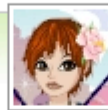


inferno\_india

Please use aloe vera products

9 hours ago - [Report It](#)

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Bree

It's not good for your body to lose weight "very very very fast". You need to find a steady, healthy rate. There are no magic diet pills to help; the only healthy way to do lose weight is through diet and exercise. And "diet" doesn't necessarily mean going on a diet, it can mean just eating healthier.

9 hours ago - [Report It](#)

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Rav

u should not take tablet.i am gymnast.i helps those person who are over weight. u should go for morningwalk if u can otherwise u can do exercise . take very little amount of food. take more vegetables. take food without musturd oil.dont use so spicy food.when u will hungerness. drink a glass of water and go for a 10 minute walk and take food again and agian go for 20 min. walk u will defenately loose ur weight. for more details u can send mails ravi1086@rediffmail.com

9 hours ago - [Report It](#)

0 0 Report It



ryan

fiber and as someone mentioned earlier aloe vera tablets will help your metabolism and digestion and can help lose fat but it'd be very unnoticeable for a long time. Simply if you wanna lose fat diet and exercise is the only healthy and safe way to do it. There's no pill that's SAFE that will really help you lose fat. Don't take any diet pills -> they only make

# Methodology

- Data collection: December 22<sup>nd</sup> - 26<sup>th</sup>, 2006
- 1,200 data records
  - 50 from each 24 subject category
- Every 20<sup>th</sup> records in a retrospective order
- Data record set;
  - 1) a question
  - 2) a best-answer
  - 3) a questioner's comment on the best answer
- Content analysis

