1
00:00:02,190 --> 00:00:30,510
[Music]

2
00:00:30,520 --> 00:00:35,150
[Applause]

3
00:00:39,869 --> 00:00:37,389
all right so um thank you I just want to

4
00:00:42,549 --> 00:00:39,879
say thank you to Peter and Gary uh for

5
00:00:44,950 --> 00:00:42,559
organizing this and and having me on I'm

6
00:00:48,069 --> 00:00:44,960
sorry I can't be there in person but um

7
00:00:50,150 --> 00:00:48,079
excited to talk to you all today so uh

8
00:00:52,189 --> 00:00:50,160
the the title of the paper is crowded

9
00:00:53,590 --> 00:00:52,199
Skies which is a little bit of a

10
00:00:55,630 --> 00:00:53,600
misnomer in the sense that I'm going to

11
00:00:59,509 --> 00:00:55,640
be talking about we think of a sort of

12
00:01:00,709 --> 00:00:59,519
multi-domain or all domain um concerns

13
00:01:01,790 --> 00:01:00,719

around

14
00:01:04,149 --> 00:01:01,800
uh

15
00:01:05,109 --> 00:01:04,159
uaps um so first thing I should say is

16
00:01:06,710 --> 00:01:05,119
that none of the things I'm going to

17
00:01:08,149 --> 00:01:06,720
discuss are classified I don't have any

18
00:01:10,350 --> 00:01:08,159
interesting or cool proprietary

19
00:01:12,990 --> 00:01:10,360
information uh and I only represent my

20
00:01:14,789 --> 00:01:13,000
own opinions and judgments um and really

21
00:01:16,830 --> 00:01:14,799
what I'm going to try to do today is

22
00:01:20,109 --> 00:01:16,840
provide a kind of framework for thinking

23
00:01:22,230 --> 00:01:20,119
about the UAP issue uh in the global and

24
00:01:25,230 --> 00:01:22,240
geopolitical context so what are what

25
00:01:27,230 --> 00:01:25,240
are we confronting uh and and why is it

26
00:01:29,149 --> 00:01:27,240
that right now I think is a is a really

27
00:01:30,710 --> 00:01:29,159
critical juncture to think about trying

28
00:01:32,910 --> 00:01:30,720
to move forward

29
00:01:35,270 --> 00:01:32,920
um because of my area and alternative

30
00:01:37,310 --> 00:01:35,280
Futures and I would do that by trying to

31
00:01:40,310 --> 00:01:37,320
give you an overlay of what I see as the

32
00:01:42,550 --> 00:01:40,320
major drivers uh for the complications

33
00:01:44,030 --> 00:01:42,560
uh in dealing with UOP issues

34
00:01:45,670 --> 00:01:44,040
particularly uh at the level of

35
00:01:47,550 --> 00:01:45,680
international cooperation but I think

36
00:01:49,630 --> 00:01:47,560
also at the level of domestic uh

37
00:01:52,109 --> 00:01:49,640
cooperation and Democratic

38
00:01:54,709 --> 00:01:52,119

accountability uh and then work through

39
00:01:58,270 --> 00:01:54,719
four sort of generic Futures uh that I

40
00:02:00,029 --> 00:01:58,280
think that are all possible um even if

41
00:02:01,389 --> 00:02:00,039
the sort of probabilities I I think are

42
00:02:02,630 --> 00:02:01,399
distinguishable and and show where I

43
00:02:05,789 --> 00:02:02,640
think that we really have some real

44
00:02:08,190 --> 00:02:05,799
policy paradoxes or policy sort of uh

45
00:02:09,309 --> 00:02:08,200
Deadlocks uh and then at the very end

46
00:02:10,630 --> 00:02:09,319
I'm going to give you some conclusions

47
00:02:12,990 --> 00:02:10,640
about ways I think that we could move

48
00:02:15,350 --> 00:02:13,000
forward uh because I think we're really

49
00:02:17,070 --> 00:02:15,360
we're in a little bit of a culdesac uh

50
00:02:19,710 --> 00:02:17,080
where we're very excited about the

51
00:02:21,790 --> 00:02:19,720
possibility um of more transparency

52
00:02:23,229 --> 00:02:21,800
particularly by the United States uh but

53
00:02:25,630 --> 00:02:23,239
I don't think that we really have

54
00:02:28,430 --> 00:02:25,640
anything like a policy agenda or a way

55
00:02:30,470 --> 00:02:28,440
forward for even what the sort of

56
00:02:35,869 --> 00:02:30,480
release of that information would mean

57
00:02:38,509 --> 00:02:35,879
or do um so uh so I I want to start with

58
00:02:41,149 --> 00:02:38,519
you know why are the skies crowded um

59
00:02:43,190 --> 00:02:41,159
you know what what does it mean uh to to

60
00:02:45,070 --> 00:02:43,200
think about the kind of current context

61
00:02:47,710 --> 00:02:45,080
that we're in uh what we we might think

62
00:02:49,710 --> 00:02:47,720
about is the kind of risk threat

63
00:02:52,030 --> 00:02:49,720

ecosystem um and the first thing I'll

64
00:02:54,830 --> 00:02:52,040
say is that um all of the claims I'm

65
00:02:57,830 --> 00:02:54,840
going to make um are identity agnostic

66
00:02:59,830 --> 00:02:57,840
so I think these are major critical

67
00:03:01,550 --> 00:02:59,840
policy questions and agenda items both

68
00:03:03,869 --> 00:03:01,560
for the United States uh and for the

69
00:03:07,309 --> 00:03:03,879
international liberal order um

70
00:03:09,270 --> 00:03:07,319
irrespective of uh where uaps come from

71
00:03:11,430 --> 00:03:09,280
uh and there's two reasons why I I I

72
00:03:15,390 --> 00:03:11,440
kind of want to work with that uh that

73
00:03:17,630 --> 00:03:15,400
position um one which is that I think

74
00:03:20,470 --> 00:03:17,640
sometimes we we don't move forward on

75
00:03:22,589 --> 00:03:20,480
establishing a kind of greater or larger

76
00:03:25,110 --> 00:03:22,599
policy agenda because we're so caught in

77
00:03:28,110 --> 00:03:25,120
the question of of how to do disclosure

78
00:03:29,830 --> 00:03:28,120
um and the second is uh that that

79
00:03:32,390 --> 00:03:29,840
problem of attribution I think is

80
00:03:36,710 --> 00:03:32,400
actually a major driver of many of the

81
00:03:38,190 --> 00:03:36,720
risks that we face um so um what why is

82
00:03:40,030 --> 00:03:38,200
it that we need we need to think about

83
00:03:42,830 --> 00:03:40,040
this problem you know why why are the

84
00:03:45,869 --> 00:03:42,840
the skies crowded and in particular why

85
00:03:48,229 --> 00:03:45,879
do we face major risks and threats um I

86
00:03:52,350 --> 00:03:48,239
think the first is that um uaps by their

87
00:03:54,470 --> 00:03:52,360
nature uh are intermittent both in their

88
00:03:56,550 --> 00:03:54,480

causality and their attribution which

89
00:04:00,309 --> 00:03:56,560
creates a kind of epistemological Black

90
00:04:02,789 --> 00:04:00,319
Hole uh for both policy makers as well

91
00:04:04,910 --> 00:04:02,799
as military strategists uh and I think

92
00:04:06,910 --> 00:04:04,920
this this sort of core Central feature

93
00:04:08,509 --> 00:04:06,920
the fact that they can move quickly uh

94
00:04:10,830 --> 00:04:08,519
the fact they can go on and off radar

95
00:04:14,149 --> 00:04:10,840
and sonar um the fact that they they

96
00:04:16,229 --> 00:04:14,159
seem to either exploit or accentuate

97
00:04:19,270 --> 00:04:16,239
what we might think about as a sort of

98
00:04:22,629 --> 00:04:19,280
Patchwork sensor Gap environment uh

99
00:04:24,550 --> 00:04:22,639
really creates I think uh many risks uh

100
00:04:26,790 --> 00:04:24,560
moving forward uh and a part that's

101
00:04:29,230 --> 00:04:26,800
because we also live in a low trust

