Questions about belief: an analysis of Yahoo! Answers queries regarding ‘belief’ in Islam and Christianity

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ABSTRACT
In this paper, we present a content analysis of questions related to religious belief in Islam and Christianity, as posed to social media Q&A sites. We choose Yahoo! Answers as a representative social media site because we wish to investigate religious information behavior by laypeople. The emergent taxonomy of questions is similar to that developed to characterize Yahoo! Answers posts focusing on eating disorders—indicating commonalities of motivation and in the socio-emotional aspects of participation in Yahoo! Answers across topic boundaries. Regarding religious information seeking, the questions are particularly interesting in that they provide insight into non-factual information needs: for example, they illuminate the desire to understand another person’s understanding of religion (rather than to hear an authoritative statement of the tenets of a faith), and to communicate with others to develop an understanding of one’s own religious beliefs.

1. INTRODUCTION
We choose the concept of ‘belief’ as the focus for our investigation of religious information behavior. This concept is selected because it is central to both Islam and Christianity (whereas other concepts such as tithing, religious laws, etc. are more specific to practice rather than to ideology). We examine queries pertaining to both Islam and Christianity so that we can compare the emergent question categorizations across the two. Further, we base this study on questions posted to Yahoo! Answers, as this forum allows us to access a formerly invisible category of religious information seeking behavior: laypeople consulting with other laypeople (rather than looking directly to authoritative sources).

This paper is organized as follows: Section 2 explores previous research on posts to social media Q&A sites (specifically, research aimed at identifying commonalities in questions that can be leveraged to enhance digital library functionality, or to build models of Q&A post behavior); Section 3 describes our data collection of 200 Yahoo! Answers questions regarding ‘Christianity and belief’ and 200 questions regarding ‘Islam and belief’, and discusses our analysis methodology; Section 4 presents our categorization of ‘belief’ questions and provides examples of posts fitting each category; Section 5 discusses the social and emotional aspects of our categorization; and Section 6 presents our conclusions.

2. PREVIOUS WORK
Existing research characterizing posts to Yahoo! Answers and other social Q&A sites has been put to two uses: to enhance the user experience in an information system, and developing a model of posts and posting behavior in order to better understand social information seeking practices.

2.1 Enhancing Social Information Systems
For this approach, previous work largely centers around the analysis of a specific type of query within a domain, to suggest search and browsing functionality or information organization for a digital library—with the goal of the resulting digital library to be to allow users to answer those questions directly themselves, without having to resort to using a social media Q&A system. Examples of this type of Q&A site question analysis include examinations of posts asking for recipes (Cunningham and Bainbridge, (2013), assistance in identifying or locating images (Cunningham and Masoodian, 2006), and finding songs and other music information / documents (Lee et al, 2005).

Mamykina et al (2011) analyzed the design of the online Q&A system StackOverflow, which provides very fast answers for technical questions that programmers post. 92% of the questions are answered in a mean time of 11 minutes. They believe that the success of the system is not merely due to its technical design, but also to the close involvement of a design team that is embedded within the user group, and system incentives that promote desirable user behavior.

Questions analyzed for the above areas—seeking advice for recipes, information on songs and images, and technical issues—are largely predicated on the idea seeking ‘the’ answer to a question; that is, that these information needs
are such that an authoritative or definitive answer is possible. While some questions surrounding religious belief afford a generally accepted factual response (and indeed, examples of such questions are detailed in Section 3), the experience of religious beliefs appears difficult to capture queries to a standard digital library.

2.2 Modeling social information seeking practice
Adamic et al. (2008) conducted a large-scale analysis of user behavior on Yahoo! Answers in general. They particularly noted the wide range of topics covered, but also observed that answers did not necessarily showed "very deep" knowledge. They observed that in topics relating to religion are prone to discussion, and that many users tended to contribute both questions and answers to this topic. Similarly, Harper et al. (2009) rated Y!A topics in Religion and Spirituality as 100% conversational.

Harper, et al. (2009) distinguish between informational questions (posed in the hopes of eliciting answers in the form of facts or advice), and conversational questions (worded so as to initiate a discussion, to solicit opinions, or perhaps as an act of self-presentation by the poster). Their experimental results indicated that while there can be overlap in these two categories within a single post, on the whole the two categories are reasonably crisp and can be reliably differentiated by both human categorizers and machine learning algorithms.

