

## снартер 8: Public Opinion

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## CHAPTER 8 PREVIEW: Public Opinion

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ACCESS THE PUBLIC DATA



## Overview

Al has the potential to have a transformative impact on society. As such it has become increasingly important to monitor public attitudes toward Al. Better understanding trends in public opinion is essential in informing decisions pertaining to Al's development, regulation, and use.

This chapter examines public opinion through global, national, demographic, and ethnic lenses. Moreover, we explore the opinions of AI researchers, and conclude with a look at the social media discussion that surrounded AI in 2022. We draw on data from two global surveys, one organized by IPSOS, and another by Lloyd's Register Foundation and Gallup, along with a U.S-specific survey conducted by PEW Research.

It is worth noting that there is a paucity of longitudinal survey data related to AI asking the same questions of the same groups of people over extended periods of time. As AI becomes more and more ubiquitous, broader efforts at understanding AI public opinion will become increasingly important.

## **Chapter Highlights**

#### Chinese citizens are among those who feel the most positively about AI products and services. Americans ... not so much.

In a 2022 IPSOS survey, 78% of Chinese respondents (the highest proportion of surveyed countries) agreed with the statement that products and services using AI have more benefits than drawbacks. After Chinese respondents, those from Saudi Arabia (76%) and India (71%) felt the most positive about AI products. Only 35% of sampled Americans (among the lowest of surveyed countries) agreed that products and services using AI had more benefits than drawbacks.

#### Men tend to feel more positively about AI products and services than women. Men are also more likely than women to believe that AI will mostly help rather than harm.

According to the 2022 IPSOS survey, men are more likely than women to report that AI products and services make their lives easier, trust companies that use AI, and feel that AI products and services have more benefits than drawbacks. A 2021 survey by Gallup and Lloyd's Register Foundation likewise revealed that men are more likely than women to agree with the statement that AI will mostly help rather than harm their country in the next 20 years.

#### People across the world and especially America remain unconvinced by self-driving cars.

In a global survey, only 27% of respondents reported feeling safe in a self-driving car. Similarly, Pew Research suggests that only 26% of Americans feel that driverless passenger vehicles are a good idea for society.

#### Different causes for excitement and concern.

Among a sample of surveyed Americans, those who report feeling excited about AI are most excited about the potential to make life and society better (31%) and to save time and make things more efficient (13%). Those who report feeling more concerned worry about the loss of human jobs (19%); surveillance, hacking, and digital privacy (16%); and the lack of human connection (12%).

#### NLP researchers ... have some strong opinions as well.

According to a survey widely distributed to NLP researchers, 77% either agreed or weakly agreed that private AI firms have too much influence, 41% said that NLP should be regulated, and 73% felt that AI could soon lead to revolutionary societal change. These were some of the many strong opinions held by the NLP research community.



## 8.1 Survey Data

### **Global Insights**

How do opinions of AI vary across the globe? The first subsection of this chapter provides a response by looking at survey data from IPSOS and Pew Research, as well as one poll that was a collaboration of Gallup and Lloyd's Register Foundation. The surveys suggest that public perceptions concerning AI differ across countries and by demographic groups.

#### **AI Products and Services**

In late 2021, <u>IPSOS</u> ran a survey on global attitudes toward AI products and services. The survey consisted of interviews with 19,504 adults ages 16–74 in 28 different countries.<sup>1</sup> Figure 8.1.1 highlights global opinions (aggregated results across the entire survey subsample) for a variety of questions relating to AI products and services. It shows the percentage of respondents who agree with a particular question. The majority of the survey sample, 60%, believe that AI products and services will profoundly change their daily life in the near future—and make their life easier. A very slight majority, 52%, feel that products and services that use AI have more benefits than drawbacks. Only 40% of respondents report that AI products and services make them feel nervous.

#### Global Opinions on Products and Services Using AI (% of Total), 2022

Source: IPSOS, 2022 | Chart: 2023 AI Index Report I have a good understanding of what 64% artificial intelligence is Products and services using artificial intelligence will profoundly change my daily life 60% in the next 3-5 years Products and services using artificial intelligence 60% make my life easier Products and services using artificial intelligence 52% have more benefits than drawbacks I know which types of products and services 50% use artificial intelligence I trust companies that use artificial intelligence 50% as much as I trust other companies Products and services using artificial intelligence 49% have profoundly changed my daily life in the past 3-5 years Products and services using artificial intelligence 39% make me nervous 10% 20% 40% 50% 60% 0% 30% % of Respondents That "Agree"

Figure 8.1.1

1 See Appendix for more details about the survey methodology.



Opinions vary widely across countries as to the relative advantages and disadvantages of Al. The IPSOS survey suggests that 78% of Chinese respondents, 76% of Saudi Arabian respondents, and 71% of Indian respondents feel that products and services using AI have more benefits than drawbacks (Figure 8.1.2). However, only 35% of American respondents share that sentiment. Among the 28 surveyed countries, France and Canada held the most negative views.