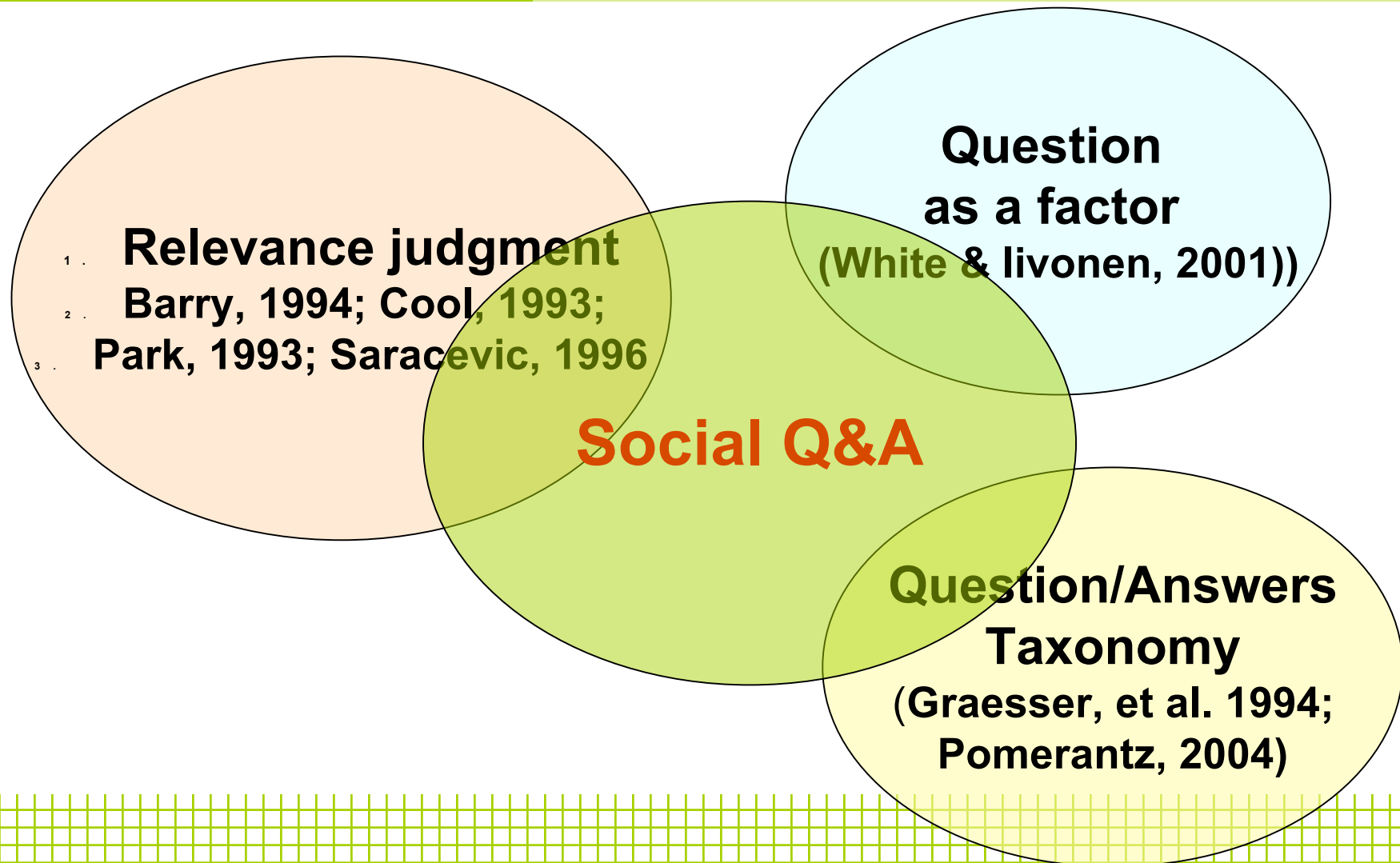
# Content Analysis

- **Comments analysis**
  - Identifying expressions or accounts on ‘selection criteria’
  - Filtering out comments with no articulation of the reasons to chose the best answers
    - “Thank you”, “Good”, “Great”, etc.
- **Question type analysis**
  - Information
    - “How long after purchase can I cancel a plane ticket from Orbitz?”
  - Suggestion
    - “What is the best way to store unopened bags of flour for long term storage?”
  - Opinion
    - “What is the meaning of Xmas to the beggars and homeless?”

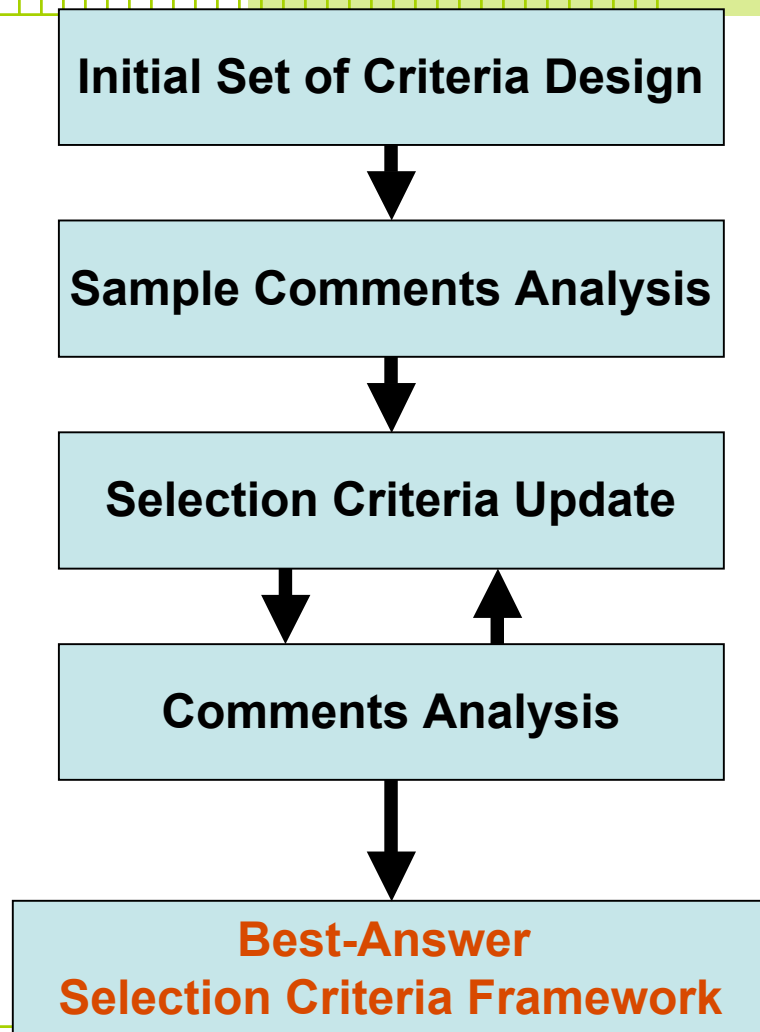
# Data Description

- Comments
  - Among 1,200 comments, 465 were selected.
    - 40% of total data collection
  - 493 criteria (expressions) were identified (unit of analysis).
  - The average number of criteria per comment is 1.06.
- Question types (Total: 493)
  - Information: 175 (35.5%)
  - Suggestion: 114 (23.2%)
  - Opinion: 195 (39.5%)
  - Others: 9 (1.8%)