Bowler et al. (2012) explored the social conversations of teenagers on Yahoo! Answers about eating disorders. They classified the types of conversations into the five categories of seeking information, emotional support, communication, self-expression and help to complete a task. This categorization provided the starting point for the present paper’s analysis of religious questions (Section 3.2). They observed that many questions posted fell into the category of “noise,” expressing random thought. When reading those conversations more closely, they realized that this was the form teenagers used to express their worries, angst and sense of alienation. For them this seemed to indicate the absence of other ways of expressing these concerns.

The same team used Yahoo! Answers to analyze how people express their information needs in natural language, again focusing on the topic of eating disorders, (Oh et al., 2013). They analyzed both socio-emotional questions and informational questions, and found that the questions asked in the areas were fundamentally different, possibly suggesting different underlying information needs. Socio-emotional questions were often phrased in terms of personal narratives including references to past experiences and emotion. They hypothesized that the users’ motivation for asking these questions might be their personal journey through an eating disorder. On the other hand, informational questions were often complex, precise and objective, possibly reflecting the users’ interests in the area of eating disorders.

Robillard, et al. (2013) explored public attitudes towards gene therapy through the lens of 903 questions posted to Yahoo! Answers from 2006 to 2010. They uncovered a set of themes characterizing the gene therapy issues raised in the posts (ethics, environment, economics, law, and society). The ethics-related questions are perhaps most interesting from the point of view of understanding public opinion, in that many of these posts express fear or concern about the potential impact of gene therapy on society as well as individuals. The authors note that questions to Yahoo! Answers and similar social media Q&A sites provide a valuable insight into public response to medical breakthroughs, as reported in news media—and that this sort of question analysis could support complementary insights into public awareness and attitudes to that elicited by more conventional surveys and focus groups.

While these earlier studies focus on questions regarding different domains and approach the characterization of questions with different goals, the common finding is that social media posters often seek more than a factual answer. Social Q&A is a complex, often contradictory, process that can involve question posers and question answerers in a “conversation” that often involves emotion, affect, communication, and mis-communication.

3. METHODOLOGY
Yahoo! Answers is a knowledge exchange community in which users can post questions and write answers to other users’ questions. It is a place where users can seek advice, share personal stories, and find information. It has about 200 million users worldwide, and is the second largest question & answer system. A number of studies have explored the Yahoo! Answers community and the interactions between communication participants.

We base our study on posts to Yahoo! Answers because it is a relatively stable and widely used social media Q&A site. Yahoo! Answers has existed in roughly the same form since 2006, when its predecessor Ask Yahoo! was discontinued. It is one of the largest Q&A sites in the world and covers an extensive set of topics. Question posters self-categorize their submissions in a fixed taxonomy of interests. Question answerers can identify posts of interest by searching or by browsing the classification scheme (Kucuktunc et al., 2012).

3.1 Data collection
The questions were sampled in April 2014 from the “answered” queries posed, as retrieved by a search on the Yahoo! Answers Society & Culture > Religion category. The searches employed were “Christian belief” and “Islam belief”. We sampled responses until we identified 200
Table 1. Taxonomy of ‘belief’ questions

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
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<tbody>
<tr>
<td>Seeking information</td>
<td>1. Differences between Christian denominations</td>
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<td></td>
<td>2. Differences between Christianity and other religions</td>
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<td>3. Clarification of Christian tenets &amp; practices</td>
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<td>4. Statements of personal Christian belief</td>
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<td>5. American &amp; its Christian roots</td>
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<td>1. Differences between schools of Islam</td>
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<td></td>
<td>2. Differences between Islam and Christianity</td>
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<td>3. Clarification of Muslim tenets &amp; practices</td>
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<td>4. Statements of personal Muslim belief</td>
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<tr>
<td>Seeking Belief Support</td>
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<td>Seeking Communication</td>
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<td>Seeking Self-Expression</td>
<td>1. Reflection</td>
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<td>2. Diatribe</td>
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<td></td>
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<td></td>
<td>2. Diatribe</td>
</tr>
<tr>
<td>Seeking Help to Complete a task</td>
<td>Schoolwork (secondary &amp; tertiary)</td>
</tr>
</tbody>
</table>

Table 1. Taxonomy of ‘belief’ questions

questions for each of Islam and Christianity (after eliminating duplicates, mis-categorized questions, and responses including the search terms in the answer rather than the question + title proper). The search results were sorted by relevancy, so the date of posting for sampled questions ranged from the recent (within a month of the data gathering period) to five years previous to data gathering (2009).