102
00:04:31,029 --> 00:04:29,240
environment uh and I think nationally we

103
00:04:33,909 --> 00:04:31,039
see that with a sort of declining trust

104
00:04:35,870 --> 00:04:33,919
by Civil Society of public institutions

105
00:04:38,070 --> 00:04:35,880
uh the trust that the information being

106
00:04:40,430 --> 00:04:38,080
given to them has any particular

107
00:04:41,790 --> 00:04:40,440
veracity at all um I think we also live

108
00:04:43,590 --> 00:04:41,800
in an extraordinary low Trust

109
00:04:47,710 --> 00:04:43,600
International environment I don't think

110
00:04:48,950 --> 00:04:47,720
we we've ever had the kind of uh I mean

111
00:04:51,550 --> 00:04:48,960
really honestly since the beginning of

112
00:04:54,790 --> 00:04:51,560
the Cold War we haven't had the the sort

113
00:04:57,510 --> 00:04:54,800

of lack of either bilateral or

114
00:05:00,150 --> 00:04:57,520
International constraints on um

115
00:05:01,749 --> 00:05:00,160
geopolitical competition um so many of

116
00:05:05,150 --> 00:05:01,759
the efforts that we made during the Cold

117
00:05:06,790 --> 00:05:05,160
War to De threat or drisk interactions

118
00:05:09,270 --> 00:05:06,800
between the Soviet Union and the United

119
00:05:11,070 --> 00:05:09,280
States have mostly crumbled particularly

120
00:05:13,830 --> 00:05:11,080
with the Ukrainian war and I think

121
00:05:15,870 --> 00:05:13,840
similarly uh because of the way that

122
00:05:18,309 --> 00:05:15,880
China now asserts itself both in terms

123
00:05:20,670 --> 00:05:18,319
of air power and sea power uh we don't

124
00:05:23,350 --> 00:05:20,680
have particularly good measures for

125
00:05:25,270 --> 00:05:23,360
building confidence uh and that that

126
00:05:27,390 --> 00:05:25,280
just becomes exponentially more true we

127
00:05:29,950 --> 00:05:27,400
start uh sort of leaving traditional

128
00:05:33,309 --> 00:05:29,960
domains like air power and sea power uh

129
00:05:34,909 --> 00:05:33,319
and thinking about outer space um so

130
00:05:36,430 --> 00:05:34,919
major drivers I think the first one

131
00:05:39,870 --> 00:05:36,440
which we have to take very seriously is

132
00:05:42,110 --> 00:05:39,880
international competition um so in the

133
00:05:44,469 --> 00:05:42,120
last you know 10 years but certainly

134
00:05:47,270 --> 00:05:44,479
even more so in the last five years uh

135
00:05:49,230 --> 00:05:47,280
we have increasing numbers of what we

136
00:05:51,150 --> 00:05:49,240
think of as provocative air encounters

137
00:05:53,629 --> 00:05:51,160
whether or not that's Russia flying

138
00:05:56,309 --> 00:05:53,639

bombers extraordinarily close to

139
00:05:57,870 --> 00:05:56,319
territorial airspace in Alaska uh

140
00:06:00,150 --> 00:05:57,880
whether or not that's us and Chinese

141
00:06:02,230 --> 00:06:00,160
Fighters um flying Danger ly close to

142
00:06:05,070 --> 00:06:02,240
one another uh and the sort of ongoing

143
00:06:07,830 --> 00:06:05,080
disputes uh about um the South China

144
00:06:10,510 --> 00:06:07,840
Seas or it's ocean disputes right it's

145
00:06:13,270 --> 00:06:10,520
it's the us trying to uh promote Freedom

146
00:06:15,909 --> 00:06:13,280
navigation in those same island chains

147
00:06:17,990 --> 00:06:15,919
uh and facing real confrontations uh

148
00:06:19,909 --> 00:06:18,000
with a Chinese Navy or or the fact that

149
00:06:21,909 --> 00:06:19,919
Chinese diesel submarines and US nuclear

150
00:06:23,589 --> 00:06:21,919
submarines are are sort of not paired

151
00:06:25,830 --> 00:06:23,599
well to compete against one another they

152
00:06:29,790 --> 00:06:25,840
have different kinds of capabilities uh

153
00:06:32,830 --> 00:06:29,800
that increase risks um of of accident

154
00:06:34,830 --> 00:06:32,840
but also risks for kind of asymmetrical

155
00:06:36,589 --> 00:06:34,840
competition meaning we're not exactly

156
00:06:38,350 --> 00:06:36,599
playing the same game and in that low

157
00:06:41,710 --> 00:06:38,360
trust environment that carries a number

158
00:06:44,870 --> 00:06:41,720
of risks too um I think that's you know

159
00:06:46,749 --> 00:06:44,880
sort of triply true of outer space uh

160
00:06:49,629 --> 00:06:46,759
where you know the sort of bipolar

161
00:06:51,830 --> 00:06:49,639
competition of the Cold War uh is now

162
00:06:53,230 --> 00:06:51,840
not just a sort of tripolar competition

163
00:06:54,990 --> 00:06:53,240

between Russia China and the United

164
00:06:57,309 --> 00:06:55,000
States but there are a number of new

165
00:06:59,790 --> 00:06:57,319
actors in space programs as well as

166
00:07:01,150 --> 00:06:59,800
commercial actors uh which potentially

167
00:07:03,110 --> 00:07:01,160
challenge that and I think that's what

168
00:07:05,670 --> 00:07:03,120
makes all of these domains uh sort of

169
00:07:08,150 --> 00:07:05,680
uniquely crowded they're all dual use

170
00:07:10,350 --> 00:07:08,160
spaces uh meaning that there is there is

171
00:07:14,150 --> 00:07:10,360
no domain any longer whether it be outer

172
00:07:17,430 --> 00:07:14,160
space uh whether it be uh the ocean uh

173
00:07:19,749 --> 00:07:17,440
or airspace um for which the military

174
00:07:21,790 --> 00:07:19,759
the sort of commercial Enterprise as

175
00:07:22,990 --> 00:07:21,800
well as what something we often forget

176
00:07:25,589 --> 00:07:23,000
which is the fact that all of these

177
00:07:27,950 --> 00:07:25,599
spaces um at least at a particular

178
00:07:30,070 --> 00:07:27,960
elevation in the case of airspace um and

179
00:07:32,150 --> 00:07:30,080
for much of outer space are Commons

180
00:07:34,589 --> 00:07:32,160
meaning that they they belong to the

181
00:07:36,790 --> 00:07:34,599
world heritage uh in a way that was

182
00:07:39,869 --> 00:07:36,800
established in the outer space treaty uh

183
00:07:41,589 --> 00:07:39,879
and the seabed minding tree um that that

184
00:07:44,230 --> 00:07:41,599
sort of characteristic means we have all

185
00:07:45,830 --> 00:07:44,240
of these overlapping uh institutions

186
00:07:47,909 --> 00:07:45,840
right we have assemblages of different

187
00:07:50,670 --> 00:07:47,919
kinds of control regimes symes of

188
00:07:53,070 --> 00:07:50,680

different kinds of sensory arrays uh and

189
00:07:55,270 --> 00:07:53,080
oftentimes conflicting and certainly not

190
00:07:57,589 --> 00:07:55,280
cooperating uh assemblages of

191
00:07:59,629 --> 00:07:57,599
information gathering and uneven

192
00:08:01,430 --> 00:07:59,639
information sharing and that's that's a

193
00:08:03,710 --> 00:08:01,440
second major driver I think we have to

194
00:08:06,790 --> 00:08:03,720
consider uh which is that there there is

195
00:08:09,589 --> 00:08:06,800
a real commercial sensor Gap and lack of

196
00:08:12,029 --> 00:08:09,599
information sharing um you know we we

197
00:08:13,469 --> 00:08:12,039
are relatively good regionally uh when

198
00:08:14,950 --> 00:08:13,479
dealing with things like air traffic

199
00:08:17,629 --> 00:08:14,960