'Products and services using AI have more benefits than drawbacks,' by Country (% of Total), 2022 Source: IPSOS, 2022 | Chart: 2023 AI Index Report

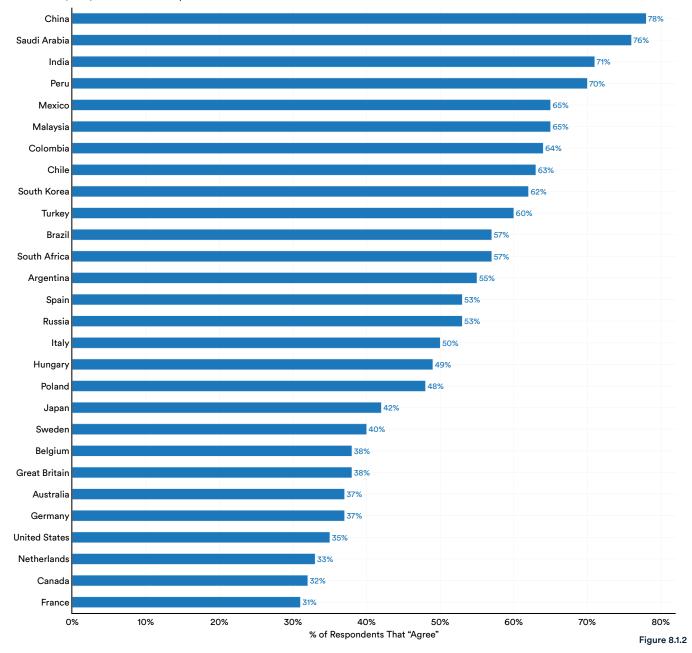




Figure 8.1.3 breaks down answers to all of IPSOS' Al products and services questions by country. Generally, sentiment relating to Al products and services seems to be strongly correlated within specific countries. For example, Chinese respondents seem to feel among the most positive about Al products and services: 87% of Chinese respondents claim that Al products and services make their lives easier, 76% report trusting companies that use AI as much as other companies, and only 30% say that AI products and services using AI make them nervous. Conversely, American respondents are among the most negative when it comes to AI. Only 41% claim that AI products and services make their lives easier, 35% report trusting AI companies as much as other companies, and 52% report that AI products and services make them feel nervous.

#### Opinions About AI by Country (% Agreeing With Statement), 2022

Source: IPSOS, 2022 | Chart: 2023 Al Index Report

I have a good understanding of what artificial intelligence is	64%	59%	60%	69%	59%	76%	67%	71%	50%	50%	57%	67%	72%	42%	41%	61%	74%	65%	76%	66%	75%	73%	78%	72%	62%	60%	68%	63%
Products and services using artificial intelligence will profoundly change my daily life in the next 3–5 years	60%	50%	52%	61%	44%	67%	80%	65%	45%	44%	46%	55%	74%	53%	53%	71%	65%	53%	71%	56%	60%	80%	72%	76%	56%	50%	73%	46%
Products and services using artificial intelligence make my life easier	59%	46%	49%	65%	44%	70%	87%	71%	39%	45%	45%	50%	72%	54%	52%	71%	73%	47%	74%	58%	64%	80%	67%	74%	59%	46%	71%	41%
Products and services using artificial intelligence have more benefits than drawbacks	55%	37%	38%	57%	32%	63%	78%	64%	31%	37%	38%	49%	71%	50%	42%	65%	65%	33%	70%	48%	53%	76%	57%	62%	53%	40%	60%	35%
I know which types of products and services use artificial intelligence	47%	38%	37%	58%	36%	59%	76%	62%	34%	37%	37%	38%	69%	45%	32%	61%	62%	41%	63%	52%	57%	69%	57%	60%	46%	37%	60%	39%
l trust companies that use artificial intelligence as much as I trust other companies	55%	36%	40%	50%	34%	56%	76%	57%	34%	42%	35%	48%	68%	48%	39%	61%	60%	38%	60%	51%	52%	73%	56%	46%	50%	39%	63%	35%
Products and services using artificial intelligence have profoundly changed my daily life in the past 3–5 years		37%	37%	51%	32%	58%	73%	58%	32%	31%	33%	38%	67%	41%	30%	65%	62%	40%	65%	45%	50%	72%	56%	62%	49%	30%	60%	36%
Products and services using artificial intelligence make me nervous	33%	51%	42%	35%	49%	36%	30%	39%	32%	37%	50%	31%	53%	26%	20%	48%	38%	36%	35%	30%	28%	51%	52%	32%	48%	37%	48%	52%
	Argentina	Australia	Belgium	Brazil	Canada	Chile	China	Colombia	France	Germany	Great Britain	Hungary	India	Italy	Japan	Malaysia	Mexico	Netherlands	Peru	Poland	Russia	Saudia Arabia	South Africa	South Korea	Spain	Sweden	Turkey	United States

Figure 8.1.3



Figure 8.1.4 breaks down opinions in all countries across demographic groups such as gender, age, household income, and employment status. IPSOS results suggest that men feel more positively about Al products and services than women-for example, compared to women, men are more likely to report feeling that AI products and services make their lives easier. Age-specific opinions vary. For instance, while individuals under 35 are most likely to report

feeling that AI products and services make their lives easier, they are also less likely than the 35-to-49 age category to believe that AI products and services have more benefits than drawbacks. Finally, households with higher incomes are more positive, compared to those with lower incomes, about AI products and services making life easier and having more benefits than drawbacks.