3.2 Data analysis
The analysis in this present study in the first instance examined the fit between the 400 questions on ‘belief’ drawn from Yahoo! Answers, and the question taxonomy presented by Bowler, et al. (2012). To that end, we conducted a qualitative, directed content analysis (Hsieh and Shannon, 2005): that is, we began the coding with the Bowler et al. (2012) framework and modified it to better describe the themes emergent from the ‘belief’ questions.

For ease of manipulation, we merged each post’s heading and body text together into a single block of text. These posted questions ranged in length: the shortest a mere 8 words (“Are christian apologetics against or with christian beliefs?”), and the longest weighed in at 953 words (a query in 16 parts about Christianity and ‘The Last Things’). The average was approximately 114 words—long enough to support complex and nuanced information need.

In the remainder of this paper, the text of posted questions is represented in *Helvetica*. The text is as entered onto Yahoo! Answers, with no modifications to spelling, punctuation, or grammar.

4. RESULTS
The set of categories that emerged from our analysis of the 400 Yahoo! Answers questions about Christian and Muslim ‘belief’ are presented in Table 1. The top level of this taxonomy is identical to the classification developed by Bowler, et al. (2012) for describing teen questions about eating disorders, with the exception that the Bowler category Seeking Emotional Support is replaced by a more topic-specific Seeking Belief Support.

4.1 Seeking Information
The majority of the 400 questions analyzed fall into this category: some portion of the question is posed so as to elicit a response that fills an information gap. This desired response may be in the form of a statement of fact (e.g., a list of the five pillars of Islam), but the majority of posts did not lend themselves to a simple or straightforward response. Where Bowler, et al. (2012) found a significant proportion of Seeking Information questions “could easily have been answered by searching the Web with a search
engine”, many of the questions here would indeed be difficult for a solo (and novice) searcher to answer.

While some of the questions address sophisticated theological concepts, many exhibit a minimal understanding of both Christianity and Islam: for example, by apparently thinking that Islam and Muslim refer to different faiths (e.g., what are 5 muslim beliefs and 5 islamic beliefs?), or that Christianity and Catholicism are separate and conflicting (e.g., What are the different beliefs of Christians and Catholics?).

Several of the subcategories for the Christian and Muslim questions are similar. We see questions asking for the Differences between Christian Denominations and the analogous Differences between Schools of Islam, both concerned with distinctions within the given faith:

Can someone explain what Shia Muslims' beliefs are? I am very confused.? Salamacum everyone. I was just wondering what are Shia Muslims' beliefs. I am very confused because I have been getting many different things. Please, confirm your answer by research or at least know what you are talking about.

Christian Monism beliefs? What are the beliefs of Christian Monism? How does it differ from popular Christianity?

Where questions in both categories sought assistance in understanding the differences between major religious traditions, the striking observation is that Christianity is the default comparator. In the Christianity + belief questions, we see requests for discussion of the Differences Between Christianity and Other Religions, or whether Christian belief can be reconciled with aspects of other faiths. The list of other faiths is lengthy: Islam, Judaism, Buddhism, Hinduism, and Wicca, as well as political and other schools of thought (anarchism, belief in reincarnation, Hapkido karate). The corresponding category for the Islam + belief questions is Differences between Islam and Christianity; we see that questions are exclusively through the lens of a Christian tradition (though the question poster might not be a believer). Though we have no demographic information about the posters, given that the language is English, it seems likely that the majority is living in Western countries—and so is more likely to have been exposed to Christianity than to Islam.

