

### **Closing Remarks / Next Steps**

Erwin Gianchandani (NSF), Kellina Craig-Henderson (NSF), Elizabeth Mynatt (Georgia Tech), Duncan Watts (University of Pennsylvania)

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01:29:52.050 --> 01:29:54.270

**Beth Mynatt:** Thanks Rob and Willie, thanks all of you.

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01:29:55.560 --> 01:30:11.280

**Beth Mynatt:** And terrific discussions! Uh, for those of you who are watching, we're still 60 some odd folks strong and folks are really engaged so that that is an indication of the quality of the discussion. So turning it over to Duncan, who is going to take the helm here.

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01:30:15.540 --> 01:30:18.150

**Duncan Watts:** Thanks Beth! I am trying to share. Okay, here we go.

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01:30:23.220 --> 01:30:28.590

**Duncan Watts:** Okay, great. Welcome to the closing session and echoing Beth,

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01:30:29.850 --> 01:30:35.460

**Duncan Watts:** Thank you to all of you who have made it this far in the program. It's really

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01:30:37.500 --> 01:30:38.160

**Duncan Watts:** Impressive.

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01:30:39.390 --> 01:30:40.530

**Duncan Watts:** And we're very grateful to you.

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01:30:41.730 --> 01:30:43.770

**Duncan Watts:** I just wanted to. Whoa.

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01:30:45.120 --> 01:30:46.860

**Duncan Watts:** I'm going to say a couple of things to

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01:30:48.990 --> 01:30:50.760

**Duncan Watts:** Sum up a little bit of

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01:30:53.400 --> 01:31:03.750

**Duncan Watts:** Our impressions from the organizing committee of what we heard today, give you a sense of the next steps from our perspective, then I'll hand it over to

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01:31:04.740 --> 01:31:17.310

**Duncan Watts:** Kellina and Erwin who are, respectively, Deputy Assistant Directors for SBE and CISE to offer their perspectives and then we will, if we have any time for questions, we'll take it. Otherwise, we'll just wrap up.

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01:31:18.630 --> 01:31:18.990

**Duncan Watts:** So,

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01:31:21.540 --> 01:31:34.080

**Duncan Watts:** Why am I having trouble driving this? Okay so we covered a tremendous amount of ground today. The discussions were very rich and

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01:31:36.330 --> 01:31:39.570

**Duncan Watts:** Crosscutting and so it was pretty challenging to

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01:31:40.590 --> 01:31:50.280

**Duncan Watts:** To in real time try to extract what we thought were the main themes that we heard but here's, here's an attempt at it. I think that

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01:31:51.990 --> 01:31:59.610

**Duncan Watts:** Across at least a couple of the sessions, the need for more and more comprehensive data is very clear.

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01:32:00.660 --> 01:32:12.330

**Duncan Watts:** That means potentially designing, building funding, better research infrastructure which includes, is, will require a

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01:32:12.870 --> 01:32:28.740

**Duncan Watts:** Sort of broader conception of infrastructure than we might be familiar with in the Engineering and Physical Sciences. It's not just about building hardware, but also having people to support the users of that hardware.

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01:32:30.720 --> 01:32:36.000

**Duncan Watts:** In addition, we have to think quite broadly about the types of data

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01:32:36.690 --> 01:32:55.620

**Duncan Watts:** That we are collecting so it's not just the sort of obvious candidates of getting more digital data or even administrative data, but

also thinking about qualitative data and ethnographic data and how all of that can be integrated into our worldview. A second

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01:32:57.360 --> 01:33:10.170

**Duncan Watts:** General point was the need to create and sustain multi disciplinary teams in part because people from different disciplines have different methodological

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01:33:12.810 --> 01:33:26.820

**Duncan Watts:** sets of skills that can complement each other, but also as has come up a few times, the, they can be helpful in sort of questioning very assumptions and framing of the research itself.

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01:33:30.000 --> 01:33:31.980

**Duncan Watts:** In addition to the

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**Duncan Watts:** The research end of things, it's a or sort of precursor to that.