## Opinions About AI by Demographic Group (% Agreeing With Statement), 2022 Source: IPSOS, 2022 | Chart: 2023 AI Index Report

I have a good understanding of what artificial intelligence is	69%	60%	66%	65%	61%	57%	63%	71%	56%	64%	71%	73%	74%	67%	59%		
Products and services using artificial intelligence will profoundly change my daily life in the next 3–5 years	63%	57%	63%	61%	55%	56%	58%	67%	53%	58%	68%	70%	72%	64%	54%		
Products and services using artificial intelligence make my life easier	62%	58%	64%	62%	54%	56%	58%	66%	53%	58%	67%	67%	70%	63%	55%		
Products and services using artificial intelligence have more benefits than drawbacks	55%	49%	47%	53%	46%	50%	51%	57%	45%	50%	59%	63%	64%	55%	47%		
I know which types of products and services use artificial intelligence	55%	46%	54%	51%	45%	46%	50%	57%	44%	48%	58%	63%	65%	54%	44%		
l trust companies that use artificial intelligence as much as I trust other companies	53%	47%	54%	51%	44%	47%	48%	57%	45%	48%	56%	61%	62%	53%	45%		
Products and services using artificial intelligence have profoundly changed my daily life in the past 3–5 years	51%	46%	54%	50%	41%	46%	47%	54%	43%	46%	55%	61%	62%	52%	43%		
Products and services using artificial intelligence make me nervous	38%	41%	40%	40%	38%	41%	41%	38%	41%	37%	40%	48%	46%	40%	38%		
	Male	Female	Under 35	35 to 49	50 to 74	Low	Medium	High	Low	Medium	High	Business Owner	Sr. Exec./ Decision Maker	Employed	Non-Employed		
	Gen	der	Age			Hous	ehold Inco	ome		Education		Employment Status					

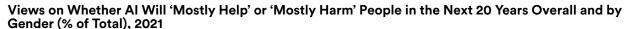
Figure 8.1.4

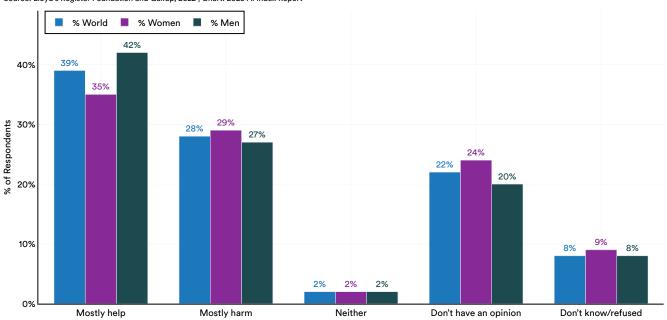


#### Al: Harm or Help?

In 2021, Lloyd's Register Foundation, an independent global charity, collaborated with Gallup to poll 125,911 people across 121 countries about their perceptions of artificial intelligence and other digital trends. Figure 8.1.5 shows the responses to the survey question, "Do you think artificial intelligence will mostly help or mostly harm people in this country in the next 20 years?"

A greater proportion of respondents believed that AI will mostly help (39%) compared to a smaller proportion who believed that it would mostly harm (28%). Mirroring the disparity in responses across gender evident in the IPSOS survey, men in the Lloyd's-Gallup poll were more likely than women to report believing that AI will mostly help people in the next 20 years.





Source: Lloyd's Register Foundation and Gallup, 2022 | Chart: 2023 Al Index Report

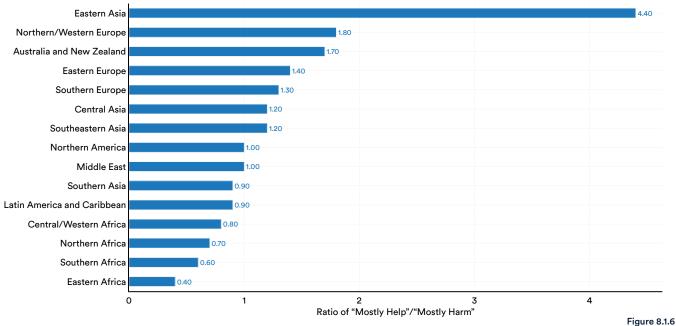




Eastern Asia, Northern/Western Europe, and Southern Europe are the regions of the world where people are most likely to report believing that AI will mostly help versus mostly harm (Figure 8.1.6). More specifically, among the Eastern Asian survey sample, for every 1 response of "mostly harm" there were 4.4 responses suggesting that AI will "mostly help." The regions whose populations are most pessimistic about the potential benefits of AI include Eastern Africa, Northern Africa, and Southern Africa.

