Evoked Culture and Rethinking Conventional Wisdom

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Culture as a reified object

- In conventional talk about culture we often attribute causal properties to culture
- So we tend to describe specific forms of human behavior as being influenced by “culture”
- For example, we say that we speak a specific language because of the culture in which we grew up

Folk and scientific perspectives

- For most every day purposes this way of talking is perfectly acceptable
- However, from a scientific point of view, this conventional way of speaking can be very misleading
  - Because it *reifies* culture (treats ‘culture’ as a thing rather than as a description of features)
  - Because it leaves the causal properties unexplained

What is “Culture” anyway?

- So, what, upon reflection, do we normally mean by “culture”?
- OED definition: “The ideas, customs, and social behavior of a particular people or society”
- Notice: three different kinds of things in this definition
  - Ideas (mental things)
  - Customs (social things)
  - Behavior (physical and biological things)

WHAT TO DO

- Clearly, therefore, we need an explanation of how mental, social and physical/biological things do the job they are supposed to do
- In other words we need an account of the cognitive and emotional mechanisms involved
- This calls for a “big” decision
- Are cultural features a cause of these mental, social, and physical/biological factors?
  - Or is it an effect?
  - Or is it an effect that then becomes a cause?

- If you choose the first alternative the problem is showing how three different kinds of features can do this!
- If you choose the second you are simply stating the obvious, namely, that ideas have consequences, that social arrangements provide context, and that behavior makes a difference in that context

- If you choose the third, you have available both cognitive and evolutionary explanations of how those features are structured in a particular way, how social facts inform the content of the various cultural features, and how the bodily behavior, informed by the brain in its present form, got to be that way and why its specific behavior can be accounted for in evolutionary terms.

Capacities

- Now you will remember that we have already developed the notion of capacities or dispositions
- The capacities of an organism need to be triggered in order to have an effect
- Triggers are specific features of our environment that activate these capacities
- This is where the specific context that activates the capacities makes a difference

AN EXAMPLE

- Let's take an example: an organism develops in a variable climate with extremes of heat and cold
- From the view point of natural selection, those members of the species involved that grow enough fur to keep them from the cold and not so much that they die of heatstroke have a selective advantage
- But some of the members of this species find a short cut: They use the skins of furred animals to protect them in the cold weather and go naked in the hot weather
- So the idea "let's make clothing from skins", is evoked by the environmental conditions but becomes a cultural feature that gets transmitted from one generation to another

Fashion

- This leads to the social situation in which people not only wear clothing some of the time
- but could even develop rules about which skins are better, which look more beautiful, which are easier to obtain, and so on
- and, without further ado, you are on your way to fashion!

Fur Fashion

Selective Advantage

- Despite environmental differences the mechanisms that become activated by the environmental conditions, aided now by the cultural features that transmit information from one person to another and from one time period to another, remain the same — because they provide a selective advantage.

CALIBRATION

- A good way of explaining how the mechanism works is to see the same capacity as being calibrated by different environmental conditions in two ways
  - As the refining of the mechanism over evolutionary time to make it optimal
  - As the immediate response to specific conditions that make one alternative behavior which the mechanism has evolved to produce, more appropriate than another

Natural selection and local conditions

- The first provides an account, via natural selection, of the *development* of the mechanism
- The second provides an account of the *operation* of the mechanism under local conditions
- Hence, an explanation for cultural variation!

Application to Problems

- With these ideas in place we are now ready to apply them to specific problems

- Such as the problem of “conventional wisdom” which covers all kinds of beliefs that people have about the world in which they live