control which I'll I'll talk about a

200
00:08:20,550 --> 00:08:17,639
little bit later um but even in those

201
00:08:23,230 --> 00:08:20,560
cases uh we don't have the kinds of

202
00:08:27,350 --> 00:08:23,240
seamless what we think of as commercial

203
00:08:30,149 --> 00:08:27,360
uh or civilian networks to ensure that

204
00:08:33,389 --> 00:08:30,159
uh we can even distinguish between uh a

205
00:08:36,230 --> 00:08:33,399
UAP and other kinds of uh issues like a

206
00:08:38,630 --> 00:08:36,240
plane that is it's off it's approved uh

207
00:08:40,029 --> 00:08:38,640
path and that leads to the third major

208
00:08:43,070 --> 00:08:40,039
driver which we I think we really have

209
00:08:45,990 --> 00:08:43,080
to consider uh which is proliferation uh

210
00:08:48,350 --> 00:08:46,000
so you know in in the last two decades

211
00:08:50,750 --> 00:08:48,360
uh the number of aerial Vehicles has

212
00:08:52,150 --> 00:08:50,760
just increased exponentially uh whether

213
00:08:54,509 --> 00:08:52,160

it's the fact that almost every major

214
00:08:58,030 --> 00:08:54,519
power and most middle Powers uh depend

215
00:08:59,790 --> 00:08:58,040
heavily on uh unpersoned Vehicles right

216
00:09:01,910 --> 00:08:59,800
drones of various kinds both for

217
00:09:04,509 --> 00:09:01,920
surveillance for attack and also for

218
00:09:06,590 --> 00:09:04,519
scientific research um you combine that

219
00:09:09,310 --> 00:09:06,600
with the increased scrutiny and

220
00:09:11,949 --> 00:09:09,320
securitization of air traffic control uh

221
00:09:13,670 --> 00:09:11,959
that both commercial and private flight

222
00:09:16,310 --> 00:09:13,680
uh is seen as a Potential Threat right

223
00:09:18,550 --> 00:09:16,320
in the post sort of September 11th world

224
00:09:21,069 --> 00:09:18,560
uh you really see a level of scrutiny

225
00:09:23,710 --> 00:09:21,079
both at the commercial and private level

226
00:09:25,389 --> 00:09:23,720
as well as at the military level um and

227
00:09:28,350 --> 00:09:25,399
then the last when we start entering

228
00:09:30,150 --> 00:09:28,360
into uh the outer space domain is that

229
00:09:32,430 --> 00:09:30,160
we have all those problems Commercial

230
00:09:36,190 --> 00:09:32,440
and Military crowding we have you know

231
00:09:39,910 --> 00:09:36,200
increasingly fewer numbers of slots for

232
00:09:42,269 --> 00:09:39,920
uh for for satellites um but the the

233
00:09:44,750 --> 00:09:42,279
area of space junk is actually one that

234
00:09:47,829 --> 00:09:44,760
is really important right so we we have

235
00:09:51,790 --> 00:09:47,839
a problem of being able to both track um

236
00:09:53,150 --> 00:09:51,800
as well as aate uh the the garbage left

237
00:09:55,630 --> 00:09:53,160
behind in space which could be

238
00:09:58,069 --> 00:09:55,640

incredibly disruptive right very small

239
00:10:00,110 --> 00:09:58,079
objects at high velocities uh can do an

240
00:10:02,550 --> 00:10:00,120
incredible amount of damage to either

241
00:10:04,670 --> 00:10:02,560
existing platforms Like Satellites which

242
00:10:06,710 --> 00:10:04,680
we depend upon for commercial

243
00:10:08,550 --> 00:10:06,720
communication or satellites which we

244
00:10:10,990 --> 00:10:08,560
depend upon for the the kind of mutual

245
00:10:13,030 --> 00:10:11,000
transparency that states have uh which

246
00:10:14,870 --> 00:10:13,040
which has a real constraining effect on

247
00:10:17,310 --> 00:10:14,880
crisis escalation so you know if you

248
00:10:20,150 --> 00:10:17,320
can't see each other's uh nuclear silos

249
00:10:21,949 --> 00:10:20,160
or you you don't have a good sense uh of

250
00:10:24,550 --> 00:10:21,959
where troop movements are happening uh

251
00:10:28,470 --> 00:10:24,560
then we we see these sort of escalating

252
00:10:30,670 --> 00:10:28,480
areas of paranoia so uh that that's sort

253
00:10:33,190 --> 00:10:30,680
of the world we in where uh there's low

254
00:10:34,949 --> 00:10:33,200
levels of trust uh the United Nations is

255
00:10:36,870 --> 00:10:34,959
is in in my estimation sort of the

256
00:10:39,110 --> 00:10:36,880
weakest that it's ever been as a fora

257
00:10:41,870 --> 00:10:39,120
for even the great Powers uh to settle

258
00:10:45,990 --> 00:10:41,880
disputes and we just have this explosion

259
00:10:47,670 --> 00:10:46,000
of all domain uh commercial vehicles so

260
00:10:50,949 --> 00:10:47,680
to try to think through what that could

261
00:10:54,310 --> 00:10:50,959
look like um as potential you know 10

262
00:10:56,350 --> 00:10:54,320
year or 20 year uh sort of outlays of

263
00:10:58,230 --> 00:10:56,360

possible scenarios um I'm I'm going to

264
00:10:59,829 --> 00:10:58,240
use what we call an alternative Futures

265
00:11:01,590 --> 00:10:59,839
methodology and I want to say a couple

266
00:11:03,269 --> 00:11:01,600
of quick things about what that is it's

267
00:11:05,310 --> 00:11:03,279
not foresight so these are not

268
00:11:07,710 --> 00:11:05,320
predictions about where we'll be in 10

269
00:11:10,030 --> 00:11:07,720
and 20 years this is an effort to

270
00:11:11,670 --> 00:11:10,040
provide images of the future that tell

271
00:11:14,150 --> 00:11:11,680
us something about our lack of

272
00:11:16,069 --> 00:11:14,160
preparedness to possible Futures rather

273
00:11:17,470 --> 00:11:16,079
than probable Futures uh and there are a

274
00:11:19,030 --> 00:11:17,480
few kind of methodological reasons for

275
00:11:22,350 --> 00:11:19,040
this which I think are really important

276
00:11:24,949 --> 00:11:22,360
and in particular in the case of uaps uh

277
00:11:27,389 --> 00:11:24,959
because they they represent uh again

278
00:11:29,670 --> 00:11:27,399
such an epistemological Black Hole uh

279
00:11:32,110 --> 00:11:29,680
for policymaking uh both both because of

280
00:11:33,629 --> 00:11:32,120
just the the lack of scientific research

281
00:11:35,190 --> 00:11:33,639
but also because of the political Mo

282
00:11:37,069 --> 00:11:35,200
motivations for maintaining the black

283
00:11:38,590 --> 00:11:37,079
hole in fact we could almost say that we

284
00:11:39,790 --> 00:11:38,600
have two different kinds of black holes

285
00:11:41,829 --> 00:11:39,800
and we don't know how to distinguish

286
00:11:43,509 --> 00:11:41,839
them one is a kind of epistemological

287
00:11:45,310 --> 00:11:43,519
black hole where we we don't have enough

288
00:11:48,069 --> 00:11:45,320

information there there's not enough

289
00:11:49,509 --> 00:11:48,079
data uh to reach strong conclusions and

290
00:11:52,190 --> 00:11:49,519
the other one we we could think of is a

291
00:11:54,470 --> 00:11:52,200
kind of cloaked black hole where there's

292
00:11:56,670 --> 00:11:54,480
actually a strategic Advantage uh

293
00:12:00,030 --> 00:11:56,680
there's a real Strategic investment uh

294
00:12:03,990 --> 00:12:00,040
in in Ming maintaining the opaque nature

295
00:12:05,670 --> 00:12:04,000
uh of of these events so why futures um

