Increased Importance of Altruistic Factors in Jobs*

Analysis of US General Social Survey from 1989 to 2016

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Rising altruism has been reported globally; however, many altruistic occupations have continued to be undervalued in society. To investigate perceived importance of altruistic motivations in work, data from the U.S. General Social Survey on the reported importance of jobs that help others and have social usefulness from 1989 to 2016 was analyzed. Our exploration revealed that the importance of altruistic motivations has increased overall across 35 years, that women view them as more important than men but the gap has decreased over time, and that older participants tend to view the motivations as more important and most between ages 35 and 44. These findings highlight the various factors influencing perspectives on the importance of altruistic occupations, and underscore a need for further research on impacts of rising altruism in occupational perspectives on care work and desired careers.

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*Code and data in this report are available at: https://github.com/shirleychen003/job_satisfaction.git.

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1 Introduction

Altruism has been on the rise and in a 2016 report by the Charities Aid Foundation, volunteering, charitable giving, and providing everyday help had increased for the previous five years (Marsh 2018). Altruism is defined by Merriam-Webster as the unselfish quality possessed by those who focus on the welfare of others ("Altruism" 2024). While altruism is generally associated with donating and selfless acts of kindness, how altruistic motivations are impacted in the context of job satisfaction has not been thoroughly explored. Altruistic occupations tend to have harsher consequences on a worker's mental and physical health; however, many altruistic jobs are still undervalued in society. The COVID-19 pandemic worsened pre-existing strains on healthcare labour shortages and the overworked, underpaid nurses took the brunt of the damage. In 34 out of 49 countries assessed by the International Labour Organization, despite their extensive contributions to a global pandemic, nurses and midwives were paid below average wage for high-skilled workers ("Nurses and Midwives: Overworked, Underpaid, Undervalued?" 2023). To understand why care workers are undervalued and what changing perspectives may exist, perspectives on the importance of altruistic work must be investigated.

Interested in American perspectives on the importance of a job that helps others and a job that is useful to society, we gathered data from the United States General Social Surveys

(GSS) ("General Social Survey" 2024). We analyzed our estimand, the proportion of responses in favour of our two intrinsically motivating factors being important in 1989, 1998, 2006, and 2016. Additionally, comparing this data to the ages and sex of participants allowed further investigation of what factors could influence responses. By investigating the perceived importance of these altruistic motivators, a more comprehensive perspective on what influences the occupations Americans seek and prioritize is revealed.

Overall, reported importance of the two factors increased from 1989 to 2016 in importance. We also found that female respondents felt the factors were more important than the male respondents did, but the difference decreased from 1989 to 2016. Finally, analyzing the relationship between age and responses revealed that age can play a role in altruistic behaviours, as studies have shown that there is a positive correlation between age and altruism.

In Data, the data collection methodology, the data cleaning processes, and key variables. In Results, the relationship between demographic information of participants and their responses as well as the overall change in importance is analyzed with supportive figures. Finally, in Discussion, the significance and possible causes of our findings are explored within economic stability, sex, age, and culture.

2 Data

2.1 Source Data and Methodology

Based at the University of Chicago since 1972, the GSS is a project with the objective of monitoring and analyzing the intricacies of American society (NORC, n.d.a). The GSS Data Explorer makes it so that data retrieved from the project is a publicly available resource, accessible to various types of people, such as educators, policymakers, or researchers through the National Opinion Research Center (NORC). It has even been referenced in leading publications, such as the New York Times and the Associated Press. Due to the variety of subjects covered regarding American society, the GSS is one of the most frequently visited resources for information for social sciences.

Majority of the GSS data was collected through face-to-face interviews with the target population of adults (18+) residing in the United States. The standard national survey methods were practiced, such as hiring interviewers and training supervisors when needed. Interviewers were required to complete a practice interview supervised by evaluators at NORC (NORC, n.d.b). However, starting in 2002, computer-assisted personal interviewing (CAPI) methods were introduced (NORC, n.d.b). The use of manual edits and keypunching were eliminated, and training to learn how to use CAPI was included.