## Views on Whether AI Will 'Mostly Help' or 'Mostly Harm' People in the Next 20 Years by Region: Ratio of 'Mostly Help'/'Mostly Harm', 2021

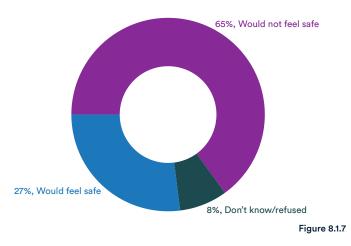
Source: Lloyd's Register Foundation and Gallup, 2022 | Chart: 2023 Al Index Report



The Lloyd's Register survey also polled respondents about their perceptions of certain AI technologies, such as self-driving cars. The majority of survey respondents reported not feeling safe in a self-driving car (65%), compared to only 27% who reported feeling safe (Figure 8.1.7).

## Perceptions of the Safety of Self-Driving Cars (% of Total), 2021

Source: Lloyd's Register Foundation and Gallup, 2022 | Chart: 2023 Al Index Report





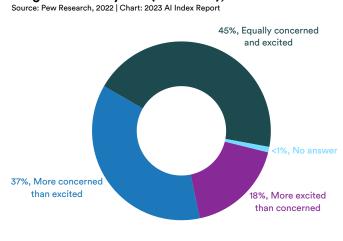
Chapter 8: Public Opinion 8.1 Survey Data

## **United States**

In 2022, <u>Pew Research</u> released one of the most comprehensive surveys to date about Americans' views on AI. The survey interviewed 10,260 panelists from a wide range of demographic groups about their broad AI-related opinions, as well as their perspectives on specific AI use cases.<sup>2</sup>

45% of Americans report feeling equally concerned and excited about the use of AI programs in daily life, while 37% report feeling more concerned than excited (Figure 8.1.8). Only 18% of Americans report feeling more excited than concerned about AI technology.

Which AI applications are Americans most excited about? A large proportion report feeling very or somewhat excited about AI being used to perform household chores (57%), to perform repetitive workplace tasks (46%), and to diagnose medical

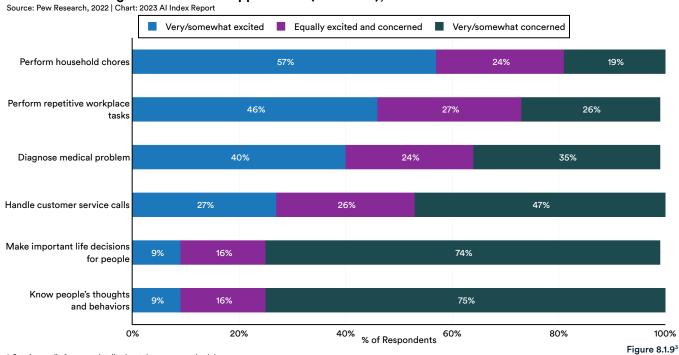


Americans' Feelings Toward Increased Use of AI

Programs in Daily Life (% of Total), 2022

problems (40%) (Figure 8.1.9). Americans are very or somewhat concerned about AI being used to make important life decisions for people (74%) and to know people's thoughts and behaviors (75%).

#### Americans' Feelings on Potential AI Applications (% of Total), 2022



2 See Appendix for more details about the survey methodology. 3 The numbers in Figure 8.1.9 may not sum up to 100% due to rounding.

Figure 8.1.8



There are two specific AI use cases that Americans are more likely to report feeling are good ideas for society rather than bad: police use of facial recognition technology, and social media companies using AI to find false information on their sites (Figure 8.1.10). More specifically, 46% of Americans believe that police using facial recognition technology is a good idea for society compared to 27% who believe it is a bad idea. However, Americans are not as excited about driverless passenger vehicles: More feel that driverless passenger vehicles are a bad idea for society than a good idea.



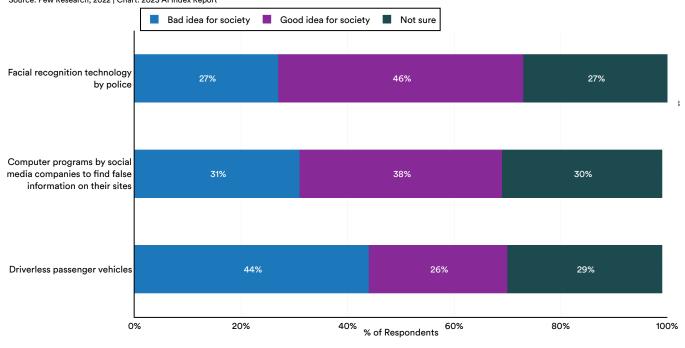
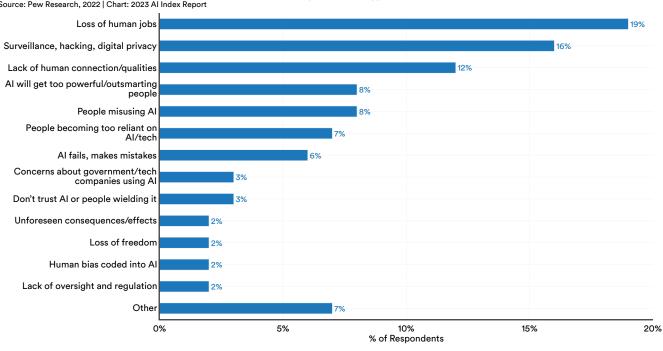