296
00:12:07,230 --> 00:12:05,680
the first is that at least uh in the

297
00:12:08,550 --> 00:12:07,240
Hawaii school called monoa School of

298
00:12:11,590 --> 00:12:08,560
alternative Futures we don't believe the

299
00:12:14,470 --> 00:12:11,600
future exists meaning initial conditions

300
00:12:16,150 --> 00:12:14,480
now do not determine all possibilities

301
00:12:17,790 --> 00:12:16,160
in the future whether that's at the

302
00:12:20,030 --> 00:12:17,800
level of physics and you're sort of in

303
00:12:21,710 --> 00:12:20,040
the Copenhagen School of the gold slit

304
00:12:24,710 --> 00:12:21,720
experience experiment you think that

305
00:12:27,230 --> 00:12:24,720
there's real novelty en chance uh in the

306
00:12:28,910 --> 00:12:27,240
sort of wave particle duality problem

307
00:12:30,910 --> 00:12:28,920
all the way to kind of the social

308
00:12:32,790 --> 00:12:30,920
Sciences whether or not you think that

309
00:12:34,990 --> 00:12:32,800
initial conditions or structures like

310
00:12:37,629 --> 00:12:35,000
economics or other sort of structuring

311
00:12:39,870 --> 00:12:37,639
principles limit or really change the

312
00:12:42,189 --> 00:12:39,880
future very much uh and aart that's

313
00:12:43,629 --> 00:12:42,199

because we think that rules change uh

314
00:12:45,870 --> 00:12:43,639
taking a little bit from the philosopher

315
00:12:47,790 --> 00:12:45,880
of David Hume there's a paradox of

316
00:12:50,790 --> 00:12:47,800
empiricism which is by definition

317
00:12:53,030 --> 00:12:50,800
empiricism is always old data it's data

318
00:12:55,150 --> 00:12:53,040
from the past it can't be possible data

319
00:12:57,790 --> 00:12:55,160
about the future which means we make

320
00:12:59,470 --> 00:12:57,800
assumptions or metaphysical leaps every

321
00:13:01,949 --> 00:12:59,480
time we presume that the data we've

322
00:13:04,350 --> 00:13:01,959
gathered is predictive of the data we

323
00:13:06,790 --> 00:13:04,360
expect to find and that works for us

324
00:13:10,310 --> 00:13:06,800
most of the time it's something like uh

325
00:13:13,030 --> 00:13:10,320
gravity uh or you know the sort of

326
00:13:15,389 --> 00:13:13,040
behavior of a of an electron uh but it

327
00:13:16,750 --> 00:13:15,399
becomes very dangerous when we're

328
00:13:18,670 --> 00:13:16,760
dealing with systems where we're not

329
00:13:20,629 --> 00:13:18,680
sure if we're dealing with a law or

330
00:13:22,990 --> 00:13:20,639
we're dealing with a rule the problem is

331
00:13:24,629 --> 00:13:23,000
that rules change in fact often times

332
00:13:26,550 --> 00:13:24,639
what we discover is the laws aren't laws

333
00:13:29,590 --> 00:13:26,560
they're merely rules for which we

334
00:13:30,550 --> 00:13:29,600
haven't yet experienced it's possibility

335
00:13:33,189 --> 00:13:30,560
for

336
00:13:34,829 --> 00:13:33,199
alteration um the third part is that

337
00:13:37,110 --> 00:13:34,839
possible Futures rather than probable

338
00:13:40,590 --> 00:13:37,120

Futures are more significant for making

339
00:13:43,550 --> 00:13:40,600
policy decisions um probable Futures

340
00:13:45,670 --> 00:13:43,560
very rarely need significant political

341
00:13:47,790 --> 00:13:45,680
investment because they are already

342
00:13:51,470 --> 00:13:47,800
expectations for how the future can play

343
00:13:54,910 --> 00:13:51,480
out possible Futures allow us to

344
00:13:57,910 --> 00:13:54,920
diagnose the fact that overconfidence or

345
00:14:00,110 --> 00:13:57,920
a lack of preparation can create major

346
00:14:01,350 --> 00:14:00,120
institutional pitfall false uh and

347
00:14:03,590 --> 00:14:01,360
another way of putting that as sort of

348
00:14:05,310 --> 00:14:03,600
our fourth Mantra uh for alternative

349
00:14:07,509 --> 00:14:05,320
Futures is that certainty is more

350
00:14:10,189 --> 00:14:07,519
dangerous than uncertainty meaning

351
00:14:13,990 --> 00:14:10,199
confidence that existing institutions or

352
00:14:17,230 --> 00:14:14,000
existing Protocols are sufficient um to

353
00:14:20,150 --> 00:14:17,240
to sort of either deter or contain um

354
00:14:23,430 --> 00:14:20,160
low probability but High consequence

355
00:14:24,910 --> 00:14:23,440
events uh is is really an error um

356
00:14:27,110 --> 00:14:24,920
particularly if an event literally

357
00:14:28,790 --> 00:14:27,120
changes the boundaries of what we think

358
00:14:31,110 --> 00:14:28,800
is possible meaning it's already out

359
00:14:33,189 --> 00:14:31,120
outside of how we normally think about

360
00:14:35,150 --> 00:14:33,199
probability and I think uaps fall

361
00:14:36,870 --> 00:14:35,160
squarely in that mode in particular

362
00:14:39,430 --> 00:14:36,880
because of the sort of two black hole

363
00:14:42,230 --> 00:14:39,440

problem um but also because they they

364
00:14:45,350 --> 00:14:42,240
pose such a challenge to to both physics

365
00:14:47,670 --> 00:14:45,360
and Technical capability uh as well as

366
00:14:49,389 --> 00:14:47,680
attribution uh which cuts to the heart

367
00:14:51,110 --> 00:14:49,399
of what I'll talk about in a second

368
00:14:53,030 --> 00:14:51,120
which is the the sort of problem of the

369
00:14:56,829 --> 00:14:53,040
security dilemma meaning how States

370
00:14:58,749 --> 00:14:56,839
interact okay um that combined with the

371
00:15:01,590 --> 00:14:58,759
fact that I think uh what I'm going to

372
00:15:03,150 --> 00:15:01,600
try to argue is that um we're we're

373
00:15:05,110 --> 00:15:03,160
pretty trapped right now I think at a

374
00:15:08,030 --> 00:15:05,120
policy level uh in three different

375
00:15:10,470 --> 00:15:08,040
paradigms of uaps the first is a kind of

376
00:15:11,829 --> 00:15:10,480
capture engagement Paradigm uh these are

377
00:15:14,269 --> 00:15:11,839
the people that hope that we can either

378
00:15:16,670 --> 00:15:14,279
recover a vehicle uh we can engage a

379
00:15:17,829 --> 00:15:16,680
vehicle um strategic thinkers who think

380
00:15:20,110 --> 00:15:17,839
that we could shoot down or have

381
00:15:21,990 --> 00:15:20,120
countermeasures against vehicles uh and

382
00:15:25,030 --> 00:15:22,000
I think this approach in particular is

383
00:15:26,230 --> 00:15:25,040
incredibly Zero Sum uh but drives

384
00:15:27,590 --> 00:15:26,240
Behavior we're going to talk about that

385
00:15:29,350 --> 00:15:27,600
in each of the future is the way that

386
00:15:32,069 --> 00:15:29,360
that combined with the other sort of

387
00:15:34,829 --> 00:15:32,079
larger structural drivers could present

388
00:15:37,269 --> 00:15:34,839

Real consequences uh for not taking the

389
00:15:39,870 --> 00:15:37,279
UAP as a sort of core central question

390
00:15:42,030 --> 00:15:39,880
for policymaking um the second Paradigm

391
00:15:44,069 --> 00:15:42,040
which I think is also uh we're in a bit

392
00:15:46,389 --> 00:15:44,079
of a rut on in terms of policymaking is

393
00:15:48,509 --> 00:15:46,399
the disclosure Paradigm a part because