The dataset used for this paper was retrieved from the GSS Data Explorer website (NORC, n.d.c). All the survey data used to measure job satisfaction was in relation to job and work in the Work Orientation Module during the years 1989, 1998, 2006, and 2016; the specific

variable names extracted from the dataset being intjob, hlpoths, and hlpsoc. For the years and demographic data, the specific variable names extracted were year, age and sex.

2.1.1 Strengths and Limitations

The GSS conducted countless surveys both in person and online to collect their data. Interviewers who were part of the in person processes received extensive training and were able to record data in real time, allowing for more versatility within the data collection methods. Furthermore, the GSS is a reliable, consistent source that covers a wide range of topics, such as religion, life satisfaction, gun rights, etc (**NORCinfo?**). The nationwide surveys had happened and still continue to happen quite often, with previous patterns being as frequent as every year and current patterns being every two years. Expanding the platform to include online surveys was helpful as well, as it promoted accessibility and cost effectiveness.

Despite the many strengths of the GSS, it is inevitable that issues and concerns arise. With the online surveys and the older generations, there may be a learning curve due to low technological literacy. This potential discrepancy can cause older individuals to not engage in the surveys, eliminating a large chunk of the American adult population from experiencing the survey. On the other hand, in person surveys are not always cost friendly, as more time and resources are typically required. There are also various biases that can arise during in person surveys. Finally, since the GSS only did start surveying non-English speakers in 2006, there are limitations in the representativeness in the data collected prior to then. Efforts have been shown by the GSS team to improve their survey methodologies to promote accessibility and inclusivity.

2.1.2 Biases and Ethics to Consider

When conducting a survey, many biases can impact the validity of your results. For example, survey bias is when participants tend to agree with statements in surveys regardless of how they truly feel. While biases can be ignored if they were randomized across your sample, it is the often systematic response bias affecting your results that becomes problematic. In terms of our questions, extreme responding, neutral responding, and question order bias can become an issue. Extreme and neutral responding bias is when participants answering on a Likert scale choose answers that don't reflect their beliefs. To combat these biases, survey designers can ensure clear question wording, randomly assign different ordered surveys, and keep surveys short.

2.2 Data Cleaning

The open source statistical programming language (R Core Team 2023) was used to clean and analyze the data, along with producing the graphs. The main packages that supported

this process included (Wickham 2023), (Wickham et al. 2023), (Xie 2023), (Firke 2023), and (Spinu, Grolemund, and Wickham 2023).

The cleaning process involved filtering the specific data variables used for our analysis from the downloaded GSS dataset, and renaming any variables with meaningful names. For example, rather than "hlpoths" being the column name for "Importance of helping others in a job" , we renamed it to 'helping_others', as shown in @tbl-cleaneddata. Further, the numerical values representing the participants' responses (1-5) were changed to the representative words/phrases (not important, very important, etc.). Table 1 shows the old and new variable names used in cleaning, the description of variables, and sample responses.

Table 1: GSS Dataset

Variable	New.Name	Description	Example.Response
hlpoths	helping_others	Importance of helping others in a job	Very Important
hlpsoc	social_usefulness	Importance of social usefulness in a job	Not Important

2.3 Data Terminology

The response choices for each question and their respective code in brackets are as follows: Inapplicable (-100), No Answer (-99), Do Not Know/Cannot Choose (-98), Very Important (1), Important (2), Neither (3), Not important (4), and Not Important At All (5). For our graphs, we did not include the Inapplicable, No Answer, and Do Not Know/Cannot choose responses to focus on the discernible participant responses.

2.4 Respondent Demographics

Table 2 shows the number and percentage of male and female respondents for 1989, 1998, 2006, and 2016. The percentages of female participants were consistently higher than the male participants, as the female participant percentages were always above 50% while the male participant percentages ranged from low to high 40s.

