

**This house believes .....  
that Credit Scoring methods  
and applications are stuck in  
the 1980s**


**Jon Hinder, Rhino Risk  
Gillian Groom, Southampton University  
& Special Guests**

# Proposing the Motion

- Credit scoring came of age in the 1980s
- For all intents and purposes, we remain stuck in the 1980s
- Premise No 1:  
We have focused on the wrong things
- Premise No 2:  
We have not focused on the fundamentals

# Premise No 1

We have focused on the  
wrong things



# Seven key stages of model development

- Data preparation
- Outcome definition (including reject inference)
- Sample selection
- Modelling (including char analysis & model run)
- Model validation
- **Model error estimation**
- Ongoing model monitoring

# Model error estimation

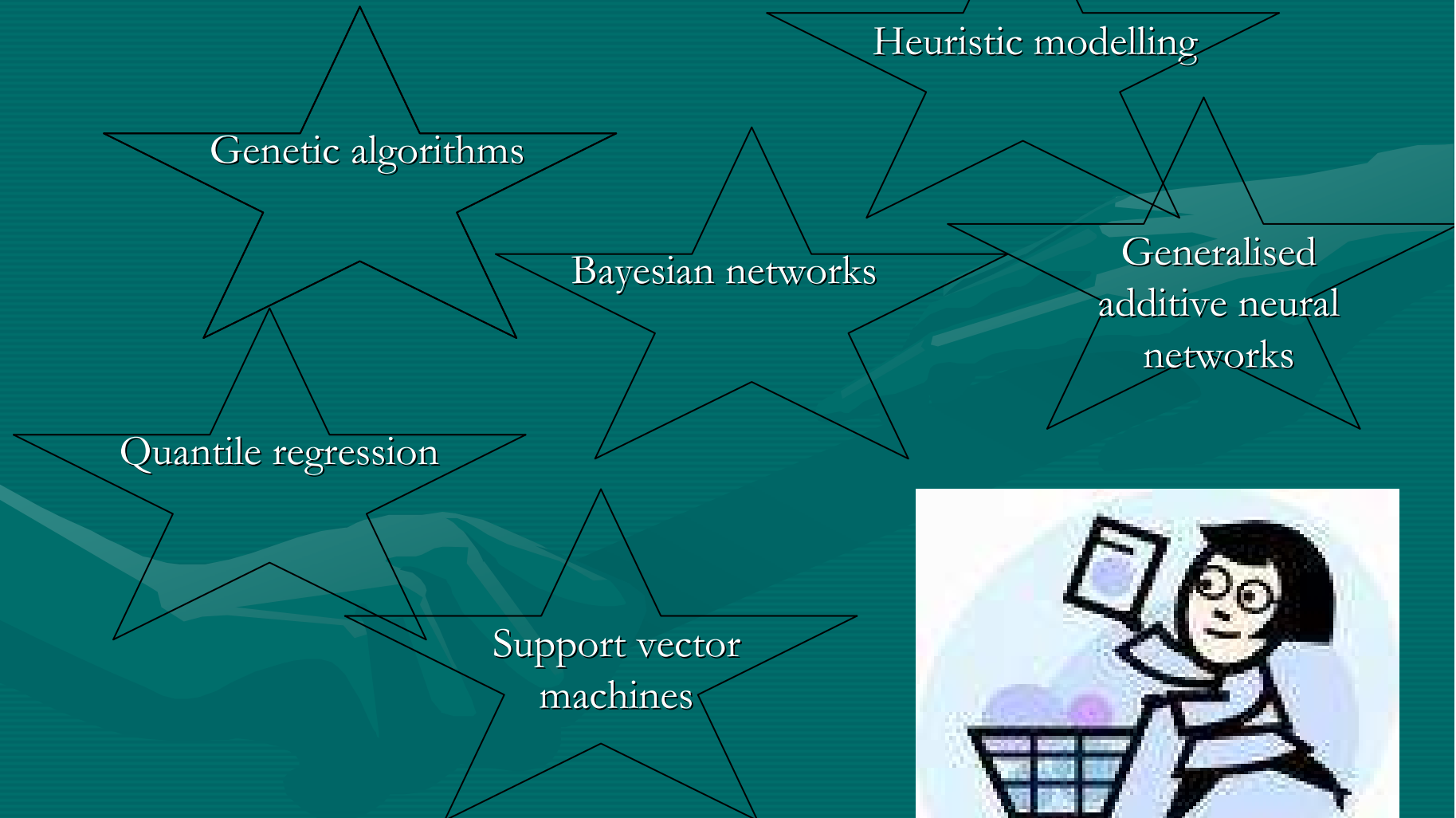
- This can be viewed as a “catch all” for trying to understand and estimate all the unknowns around the model performance:
- What level of conservatism do I need to ensure my model estimates are robust?
- How can I estimate my model's performance through an economic cycle?
- If I have less certainty around my model estimates (and hence losses), how can I use Stress Testing / Forecasting / Simulation to help me understand this?