394
00:15:51,590 --> 00:15:48,519
it it puts us into an incredibly US

395
00:15:53,230 --> 00:15:51,600
versus them uh relationship both with

396
00:15:55,550 --> 00:15:53,240
our own governments right we see that

397
00:15:57,749 --> 00:15:55,560
already uh in the negotiations that are

398
00:16:00,269 --> 00:15:57,759
being made between arrow and the the

399
00:16:02,230 --> 00:16:00,279
Congress uh between private citizens and

400
00:16:04,749 --> 00:16:02,240
organizations like soul and both of

401
00:16:07,230 --> 00:16:04,759
those actors um but also an Us Versus

402
00:16:09,069 --> 00:16:07,240
Them Paradigm with all of the other UAP

403
00:16:11,749 --> 00:16:09,079
programs right whether not that's China

404
00:16:13,910 --> 00:16:11,759
Russia or India uh where the questions

405
00:16:16,749 --> 00:16:13,920
of disclosure are very rarely about

406
00:16:18,389 --> 00:16:16,759
constitutional accountability uh or the

407
00:16:20,910 --> 00:16:18,399
particular scientific value of

408
00:16:22,550 --> 00:16:20,920
disclosure and they're often about uh

409
00:16:24,189 --> 00:16:22,560
whether or not they sort of first mover

410
00:16:26,790 --> 00:16:24,199
advantages or not right meaning they

411
00:16:29,030 --> 00:16:26,800
think about those questions both in

412
00:16:30,829 --> 00:16:29,040
political and geopolitical terms rather

413
00:16:33,870 --> 00:16:30,839

than what we'll call later functional

414
00:16:35,910 --> 00:16:33,880
terms um and the last is we still very

415
00:16:38,150 --> 00:16:35,920
much have a paradigm that is alive and a

416
00:16:41,790 --> 00:16:38,160
well in discourse of pretend nothing is

417
00:16:43,590 --> 00:16:41,800
happening um and and I think that is is

418
00:16:45,350 --> 00:16:43,600
in some sense the most dangerous right

419
00:16:47,230 --> 00:16:45,360
it it shows that there's an expectation

420
00:16:49,670 --> 00:16:47,240
that either uaps will become less

421
00:16:51,710 --> 00:16:49,680
relevant which none of the data suggests

422
00:16:54,710 --> 00:16:51,720
um or that there's nothing really there

423
00:16:56,829 --> 00:16:54,720
to to be concerned about it all um I

424
00:17:01,150 --> 00:16:56,839
want to propose a kind of fourth

425
00:17:03,550 --> 00:17:01,160
Paradigm where we remain institutionally

426
00:17:06,909 --> 00:17:03,560
and sort of uh politically agnostic

427
00:17:08,350 --> 00:17:06,919
about what uaps are uh and do our best

428
00:17:10,669 --> 00:17:08,360
to think about ways in which there could

429
00:17:13,470 --> 00:17:10,679
be International cooperation

430
00:17:16,789 --> 00:17:13,480
collaboration um that avoids the kind of

431
00:17:18,549 --> 00:17:16,799
high politics of the military uh and

432
00:17:20,470 --> 00:17:18,559
sort of more geopolitical even

433
00:17:21,990 --> 00:17:20,480
diplomatic relationships and this this

434
00:17:23,110 --> 00:17:22,000
comes from uh international relations

435
00:17:25,829 --> 00:17:23,120
theorists from the first half of the

436
00:17:29,070 --> 00:17:25,839
20th century named David mrran uh who

437
00:17:31,270 --> 00:17:29,080
decided that sometimes we we actually

438
00:17:34,029 --> 00:17:31,280

should avoid the big issues meaning

439
00:17:36,669 --> 00:17:34,039
right are what are uaps or how is the

440
00:17:38,310 --> 00:17:36,679
United States and China going to sign a

441
00:17:40,430 --> 00:17:38,320
a treaty to restrict the experimentation

442
00:17:43,510 --> 00:17:40,440
or use of UAP technology because those

443
00:17:46,510 --> 00:17:43,520
issues are s sort of so highly fraught

444
00:17:48,870 --> 00:17:46,520
uh with sort of larger deeper structural

445
00:17:51,150 --> 00:17:48,880
issues about geopolitical competition

446
00:17:53,029 --> 00:17:51,160
that making progress on them requires in

447
00:17:55,190 --> 00:17:53,039
some sense a whole transformation of the

448
00:17:57,350 --> 00:17:55,200
international order that instead if we

449
00:17:59,549 --> 00:17:57,360
want to sort of build up create a kind

450
00:18:01,710 --> 00:17:59,559
of gradualism we should start with low

451
00:18:03,190 --> 00:18:01,720
stakes politics and and I'll get into

452
00:18:05,230 --> 00:18:03,200
that in the conclusion but I I want that

453
00:18:08,590 --> 00:18:05,240
kind of in the back of your mind while I

454
00:18:10,510 --> 00:18:08,600
I think through uh these four Futures so

455
00:18:12,350 --> 00:18:10,520
in all cases uh in alternative Futures

456
00:18:13,549 --> 00:18:12,360
we always use the same four and the

457
00:18:16,870 --> 00:18:13,559
reason for that is that these are

458
00:18:19,630 --> 00:18:16,880
diagnostic tools not predictions uh so

459
00:18:21,029 --> 00:18:19,640
we talk about collapse Futures uh that's

460
00:18:23,230 --> 00:18:21,039
where the sort of order that we

461
00:18:26,390 --> 00:18:23,240
currently live in for some reason loses

462
00:18:28,669 --> 00:18:26,400
the capacity uh to maintain its C

463
00:18:31,430 --> 00:18:28,679

capabilities of authority and legitimacy

464
00:18:33,990 --> 00:18:31,440
uh and everything breaks down discipline

465
00:18:36,549 --> 00:18:34,000
Futures where we have possible or

466
00:18:38,470 --> 00:18:36,559
partial collapses and the state has to

467
00:18:40,990 --> 00:18:38,480
reass assert itself not through

468
00:18:44,270 --> 00:18:41,000
legitimacy but through Authority or its

469
00:18:46,669 --> 00:18:44,280
use of force three transformation

470
00:18:50,110 --> 00:18:46,679
Futures where some fundamental

471
00:18:52,270 --> 00:18:50,120
assumption some fundamental rule to how

472
00:18:53,710 --> 00:18:52,280
the entire International order uh or

473
00:18:56,430 --> 00:18:53,720
political order is structured that one

474
00:18:58,669 --> 00:18:56,440
of those rules changes and we really see

475
00:19:00,270 --> 00:18:58,679
the system as a result change and then

476
00:19:01,830 --> 00:19:00,280
fourth the one that sounds the most

477
00:19:04,029 --> 00:19:01,840
boring but is often the most useful is

478
00:19:06,350 --> 00:19:04,039
what we call a continued growth future

479
00:19:09,310 --> 00:19:06,360
what if nothing changes right the level

480
00:19:11,830 --> 00:19:09,320
of disclosure uh the the number of

481
00:19:13,789 --> 00:19:11,840
frequency of uaps continues as it is

482
00:19:15,430 --> 00:19:13,799
what kind of future does that look like

483
00:19:17,590 --> 00:19:15,440
so I'm going to start with the collapse

484
00:19:19,470 --> 00:19:17,600
future uh and I think this one uh you

485
00:19:22,909 --> 00:19:19,480
know again this isn't about probability

486
00:19:25,270 --> 00:19:22,919
but this one I think poses real real

487
00:19:28,350 --> 00:19:25,280
problems uh that that could be of high

488
00:19:31,190 --> 00:19:28,360

risk so imagine a world where uh we have

489
00:19:34,029 --> 00:19:31,200
a major catastrophe a UAP event takes

490
00:19:36,470 --> 00:19:34,039
place during a time of Crisis uh in a

491
00:19:38,750 --> 00:19:36,480