Table 3 displays the number of respondents within different age groups for 1989, 1998, 2006, and 2016. The classified age groups are '18-24', '25-34', '45-54', '55-64', and '65+'. Further, there is a column labelled "N/A" for the respondents who did not disclose their age. As shown by the table, the 18-24 age group had the least amount of participants every year, while the age group with the most participants per year varied; however, the age range of the most participants per year stayed between 25-54.

Table 2: Respondent Gender Count and Percentage for 1989, 1989, 2006, and 2016

Year S	ex	Count	Percentage
1989	female	789	56.40
1989	male	610	43.60
1998	female	681	58.86
1998	male	476	41.14
2006	female	808	53.51
2006	male	702	46.49
2016	female	766	52.14
2016	male	703	47.86

Table 3: Respondent Count of Participants in Age Groups by Year

Year	18-24	25-34	35-44	45-54	55-64	65+	N/A
1989	151	324	296	215	154	257	2
1998	108	255	298	188	125	182	1
2006	110	269	329	335	227	231	9
2016	112	238	275	266	268	303	7

Table 4: Total Respondent Mean, Median, Mode, Min, and Max Age by Year

Year	Mean	Median	Mode	Min	Max
1989	45	42	28	18	89
1998	45	42	33	18	89
2006	47	46	47	18	89
2016	49	49	58	18	89

2.5 Graphs of Responses

Figure 1 and Figure 2, shows the responses to the prompt "On the following list there are various aspects of jobs. Please circle one number to show how important you personally consider it is in a job" where each graph represents one of the aspects. Respondents answered on a 1 to 5 Likert scale where 1 represents "very important" and 5 represents "not important at all".

2.5.1 Helps Others

In Figure 1, the proportion of respondents to the prompt "A job that allows someone to help other people?" is displayed. From the first year of data collection in 1989 to 2006, "Important" was the most selected response. In 2016, "Very Important" surpassed "Important" by 1%. In general, you can see an increase in "Very Important" respondents across the years while there is little change in the proportion of "Not Important" and "Not Important At All" responses. Further, there is a general decrease in "Neither" responses from 1989 - 2006 which is interrupted when there is a slight increase in 2016.