# Senior Management concerns



Imagine a Chief Executive going to a credit conference seeking answers to these questions .....

# A shopping basket of goodies



# Past Edinburgh Conference papers

	2003	2005	2007
Data preparation (including bureau analysis)	4	2	2
Outcome definition (including reject inference)	2	2	3
Sampling design			
Modelling method (1)	14	19	21
Model validation	2	3	4
<b>Model error estimation</b>	<b>2</b>	<b>4</b>	<b>9</b>
Ongoing model monitoring			
Credit strategies / optimisation	6	8	4
Profitability / revenue modelling	8	4	3
Others (fraud, regulation, analysis of lending markets, non retail)	9	20	31
(1) Subset - Small sample modelling / survival analysis	3	3	3
Total	47	62	77



# We have focused on the wrong things

Only 8% of past Edinburgh papers have focused on:

- Conservatism
- Modelling using economic data
- “Long run” modelling i.e. Through the cycle / point in time modelling
- Forecasting
- Simulation
- Stress testing

This conference, and our Industry as a whole, has not tried to tackle the correct “hard” problems.

## Premise No 2

We have not focused on the  
fundamentals



## There is a lack of focus on the fundamentals of model validation and monitoring

- Basic errors are still being made:
- Waiting before the completion of the full model outcome period to validate
- Not using confidence estimates for model power measures
- Not realising that the actual v expected is the name of the game