The next set of sub-categories (Clarification of Christian / Muslim Tenets & Practices) also reflects a higher degree of familiarity with Christianity than with Islam, on the part of the posters. Several of the posts about Islam included very basic questions about the religion and its expression (e.g., What are the services like?); again, this difference likely reflects a personal background of the posters that includes a greater exposure to Christianity than to Islam.

For both religions, these questions ranged from the very general to the highly specific. Both categories include questions about the fundament of the faiths:

What are the necessary beliefs to call yourself a christian?
many people call themselves christians, but they all have different beliefs, and many reject huge sections of the bible completely. of course, everyone is entitled to their own beliefs, but not if you are claiming to be a christian.
a christian by definition must believe a number of things;
1. god exists
2. jesus is the only way
(some people even reject this, and i dont see how)
what are the foundations of christian belief?

What exactly is a Muslim?

There are many people who label them self as Muslim but have different views, beliefs and/or attitudes about certain issues from one another. Also, some practice differently than others while some practice more than others. So exactly what makes a person a Muslim? What is the base or core belief or practice that defines a Muslim, regardless of sect or level of participation?

For both religions, the majority of these posts go far beyond the basics of the faith, including questions about the afterlife, the acceptability of homosexuality and divorce, the role of suffering (Christianity), and attitudes toward mysticism (among others). The questions about Islam tended to involve more specific details and hypothetical situations. For example:

Because of their religious beliefs, do muslims think it acceptable to lie in UK courts?
Islam considers non muslims to be evil doers and, in fact, lesser beings.

In an Islamic country, the word of a non believer,such as a christian, will not be accepted against that of a muslim -- and it is not acceptable for a non believer to try or judge a muslim.

Do muslims carry this belief over into the UK environment, and believe that because non believers have no right to judge them, then lying in a UK court of law is no sin at all?

Muslim belief and professionalism?
Would a muslim vet save the life of a dying pig?
My question is a serious question.
Following the refusal of the trainee police woman for shaking hands with Met commisionar, I wonder
where this would lead in terms of setting a precedent of refusing to do your duty, because of your personal belief

For both Christianity and Islam, posters requested answers in the form of statements of personal understanding of the religion (Statements of Personal Christian / Muslim belief). These posts ask questions about Christianity / Islam, but are primarily curious about the responders’ personal beliefs rather than (necessarily) authoritative responses:

   Christians??...

What is a christians in ur opinion??..what are they beliefs??...i think the problem in this place is that people [non-christians generally] just say that we all believe in hell..or we all believe in ...whatever its...

A poll for muslims (relating to beliefs and practices)?
1) Do you support the adoption of Sharia law in society?

2) Do you accept some of the less popular ideals of the Quran (eg. amputation of limbs as punishment, the wearing of a hijab, exectution by stoning for adultery)?

3) Are you opposed to Israel's existence? Would you support the unification of Palestine as an Arab state? What if it led to the oppression, expulsion, or even killing of the local Jewish population in the region?

4) Do you support Arab revolutionary organizations such as Hezbollah or Hamas despite their attacks on innocent civilians (this is not to say that Israel isn't guilty of such acts - in fact, it is moreso than either of those organizations - but does that excuse revolutionary counterattacks)?

5) Do you consider countries such as Iran or Saudi Arabia to be oppressive? Would you support the liberalization of such societies?

6) Would you feel offended if you learned that a non-muslim has entered Mecca?

The fifth sub-category of Christian Seeking Information posts, America & its Christian Roots, are uniformly confrontational questions/statements challenging what the posters see as platitudes about the foundation of USA history and culture. There is no corresponding Country X and its Muslim Roots subcategory. This difference seems likely to reflect a USA-centric population of contributors to this section of Yahoo! Answers.

   This country was built on Christian Beliefs! (The USA)?

   When people say that this country is founded on Christian beliefs, does that mean after the Christians killed the Native Americans and destroyed their beliefs? Or is it regarding other christian beliefs like Slavery and Segregation. Please help clarify which one of these that god thinks is best.

4.2 Belief Support
These questions were posed by a person of previous or wavering religious faith, seeking responses that would support that faith. For example:

   Wavering Christian Belief? I'm only a teen, so bear with me here. My belief Christianity has been wavering for as long as I can remeber. Sometimes I'm convinced of the existence of Jesus/God and other times I'm in doubt. Usually I'm somewhere in between, leaning on the side of belief. I REALLY do want to believe, but some part of me keeps holding me back (I'm pretty sure it's my brain!). So my question to you is, what makes you a firm believer?