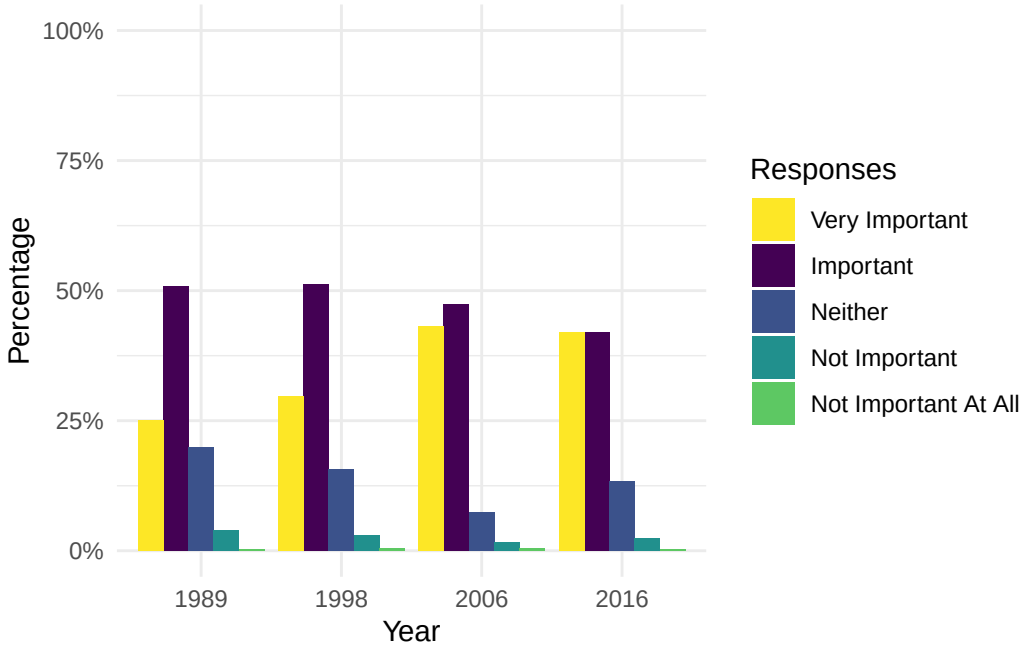

Figure 1: Proportion of Responses to Q1 - "A job that allows someone to help other people?"

2.5.2 Social Usefulness

Figure 2 displays the proportion of responses for the prompt "A job that is useful to society?". There is a large increase in the proportion of "Very Important" responses from 1989 to 2016. In contrast, there is a gradual decline for both "Important" and "Neither". There is little change in "Not Important" and "Not Important At All". Compared to the other figures, this graph has the most varying change in the "neutral" response.

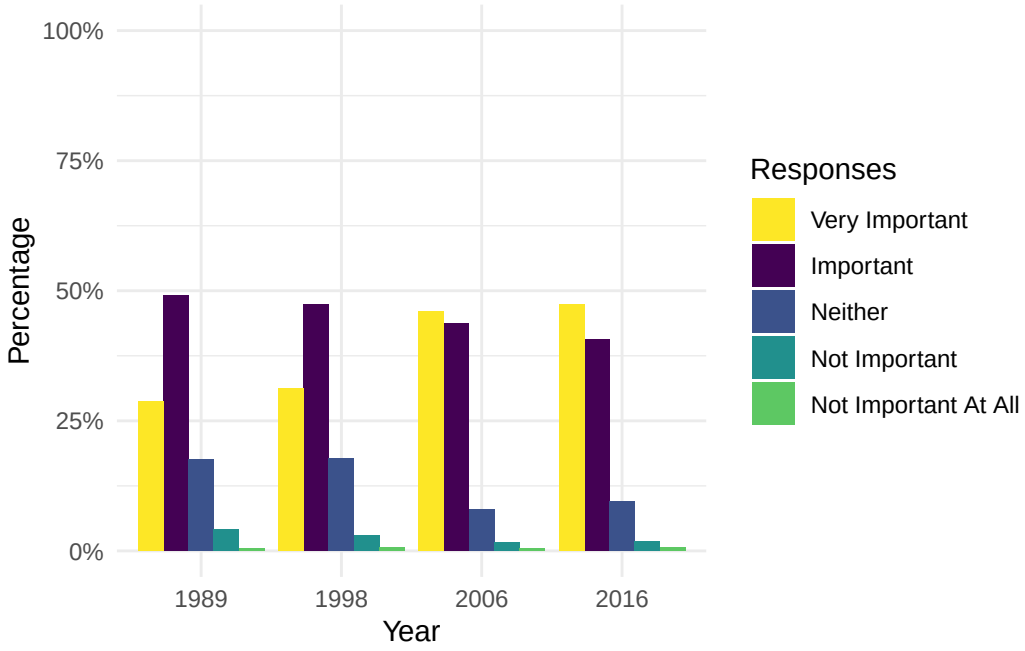

Figure 2: Proportion of Responses to Q3 - "A job that is useful to society?"

3 Results

3.1 Overall Trends

Table 5 summarizes the average responses per year for each question, where 1 represents "Very Important" and 5 represents "Not Important At All". There is a general decrease in scores, meaning importance increased, each year. The largest change from 1989 to 2016 was "Social Usefulness", with an average response decrease of 0.311. Overall, interesting work was consistently more important than helping others and social usefulness with an average of 0.264 points lower. As time passed, interesting work became rated more similarly with the other two factors, and in 2016 the average difference was only 0.144 points.