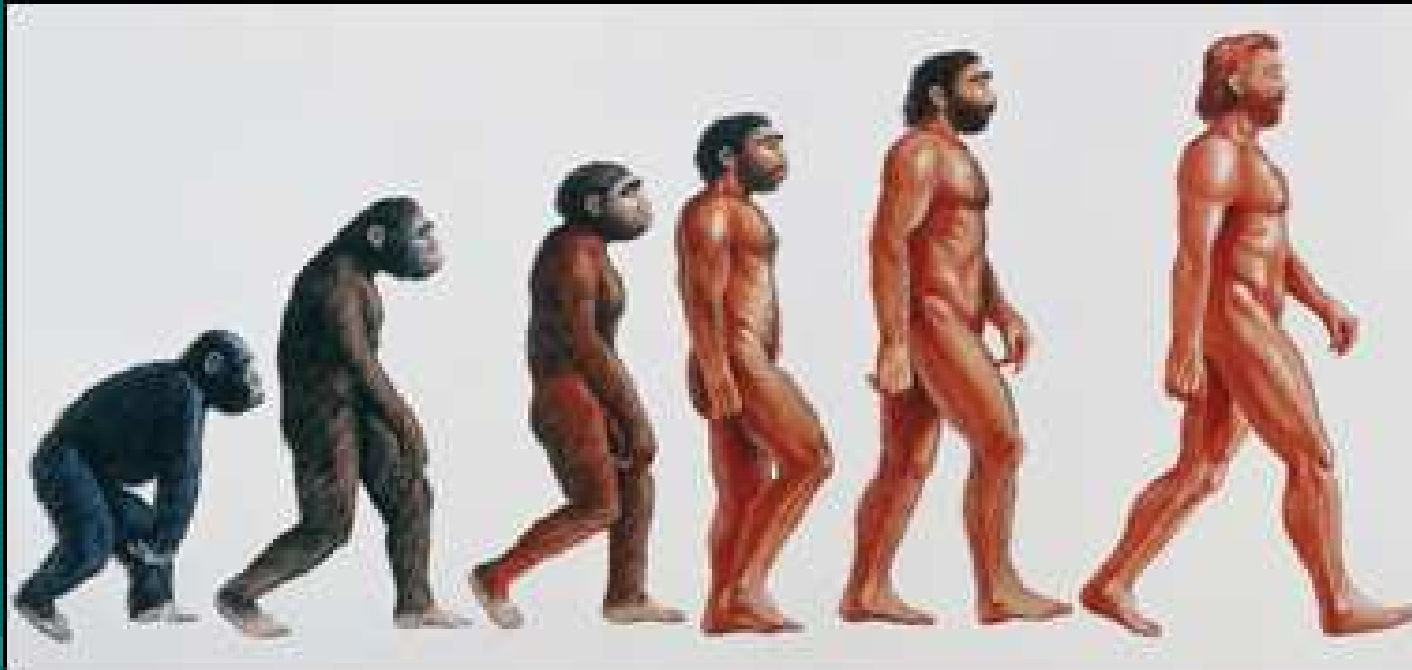
# A little knowledge is a dangerous thing