territorial space uh and this could

492
00:19:40,549 --> 00:19:38,760
happen in any domain right so it could

493
00:19:42,750 --> 00:19:40,559
either be territorial because it's in

494
00:19:44,590 --> 00:19:42,760
territorial airspace uh it could be in

495
00:19:46,310 --> 00:19:44,600
territorial Waters it could be in

496
00:19:48,950 --> 00:19:46,320
disputed territories like the South

497
00:19:51,669 --> 00:19:48,960
China Sea or Taiwan or it could happen

498
00:19:53,750 --> 00:19:51,679
in the sort of Highly crowded area of

499
00:19:56,029 --> 00:19:53,760
outer space where there're really high

500
00:19:58,470 --> 00:19:56,039
value assets like surveillance

501
00:20:01,510 --> 00:19:58,480
satellites um now if there there's

502
00:20:04,510 --> 00:20:01,520
already an existing conflict there um

503
00:20:06,390 --> 00:20:04,520
the the speed at which uaps can move and

504
00:20:08,510 --> 00:20:06,400
the unpredictability from which they can

505
00:20:10,470 --> 00:20:08,520
be tracked and their ability to cross

506
00:20:13,669 --> 00:20:10,480
domains whether or not that's from water

507
00:20:16,270 --> 00:20:13,679
to air air from out to outer space could

508
00:20:19,590 --> 00:20:16,280
create crisis escalation meaning if it

509
00:20:20,950 --> 00:20:19,600
blinds a system in outer space um that

510
00:20:23,549 --> 00:20:20,960
could be perceived by one of the

511
00:20:27,070 --> 00:20:23,559
competitors as an anti-satellite attack

512
00:20:30,029 --> 00:20:27,080
um those kinds of attacks uh is are are

513
00:20:32,190 --> 00:20:30,039

the kinds of things that that create um

514
00:20:33,909 --> 00:20:32,200
escalating potential nuclear conflicts

515
00:20:35,830 --> 00:20:33,919
in part because our nuclear security is

516
00:20:37,750 --> 00:20:35,840
so dependent upon being able to see one

517
00:20:39,430 --> 00:20:37,760
another um it could be a case where we

518
00:20:42,950 --> 00:20:39,440
have a standoff like the Cuban Missile

519
00:20:46,830 --> 00:20:42,960
Crisis over Taiwan uh and a midair

520
00:20:50,750 --> 00:20:46,840
Collision uh a submarine uh being struck

521
00:20:53,669 --> 00:20:50,760
by uh UAP uh some other kind of mishap

522
00:20:55,990 --> 00:20:53,679
or even just the radar expectation right

523
00:20:57,590 --> 00:20:56,000
so think Gulf of tonen where the United

524
00:21:01,350 --> 00:20:57,600
States is literally chasing its own

525
00:21:03,830 --> 00:21:01,360
sonar our shadow uh in particularly uh

526
00:21:05,950 --> 00:21:03,840
Stormy Weather these kinds of events are

527
00:21:10,350 --> 00:21:05,960
actually likely to Spur Wars right they

528
00:21:11,710 --> 00:21:10,360
they pose a major safety crisis uh and

529
00:21:13,630 --> 00:21:11,720
because of the drivers because there's

530
00:21:15,230 --> 00:21:13,640
such a low trust environment they're not

531
00:21:17,510 --> 00:21:15,240
likely to

532
00:21:20,470 --> 00:21:17,520
deescalate um as a result I think

533
00:21:22,310 --> 00:21:20,480
collapsed Futures uh present really

534
00:21:25,710 --> 00:21:22,320
serious consequences so if this happens

535
00:21:27,789 --> 00:21:25,720
in outer space uh you know even um just

536
00:21:30,350 --> 00:21:27,799
a few satellites exploding if that leads

537
00:21:32,830 --> 00:21:30,360
to counterattacks or reprisals uh we

538
00:21:34,669 --> 00:21:32,840

could see an exponential increase in

539
00:21:37,029 --> 00:21:34,679
space junk they could literally make

540
00:21:39,110 --> 00:21:37,039
space inaccessible right we could enter

541
00:21:40,950 --> 00:21:39,120
a world where we cannot predictably

542
00:21:44,070 --> 00:21:40,960
track space junk either because of its

543
00:21:46,630 --> 00:21:44,080
size or the number of different objects

544
00:21:48,710 --> 00:21:46,640
such that we don't have the ability to

545
00:21:52,070 --> 00:21:48,720
get launch vehicles uh with any kind of

546
00:21:54,430 --> 00:21:52,080
predictability or it we can but because

547
00:21:56,789 --> 00:21:54,440
the windows are so small we start to see

548
00:21:58,909 --> 00:21:56,799
them being policed right we start to see

549
00:22:00,870 --> 00:21:58,919
a kind of competition over those narrow

550
00:22:02,950 --> 00:22:00,880
Windows um I think that that could

551
00:22:04,750 --> 00:22:02,960
actually be quite catastrophic right I

552
00:22:06,710 --> 00:22:04,760
think that risks potential nuclear

553
00:22:08,350 --> 00:22:06,720
escalation accidental nuclear weapons I

554
00:22:11,350 --> 00:22:08,360
think that could that could produce

555
00:22:13,350 --> 00:22:11,360
Naval escalations uh if it were in the C

556
00:22:15,230 --> 00:22:13,360
domain and it involves submarines that

557
00:22:18,789 --> 00:22:15,240
could be either nuclear or conventional

558
00:22:22,029 --> 00:22:18,799
so future number two discipline future

559
00:22:25,230 --> 00:22:22,039
imagine a commercial event a UAP mid

560
00:22:27,710 --> 00:22:25,240
Collision either at sea or air uh or the

561
00:22:30,669 --> 00:22:27,720
loss of major infrastructure in Space

562
00:22:33,110 --> 00:22:30,679
the loss of life given the ways in which

563
00:22:35,630 --> 00:22:33,120

that could drive tensions between states

564
00:22:38,870 --> 00:22:35,640
depending on the domain um if this takes

565
00:22:40,590 --> 00:22:38,880
place say in outer space or in airspace

566
00:22:42,630 --> 00:22:40,600
we could see further erosion of the

567
00:22:44,310 --> 00:22:42,640
Aerospace treaty the law of the sea

568
00:22:46,590 --> 00:22:44,320
treaty which I think is already sort of

569
00:22:48,310 --> 00:22:46,600
on the brink uh because of territorial

570
00:22:51,390 --> 00:22:48,320
disputes both between the United States

571
00:22:54,350 --> 00:22:51,400
and Russia over seabeds uh and where

572
00:22:56,070 --> 00:22:54,360
continental shelf is uh or freedom of

573
00:22:58,310 --> 00:22:56,080
navigation disputes uh between the

574
00:23:00,830 --> 00:22:58,320
United States and China or an outer

575
00:23:02,710 --> 00:23:00,840
space where we really do see quite a bit

576
00:23:04,990 --> 00:23:02,720
of competition and sort of states on the

577
00:23:07,070 --> 00:23:05,000
precipice of whether or not to abandon

578
00:23:09,230 --> 00:23:07,080
the 1968 outer space treaty and really

579
00:23:11,510 --> 00:23:09,240
move from militarization of space to

580
00:23:14,789 --> 00:23:11,520
weaponization of space um if that were

581
00:23:16,430 --> 00:23:14,799
to happen we could see potential losses

582
00:23:18,230 --> 00:23:16,440
in the commercial system right Freedom

583
00:23:20,950 --> 00:23:18,240
navigation is essential to the sort of

584
00:23:23,029 --> 00:23:20,960
supply chain world we exist in um we can

585
00:23:26,350 --> 00:23:23,039
see reprisals in outer space that could

586
00:23:29,669 --> 00:23:26,360
disrupt International Communication and

587
00:23:33,269 --> 00:23:29,679
we could just see a general degrading of

588
00:23:34,870 --> 00:23:33,279