Rethinking Conventional Wisdom

Dominance and Subordination of Potential Danger Domains

Comparing UK and SA

THE TEAM

- TOM LAWSON
- JOEL MORT
- MICHAL FUX


HARRISMITH
JOHANNESBURG
LADYSMITH
FREE STATE
ROYAL NATAL NATIONAL PARK
Mont Aux Sources
3282M
Bergville
WOODSTOCK DAM
SPIOENKOP NATURE RESERVE
SPIOENKOP DAM
R74
N3
R103
Colenso
Winterton
OKHAHLAMBA STATE FOREST
2905M
Chieveley
WEENEN NATURE RESERVE
GREYTOWN
uKHAHLAMBA
Cathedral Peak
3004M
BELL PARK DAM
R600
CATHEDERAL PEAK STATE FOREST
Champagne Valley
Estcourt
MONK'S COWL STATE FOREST
3338M
3377M
WAGENDRIFT DAM
DRAKENSBERG
Mooi River
GIANT'S CASTLE NATURE RESERVE
3294M
Mokhotlong
Kamberg
Rosetta
HIGHMOOR NATURE RESERVE
3315M
KAMBERG NATURE RESERVE
Nottingham Road
PIETERMARITZBURG
LOTENI NATURE RESERVE
Balgowan
HIGHEST POINT IN SOUTHERN AFRICA 3482M
MKHOMAZI STATE FOREST
Fort Nottingham
LESOTHO
VERGELEGEN NATURE RESERVE
UMGENI NATURE RESERVE
Dargle
PARK
Lower Loteni
KWAZULU-NATAL
Sani Pass Area
COBHAM STATE FOREST
Boston
HIMEVILLE NATURE RESERVE
R617
Himeville
THE SWAMP NATURE RESERVE
GARDEN CASTLE STATE FOREST
Underberg
Bulwer
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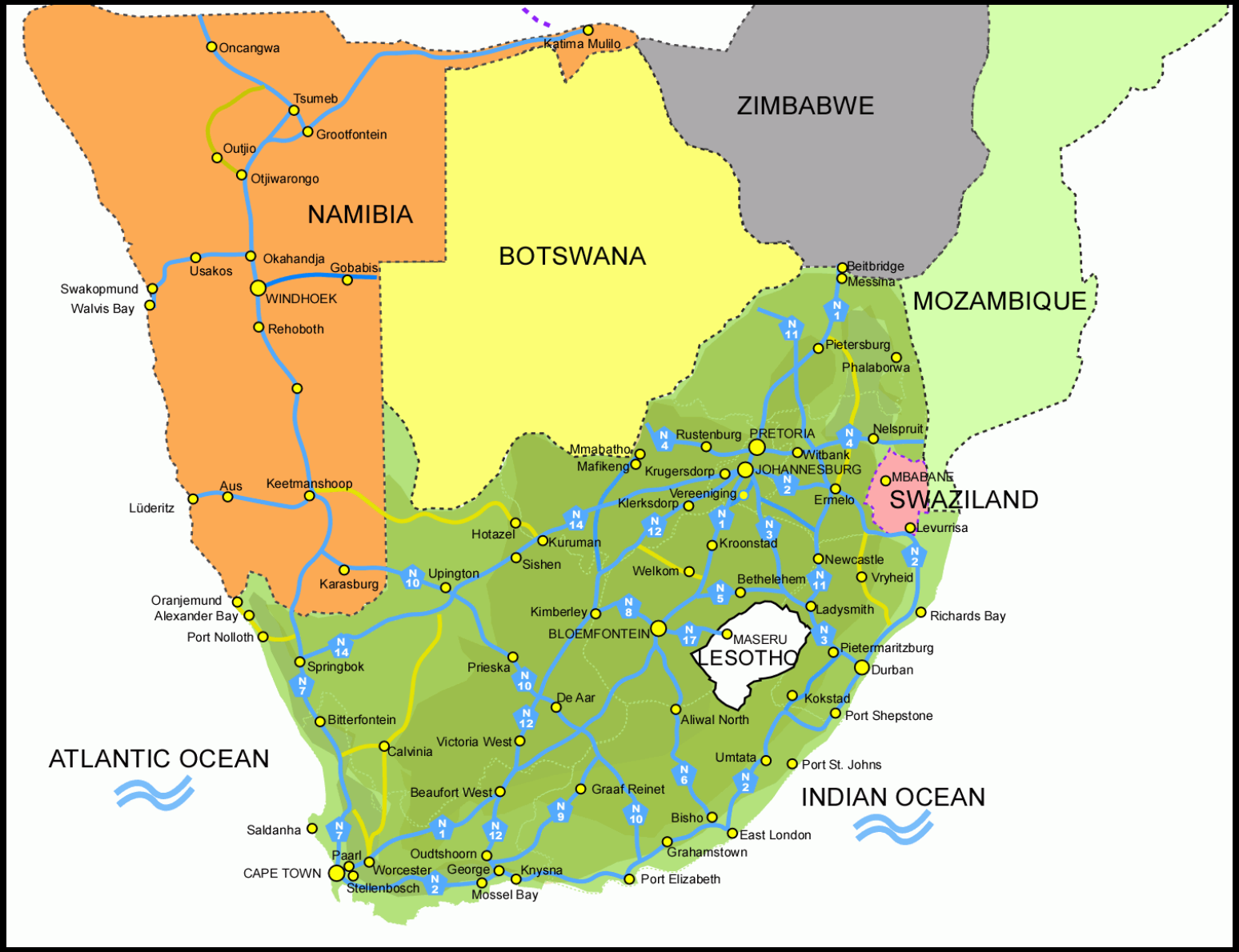

