U.S. Senate Committee on Commerce, Science and Transportation
"CHIPS and Science Implementation and Oversight"
October 3, 2023

Ranking Member Cruz Questions for the Record for National Science Foundation Director Dr. Sethuraman Panchanathan

1. ***Research Security Guardrails for Fundamental Research.*** Since 1985, our collaborations in fundamental research with other countries have been completely open, unregulated, and unprotected. For this kind of research, we have put no restrictions on data-sharing or with whom research is done. Of concern, China has been able to leverage the openness of the U.S. research system and acquire technologies and know-how critical to U.S. national security and competitiveness. U.S. researchers on federal research grants for R&D in cutting edge technologies are concurrently collaborating with China on fundamental research projects.

   a. Do you support putting security guardrails around fundamental research, including restrictions on data-sharing?

2. ***National Science Foundation (NSF) Grant for Journalist Therapy.*** In September 2022, the NSF began dispersing a $5 million award to the George Washington University to create a therapy toolkit for journalists targeted by "misinformation-driven harassment campaigns."[1]

   a. Please explain in detail how this award advances the NSF's statutory mission "to promote the progress of science."

3. ***NSF Engagement in Censorship Projects.*** During your testimony, you made the following statement: "I want to say one thing very categorically, we do not -- NSF does not engage in censorship. We do not regulate any content and engage with anybody who also does so." You then stated: "We are not in the business of censorship. We are not in the business of controlling content." However, a cursory examination of NSF grants directly contradicts your claim that NSF does not engage with anybody who regulates content. For example, since fiscal year 2021, NSF has funded over 100 academic projects that are aimed at supposedly reducing "mis-, dis-, and mal-information," much of which is simply content that the progressive left does not agree with.

   a. Define "censorship."
   b. Define "regulate […] content."
   c. Define "controlling content."
   d. Define "engage" in the context of your statement above.

[1] *See* USA Spending*, NSF*, https://www.usaspending.gov/award/ASST_NON_2230683_4900

e. Define "in the business of" in the context of your statement above.

4. ***NSF Grants with First Amendment Implications.*** For each of the following awards, please provide the section of NSF's statutory mandate that the award fulfills and a "yes" or "no" answer as to whether NSF believes the awarding of government funds for the project is consistent with the First Amendment. For awards to which you answered "yes," please provide any documentation or analysis NSF conducted to verify that the project would not infringe on lawful speech. For awards to which you answered "no," indicate whether you will reevaluate and possibly rescind the award.

a. $5 million ongoing award to the University of Washington.
   i."[S]olutions must not only provide the public with skills for determining the truthfulness of claims, but must also provide resources for addressing the social and emotional impacts of misinformation. [This project] will also design and implement a socio-technical platform that supports digital literacy interventionists."[2]

b. $5 million ongoing award to the University of Wisconsin.
   i."[T]his project is a dynamic and flexible digital dashboard that will help end users… (1) identify trending misinformation networks on social media platforms… (2) strategically correct misinformation." "[B]y the end of phase II, Course Correct intends to have further developed the digital dashboard in ways that could ultimately be adopted by other end users such as **public health organizations**, **election administration officials** (emphasis added), and commercial outlets."[3]

c. $5 million ongoing award to the George Washington University.
   i."[T]his project addresses the links between two significant problems impacting trust in contemporary communication systems: (1) the broad and rapid spread of misinformation and (2) abuse and harassment directed at members of expert communities" and "create[s] a rapid-response socio-technical system that supports journalists and other experts facing online abuse and harassment."[4]

d. $505,017 ongoing award to the State University of New York.
   i."[T]his project aims to address these challenges by transitioning a set of algorithms, software frameworks, and system designs out of the research lab

[2] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2230616_4900
[3] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2230692_4900
[4] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2230683_4900

into the hands of active practitioners to help identify and mitigate information manipulation (misinformation and dis-information)."[5]

e. $441,200 ongoing award to the University of Utah.
    i. "[T]o address these challenges, this project combines the complementary information processing strengths of humans and computation to transform the efficiency, effectiveness, and scale of fact-checking. The project can enable fact-checkers to spot misinformation early, prioritize effort, and unify the various tools and techniques used for fact-checking."[6]

f. $396,000 ongoing award to New York University.
    i. "[T]o address these challenges, this project combines the complementary information processing strengths of humans and computation to transform the efficiency, effectiveness, and scale of fact-checking. The project can enable fact-checkers to spot misinformation early, prioritize effort, and unify the various tools and techniques used for fact-checking."[7]