the process by which um states are able

589
00:23:36,830 --> 00:23:34,880
to collaborate even to the limited

590
00:23:38,510 --> 00:23:36,840
extent they are now um I think in that

591
00:23:42,149 --> 00:23:38,520
kind of environment we would likely see

592
00:23:43,950 --> 00:23:42,159
an increase uh in state secrecy uh right

593
00:23:45,470 --> 00:23:43,960
States would become paranoid about

594
00:23:47,870 --> 00:23:45,480
whether or not other states have been

595
00:23:50,190 --> 00:23:47,880
involved were these uaps were these

596
00:23:53,070 --> 00:23:50,200
actually just kill vehicles um from

597
00:23:55,350 --> 00:23:53,080
various States uh and that would be I

598
00:23:57,909 --> 00:23:55,360
think an undesirable future so number

599
00:24:00,230 --> 00:23:57,919
three transformation future I think this

600
00:24:02,549 --> 00:24:00,240
can take one of two forms one is

601
00:24:04,230 --> 00:24:02,559
asymmetrical disclosure a single state

602
00:24:05,230 --> 00:24:04,240
decides to disclose everything they know

603
00:24:08,110 --> 00:24:05,240
about

604
00:24:10,350 --> 00:24:08,120
uaps I think this would significantly

605
00:24:11,909 --> 00:24:10,360
increase Interstate competition I I

606
00:24:14,149 --> 00:24:11,919
think that there would be a kind of race

607
00:24:16,310 --> 00:24:14,159
to see if we could meet a gap and

608
00:24:17,950 --> 00:24:16,320
knowledge I think domestically and

609
00:24:20,310 --> 00:24:17,960
internationally we would see an increase

610
00:24:22,950 --> 00:24:20,320
in conspiracy theories and in general

611
00:24:24,230 --> 00:24:22,960
we' see a growing level of distrust uh

612
00:24:25,909 --> 00:24:24,240
because it would be very difficult to

613
00:24:29,710 --> 00:24:25,919

know whether or not the side that

614
00:24:31,990 --> 00:24:29,720
disclosed uh was disclosed Truth uh or

615
00:24:34,029 --> 00:24:32,000
was using strategic communication and

616
00:24:36,029 --> 00:24:34,039
we'd end up potentially also for a kind

617
00:24:39,430 --> 00:24:36,039
of race for what's left so a state were

618
00:24:41,590 --> 00:24:39,440
to disclose in a way that suggested uh

619
00:24:42,990 --> 00:24:41,600
that one side or the other had a certain

620
00:24:45,350 --> 00:24:43,000
kind of capability the ability to

621
00:24:47,990 --> 00:24:45,360
reverse engineer uh the ability to to

622
00:24:50,549 --> 00:24:48,000
make use of a new propulsion system some

623
00:24:52,750 --> 00:24:50,559
new kind of cloaking system um then I

624
00:24:55,190 --> 00:24:52,760
think we would see what what we call the

625
00:24:56,590 --> 00:24:55,200
security dilemma which is that no matter

626
00:24:58,470 --> 00:24:56,600
the intention of the state in

627
00:25:00,789 --> 00:24:58,480
competition the Pres resumption of

628
00:25:03,070 --> 00:25:00,799
capability on the other side of the

629
00:25:05,510 --> 00:25:03,080
competition line always produces a sense

630
00:25:07,909 --> 00:25:05,520
of insecurity so even technologies that

631
00:25:10,750 --> 00:25:07,919
we think of as being useful for defense

632
00:25:13,269 --> 00:25:10,760
um Can very quickly uh be perceived by

633
00:25:15,029 --> 00:25:13,279
the other side as offense because from

634
00:25:16,750 --> 00:25:15,039
the other position it's impossible to

635
00:25:19,110 --> 00:25:16,760
tell the difference between offense and

636
00:25:22,909 --> 00:25:19,120
defense and the capability of winning a

637
00:25:25,470 --> 00:25:22,919
war B sort of XP party non-human

638
00:25:27,110 --> 00:25:25,480

disclosure so what if we have uaps

639
00:25:28,990 --> 00:25:27,120
disclose themselves and it turns out to

640
00:25:31,470 --> 00:25:29,000
not be any of the competitive actors in

641
00:25:33,630 --> 00:25:31,480
the system um I think this would also

642
00:25:35,909 --> 00:25:33,640
lead to potentially hostile actions

643
00:25:37,470 --> 00:25:35,919
between states the security D would be

644
00:25:40,630 --> 00:25:37,480
further magnified because there would be

645
00:25:42,630 --> 00:25:40,640
no diplomatic relations no framework for

646
00:25:44,549 --> 00:25:42,640
understanding the actor and again that

647
00:25:46,830 --> 00:25:44,559
offense defense Paradigm would would

648
00:25:48,789 --> 00:25:46,840
would not hold we would presume that all

649
00:25:50,630 --> 00:25:48,799
capabilities that were in excess of

650
00:25:52,950 --> 00:25:50,640
currently existing state capabilities

651
00:25:54,389 --> 00:25:52,960
were by definition a threat uh and I

652
00:25:56,549 --> 00:25:54,399
think that would also lead to

653
00:25:57,710 --> 00:25:56,559
potentially escalating conflicts um

654
00:26:01,070 --> 00:25:57,720
certainly lead to the Panic of

655
00:26:03,389 --> 00:26:01,080
populations lastly continue growth model

656
00:26:05,430 --> 00:26:03,399
So In This World Imagine a future where

657
00:26:07,389 --> 00:26:05,440
we have frequent non-transformational

658
00:26:08,909 --> 00:26:07,399
UAP events basically what we have now

659
00:26:10,909 --> 00:26:08,919
what someone in the audience was calling

660
00:26:13,990 --> 00:26:10,919
blurry images right we have a series of

661
00:26:15,630 --> 00:26:14,000
blurry images and encounters um that I

662
00:26:18,510 --> 00:26:15,640
think we would maintain continued levels

663
00:26:20,990 --> 00:26:18,520

of secrecy by all states um I think that

664
00:26:23,630 --> 00:26:21,000
would create a kind of opaque character

665
00:26:25,710 --> 00:26:23,640
which I think is what is creating the

666
00:26:28,389 --> 00:26:25,720
kind of drivers for competition between

667
00:26:30,590 --> 00:26:28,399
states um I also think that's what

668
00:26:33,470 --> 00:26:30,600
creates the opportunity for the kinds of

669
00:26:36,909 --> 00:26:33,480
accidents I or I described in the other

670
00:26:39,190 --> 00:26:36,919
Futures B uh likely to see weaponization

671
00:26:41,149 --> 00:26:39,200
and restrictions on outer space domains

672
00:26:42,549 --> 00:26:41,159
and significant erosions of norms right

673
00:26:44,430 --> 00:26:42,559
if we keep having these events and

674
00:26:46,269 --> 00:26:44,440
they're happening multiple territories

675
00:26:47,549 --> 00:26:46,279
and we can't sort of resolve either of

676
00:26:49,190 --> 00:26:47,559
the black holes right the

677
00:26:51,389 --> 00:26:49,200
epistemological black hole or the

678
00:26:53,630 --> 00:26:51,399
cloaked black hole uh then I think that

679
00:26:56,430 --> 00:26:53,640
actually drives the weaponization of

680
00:27:00,190 --> 00:26:56,440
space right that drives censor sort of

681
00:27:02,470 --> 00:27:00,200
arms races uh and also potentially uh

682
00:27:04,149 --> 00:27:02,480
sabotage spoofing and the effort to try

683
00:27:07,230 --> 00:27:04,159
to strategically use those

684
00:27:09,230 --> 00:27:07,240
geopolitically and I think in general um

685
00:27:12,549 --> 00:27:09,240
that position also leads to internal

686
00:27:14,269 --> 00:27:12,559