# Related Works to Develop Criteria Framework



# Content Analysis Process



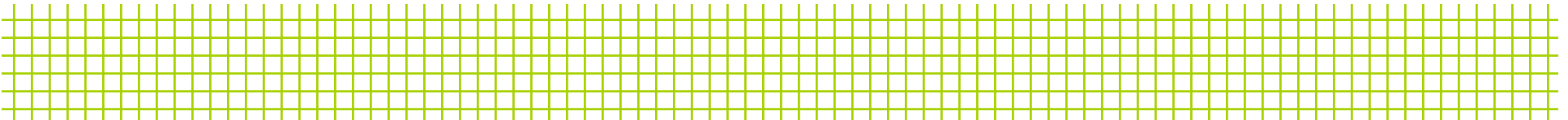
- Explorative & iterative process to review the data and assign the criteria to the data
- Lots of negotiation / discussions among analysts to build the criteria framework





# Best-Answer Selection Criteria Framework

- 7 value categories, 24 individual criteria
  - Content value
  - Cognitive value
  - Socio-emotional value
  - Extrinsic value
  - Information source value
  - Utility
  - General statement



# Content Value

Category	Criteria	Total	
		No	%
Content value	Accuracy	18	3.7%
	Scope & specificity	12	2.4%
	Clarity	14	2.8%
	Writing style	9	1.8%
	Completeness	13	2.6%
	Existence of particular detail	16	3.2%
	Characteristics	6	1.2%
	Subtotal	88	17.8%

- “I choose this answer as best because it was worded perfectly” (Writing style)
- “All of the answers are good but A[ID]’s explanation was the best in stating that all radicals have two values” (Existence of particular detail)

# Cognitive value

Cognitive value	Content novelty	14	2.8%
	Perspective novelty	11	2.2%
	Understandability	3	0.6%
	Questioner's background/experience	2	0.4%
	Subtotal	30	6.1%

- “huh!!!! Never heard that name” (Content novelty)
- “I never thought about using a shimmer eye shadow to go over the beige. It sounds like a good idea” (Perspective novelty)

# Socio-emotional value

Socio-emotional value	Emotional support	17	3.4%
	Answerer's attitude	10	2.0%
	Answerer's effort	7	1.4%
	Answerer's experience	2	0.4%
	Agreement	74	15.0%
	Confirmation	21	4.3%
	Affect	33	6.7%
	Subtotal	164	33.3%

- “Thanks to the other person who posted the big list of symptoms, but I wanted a more personal statement.” (Answerer’s experience)
- “This guy thinks like me so he must be alright” (Agreement)
- “You’re answer was too funny” (Affect)

## Extrinsic Value & Information Source Value

Extrinsic value	External verification	4	0.8%
	Available alternatives	7	1.4%
	Quickness	6	1.2%
Subtotal		17	3.4%
Information source value	Reference to external sources	9	1.8%
	Source quality	8	1.6%
Subtotal		17	3.4%

- “You were the first one to answer” (Quickness)
- “Perfect answer from the best source” (Source quality)
- “You are quite the expert on gaming/consoles” (Source quality)