I have muslim beliefs and i have to hide it? i was born a catholic and I attend a catholic girls school and i am italian. My family will go crazy if anyone changes religions because they believe that "if your born italian you should be catholic like your family" but i have muslim beliefs and have been thinking about it for ages now...but i have to hide it and thats clearly very hard i dont know what to do and im feeling really upset about it because im confused about my identity and who i should be and who people want me to be i just really need some advice...for example if i were to say i wanted to wear the hijab i would get yelled at by my family and not be accepted...even my friends at school are being mean about it and saying im crazy and stuff but ive been thinking about this for more than 2 years now

Note that these posts also tend to overlap with other categories: Seeking Communication, by calling for opinions, advice, and simple correspondence from others; and Seeking Self-Expression, by journaling experiences and personal religious positions.

4.3 Seeking Communication
These questions are posed to elicit a ‘conversation’ between the question poster and respondents, generally by asking for opinions about a religious issue:

   According to Christian belief, am i a demon? Okay, so in Paradise Lost, the demons said that pain would be their pleasure. im masochistic, so i feel a lot like this. According to common Christian belief, does that make me a demon? And if so, does that justify me cutting or killing myself? And please don't insult my religion, or tell me not to kill myself, i just want to know what my religion says about me. Thanks
Muslim belief and professionalism? Would a muslim vet save the live of a dying pig? My question is a serious question. Following the refusal of the trainee police woman for shaking hands with Met commisionar, I wonder where this would lead in terms of setting a precedent of refusing to do your duty, because of your personal belief.

These questions do not seem to ask for ‘the’ answer (as might a Seeking Information question), but rather look for a set of possibilities, based on the individuals’ experiences in faith.

Note that the Statements of Personal Christian / Muslim belief questions (a subcategory of Seeking information) may also fit into the category of Seeking Communication, in that they often (but not always) begin a back-and-forth discussion of the responses. The conversation may also involve the question poster being asked (or feeling pressure) to confirm that they were sincere in asking for these personal affirmations and not simply ‘trolling’. The mechanism for indicating an addendum to a question is the Update:

Update : I openly admit to being somewhat ignorant about Islamic perceptions of society, despite knowing a good deal about the fundamental ideology. So if any of my question seems uninformed (which they should, as I am looking to learn), then I just want to say that I don't mean to offend.

The original category in Bowler, et al. (2012) included a subcategory they called Deep Talk, in which the poster solicited direct contact (outside of Yahoo! Answers) between the question poster and individual respondents. We did not note any similar questions in this sample of questions, neither for Christianity nor for Islam.

### 4.4 Seeking Self Expression

Some of the postings to Yahoo! Answers were not really questions, but rather statements of personal religious stance. We see two types of expression: the Reflection and the Diatribe.

In a Reflection, the poster builds on the question and responses to work towards a clarification of his/her personal religious beliefs. In the following example, we see the poster move from a seemingly straightforward Seeking Information query aimed at soliciting belief statements from Christians, to concern that the non-believers do not see the multiplicity of beliefs within the Christian tradition, to an introspection about the poster’s opinions on several Christian tenets, to an expression of openness to conversation with people of different faiths, then back to the original solicitation of opinions, and concluding with Updates responding to answers with further clarification of the posters’ beliefs.

Christians??...? What is a christians in ur opinion??..what are they beliefs??...i think the problem in this place is that people [non-christians generally] just say that we all believe in hell..or we all believe in...whatever its...

I'm a christian...i believe that God sent his Son to earth...i dont believe in hell [show me in the bible a place that says that we actually "LIVE" after we die?], i believe that people shouldn't confess to people about sins that committed against God, because they [priest] are only humans, and not better than anybody else, i think you can get to heaven by just having faith in him...i dont pray to the virgini mary, or any statue or none-living thing, i believe that people should be respected, no matter what religion they have, but i love talking to people from different cultures and religions, because sometimes they might seem that they know more than we do...and now is my question...do u still think that we're all the same?...what is a christian in ur opinion?