erosion of of Civil Society State trust

687
00:27:16,549 --> 00:27:14,279
right something that I already think is

688
00:27:17,990 --> 00:27:16,559

a crisis a continued growth future if we

689
00:27:19,549 --> 00:27:18,000
do nothing if we just allow things to

690
00:27:21,230 --> 00:27:19,559
continue to go as they are I think it's

691
00:27:24,070 --> 00:27:21,240
a rle of the dice if it becoming any of

692
00:27:25,630 --> 00:27:24,080
the other non-desirable Futures all

693
00:27:27,750 --> 00:27:25,640
right so in conclusion here are the

694
00:27:29,110 --> 00:27:27,760
things I want to say about uh how we

695
00:27:32,029 --> 00:27:29,120
could we could think about maybe moving

696
00:27:34,269 --> 00:27:32,039
forward as I I don't think that uh if if

697
00:27:36,990 --> 00:27:34,279
this is driven either by a single state

698
00:27:39,110 --> 00:27:37,000
or driven by uaps themselves uh we have

699
00:27:41,110 --> 00:27:39,120
particularly uh good Futures to look

700
00:27:43,750 --> 00:27:41,120
forward to given the International

701
00:27:46,470 --> 00:27:43,760
System we live in so uh what could we do

702
00:27:48,190 --> 00:27:46,480
um I think in all of these Futures uh

703
00:27:49,630 --> 00:27:48,200
it's a lack of international competition

704
00:27:51,630 --> 00:27:49,640
and a lack of transparency and

705
00:27:53,669 --> 00:27:51,640
Democratic accountability that creates

706
00:27:56,470 --> 00:27:53,679
the significant hazards for planetary

707
00:27:58,870 --> 00:27:56,480
life meaning it's it's the fact that

708
00:28:01,190 --> 00:27:58,880
every Mis attrib attribution or every

709
00:28:03,230 --> 00:28:01,200
sort of opaque uh situation where we

710
00:28:05,149 --> 00:28:03,240
can't have attribution or knowledge uh

711
00:28:08,590 --> 00:28:05,159
we interpret as a threat right we in a

712
00:28:09,950 --> 00:28:08,600
kind of threat Paradigm two um existing

713
00:28:12,029 --> 00:28:09,960

Frameworks are not likely to provide

714
00:28:14,470 --> 00:28:12,039
Solutions if State interest and state

715
00:28:16,430 --> 00:28:14,480
secrecy and a monopoly over knowledge is

716
00:28:19,630 --> 00:28:16,440
driving political behavior and

717
00:28:21,870 --> 00:28:19,640
policymaking um we are only more likely

718
00:28:24,789 --> 00:28:21,880
to accelerate that competition as well

719
00:28:26,789 --> 00:28:24,799
as these overlapping networks right um

720
00:28:29,230 --> 00:28:26,799
that intersection with security means

721
00:28:30,750 --> 00:28:29,240
that high politics is likely to drive

722
00:28:33,509 --> 00:28:30,760
this political decision- making and

723
00:28:36,430 --> 00:28:33,519
we're not likely to see cooperation

724
00:28:38,710 --> 00:28:36,440
three um the lack of appreciation of

725
00:28:41,070 --> 00:28:38,720
danger that's sort of head in the sand

726
00:28:42,430 --> 00:28:41,080
perspective um is increasing the

727
00:28:44,509 --> 00:28:42,440
likelihood of preferring freedom of

728
00:28:46,389 --> 00:28:44,519
action over Corporation because we don't

729
00:28:48,870 --> 00:28:46,399
appreciate the kinds of safety

730
00:28:50,990 --> 00:28:48,880
challenges that uaps could have states

731
00:28:52,909 --> 00:28:51,000
have very little incentive even at the

732
00:28:55,110 --> 00:28:52,919
civilian commercial level to think about

733
00:28:56,549 --> 00:28:55,120
information sharing or collaboration uh

734
00:28:58,190 --> 00:28:56,559
so I think there's a real role to play

735
00:29:00,350 --> 00:28:58,200
to think less about about kind of

736
00:29:02,870 --> 00:29:00,360
military or security consequences of

737
00:29:05,590 --> 00:29:02,880
uaps and think about the very benal and

738
00:29:07,389 --> 00:29:05,600

very significant way that not addressing

739
00:29:09,310 --> 00:29:07,399
them and not having a framework for

740
00:29:11,310 --> 00:29:09,320
studying and tracking them could

741
00:29:13,350 --> 00:29:11,320
interrupt uh either the commercial

742
00:29:15,389 --> 00:29:13,360
sector and the global economy or the

743
00:29:18,310 --> 00:29:15,399
International Communication Network or

744
00:29:19,990 --> 00:29:18,320
the international travel Network so um I

745
00:29:22,110 --> 00:29:20,000
think all of the existing paradigms for

746
00:29:24,430 --> 00:29:22,120
that reason are highly problematic kind

747
00:29:26,590 --> 00:29:24,440
of capture engagement Paradigm is likely

748
00:29:29,909 --> 00:29:26,600
to drive arms races particularly if it's

749
00:29:31,710 --> 00:29:29,919
a kind of race or nonhuman disclosure I

750
00:29:35,269 --> 00:29:31,720
think the disclosure Paradigm where one

751
00:29:38,549 --> 00:29:35,279
state discloses either partial all

752
00:29:40,750 --> 00:29:38,559
things uh insecurity and finally if we

753
00:29:43,509 --> 00:29:40,760
ignore then all possible Futures become

754
00:29:45,430 --> 00:29:43,519
challenging so last Point what if we

755
00:29:47,350 --> 00:29:45,440
tried a functionalist Paradigm instead

756
00:29:48,990 --> 00:29:47,360
of focusing on security or even

757
00:29:51,470 --> 00:29:49,000
disclosure as a kind of ontological

758
00:29:53,350 --> 00:29:51,480
transformation we focus on safety the

759
00:29:55,389 --> 00:29:53,360
way we did with air traffic control uh

760
00:29:57,430 --> 00:29:55,399
we could focus on freedom of navigation

761
00:29:59,350 --> 00:29:57,440
Commerce freedom of movement where where

762
00:30:00,990 --> 00:29:59,360
we see lots of converging interests

763
00:30:03,070 --> 00:30:01,000

between states the same way we did with

764
00:30:05,269 --> 00:30:03,080
the postal system uh the same way we did

765
00:30:07,350 --> 00:30:05,279
with air traffic control uh the

766
00:30:10,110 --> 00:30:07,360
international standards on passports

767
00:30:11,990 --> 00:30:10,120
where because states have so much

768
00:30:14,110 --> 00:30:12,000
investment in the system being

769
00:30:16,310 --> 00:30:14,120
functional they're less likely to think

770
00:30:18,909 --> 00:30:16,320
in competitive terms um I think trying

771
00:30:21,990 --> 00:30:18,919
to build those kinds of in institutions

772
00:30:24,389 --> 00:30:22,000
for uaps to try to deconflict these

773
00:30:27,350 --> 00:30:24,399
areas um is what's necessary for a kind

774
00:30:29,190 --> 00:30:27,360
of all planetary safety regime filling

775
00:30:31,630 --> 00:30:29,200
sensor gaps not necessarily with the

776
00:30:33,350 --> 00:30:31,640
clarity of Those sensors but with

777
00:30:35,269 --> 00:30:33,360
information sharing and trying to build

778
00:30:37,590 --> 00:30:35,279
lowlevel cooperation either at the

779
00:30:39,750 --> 00:30:37,600
civilian level commercial level or even

780
00:30:41,310 --> 00:30:39,760
the amateur level so we have some kind

781
00:30:43,110 --> 00:30:41,320
of framework to break out of what I

782
00:30:46,110 --> 00:30:43,120
think is fundamentally right now a kind

783
00:30:47,810 --> 00:30:46,120
of militarized paradox of knowledge I'll