# Utility & General Statements

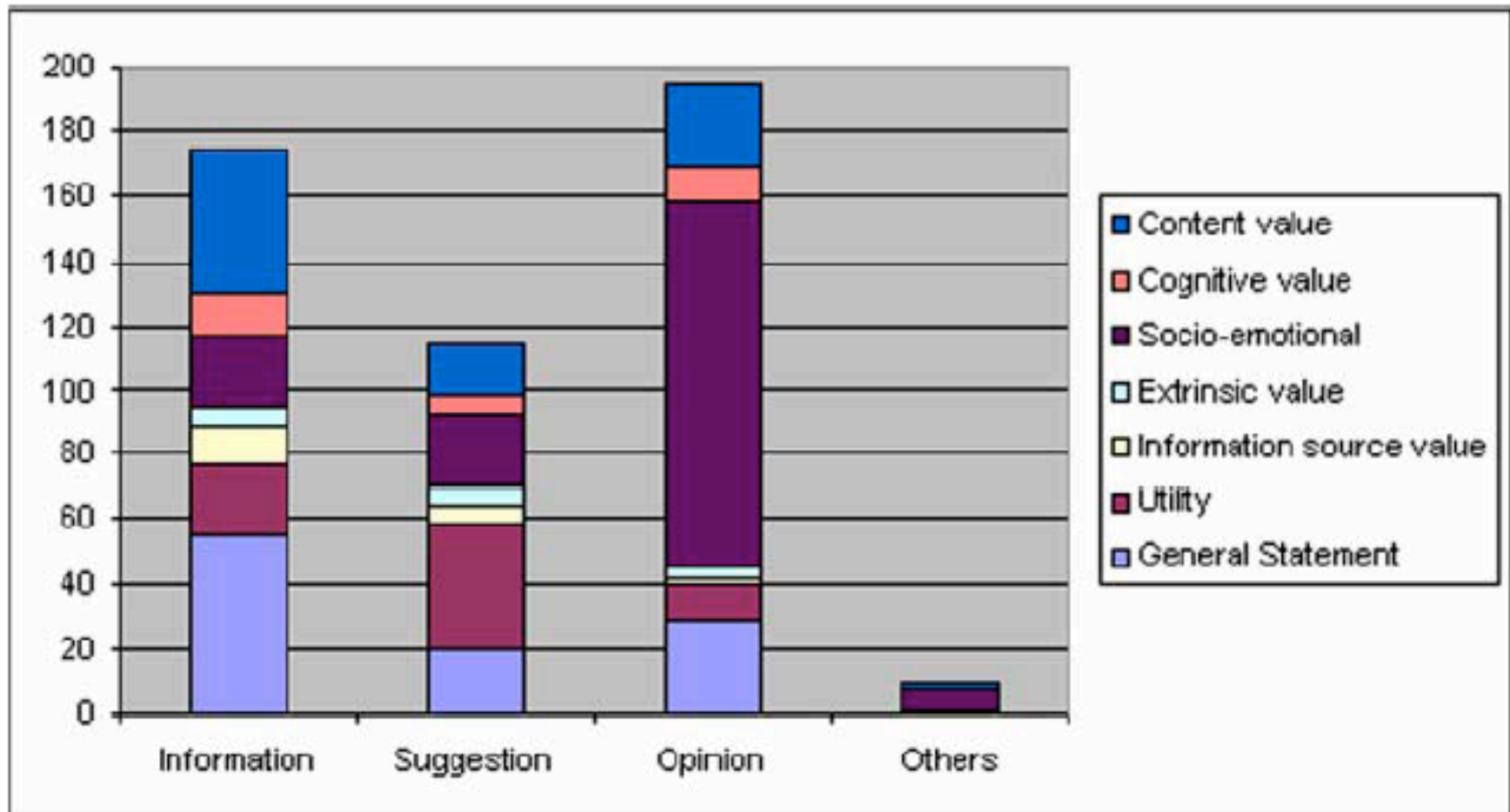
Utility	Effectiveness	30	6.1%
	Solution feasibility	43	8.7%
Subtotal		73	14.8%
General Statement		104	21.1%

- “All the suggestions where great and after trying them out I found this one worked the best” (Effectiveness)
- “That will help me so much. I’m going to try this next time” (Solution feasibility)
- “This is exactly what I was looking for” (General statement)