Update : oh..and i do believe in heaven...its just that we'll go when he comes again to earth...2 adventment...

Update 2: Hell exist when he comes again...no after we die...in the part that say "and it was the second death" it means that the people ...not saved will die again in a "hell" if u wanna call it like that...

In contrast, the Diatribe presents an explicit stance—and in this sample of questions, the Diatribes are exclusively strongly critical. This type of post appears to be intended to be provocative of believers, rather than to initiate a discussion or to echo internal musings. For example:

So if I bash the Christian belief I'm a Christian basher? So what do you call a Christian bashing other people's beliefs? For example what is a Christian bashing Islam called? Or a Christian bashing Atheism?

Or this happens all the time, Christians bashing Satanism? What about Christians bashing Wicca? What are these Christians called? Why is it righteous for Christians to bash but not for anyone else? It seems that Christianity is a religion based on contradictions. They practise an "eye for an eye", but to their enemy they preach to "turn the other cheek". Am I the only one who sees the hypocrisy in this faith?

### 4.5 Seeking Help To Complete A Task

As was the case with Bowler et al. (2012), students (apparently high school and university) requested assistance with an essay or a project, in studying for a test or exam, and in second-guessing exam responses. For example:

Can someone explain Basic Christian/Catholic Beliefs? For school I need write an paper about Christianity. I
don't know much about it. Just some beliefs would be nice.

What are the beliefs of muslims??
doing a report and not so sure what they believe in..does anyone know??

It is striking that many of these questions are upfront about how the responses will be used to complete homework, and detail the form of response desired:

Why is belief in life after death important to muslims?
Homework need a decent answer cheers.

Is Risalah the most important belief for a Muslim?
I am currently studying Religious Education at A level, and for my asessment I need to come up with 3 reasons to agree with the statmen’tis risalah the most important belief for a muslim’ and 3 reasons to disagree. I also need to include quotes from the Qur’an that is linked to the point. Thank you so much! And sorry if i cause any offence! :)

Some posts point to impending deadlines, perhaps in the hope that responders will identify with, and react sympathetically to, their predicament:

I need info on christian beliefs on God QUICK because i have a religious education project about christianity in 2 days !!!! plz no trolls -_

Only one poster for this category justified the request for assistance by pointing to the inadequacies of the sources that their own previous searches had uncovered:

… there doesnt seem to be much information on websites, I just thought I'd ask on here, maybe i could get opinions from some individual Muslims. Any comments telling me to do my own homework will be ignored, i am doing my own homework, im just researching the answer from a more active source.

In general, the posters do not seem to feel it necessary to state that they will not copy the responses directly into their assignments. Like Bowler et al. (2012), we question whether the posters (or responders) draw distinctions between plagiarism, cheating, and ‘crowdsourcing’.

5. DISCUSSION

Many of the Informational questions and questions Seeking help for a task are fairly straightforward and could easily be answered by simple Web searches. For the latter categorization, we speculate (Section 4.5) that students are simply using Yahoo! Answers as a shortcut for completing assignments.

For the remainder of the Informational questions and the Seeking Belief Support, Seeking Communication, and Seeking Self-Expression posts, we see a strong conversational element emerge in the posts and the responses. The architecture of Yahoo! Answers is not designed for back-and-forth discussion. The main mechanism for reply is the Update function, which allows the question poster to create addendums to the original message (and this addendum can include responses to statements in answers). However the mechanism is clumsy, as the Update is not positioned near the answer it is responding to (and that answer is likely on a different webpage, if the original question has attracted more than one or two responses).

Despite the awkwardness and inconvenience of building a conversation via Updates, the mechanism sees significant use in our 400 sample questions (117 times in the 200 Christian + belief posts, 121 times in the Islam + belief posts). Clearly, the Yahoo! Answers posters are looking for more extensive contact with others than the system is intended by its creators to support.