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01:33:39.870 --> 01:33:51.540

**Duncan Watts:** The, the issue of training came up over and over here, particularly in this last session, but also in the earlier sessions and they need to be thoughtful about how that training

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01:33:52.410 --> 01:34:03.690

**Duncan Watts:** will impact the future work workforce, as well as, you know, thinking about the, sort of, you know, the zero sum or ideally non zero sum

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01:34:04.650 --> 01:34:20.460

**Duncan Watts:** game being played between existing disciplines and how changing the training, especially with respect to see CS + X will will impact allocation of resources. A third point that

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01:34:22.080 --> 01:34:30.120

**Duncan Watts:** I think is, you know, really came up organically today was not explicitly in the the agenda that we put forward is

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01:34:30.840 --> 01:34:45.210

**Duncan Watts:** Is that the the the ethical issues associated with the problems that we're talking about are a really a research program unto themselves. It's not something that we we just should be aware of, but that we have to think

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01:34:45.720 --> 01:34:55.650

**Duncan Watts:** deeply about. And it's, you know, and it brings up some some non trivial and currently unsolved problems in part

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01:34:57.330 --> 01:34:59.010

**Duncan Watts:** because of the way that

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01:35:01.440 --> 01:35:09.270

**Duncan Watts:** The issues that that come up in data in a digital era where we're, we're, we're, we need to start thinking hard about how to

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01:35:10.110 --> 01:35:19.800

**Duncan Watts:** trade off between the public good of the data and also the rights of individuals that as I think came into sharp relief in the last session.

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01:35:20.760 --> 01:35:32.160

**Duncan Watts:** The ethics, the scope of the eth- ethics problem is is much broader than just, like, what do we do with the data that we're collecting but also how do we think about designing and evaluating the technology that we're building?

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01:35:33.810 --> 01:35:49.410

**Duncan Watts:** A point that I think was Jennifer brought up very clearly in her presentation is that, you know, even if we solve all of the problems we're still not out of the woods just measuring things even perfectly

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01:35:50.580 --> 01:36:02.940

**Duncan Watts:** Is not enough. If we want to have impact, we have to find a way to communicate, you know, the essence of what we've learned to to people outside of our communities.

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01:36:03.480 --> 01:36:23.100

**Duncan Watts:** And as I think, you know, in many separate conversations that I've been involved in around the science of science communication, it is striking how unscientific scientists when it comes to communicating their science. And so I think that is an area where we really need to direct

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01:36:24.180 --> 01:36:25.380

**Duncan Watts:** considerable attention.

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01:36:27.480 --> 01:36:30.810

**Duncan Watts:** Another point that came up in the

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01:36:32.880 --> 01:36:49.140

**Duncan Watts:** In the second session around disparities, in particular in the Tiffany brought up very clearly, and I think is a really important point for us to consider as we we did put on the agenda, you know, what should we do about partnering with industry?

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01:36:50.760 --> 01:36:56.850

**Duncan Watts:** But we should also be thinking about how we partner with communities. And of course, this

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01:36:57.870 --> 01:37:10.170

**Duncan Watts:** is especially true for historically marginalized communities. And we should maybe think about how to reframe the traditional broader impact statements associated with

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01:37:10.920 --> 01:37:24.630

**Duncan Watts:** NSF proposals to to integrate that and that sort of partnership and and explicitly include funding support for that those activities and

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01:37:25.650 --> 01:37:36.810

**Duncan Watts:** Another point that I thought was very interesting and David Grusky brought up is that the sort of historical

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01:37:39.450 --> 01:37:53.850

**Duncan Watts:** Deprioritization of evaluation research. I think that's a, you know, an interesting point, and we should be doing, you know, this came up in many of the discussions and repeatedly in this last session, you know, how do we know that things are working?