Table 5: Average of Responses by Year Dvidied by Question

Year	Helping Others	Social Usefulness
1989	2.034	1.988
1998	1.932	1.943
2006	1.687	1.670
2016	1.767	1.675

3.1.1 Sex

In Table 6 and Table 7, we see the percentage distribution of responses by respondent sex for the importance of helping others. In 1989, female respondents took the more extremes, and had much higher percentages for "very important" compared to their male counterparts. In 2016, the trend continues but at a lesser scale, with the proportions evening more.

Table 6: Helping Others Response Count and Proportions (%) 1989 by Sex

Response	Sex	Count	Percentage
very important	female	210	59.83
very important	male	141	40.17
important	female	419	58.93
important	male	292	41.07
neither	female	133	47.67
neither	male	146	52.33
not important	female	24	44.44
not important	male	30	55.56
not important at all	female	3	75.00
not important at all	male	1	25.00

Table 7: Helping Others Response Count and Proportions (%) 2016 by Sex

Response	Sex	Count	Percentage
very important	female	350	56.63
very important	male	268	43.37
important	female	324	52.43
important	male	294	47.57
neither	female	80	41.03
neither	male	115	58.97
not important	female	11	32.35
not important	male	23	67.65
not important at all	female	1	25.00
not important at all	male	3	75.00

In Table 8 and Table 9, the previous trend continues, with more women favouring importance and a decrease in differences in 2016. Social usefulness and interesting work had similar differences in proportions, while 1989 helping others had the largest disparity.

Table 8: Social Usefulness Response Count and Proportions (%) 1989 by Sex

Response	Sex	Count	Percentage
very important	female	223	55.61
very important	male	178	44.39
important	female	401	58.45
important	male	285	41.55
neither	female	135	54.66
neither	male	112	45.34
not important	female	25	43.10
not important	male	33	56.90
not important at all	female	5	71.43
not important at all	male	2	28.57

Table 9: Social Usefulness Response Count and Proportions (%) 2016 by Sex

Response	Sex	Count	Percentage
very important	female	379	54.38
very important	male	318	45.62
important	female	314	52.68
important	male	282	47.32
neither	female	58	41.13
neither	male	83	58.87
not important	female	11	42.31
not important	male	15	57.69
not important at all	female	4	44.44
not important at all	male	5	55.56

3.1.2 Age

Table 10 and Table 11 display the proportion of respondents, filtered by age groups in our selected years, who had chosen either "important" or "very important" for the prompt. For both tables, the age group 35-44 have the highest percentage, suggesting the group's support of helping others and social usefulness in an occupation. This age range is not fairly early nor late in one's adult life, depicting a stage in life where individuals are generally more settled in their careers and personal lives. Thus, there is potentially more of an inclination to fulfill social responsibilities and foster a sense of communal engagement due to a surplus of time and stability.

Table 10: Helping Others Response Proportion (%) by Age

Response	18-24	25-34	35-44	45-54	55-64	65+
important	4.08	9.00	9.68	8.74	6.58	9.36
very important	2.80	7.05	8.04	6.68	5.29	5.49

Table 11

Table 11: Social Usefulness Response Proportion (%) by Age

Response	18-24	25-34	35-44	45-54	55-64	65+
important	3.6	8.64	9.65	8.00	6.05	9.00
very important	3.5	7.59	8.40	7.24	6.07	5.89

3.2 Change in importance over time

Figure 3 graphically demonstrates the changing proportion of responses to how important it is for a job to help others. As mentioned in previous sections, although the proportion of "Important" responses decrease, the graph illustrates the increase in "Very Important" responses proportions. Additionally, the proportions of "Not Important" and "Not Important At All" are visually less significant than the other responses, as their colours are barely seen on the graph.