Figure 8.1.10<sup>4</sup>

4 The numbers in Figure 8.1.10 may not sum up to 100% due to rounding.



Of the sample of Americans who reported being more concerned than excited about AI, Figure 8.1.11 outlines the main reasons for their concern. The primary reasons include loss of human jobs (19%); surveillance, hacking, and digital privacy (16%); and lack of human connection (12%). Americans reported being less concerned about the potential loss of freedom and issues relating to lack of oversight and regulation.

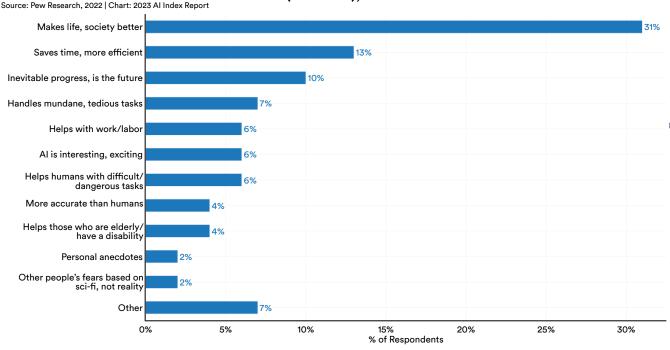


#### Main Reason Americans Are Concerned About AI (% of Total), 2022 Source: Pew Research, 2022 | Chart: 2023 AI Index Report

Figure 8.1.11



The two leading reasons that Americans report being excited about AI relate to its potential to make life better and to save time (Figure 8.1.12). Of the respondents, 31% believe AI makes life and society better. A significant group also reported feeling excited about the potential of Al to save time and increase efficiency (13%), as well as to handle mundane, tedious tasks (7%).



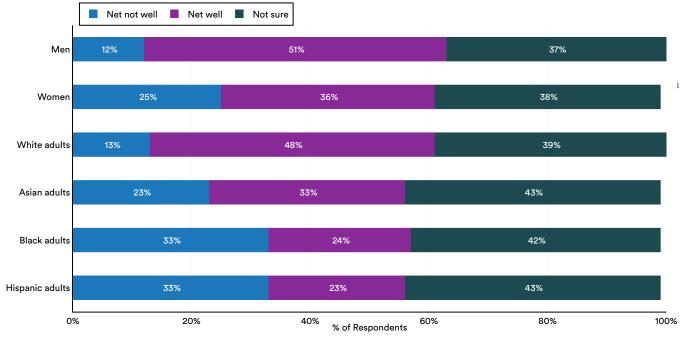
#### Main Reason Americans Are Excited About AI (% of Total), 2022

Figure 8.1.12



Source: Pew Research, 2022 | Chart: 2023 Al Index Report

The Pew Research survey also asked participants which group of people had their experiences and views taken into consideration in the design of AI systems. Respondents felt AI systems most reflected the experiences and views of men and white adults (Figure 8.1.13). There was a 15 percentage point gap in the degree to which people felt that AI systems positively considered the experiences and views of men over women. Similarly, respondents felt that the experiences and views of Asian, Black, and Hispanic adults, compared to those held by white adults, were not as positively considered.



People Whose Experiences and Views Are Considered in the Design of AI Systems (% of Total), 2022