Oncangwa
Katima Mulilo
ZIMBABWE
Tsumeb
Grootfontein
Outjio
Otjiwarongo
NAMIBIA
BOTSWANA
Okahandja
Usakos
Gobabis
Swakopmund
WINDHOEK
Walvis Bay
Rehoboth
Beitbridge
Messina
MOZAMBIQUE
Pietersburg
Phalaborwa
Rustenburg
PRETORIA
Nelspruit
Mmabatho
Witbank
Mafikeng
Krugersdorp
JOHANNESBURG
MBABANE
SWAZILAND
Aus
Keetmanshoop
Vereeniging
Ermelo
Lüderitz
Klerksdorp
Levurrisa
Hotazel
Kuruman
Kroonstad
Newcastle
Sishen
Upington
Welkom
Vryheid
Karasburg
Bethelehem
Oranjemund
Kimberley
Ladysmith
Richards Bay
Alexander Bay
BLOEMFONTEIN
MASERU
LESOTHO
Port Nolloth
Pietermaritzburg
Springbok
Prieska
Durban
De Aar
Kokstad
Bitterfontein
Aliwal North
Port Shepstone
Victoria West
Calvinia
ATLANTIC OCEAN
Umtata
Port St. Johns
Beaufort West
Graaf Reinet
INDIAN OCEAN
Bisho
Saldanha
East London
Oudtshoorn
Grahamstown
Paarl
CAPE TOWN
Worcester
George
Knysna
Port Elizabeth
Stellenbosch
Mossel Bay

- Despite the frequent reliance on Conventional Wisdom about potential threats (and the level of preoccupation with them) in political, policy, intelligence, and other domains, until now there have been few empirical studies addressing the spread, common features, or differences of precautionary preoccupations across cultures, a fact that underscores the importance of adding to the current state of knowledge.

Initial Study

- This presentation exhibits some of our initial investigations of any significant variation or subordination of dominant themes (e.g. contamination/contagion, social status threats, predation/assault, decline in resources)
- *within* and *between* populations and
- *how* these themes may be reflected in each target populations' collective precautionary behaviors (i.e. rituals, customs, ideological proscriptions, etc.)

Hypothesis

*Environmental triggers *and* specific cognitive capacities
*constrain the dominance of particular precautionary themes generally
*as well as their variability between distinct populations.

Our initial results support these claims.

We further posit that in many populations there is significant continuity between

1. the degree of individual preoccupation with possible threats,
2. individual precautionary measures, and
3. collective religious rituals.

Calibrating the mechanisms

- Collective rituals and prescribed ideological contexts provide an occasion at least for calibrating evolutionarily bequeathed cognitive precautionary mechanisms and

- the eliciting of particular precautionary themes. (We have addressed these in subsequent studies.)

Summary

- What is CW and why is it puzzling?
- Questions About and Importance of Precaution
- Our Project Aims
- Overview of All Studies
- Study One - Likert Scale Instrument
- Analysis and Results
- Discussion

What do we mean by Conventional Wisdom?

...and why SHOULD it matter?

CW is constantly in the spotlight in the form of significant and generally accepted claims that directly (or indirectly) result in business communication, policy-making, naïve explanations, and world descriptors.

Why CW is puzzling & deserves scrutiny

1

Eye Contact CW:

In human beings, eye contact is a form of nonverbal communication and is thought to have a large influence on social behavior. Coined in the early to mid-1960s, the term has come in the West to often define the act as a meaningful and important sign of confidence and social communication.

F. S. Chen:

There is a lot of cultural lore about the power of eye contact as an influence tool but our findings show that direct eye contact makes skeptical listeners less likely to change their minds, not more, as previously believed. (2013)

Why CW is puzzling & deserves scrutiny 2

Gov Rick Perry:

...I know this — the world has never been as dangerous as it is today…

Gen Martin Dempsey:

I will personally attest to the fact that [the world is] more dangerous than it has ever been.