Similarly, in Figure 4, there is an illustrated increase in recognition of altruistic motivations in the workplace, as there is an increase in "Very Important" and "Important responses; these responses evidently take up the majority of the graph. This visualization further conveys the prevalence of American employees that deem helping others and social usefulness in their job important in their occupation. Not only does this portray the changing mindset of working individuals, but also supposedly the evolving attitudes of members of society.

4 Discussion

4.1 Economic Factors

In the early 1990s, much of the Western world, including the United States, entered a recession (Wikipedia 2024). The 1980s had a very slow productivity growth at 1.5 each year and at the end of the early 90s recession, the Federal budget had a $298 billion deficit (Su 2001). In 2000, the U.S. had their highest unemployment rate in three decades at 4.0% (Su 2001). These low employment rates from late 1989 to 1992 likely contributed to the lower amount of importance

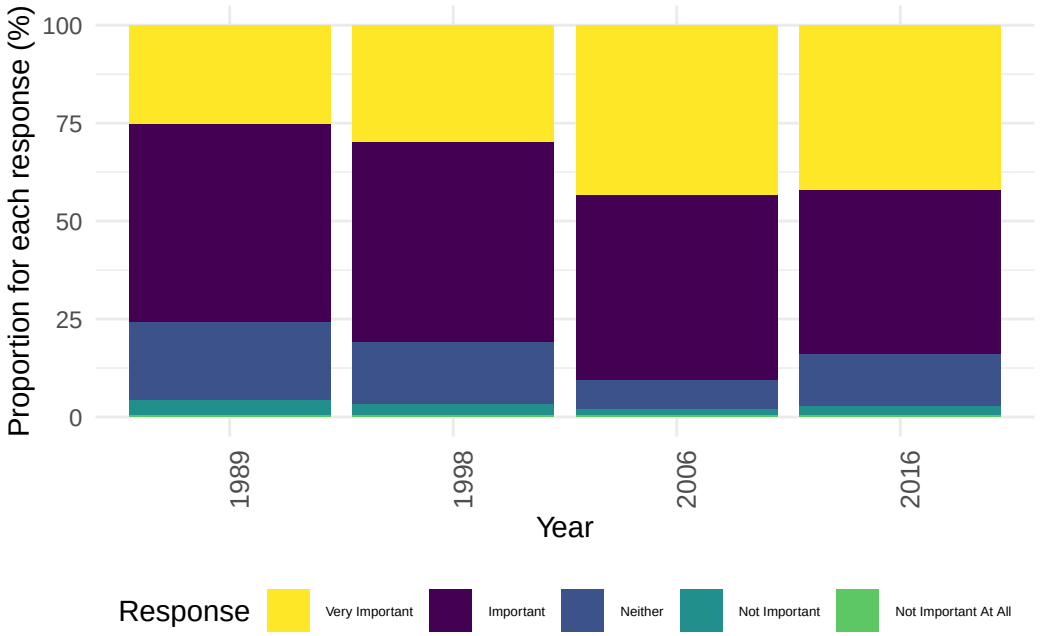

Figure 3: Proportion (%) of Responses to Importance of Job that Helps Others

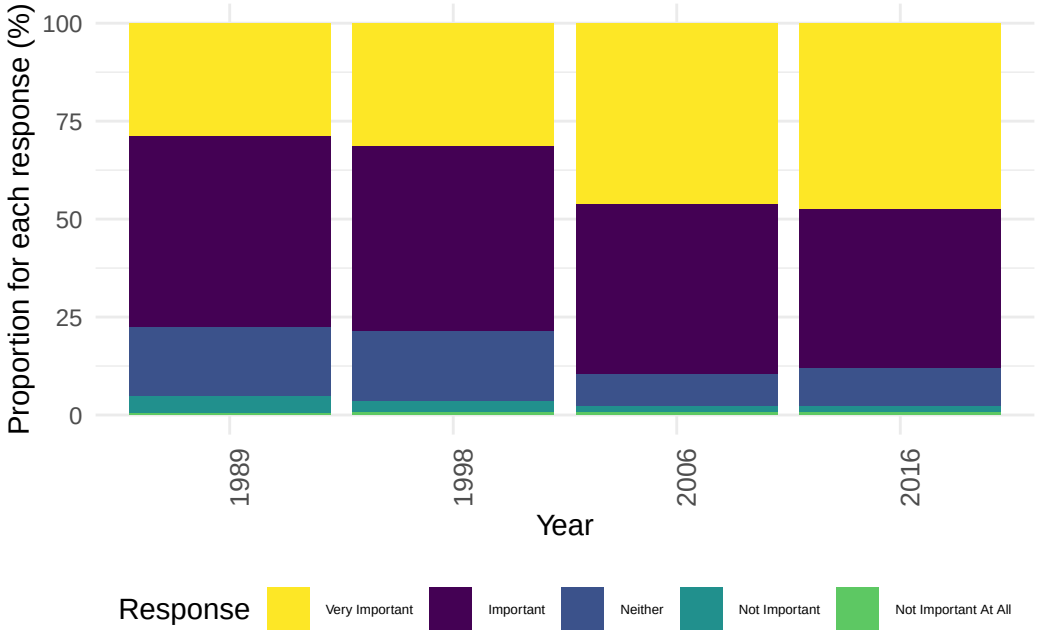

Figure 4: Proportion (%) of Responses to Importance of Social Usefulness in Job

workers placed on their occupation being one which helps others and is useful to society; instead, workers may have prioritized pay and stability. In contrast, the 2010s had the lowest unemployment rate, low inflation rates, and low interest ("What Trends Distinguished the u.s. Economy over the Past Decade?" 2019). The decade was the first since the 1850s to skip a recession and low unemployment broke a 50-year record. These factors may have contributed to participants putting higher value on altruistic occupation factors.

4.2 Sex

Women generally placed more importance on occupations that help others and are useful to society. The disparity between attitudes of women and men was largest for the importance of occupations that help others, and it is evident how this translates to women working in care work. In 2021, 77.6% of the 21.2 million U.S. care workers were women (Daily 2022). Care work includes occupations in which workers care for others like children, persons with disabilities, seniors, and