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01:37:55.080 --> 01:38:06.450

**Duncan Watts:** And if we're going to be taking a more sort of active solution oriented view of the science that we do, we should we should be also thinking about how to evaluate

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01:38:07.560 --> 01:38:10.440

**Duncan Watts:** The impact of what we're doing. And then finally,

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01:38:12.930 --> 01:38:13.380

**Duncan Watts:** You know,

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01:38:14.580 --> 01:38:21.390

**Duncan Watts:** I think a large chunk of the chat session was devoted to to this final bullet point that

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01:38:22.500 --> 01:38:26.790

**Duncan Watts:** That diversity and disparate impact are, are sort of

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01:38:29.490 --> 01:38:46.980

**Duncan Watts:** Pervasive problems that have, you know, proven resistant even to, you know, deliberate and well intentioned institutional efforts to alleviate them and that cut across all of the other issues that were there were talking about

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01:38:48.180 --> 01:39:03.270

**Duncan Watts:** And really need to pervade all of the discussions that we have going forward. It's true for representation in industry, it's true in training and education programs. It's, it's true in

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01:39:04.410 --> 01:39:23.250

**Duncan Watts:** The training data that we use for machine learning algorithms and decision systems. It's true for how we design intervention. So I really think that and grateful to this group for for bringing this point out so clearly, and I hope that we keep that front and center as we go forward and

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01:39:24.540 --> 01:39:25.110

**Duncan Watts:** So,

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01:39:29.160 --> 01:39:46.290

**Duncan Watts:** What does, what is going to happen going forward? Well, in the near term, we're pretty sure about what we're gonna do. We're going to try to summarize what we've heard today. We'll read your one pagers, by the way, please continue to send those up until the end of this weekend.

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01:39:47.580 --> 01:39:52.170

**Duncan Watts:** We will we will write up what we've learned. We will report that

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01:39:53.250 --> 01:39:57.000

**Duncan Watts:** Back to the, the CISE and SBE

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01:39:58.020 --> 01:39:59.910

**Duncan Watts:** advisory committees in early June.

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01:40:01.350 --> 01:40:11.220

**Duncan Watts:** And will also share the report back back with all of you. We will not share the one pagers as we didn't

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01:40:12.540 --> 01:40:29.700

**Duncan Watts:** We promised that those would be confidential. So, but we will share, we will share the summer report and we will also communicate any follow up activities, whatever those may be that could be additional workshops in the future. It could be

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01:40:32.910 --> 01:40:33.570

**Duncan Watts:** It could be

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01:40:34.680 --> 01:40:36.480

**Duncan Watts:** You know calls to action to help

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01:40:38.010 --> 01:40:45.390

**Duncan Watts:** The NSF with with other kinds of activities and just, you know, to give you a sense of how we've been thinking about

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01:40:46.500 --> 01:40:51.870

**Duncan Watts:** The this this workshop and the

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01:40:52.920 --> 01:40:58.590

**Duncan Watts:** broader problem area. I have this this table here, which is the three

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01:40:59.910 --> 01:41:14.430

**Duncan Watts:** thematic areas that we talked about today. You could imagine, you know, adding other rows to this table in the future as we come up with other thematic areas that we wish to include you know, gamut. And then for each of these, we have

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01:41:16.050 --> 01:41:17.730

**Duncan Watts:** These cross cutting columns.

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01:41:19.020 --> 01:41:34.350

**Duncan Watts:** And already, I would add one more column to that which would be the the community engagement column. So already, that table has changed as a result of today's discussion, but it's sort of a helpful organizing

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**Duncan Watts:** Device for us to think about, you know, can we put

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01:41:41.610 --> 01:41:48.810

**Duncan Watts:** Things in those boxes that that correspond to two concrete steps that we can take in the future.

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01:41:56.160 --> 01:42:03.840

**Duncan Watts:** Okay, so I'll hand it off now to to Kellina first and then to Erwin to offer their remarks.

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01:42:08.910 --> 01:42:09.210

**Kellina Craig-Henderson:** Great.

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01:42:11.280 --> 01:42:11.940

**Kellina Craig-Henderson:** You have to step.

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01:42:12.990 --> 01:42:15.300