# Value and Criteria Ranks

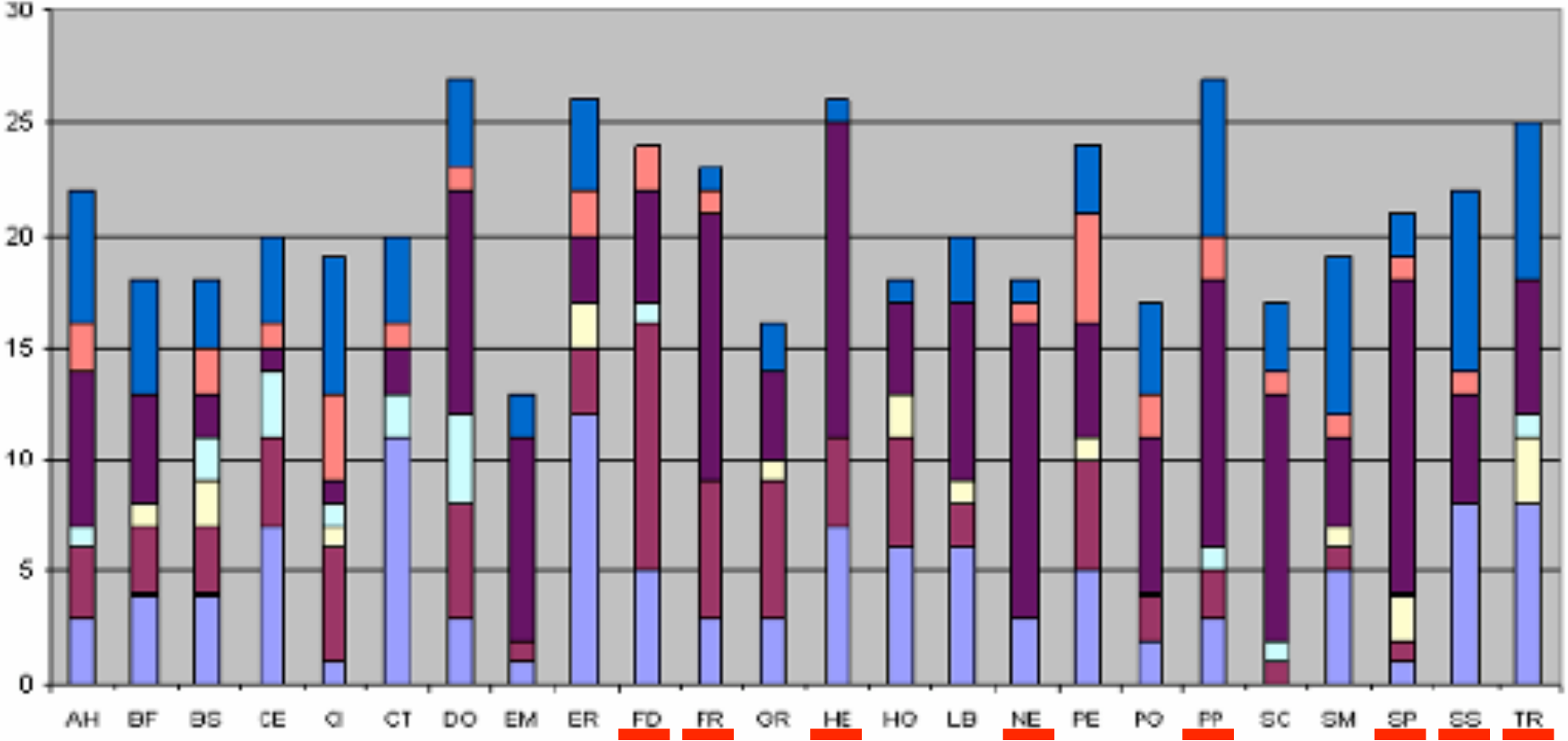
- Socio-emotional value (33.3%)
  - > Content value (17.8%)
    - > Utility value (14.8%)
      - > Cognitive value (6.1%)
        - > Extrinsic value, Info Source value (3.4%)
- Agreement (Socio-emotional: 15.0%)
  - > Solution feasibility (Utility: 8.7%)
    - > Affect (Socio-emotional: 6.7%)
      - > Effectiveness (Utility: 6.1%)
        - > Confirmation (Socio-emotional: 4.3%)
          - > Accuracy (Content: 3.7%)

# Relevance Criteria Distribution by Question Types



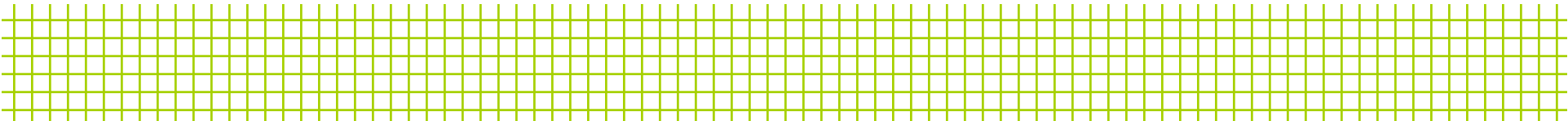


# Relevance Criteria Distribution by Subject Categories





# Discussion

- The first explorative trial to understand the nature of data in social Q&A
  - Relevance judgment to answers, not to documents
  - Overlaps with many previous relevance criteria, but different context to understand the criteria
  - The dominance of the ‘Socio-emotional value’
  - General statements
  - Social interaction among fellow users
- 