My genie is bigger than  
yours

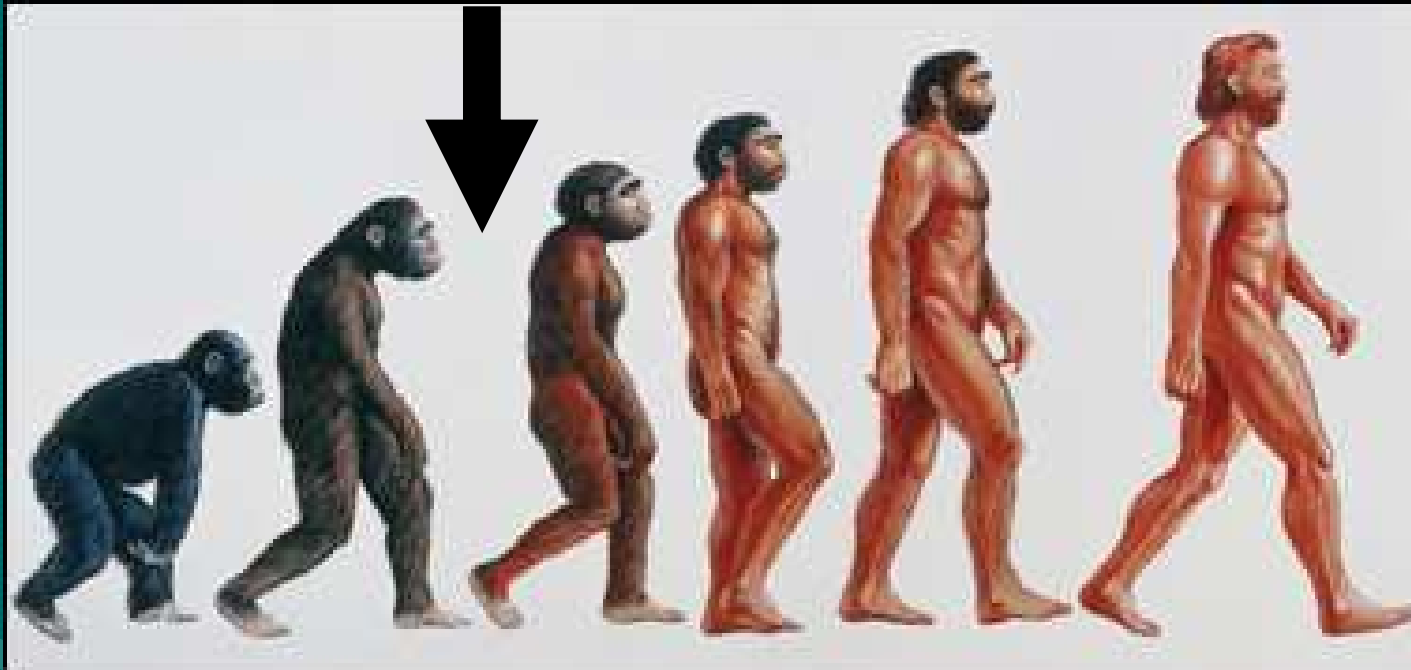


# The Ascent of Credit Scoring



# The Ascent of Credit Scoring

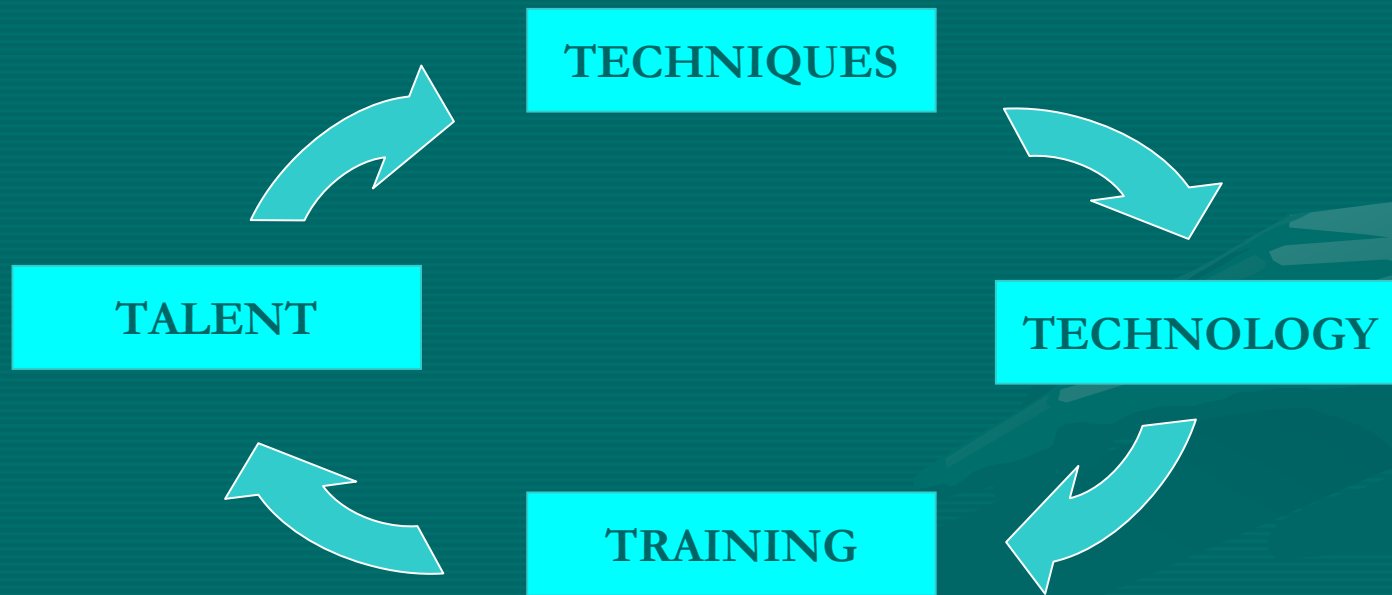
Stuck in the 1980s



Vote Jon & Nigel

# Opposing the Motion

## The 4 “T”s of Change



# Some Significant Changes

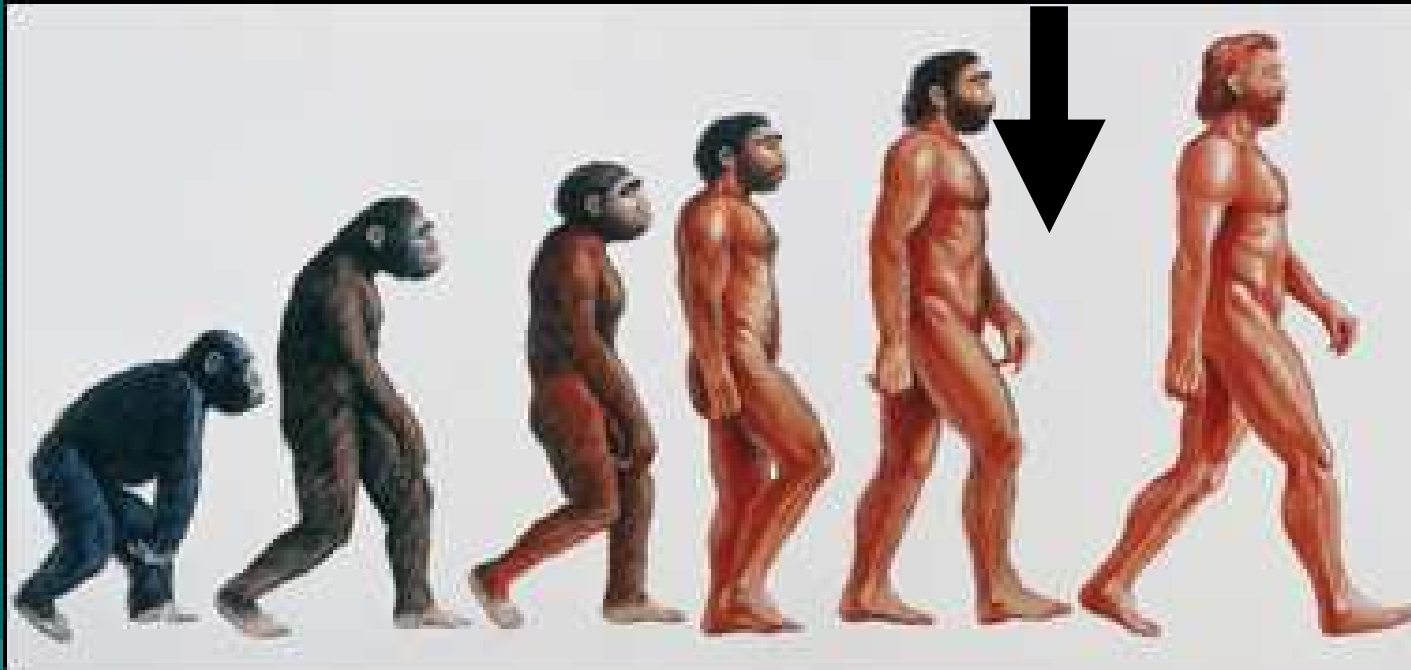
- Range and Depth of Credit Bureau Data
- The battle against FRAUD





# The Ascent of Credit Scoring

We have made significant progress



Vote Gillian & David

# Jon and Nigel's response

- There is talent in our Industry – but very few are in Senior Positions
- Unlike Actuarial Science – our closest cousins – where there are professional exams – and which generates the leaders of their Insurance profession
- With enhancements to technology comes the risk of losing the “art” of model development.

# Jon and Nigel's response

- Our natural bias as data analysts has been to get the most out of data. This has been the industry's primary focus for 20 years
- Just because data is not readily available does not mean it is not both important and useable
- Understanding what we don't know is more important than sharpening the pencil on what we do know
- The industry has shy'ed away from the most fundamental question of "What if our models/calculations are wrong?"
- In the future we must focus less on likelihood and probability, and much more on possibility

**Professor David J. Hand**  
**Imperial College London**

**President:**  
**Royal Statistical Society**

# Summary & Vote

- It is time to vote .....