Why, then, might people turn to Yahoo! Answers for information and discussion of belief, given that there is no guarantee of authority (or even response) to factual questions, or easily usable affordances for discussion? Given the sensitivity of topic, we speculate that one of the attractions for discussion of religious beliefs on Yahoo! Answers lies in the anonymity of the forum. It is difficult to grapple alone with questioning one’s beliefs, yet turning to friends and relatives to discuss moving away from a formerly shared faith may feel threatening. Even among the faithful, the personal expression and experience of religious belief can feel too intimate to share when face-to-face. It is also generally easier to ask questions anonymously about subjects that are genuinely unfamiliar, to avoid appearing parochial or unsophisticated (for example, many of the questions about Islamic practice and tenets may fall into this class, given that the posters appear much less familiar with Islam than with Christianity).

But while anonymity can create an impression of a safe space for discussion, it can also provide a forum for deliberately confrontational or inflammatory messages. Witness, for example, posts challenging religious belief that are more statements than questions (e.g., the Diatribes, Section 4.4). The poster gains the satisfaction of attacking what s/he perceives as the orthodoxy, but without fear of personal reprisal.

We also note that even with the best of intentions, the impoverished text interface can add to the difficulty of establishing a sincere religious conversation through Yahoo! Answers. The sensitive nature of the topic can leave posters open to the suspicion that their questions are not genuine, and that they are simply trolling to provoke controversy. Some posters attempt to head off aggressive responses by defensively stating upfront their innocent intentions; e.g.,
I am curious of other religions. What do you base your faith on? I just need some insight and I want to better understand your faith. Thanks!

Other posters seem taken aback by the hostility unleashed by what they had thought was an innocent query; for example:

Update: Um...I just want to learn more about it.. I didn’t need all the hateful answers..thanks.

6. CONCLUSIONS

Bowler, et al. (2012) describe their taxonomy as “not meant to be a universal categorization of all questions in Yahoo! Answers. However, their categories were developed specific to the questions asked by teens, about eating disorders.” Despite this caveat, we see that the top-level categories transfer well to describe questions about belief. The upper level categories that emerged from Bowler, et al.’s analysis (2012) were: Seeking Information, Emotional Support, Communication, Self-expression and Help to Complete a Task. For our categorization, the Emotional Support class was more naturally translated as Seeking Belief Support, the remaining four classes were appropriate to describe the ‘belief’ questions.

At the second level of the taxonomy, we see differences between the sub-categories for questions related to Islam and Christianity in the Seeking Information category—to be expected, given that the two domains are very different. The taxonomy of the ‘belief’ questions is less detailed at the second level for the Seeking Belief Support, Seeking Communication, and Seeking Help to Complete a Task categories; these all included two subcategories in the Bowler, et al. (2012) taxonomy. Finally, one of the Seeking Self-Expression subcategories also differed—the eating disorder posts included Confessions and Reflections (explorations of the posters’ personal experiences with anorexia and bulimia), while the ‘belief’ categories included inwardly directed Reflections (exploring the posters’ personal faith) and outwardly directed Diatribes.

On the whole, then, the Bowler, et al. (2012) framework is expressive enough to capture the perspectives embodied in the ‘belief’ questions. It remains to be seen whether the framework will also fit less personal and emotionally sensitive subjects such as the technical/software issues addressed by Mamytkina et al (2011)—though we suspect that it may, as even these seemingly neutral topics can attract emotional investment. The emotional, social, and affective aspects of information seeking have been relatively neglected, particularly as regards to information system design and modeling of the information seeking process (Section 2); this framework captures that side of the information seeker’s experience.

As regards explorations of specifically religious information seeking, Yahoo! Answers presents an opportunity to capture an otherwise inaccessible aspect: laypeople reaching out to other laypeople for information and conversation about religion. We see from this small sample a rich collection of behaviors, including a strong emphasis on dialogue and exchange of views. One challenge for development of forums is to establish a ‘safe space’ for these conversations, while at the same time maintaining the openness and freedom to explore ideas that is apparently valued by the Yahoo! Answers participants.

We further note that this present paper looks at the question posts (and the corresponding behavior and motivations of question posters). A follow-up study of question responses is needed to build an understanding of that side of the Yahoo! Answers ‘conversations’, and to enrich our understanding of the question posters’ assessment of quality in responses. Evidence from recent studies of answers to questions about eating disorders (Bowler, et al., 2013; Oh, et al., 2013) indicates that the behaviors are likely to be complex and multifaceted.

7. REFERENCES