include industries such as education, healthcare, personal services, and more ("Study: Women Working in Paid Care Occupations" 2022). Despite the essential work the care industry does, it has historically been underpaid work and home health care workers had an average salary of $13.81 from 2018 to 2020 (Gould, Sawo, and Banerjee 2021). The issue worsens when intersectional impacts are considered, as care workers are disproportionately women of colour. The change in attitude disparity between 1989 and 2016 may be a sign of more supportive views for care work and lowered inequality; however, the continued low pay of care workers is evidence that changing attitudes have not largely improved the care economy. The general trend of lower importance across both factors for men may also be an indication of persisting stereotypes that men need to prioritize pay and supporting their own family. This may be a feedback loop, where men believe they must be making more money to support their family while women believe their value is in care work, and when men receive higher pay than their female counterparts it is confirmed that they are responsible for monetarily supporting the family.

4.3 Age

Age is a crucial factor to consider when evaluating employees in the job force. Gradual aging often eventually leads to a decreasing ability to work due to increased health problems (Converso et al. 2018). In general, as adults age and indulge in more life experiences, values and motivational priorities tend to shift. This idea is supported by various lifespan developmental theories and can explain the assorted percentages that are shown in Table 10 and Table 11. Aging and altruism studies have shown that while age-varying limiting factors, older age can be associated with higher levels of altruistic motivation (Sparrow et al. 2021).

In the aforementioned tables, we see a significantly higher proportion in responses when comparing the 24 and lower age range to the 24 and higher age range. This could be attributed to the fact that 62.2% of Americans who enroll in college at 19, graduate within 5 years of their

bachelor's degree (Hanson 2024). New graduates in this age group are usually in a transitional phase of life, and open to exploration, establishing careers, and personal growth.