# Follow-up Study

- Automatic Web crawling for data collection
- Descriptive/statistical analysis of the context
  - Average length of questions, answers, comments, etc.
  - Average # of answers per question
  - Length of answers, time stamp influence to select best answers
  - Best-answer vs. other answers rating comparison
- Relevance criteria framework modification
- General statement analysis in depth
- Criteria pattern investigation and characteristics analysis among different subjects

ask.



answer.



be a better Planet  
see Environment >



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Home > Environment > Global Warming > Question



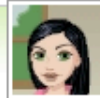
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### Resolved Question

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#### Closed to new answers



Nea

7%

Best answer

789 answers

Member since: June 21, 2007

Total points: 2,405 (Level 3)

Points earned this week: 371

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4 ☆

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#### Categories

> All Categories

> Environment

- Alternative Fuel Vehicles
- Conservation

» **Global Warming**

- Green Living
- Other - Environment



Biran\_Sefar

Best Answer - Chosen by Asker

Please seek prompt medical treatment for your substance abuse issues. Clearly, you are in the throes of neuron death brought on by a toxic accumulation of heavy metals and other contaminants in whatever drug you are abusing.

1 👍

0 🗨

Report It

Asker's Rating: ★★★★★

Your answer cracked me up! It was a dare in the roaming game to ask this absurd question - I'm not really that huge an idiot.

ask.



answer.



discover.



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**Nea**

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Member since: June 21, 2007



**2,405** points  
**Level 3**

**7%**  
Best answer

About me: I like puppies

(User does not allow IM).

[Email Nea](#)

You can help make  
Answers a better place



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**Answers**

Total answers

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Best answers

59

**Questions**

Questions asked

20

Resolved questions

18

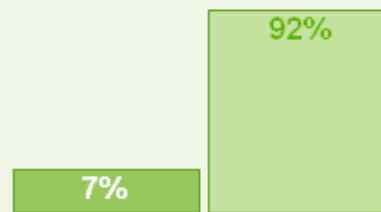
Stars received

25

Nea's Stats

[ANSWERS](#) | [QUESTIONS](#)

789 total answers



59 BEST

730 OTHER

[Answers](#)

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Muslims,atheists and others Jesus said "go and make disciples of all nations"?

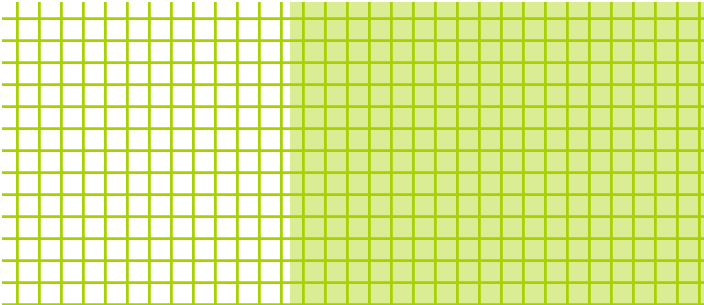
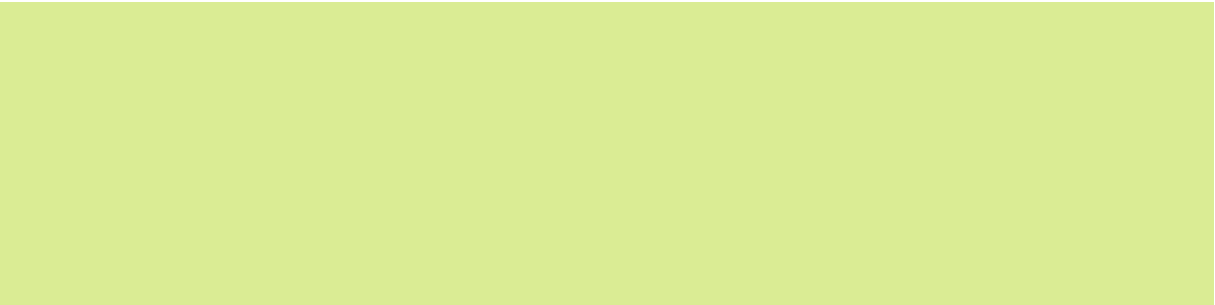
3 ☆ In [Religion & Spirituality](#) - Asked by [skylolo](#) - 18 answers - 9 hours ago - Resolved



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- 
- 
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