**Kellina Craig-Henderson:** I guess. Can you see me? Okay. Can you hear me?

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01:42:16.140 --> 01:42:22.230

**Kellina Craig-Henderson:** Yes. Okay, great. Um, so first I want to, I'm

**Kellina Craig-Henderson** and I'm the deputy in SBE and

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01:42:23.190 --> 01:42:34.050

**Kellina Craig-Henderson:** I want to first thank each of you for participating in this intellectually rich and thought provoking discussion on harnessing computational social sciences together to solve rich

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01:42:34.890 --> 01:42:46.440

**Kellina Craig-Henderson:** Critical societal problems. I just want to note first and I'll just talk for a few moments here that the federal government has a interagency working group which is focused on

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01:42:46.770 --> 01:42:55.200

**Kellina Craig-Henderson:** Defining the attributes that make a data scientist and this has been going on for a while and our CIO is the

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01:42:55.830 --> 01:43:02.190

**Kellina Craig-Henderson:** One of the co-chairs for that group. And there's been quite a bit of discussion drawing from across federal agencies as to what

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01:43:02.700 --> 01:43:13.620



**Kellina Craig-Henderson:** What kinds of skills and attributes would be necessary for this classification series. I mean, there's still there are some jobs posted that are called data scientist but

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**Kellina Craig-Henderson:** There is, there's lacking across the board federal federally accepted definition of what that constitutes. So that's one thing. And then I wanted to say that

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01:43:24.510 --> 01:43:42.300

**Kellina Craig-Henderson:** As most of you, the organizers certainly know, that plans for this workshop began well before the current pandemic and that's the case. But I think that the the discussion today is in fact very timely it's timely because it takes place against the backdrop of the COVID-19

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01:43:43.380 --> 01:43:55.650

**Kellina Craig-Henderson:** Epidemic, which pandemic, which represents the mother of all societal problems. And so if we are talking about addressing societal problems then this is certainly one where we can turn our attention.

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01:43:55.980 --> 01:44:05.760

**Kellina Craig-Henderson:** And I know that, without doubt, solving these problems that are associated with the things we've talked about today, along with the current pandemic crisis,

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01:44:06.510 --> 01:44:17.370

**Kellina Craig-Henderson:** It cannot be done. We cannot accomplish this without the intellectual contributions of computational and social scientists working together along with medical

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01:44:17.700 --> 01:44:26.730

**Kellina Craig-Henderson:** researchers and practitioners to solve this, this problem. We'll not get past this thing unless we address head on the problems of

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01:44:27.210 --> 01:44:37.830

**Kellina Craig-Henderson:** Of trust and misinformation, the problems associated with racial and ethnic and health demographic inequities that exist in our country and around the world globally.

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01:44:38.730 --> 01:44:49.290

**Kellina Craig-Henderson:** The work that you each shared with us today highlights the potential that exists when computational social scientists work together, and it also makes clear that

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01:44:49.860 --> 01:45:01.950

**Kellina Craig-Henderson:** Everyone I think on this call has been committed or is committed to doing better, and we look forward, I know I do as a representative of the National Science Foundation, I look forward to assisting you in

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01:45:02.520 --> 01:45:10.500

**Kellina Craig-Henderson:** Directing, utilizing your respective insights to address the continuing problems of bias, the problems of misinformation and trust,

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01:45:10.950 --> 01:45:21.480

**Kellina Craig-Henderson:** And the expanding problems of representation within the technical workforce. Thank you for your efforts and I look forward to our next conversations. Erwin, you can take it from here.

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01:45:22.530 --> 01:45:25.200

**Erwin Gianchandani:** Thanks Kellina. Can everybody see and hear me okay?

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01:45:26.670 --> 01:45:27.390

**Erwin Gianchandani:** Okay, great.

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01:45:28.470 --> 01:45:35.400

**Erwin Gianchandani:** So I just want to echo, actually, a lot of what Kelly and Duncan have already said here in closing part of this program.