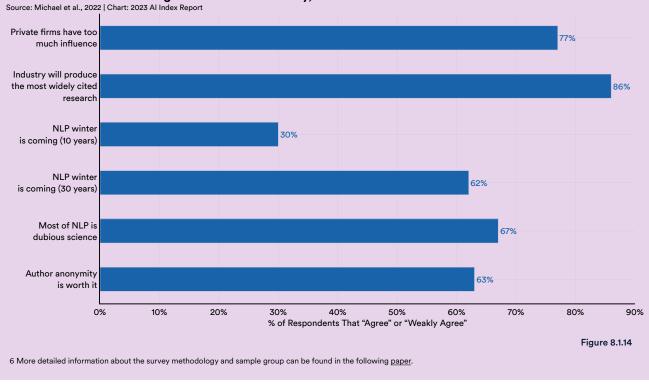
Figure 8.1.135

5 The numbers in Figure 8.1.13 may not sum up to 100% due to rounding.





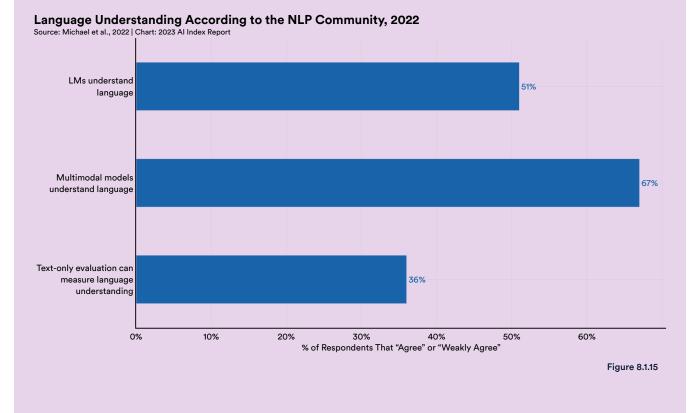
From May to June 2022, a group of American researchers conducted a survey of the NLP research community on a diverse set of issues, including the state of the NLP field, artificial general intelligence (AGI), and ethics, among others. According to the authors, a total of 480 individuals completed the survey, 68% of whom had authored at least two Association for Computational Linguistics (ACL) publications between 2019 and 2022.<sup>6</sup> The survey represents one of the most complete pictures of the attitudes AI researchers have toward AI research. In general, the NLP research community strongly feels that private firms have too much influence (77%) and that industry will produce the most widely cited research (86%) (Figure 8.1.14). Curiously, 67% either agreed or weakly agreed with the statement that most of NLP is dubious science. A small proportion, 30%, think an "NLP winter"—a period when the field faces a significant slowdown or stagnation in research and development—is coming in the next decade.



#### State of the Field According to the NLP Community, 2022

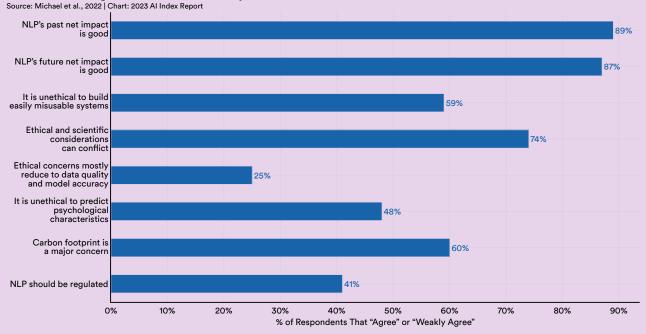


A small majority of NLP researchers believe that specific types of AI systems can actually understand language: 51% agreed with the statement that language models (LMs) understand language, with even more (67%) agreeing that multimodal models understand language (Figure 8.1.15).





NLP researchers also seem to believe that NLP's past net impact has been positive (89%) and that its future impact will continue to be good (87%) (Figure 8.1.16). The community is divided on the issue of using AI to predict psychological characteristics, with 48% of respondents feeling it is unethical. Sixty percent of researchers feel that the carbon footprint of AI is a major concern; however, only 41% feel that NLP should be regulated.

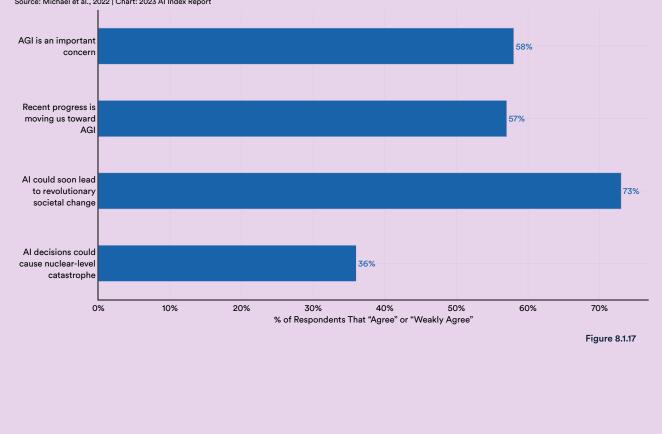


#### Ethics According to the NLP Community, 2022

Figure 8.1.16



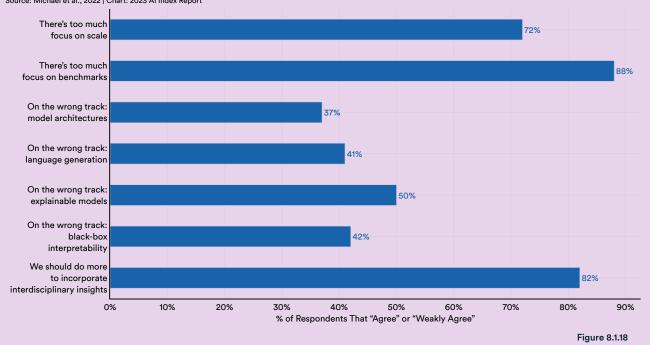
Although a large majority of researchers feel that AI could soon lead to revolutionary societal change (73%), only 36% feel that AI decisions could cause nuclear-level catastrophe (Figure 8.1.17). A plurality of researchers, 57%, held that recent research progress was leading the AI community toward Artificial General Intelligence (AGI).



