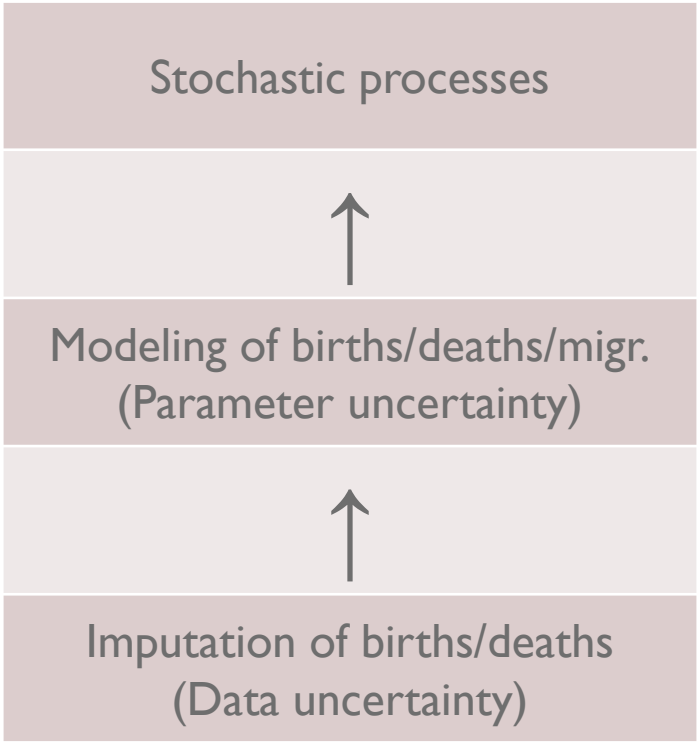
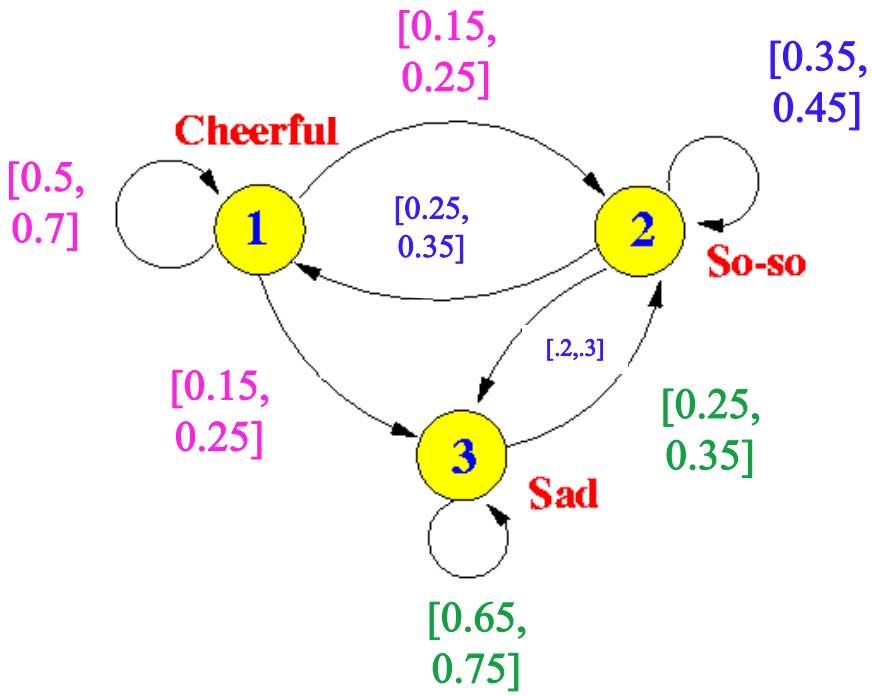
Uncertainty