g. $336,664 ongoing award to Rensselaer Polytechnic Institute.
    i. "[U]nderstanding how information flows and its impact on human behavior is important for determining how to protect society from the effects of misinformation, propaganda, and "fake news". This project traces how information spreads on social media channels and how ideas, opinions, and beliefs change as they spread."[8]

h. $330,555 ongoing award to the University of Florida.
    i. "[D]espite decades of research, misinformation remains a serious threat as most technical mitigation methods focus on improving detection accuracy and fail to consider social and emotional perspectives. This project assists in enhancing information integrity by identifying influencing communities, agents, and culturally resonant information to identify tipping points in public dialogue on controversial issues and offering venues of user-centric interventions at scale."[9]

i. $225,669 ongoing award to Boston University.
    i. "[T]his project aims to address these challenges by transitioning a set of algorithms, software frameworks, and system designs out of the research lab

[5] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2247867_4900
[6] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2154123_4900
[7] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2154119_4900
[8] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2214216_4900
[9] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2323794_4900

into the hands of active practitioners to help identify and mitigate information manipulation (misinformation and dis-information)."[10]

j. $224,033 ongoing award to the Illinois Institute of Technology.
   i. "[T]he project aims to study the scientific underpinnings of disinformation and develop a computational framework to attribute, detect, and explain disinformation to inform policymaking."[11]

k. $220,000 ongoing award to Syracuse University.
   i. "[T]he project aims to study the scientific underpinnings of disinformation and develop a computational framework to attribute, detect, and explain disinformation to inform policymaking."[12]

l. $217,000 ongoing award to the University of North Carolina at Charlotte.
   i. "[D]espite decades of research, misinformation remains a serious threat as most technical mitigation methods focus on improving detection accuracy and fail to consider social and emotional perspectives. This project assists in enhancing information integrity by identifying influencing communities, agents, and culturally resonant information to identify tipping points in public dialogue on controversial issues and offering venues of user-centric interventions at scale."[13]

m. $120,008 ongoing award to the Georgia Tech Research Corporation.
   i. "[T]he general approach is to leverage the social responses that ordinary users make on online posts, such as supporting, questioning, disbelieving, or countering claims, to robustly detect misinformation and suggest corrective responses."[14]

n. $115,967 ongoing award to the University of California, Santa Barbara.
   i. "[T]he project aims to study the scientific underpinnings of disinformation and develop a computational framework to attribute, detect, and explain disinformation to inform policymaking."[15]

o. $67,380 ongoing award to the Pennsylvania State University.
   i. "[T]he experience of the COVID-19 pandemic has highlighted the need to develop strong relationships and trust between the research community and these various constituencies before a crisis. The workshop will be organized

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[10] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2247868_4900
[11] *See* USASpending, *NSF*, https://www.usaspending.gov/award/ASST_NON_2241068_4900
[12] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2241070_4900
[13] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2323795_4900
[14] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2239879_4900
[15] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2241069_4900

around 3 sessions: 1) case studies of innovation and misinformation in focal pathogens and "gain of function" research, 2) communicating novelty and risk, 3) tailoring communication to different audiences… including lay public, agency, and policymakers."[16]

p. $38,515 ongoing award to the University of Houston.
   i. "[T[his…project is the development of an online dashboard with misinformation forecast trends and analysis to help address the misinformation endemic in America."[17]

q. $21,003 ongoing award to the University of Alaska, Fairbanks.
   i. "[T]hough a small body of prior research on health misinformation exists, there is a pressing need to gain a better understanding of how to detect, monitor and understand misinformation and its impact on population health during emergencies. The project takes a one health approach, documenting perspectives of public health officials and healthcare providers on misinformation."[18]

r. $16,014 ongoing award to the University of Oklahoma.
   i. "[T]he development of a software platform that may be integrated into crisis management systems such as public health (WHO, CDC), emergency management (FEMA), and transportation (DOT) agencies to facilitate the transmission of correct information **and provide the option to notify social media providers of identified misinformation**" (emphasis added). "It is becoming increasingly important for government agencies, policy makers, and emergency management officials to be capable of addressing major crisis scenarios under acute time and resource constraints. Using social media platforms more efficiently would be a critical step towards this vision."[19]

s. $11,485 completed award to Texas State University.
   i. "[T]his…project is the development of an online dashboard with misinformation forecast trends and analysis to help address the misinformation endemic in America."[20]

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[16] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2319012_4900
[17] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2309846_4900
[18] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2309906_4900
[19] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2222940_4900
[20] *See* USASpending, *NSF,* https://www.usaspending.gov/award/ASST_NON_2223343_4900