Artificial General Intelligence (AGI) and Major Risks According to the NLP Community, 2022 Source: Michael et al., 2022 | Chart: 2023 Al Index Report



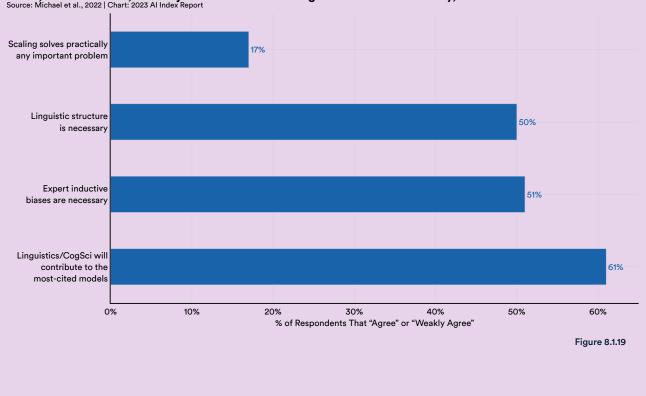
When asked about the direction AI research is taking, the NLP community registered the strongest responses about the following: First, there's too much focus on benchmarks (88%); second, more work should be done to incorporate interdisciplinary insights (82%); and third, there's too great a focus on scale (72%) (Figure 8.1.18).



#### Promising Research Programs According to the NLP Community, 2022 Source: Michael et al., 2022 | Chart: 2023 Al Index Report



A further point on the NLP community's skepticism of scale: Only 17% of respondents agreed or weakly agreed with the statement that scaling solves practically any important problem, with a further 50% reaffirming the importance of linguistic structure (Figure 8.1.19).



#### Scale, Inductive Bias, and Adjacent Fields According to the NLP Community, 2022 Source: Michael et al., 2022 | Chart: 2023 Al Index Report



## 8.2 Social Media Data

## **Dominant Models**

Public attitudes toward AI can also be gauged through quantitative and qualitative analyses of posts that people make on social media. The NetBase Quid team leveraged the NetBase platform to analyze social conversation around AI models and new releases for uses across sectors from January to December 2022, looking at 2.74 million social media posts.

Figure 8.2.1 shows the net sentiment score of various AI models that were released throughout the year. The net sentiment score expresses the ratio of positive to negative sentiment around a given topic. In this case, a net sentiment score of +100 means that all conversation is positive; a score of -100 means that all conversation is negative. AlphaCode had the most consistently high sentiment over time, as well as the highest average sentiment for 2022, due to positive press coverage on social media and practical use cases of AI-driven programming. Consumers and media outlets embraced the practical use case of programming automation. Some sample social media posts relating to AlphaCode include:

<u>"#AlphaCode</u>—a new <u>#Al</u> system for developing computer code developed by <u>@DeepMind</u> can achieve average human-level performance in solving programming contests." – Science Magazine, Twitter

"DeepMind's AlphaCode outperforms many human programmers in tricky software challenges." – <u>@lunamoth</u> ChatGPT conversation has increasingly saturated social media conversation around AI model releases more broadly, with sentiment growing ever more mixed. Consumers question the implications of its launch as well as its underlying ethical principles. Another frequent preoccupation is the bias of the system toward certain political, ethical, or cultural beliefs.

"ChatGPT passed a Wharton MBA exam. Time to overhaul education." – <u>@GRDecter</u>

"Alarm: ChatGPT by <u>@OpenAl</u> now \*expressly prohibits arguments for fossil fuels\*. (It used to offer them.) Not only that, it excludes nuclear energy from its counter-suggestions. <u>@sama</u>, what is the reason for this policy?" – <u>@AlexEpstein</u>

Finally, while GLM-130B took up very little volume of the overall social media conversation, a small conversation of very negative sentiment grew over the system's ties to the Chinese government and how it was "prohibited" from using the software to "undermine" China's government in any way. Technology influencer and PhD student Jesse Wood posted a Twitter thread about GLM-130B's licensing language that gained significant traction.

"The model license for GLM-130B has a restriction: 'You will not use the Software for any act that may undermine China's national security and national unity, harm the public interest of society, or infringe upon the rights and interests of human beings." – <u>@jrhwood</u>



2022/Q4

#### Net Sentiment Score of Al Models by Quarter, 2022 Source: NetBase Quid, 2022 | Chart: 2023 Al Index Report 2022/Q1 2022/Q2 2022/Q3 DALL-F 0 40 29

DALL-E	0	42	29	21
LaMDA	73	-9	-11	44
AlphaCode	60	79	71	70
CoPilot	29	22	15	34
PaLM		66	66	30
Gato		47	84	65
Imagen		24	65	56
Stable Diffusion			35	52
Whisper			85	69
Make-A-Video			4	9
AlphaTensor				96
GLM-130B				55
BLOOM				0
CICERO				14
ChatGPT				32

Figure 8.2.17

7 The AI Index searched for sentiment surrounding the term "DALL-E," as it was more frequently referred to on social media, rather than DALL-E 2, the official name of the text-to-image model released by OpenAI in 2022.