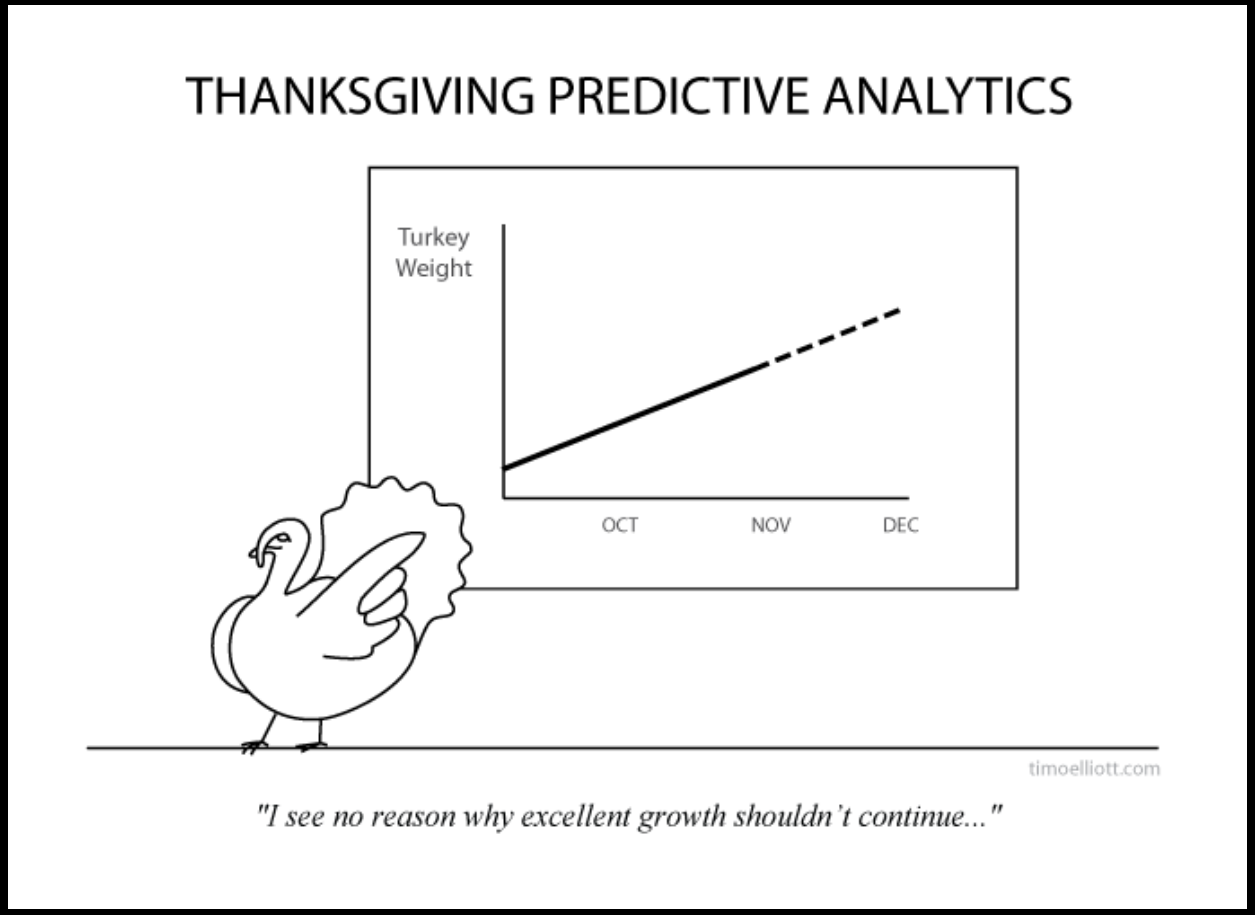
UNCERTAINTY refers to the quantifiable likelihood of outcomes other than the most likely one.

Uncertainty should be propagated from the following sources:





Revisiting assumptions



Forecasting assumptions: relating the past and future

Models allow better assessment of past rates

- Accurate; complete; internally consistent; dynamic
- … but does not tell the future.

Review past sources of error

- Too influenced by contemporary trends
- Lack of feedback mechanisms (i.e., agent behavior)

In first stage, incorporate three elements in review:

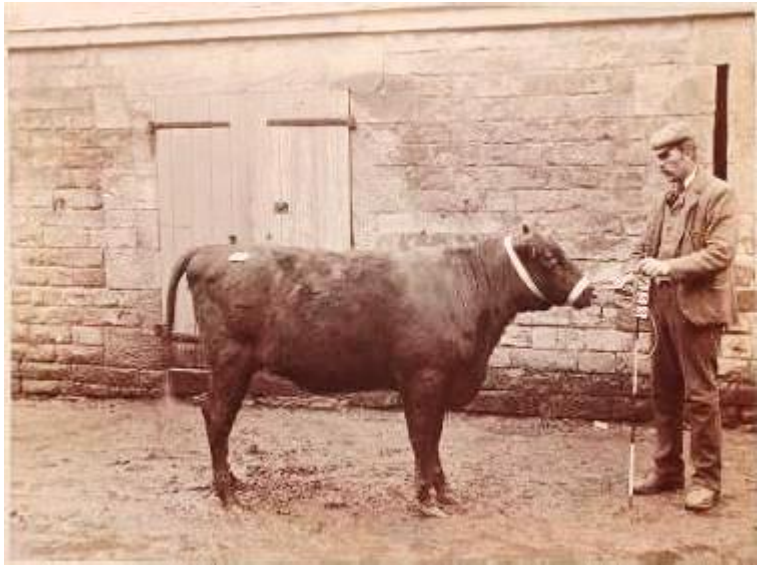
(1) Historical trends

(2) Demographic/sociological theory

(3) Expert judgment

Consultations and incorporating expert judgment

An approach to uncertainty: wisdom of crowds



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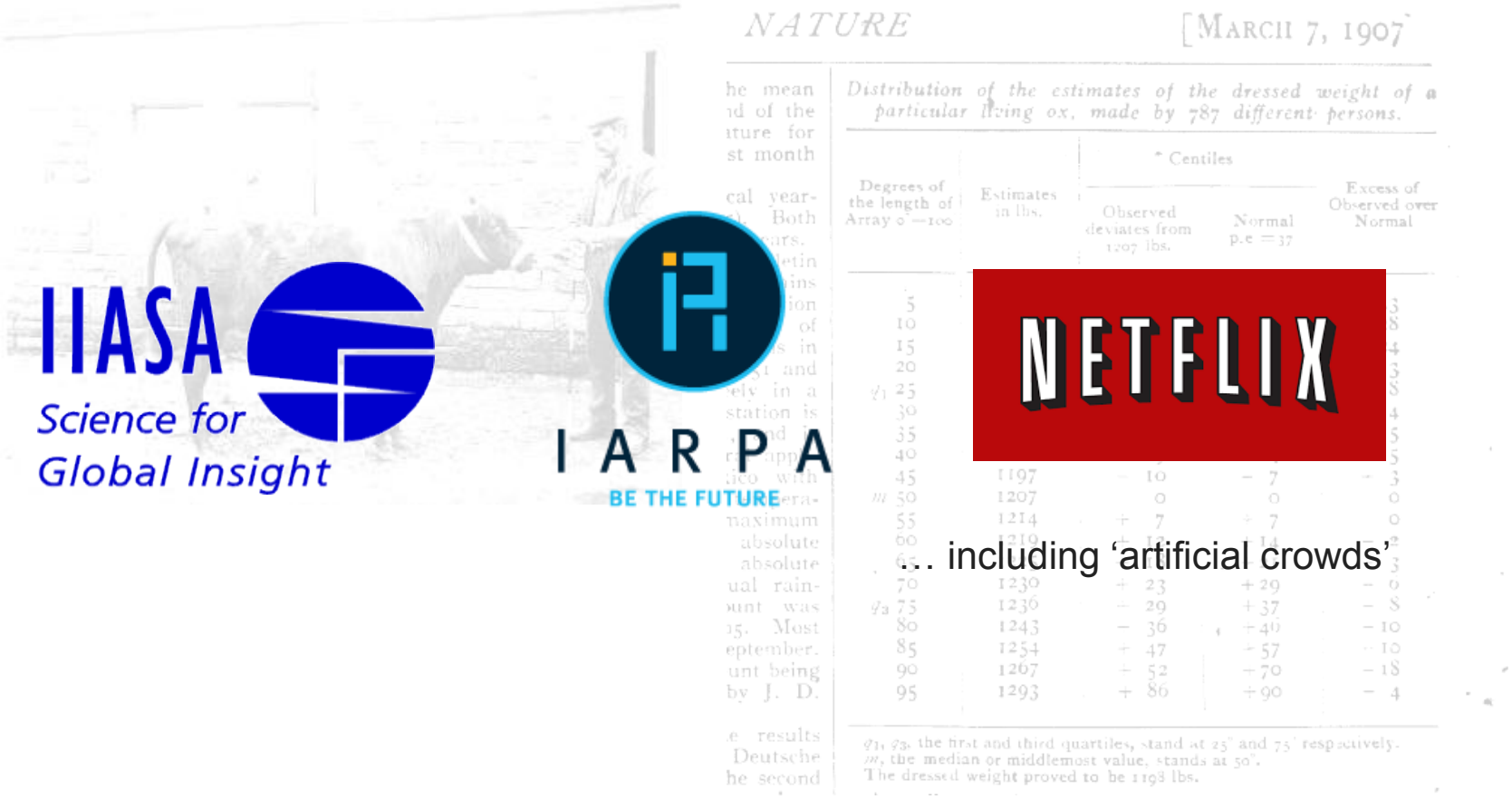
Distribution of the estimates of the dressed weight of a particular living ox, made by 787 different persons.