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01:45:35.850 --> 01:45:42.120

**Erwin Gianchandani:** And I kind of want to come back to where we started earlier today, which is to thank all of you very, very much for

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01:45:42.810 --> 01:45:52.050

**Erwin Gianchandani:** Taking part in today's roundtable and especially to thank Beth and Duncan and Willie and Rob and the rest of the organizing committee for pulling this together.

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01:45:52.830 --> 01:46:05.430

**Erwin Gianchandani:** You know, coming into today, I don't know that any one of us actually knew exactly what to expect. But I would say that it has come together, incredibly well. And we've had some really fascinating and

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01:46:06.660 --> 01:46:11.760

**Erwin Gianchandani:** Frankly, very timely discussions as well throughout the course of the day today. And in fact,

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01:46:12.870 --> 01:46:25.500

**Erwin Gianchandani:** While this workshop has illustrated, I think, the many challenges that we as a society face, it's also and many of those being motivated by the COVID-19 pandemic complete as Kelly said.

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01:46:26.190 --> 01:46:33.750

**Erwin Gianchandani:** In some ways it's also been a highlight for me over the course of the last couple of months. I think we've all really been very focused on COVID-19 and

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01:46:34.140 --> 01:46:43.230

**Erwin Gianchandani:** At our individual organizations, trying to figure out how to respond to it and so forth. But this was an opportunity today to, I think, take a little bit of time away from that.

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01:46:43.680 --> 01:46:50.880

**Erwin Gianchandani:** Here and now immediate response to COVID-19 and to think about new research directions to think about opportunities

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01:46:51.390 --> 01:46:58.140

**Erwin Gianchandani:** That allow us to really be able to bring together the CISE and SBE communities, in particular in a meaningful way.

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01:46:58.920 --> 01:47:07.080

**Erwin Gianchandani:** And that truly is a testament, you know, for this to be the highlight over the course of the last couple of months for me personally I think for many others from

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01:47:07.380 --> 01:47:16.650

**Erwin Gianchandani:** NSF and perhaps for many of you on the call, I think that's really a testament to the great talks and great discussion that's been spurred as a result of those talks today.

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01:47:18.360 --> 01:47:27.720

**Erwin Gianchandani:** I also want to say that I do think we've walked away with the list of topics that Duncan had on the slide that Kelly articulated as well.

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01:47:28.140 --> 01:47:39.510

**Erwin Gianchandani:** Some really impressive research directions at the intersection of our fields. I think we've also walked away with an

appreciation for some of the things that we ought to think about as we try to

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01:47:40.170 --> 01:47:50.430

**Erwin Gianchandani:** Enable our fields to come closer together. How can we do that in a way that allows us to be able to respect each perspective and every perspective that comes to the table?

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01:47:50.760 --> 01:47:59.460

**Erwin Gianchandani:** And how can we really work collaboratively rolling up our sleeves with everyone being on an equal footing, whether you're wearing a CISE hat or you're in an SBE hat or

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01:47:59.910 --> 01:48:06.630

**Erwin Gianchandani:** you're wearing another hat. There was a lot of discussion, particularly in the last session about education in the skilled technical workforce and

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01:48:07.560 --> 01:48:18.660

**Erwin Gianchandani:** I think that education research community has quite a bit to offer in that regard as well. So how do we roll up our sleeves to advance the things that the myriad challenges that we're facing as a society. And so for that.

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01:48:19.740 --> 01:48:33.090

**Erwin Gianchandani:** I think all of us at NSF are really appreciative, have a profound gratitude to you all for engaging in the discussion today. Duncan sort of stole a little bit of what I was going to say in terms of next steps, but that's okay.

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01:48:34.440 --> 01:48:39.420

**Erwin Gianchandani:** I'll just add a little bit more to that and hopefully I don't surprise the organizers when I say this.

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01:48:40.500 --> 01:48:48.450

**Erwin Gianchandani:** So I know that Duncan, Beth, and the other members of the organizing committee are going to try to synthesize the inputs from today.