However, percentages are not consistently increasing as the age increases, accounting for the limitations within these types of studies. Although positive linear relationships have been demonstrated in cross-sectional studies of subjective, behavioral, and neural measures of altruism, the reasoning behind why older adults tend to be more altruistic is still not fully developed. Psychological stress levels were seen as an affecting factor of prosocial behaviour, as studies showed that stressors had the ability to provoke or reduce altruism in young adults (Sparrow et al. 2019). Changes in cognitive ability and socioemotional development have also been explored as elements that promote altruistic behaviour.

4.4 Culture

Generally, the data shows an increasing support for occupations that help others and contribute to society. These factors can be categorized into intrinsic motivations which are aspects of an occupation which are desired because they are enjoyable in themselves, while extrinsic motivations refer to aspects sought for reasons outside of work (Bogue 2021). In individualistic cultures, intrinsic motivations have a stronger link to job satisfaction whereas in collectivist countries, extrinsic factors are intrinsically motivating (Monnot 2019), (Huang and Vliert 2003). (Santos, Varnum, and Grossmann 2017) has found that there are more individualistic relational practices in the United States and that the use of individualistic words has increased over time. The relation between individualistic culture and intrinsic motivations in combination with increasing individualism in the U.S. may explain the increase in importance of occupations with intrinsic value. The U.S. also scores below average on uncertainty avoidance according to the Culture Factor Group, perhaps contributing to an increased openness to taking a riskier job that may be more rewarding ("Country Comparison Tool: United States," n.d.). An exploration to pursue in the future is comparing various intrinsically and extrinsically motivating factors with changes in individualism and uncertainty avoidance over time and across cultures.

5 Appendix

5.1 Survey

Survey available at: https://forms.gle/ezXF9ADu7phXJGM87

5.1.1 Survey Introduction

The following survey aims to investigate the importance of various factors in jobs. From analyzing 1989 to 2016 data in the United States General Social Survey, our paper revealed the increasing importance of intrinsic motivations over 35 years. To deepen our understanding of the relationship between demographic factors and the importance of occupational motivations, we created this short survey.

5.1.2 Questions

1. All responses to this survey are completely confidential and will only be used for research purposes. Your email will only be used if you request your responses to be sent to you. You may withdraw consent and close this survey at any time. For any further inquiries, please email jessica.im@mail.utoronto.ca or sshirleyy.chen@mail.utoronto.ca.

- I consent.

2. What is your age group?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

3. What gender do you identify with?

- Woman
- Man
- Non-Binary
- Other:

4. What race do you identify with?

- Asian or Pacific Islander
- Black or African American
- Hispanic or Latino
- First Nations or Indigenous
- White or Caucasian
- Multiracial/Biracial
- Other:

5. What nationality/nationalities do you identify with?

- Type…

6. What is your current employment status?

- Full-time employee
- Part-time employee
- Unemployed
- Retired
- Student
- Other:

7. What is the importance of a job that allows someone to help other people?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

8. What is the importance of a job that pays well?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

9. What is the importance of a job that is interesting?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

10. What is the importance of job security?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

11. What is the importance of a job that is collaborative?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

12. What is the importance of a job that has autonomy?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

13. What is the importance of a job that is useful to society?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

14. What is the importance of a job that has growth opportunities?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

15. What is the importance of a job that has work-life balance?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

16. What is the importance of a job that has flexible hours?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

17. What is the importance of a job that has a flexible location?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

18. What is the importance of a job that has a positive social impact?

- Likert scale 1 (Very Important) - 5 (Not Important At All)

5.1.3 Survey Confirmation Message

Thank you for completing our survey, your submission has been recorded and your answers may be requested to be sent to the email you entered. Your participation is valued and impactful in our quest to better understand occupational motivations. By participating, you have helped reveal what types of jobs are desired and valued.

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