Figure 8.2.2 highlights the proportion of AI-related social media conversation that was dominated by the release of particular models.<sup>8</sup> ChatGPT dominated consumer conversation with a rapid rise, making up over half of consumer conversation by the end

**Artificial Intelligence** 

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of 2022. Despite initial excitement, sentiment was mixed by the end of the year, as some individuals became more aware of ChatGPT's limitations. OpenAI CEO Sam Altman even publicly commented on it being "incredibly limited" in certain respects.

"ChatGPT is incredibly limited, but good enough at some things to create a misleading impression of greatness. It's a mistake to be relying on it for anything important right now. It's a preview of progress; we have lots of work to do on robustness and truthfulness." – @SamAltman

Conversation around LaMDA exploded in Q2 2022 as an ex–Google employee reported his experiences with a "sentient" system that spoke of its own emotions and thoughts. Many political and technology influencers spoke out, however, about the "deepfake" nature of the responses of systems like LaMDA that do not have a sense of "truth" and could proliferate misinformation.

"Al systems like LamDA and GPT-3 are sociopathic liars with utter indifference to truth, deepfakers with words, every day creating more compelling, more plausible misinformation on demand. It is imperative that we develop technology & policy to thwart them." – @GaryMarcus "This story ... is really sad, and I think an important window into the risks of designing systems to seem like humans, which are exacerbated by <u>#Alhype</u>." – <u>@nitashataku</u>

Stable Diffusion conversation stands out as a prominent leader in conversation volume toward the end of 2022, but it is also a symbol of how the consumer lexicon around AI models is developing. Many consumers debated the "originality" of what Stable Diffusion produces.

"I've worked on neural networks, so I understand stable diffusion pretty well. And while it can't have original thoughts, it can come up with original works." – <u>r/TikTokCringe</u>

"That's true of anywhere that datasets scrape without permission. The thing to actually be upset about is that their own generator is purposefully using the Stable Diffusion dataset that already contains tons of stolen work." – <u>@Emily\_Art</u>

ChatGPT dominated consumer conversation with a rapid rise, making up over half of consumer conversation by the end of 2022.

8 The figures in this section consider all Al-related social media conversation. The percentage associated with the model in Figure 8.2.2 represents the share of all Al-related social media conversation that was dominated by that model.



	2022/Q1	2022/Q2	2022/Q3	2022/Q4
DALL-E	0%	1%	3%	2%
LaMDA	1%	35%	9%	<1%
AlphaCode	2%	<1%	<1%	1%
CoPilot	10%	3%	4%	1%
PaLM		<1%	<1%	<1%
Gato		10%	18%	3%
Imagen		5%	4%	2%
Stable Diffusion			19%	19%
Whisper			<1%	<1%
Make-A-Video			33%	15%
AlphaTensor				1%
GLM-130B				<1%
BLOOM				<1%
CICERO				3%
ChatGPT -				52%

#### Select Models' Share of Al Social Media Attention by Quarter, 2022 Source: NetBase Quid, 2022 | Chart: 2023 Al Index Report

Figure 8.2.2



## Appendix

## **IPSOS**

For brevity, the 2023 AI Index does not republish the methodology used by the IPSOS survey that features in the report. More details about the IPSOS survey's methodology can be found in the <u>actual survey</u>.

# Lloyd's Register Foundation and Gallup

For brevity, the 2023 AI Index does not republish the methodology used by the Lloyd's Register Foundation and Gallup survey that features in the report. More details about the Lloyd's Register Foundation and Gallup survey methodology can be found in the <u>actual survey</u>.

### **Pew Research**

For brevity, the 2023 AI Index does not republish the methodology used by the Pew Research survey that features in the report. More details on the Pew Research survey methodology can be found in the <u>actual survey</u>.

### NetBase Quid Social Media Data

NetBase Quid collects social media data from over 500 million sources in real time and analyzes this data through AI-powered Natural Language Processing. This process parses out language and breaks out posts by filters such as drivers of positive and negative sentiment, emotions, and behaviors, allowing for deeper insights to be reached. To understand public perception of advancements in artificial intelligence, NetBase Quid analyzed social media conversation around AI and AI model releases from January 2022 to December 2022. First, the NetBase Quid team analyzed conversation around AI to understand key drivers of general sentiment around AI advancements, such as ethical, cultural, and economic concerns and perceptions among consumers. Then, the NetBase Quid team leveraged the platform for a more targeted analysis of the same conversation, understanding volume and sentiment around the major AI model updates and releases in 2022. This NetBase Quid analysis ultimately showcases the relationship between public perception and the advancement of Al, leveraging targeted analytics tools to understand both specific reactions to model releases as well as a wider consumer conversation and what drives it.