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01:48:49.080 --> 01:48:55.770

**Erwin Gianchandani:** And they will be, we'll all be hearing from them at the joint session with the CISE and SBE advisory committees

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**Erwin Gianchandani:** Come Thursday afternoon (June 4) and so I encourage you all, that's a public meeting and folks are certainly welcome to join.

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01:49:05.880 --> 01:49:09.480

**Erwin Gianchandani:** And so I encourage if you're able to join for you to please do so.

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**Erwin Gianchandani:** And if you have any questions about how to get access, you can go to the NSF CISE and SBE advisory committee webpages. They're all easily accessible

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01:49:18.690 --> 01:49:24.000

**Erwin Gianchandani:** Through the various search engines or just reach out to Kelly or me and we'd be happy to make sure that you're registered for that.

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01:49:24.840 --> 01:49:29.610

**Erwin Gianchandani:** It's an hour and a half session, but I think it will be a really interesting discussion to see how some of the

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01:49:30.240 --> 01:49:48.210

**Erwin Gianchandani:** Stuff today distills out into some key themes above and beyond what Duncan just described. And secondly, I would say we really just scratched the surface here. There's a lot more opportunity for deeper discussion in any of the three original topic areas and any of the topics areas that Duncan just

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01:49:49.980 --> 01:50:01.320

**Erwin Gianchandani:** Synthesized. And so I think we and the organizers have more to say on that in the coming weeks in terms of follow up workshops and follow up engagements. But I think there's certainly more opportunity

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01:50:02.040 --> 01:50:21.270

**Erwin Gianchandani:** To flesh some of these things out further. And then finally, I think the, the most important thing, the thing that draws everyone when we talk about NSF organizing a workshop is, what does this mean longer term for the foundation? And I'll just say that we started down this path and

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01:50:22.290 --> 01:50:24.540

**Erwin Gianchandani:** I think I can say this fairly speaking for

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01:50:25.020 --> 01:50:31.680

**Erwin Gianchandani:** Margaret and Skip and Kelly as well. We started down this path really trying to think about ways in which we could cultivate

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01:50:31.890 --> 01:50:44.130

**Erwin Gianchandani:** Cultivate collaborations internally within CISE and SBE so that we could catalyze meaningful collaborations and advance the research enterprise externally across the Community and in collaboration with

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01:50:44.490 --> 01:50:51.720

**Erwin Gianchandani:** Our colleagues and other sectors as well. And so there were a number of program officers from CISE and SBE that are on the

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01:50:52.800 --> 01:51:00.120

**Erwin Gianchandani:** Zoom meeting today and that was with intention. Those of you who are familiar with NSF know that anything we do starts with our program officers.

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**Erwin Gianchandani:** And so I would just encourage you to stay tuned because we really looked at this roundtable and this whole effort that we've kickstarted over the course of the last

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01:51:11.070 --> 01:51:21.900

**Erwin Gianchandani:** Year or so, as a means to be thinking about programmatically, what does that mean, and how can we provide the right levers as a funding agency to help enable some of the great research that we're talking about?

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01:51:22.440 --> 01:51:36.720

**Erwin Gianchandani:** So thank you again to all of our participants today. It's great to have so many folks still on the call at the end of a long day. I think that's testament to the interest in this topic in this workshop and I'll turn it back over to

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01:51:38.010 --> 01:51:38.580

**Erwin Gianchandani:** Duncan and Beth to conclude

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01:51:43.920 --> 01:51:44.340

**Duncan Watts:** Thanks Erwin.

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01:51:46.410 --> 01:51:49.560

**Duncan Watts:** And thank you, Kelly. Let me just try

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01:51:53.010 --> 01:51:53.370

**Duncan Watts:** Sorry.

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01:51:55.980 --> 01:51:56.280

**Duncan Watts:** And

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01:52:01.380 --> 01:52:05.670

**Duncan Watts:** Try to share my screen again, share the right window this time.

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01:52:09.060 --> 01:52:12.420

**Duncan Watts:** So we have a couple of minutes

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01:52:14.040 --> 01:52:22.890

**Duncan Watts:** Spare. Everybody may well be exhausted at this point. I see lots of people signing off. Beth, did you see any

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**Duncan Watts:** Any final questions that were burning to be answered?