Degrees of the length of Array 0°—100°	Estimates in lbs.	* Centiles: Observed deviates from 1207 lbs.	* Centiles: Normal p.e = 37	Excess of Observed over Normal
5	1074	−133	−90	+43
10	1109	− 98	−70	+28
15	1126	− 81	−57	+24
20	1148	− 59	−46	+13
q_1 25	1162	− 45	−37	+ 8
30	1174	− 33	−29	+ 4
35	1181	− 26	−21	+ 5
40	1188	− 19	−14	+ 5
45	1197	− 10	− 7	+ 3
m 50	1207	0	0	0
55	1214	+ 7	+ 7	0
60	1219	+ 12	+14	− 2
65	1225	+ 18	+21	− 3
70	1230	+ 23	+29	− 6
q_3 75	1236	+ 29	+37	− 8
80	1243	+ 36	+46	−10
85	1254	+ 47	+57	−10
90	1267	+ 52	+70	−18
95	1293	+ 86	+90	− 4

q_1, q_3, the first and third quartiles, stand at 25° and 75° respectively.
m, the median or middlemost value, stands at 50°.
The dressed weight proved to be 1198 lbs.

Consultations and incorporating expert judgment

An approach to uncertainty: wisdom of crowds



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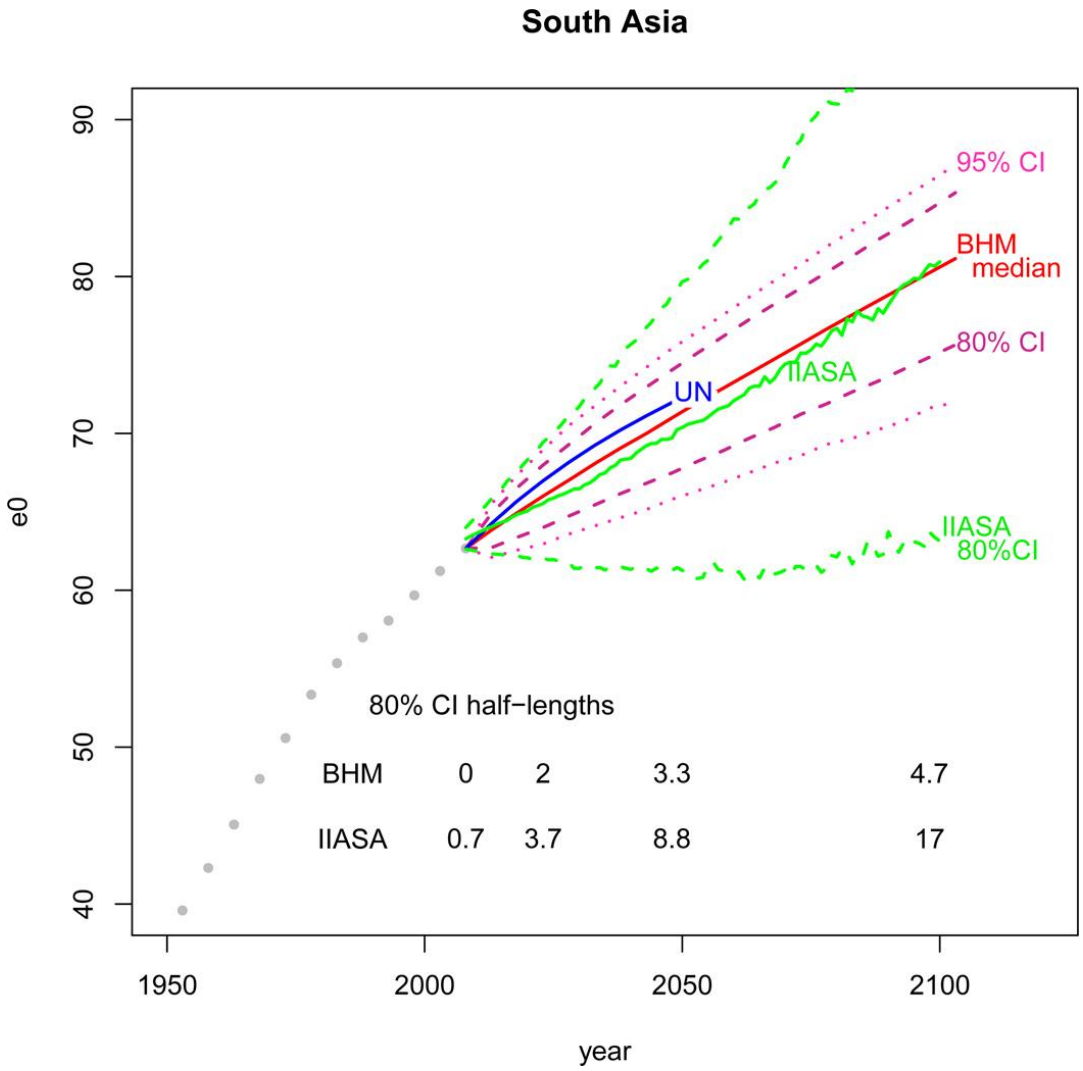
BE THE FUTURE

NETFLIX

… including ‘artificial crowds’

Consultations and incorporating expert judgment



Consultations and incorporating expert judgment

Collective wisdom of California experts in attendance