

1 Introduction

For this assignment, I want you to assess the interest and knowledge of our society on the fundamental cosmological questions that have been occupying humankind since the dawn of civilization, and far before.

The claim is that nearly every person has been thinking in one way or another about these questions. What we wish to explore is:

1. what is the general public interest in these fundamental questions.
2. what are the ideas on the answers to these questions.

2 Organization

To explore this further, we will form 10 groups of 8 (or 9) students. Each group will have

1. to design a systematic program to interview 25 to 30 people on these questions,
2. sort the answers into a database
3. perform a rough statistical analysis on the (nature of the) answers
4. draw conclusions on aspects such as general awareness and knowledge of cosmological questions and issues.
5. write a report (15 to 20 pages), detailing the interview process, analysis and conclusions of your poll. Submit this report at the latest at the first lecture in the new year 2020.
6. Put together a presentation (pptx), for the presentation session at the tutorial on friday January 10.

3 Interviewee Information

Before interviewing persons, first shortly explain the context and background of your interview. Also indicate this is within the context of a scientific course and project, and that the answers will be kept strictly anonymous. If people are prepared to give their name and eg. email address, that is fine (you may even send them the results of the investigation). However, that is not mandatory. Nonetheless, you need to know some aspects of each person in order to be able to do an analysis on the answers. Thus, of each interviewed person, note,

- a. age
- b. gender
- c. where they live, also distinguish between city, town, village, farm/rural

- d. town of birth
- e. profession
- f. education
- g. religious background (if they are prepared to provide this)

3.1 Processing the Answers

With the design of the interview sessions I mean issues like which people you are going to interview, where (city, rural areas, ...), how to distribute the interviewing (individual or with several), distribution of tasks (e.g. 2 doing the interviewing, 2 collecting the answers in a database and doing the analysis, 1 or 2 doing the presentation, ...). You are entirely free in setting it up in the way you deem most convenient and/or efficient.

Finally

The nature of the answers considers aspects such as e.g. a) does someone know about the current scientific views, b) does someone know the recent developments on cosmological research c) are the answers religiously inspired, d) does someone deem the questions irrelevant or socially unimportant, or on the contrary do they deem them important, e) if not important, why not? Surely, there will be a rich variety of answers, and I am sure some answers will be unexpected.

4 Interviewees

Each group should interview 25 to 30 people. You are allowed to interview family members, but not more than 3 in total (for the entire group).

Of the other people interviewed, try to put together a list that is as varied as possible. Suggestions for interesting interviewees:

1. people of different generations: e.g. a teenager, a twen (ie. your own generation), a middle-aged person (30-55 yrs.), an older person (55-70), old person (70+).
2. a religious leader (roman-catholic priest, minister, rabbi, imam, etc.)
3. a shopkeeper or market salesperson
4. a (local) politician (city board, wethouder, raadslid, ...)
5. someone from the financial sector: bank manager, financial adviser
6. a farmer
7. a schoolteacher (elementary school, highschool,...)

8. a (house) construction site (builder, construction worker)
9. an artist
10. a professor at the university (but not from astronomy, physics or chemistry)

I leave it mostly up to your own originality to define an interesting sample of interviewees.

5 The fundamental cosmological questions

Each interviewee should be asked a well-defined list of questions. You may define those questions while defining and organizing your group, but they should at least contain the following set of questions:

1. Where does the Universe come from ?
2. Did the Universe have an origin ? How did the Universe begin ?
3. Did it begin at all ?
4. When did the world/Universe begin ? Ie., how old is the Universe ?
5. What is the Universe made of ?
6. How big is the Universe ? Is it finite, or infinite ?
7. What is the role of humans in the cosmos ?
8. What is the fate of the Universe ? Will it end, or will it always be there ?
9. Is our Universe unique ?
10. Is the human brain capable of answering these questions ?

In addition, you may want to ask about the interest of the interviewee(s) as evidenced by

11. Did the interviewee ever discuss these issues with others ?
12. Did the interviewee ever watch documentaries on the subject ?
13. Did the interviewee ever read books or newspaper/magazine articles on the subject ?
14. Did the interviewee ever attend exhibitions or visit science museums and/or events/shows ?

Also, you are free to ask various more specific questions concerning the Big Bang theory that set 20th/21st century cosmology. You are free to formulate more questions that you think are interesting in this context.

15. Do you know that the Universe is expanding ?
16. Have you heard of dark energy ?
17. Do you know why the nightsky is dark ?
18. How do we know for sure that the Big Bang happened ?

6 Conclusion

I am very much looking forward to the result of this Cosmology Awareness Poll ... and wish you all much fun and success,

with best wishes, Rien