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**Beth Mynatt:** So mostly just suggestions for other things that we should consider

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**Beth Mynatt:** Thanks to Paul Baker, for example, who's

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01:52:39.780 --> 01:52:51.180

**Beth Mynatt:** Mentioned, as I anticipated that he would, that there's other things that we can do around broadening participation and also looking at disparities with respect to people with disabilities. So there's a number of resources there.

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**Beth Mynatt:** That was kind of brought up a few times by our panelists, but didn't really get a focus discussion. And then there was an additional suggestion

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**Beth Mynatt:** That as we as we shift this into, for example,

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**Beth Mynatt:** as Erwin mentioned, the the discussion with the Advisory Committee, which is public, and then moving into

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01:53:14.100 --> 01:53:30.330

**Beth Mynatt:** Perhaps a more public facing portion of this, there's other CISE-SBE connections that are happening, and maybe a way of synthesizing or pulling that together is another point of value to the community so appreciated that suggestion as well.

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01:53:30.780 --> 01:53:40.050

**Duncan Watts:** And just a reminder, two reminders is one we have, we're archiving all of this chat so we have all your content here. However,

721

01:53:41.130 --> 01:53:43.530

**Duncan Watts:** If you think that there are

722

01:53:44.730 --> 01:53:48.690

**Duncan Watts:** Programs that we should know about. Or if there are topics that were not covered,

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01:53:50.250 --> 01:54:07.950

**Duncan Watts:** We are still, we will be eager to see your one pages anytime over the next several days. So please feel free to use that as an opportunity to articulate points or point us to resources that you feel we missed

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01:54:10.530 --> 01:54:13.110

**Duncan Watts:** And with that, let me just say

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01:54:14.910 --> 01:54:16.140

**Duncan Watts:** Thank you to

726

01:54:18.000 --> 01:54:19.260

**Beth Mynatt:** Just go back, it'll fix it.

727

01:54:22.320 --> 01:54:43.860

**Duncan Watts:** I'll just leave it out of presentation mode so thank thank you again to the to the CISE and SBE leadership, to Margaret, Erwin, Skip, and Kelly and the all the program managers who weighed in on older versions of our proposal. Your enthusiasm has been a sustaining force throughout this

728

01:54:44.970 --> 01:54:48.480



**Duncan Watts:** Throughout this process and we very much appreciate the support

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01:54:49.320 --> 01:55:05.490

**Duncan Watts:** Also a really heartfelt thanks to Frankie King and her team at Vanderbilt for really just incredible execution on building a website, on handling all of the invitations and administration, and running this this meeting. Really,

730

01:55:07.110 --> 01:55:25.200

**Duncan Watts:** It's a really impressive effort and has taken a huge amount of work away from from those of us on the organizing committee. But thank you also to Beth, Rob, Alondra, Nadya, and Willie, my co-organizers. It's been a really

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01:55:26.400 --> 01:55:40.920

**Duncan Watts:** Great experience and looking forward to, to the next steps. Thank you to our speakers, you know, I think Erwin was right, we were all a little unsure what to expect today. I think that

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01:55:42.510 --> 01:55:47.640

**Duncan Watts:** We were optimistic having spoken to all of you beforehand that this would be

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01:55:48.660 --> 01:55:57.000

**Duncan Watts:** A stimulating set of presentations, but I think it has exceeded our expectations. And finally, thanks to everybody.

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01:55:58.290 --> 01:56:09.810

**Duncan Watts:** We're still at 59 participants at 4:57pm East Coast time. Thank you all for your energy and your thoughts today, and we will be in touch.

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01:56:13.620 --> 01:56:14.310

**Duncan Watts:** That's all for me.

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01:56:14.970 --> 01:56:20.400

**Beth Mynatt:** With that, thanks everyone very much. Please take care, and stays, stay healthy. Stay safe.