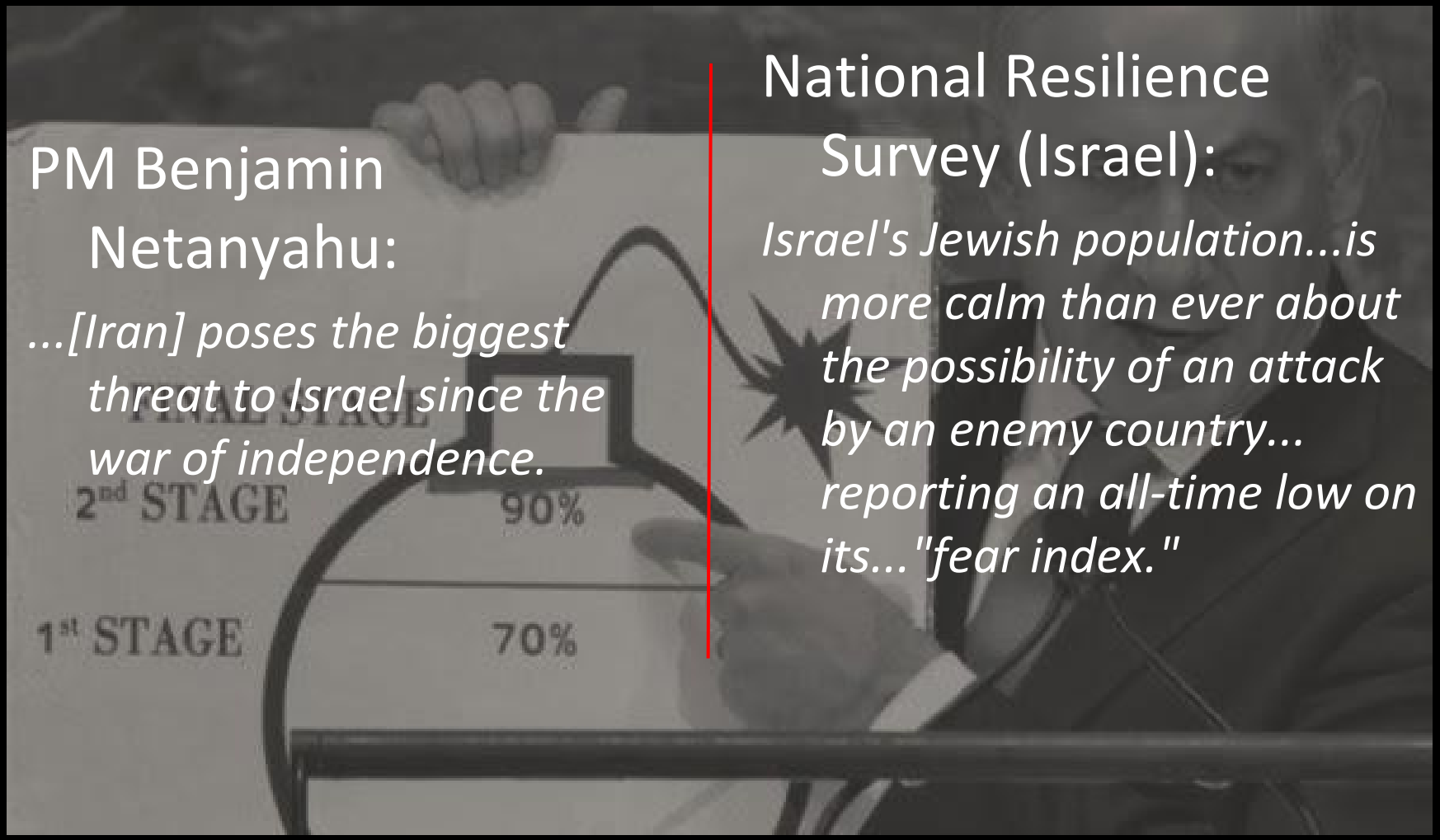
Steven Pinker:

Ours is the most peaceful time in history.

Mueller and Stewart:

The chances of an American dying in a bathtub are much higher than dying in a terror attack.

Why CW is puzzling & deserves scrutiny 3



PM Benjamin Netanyahu:

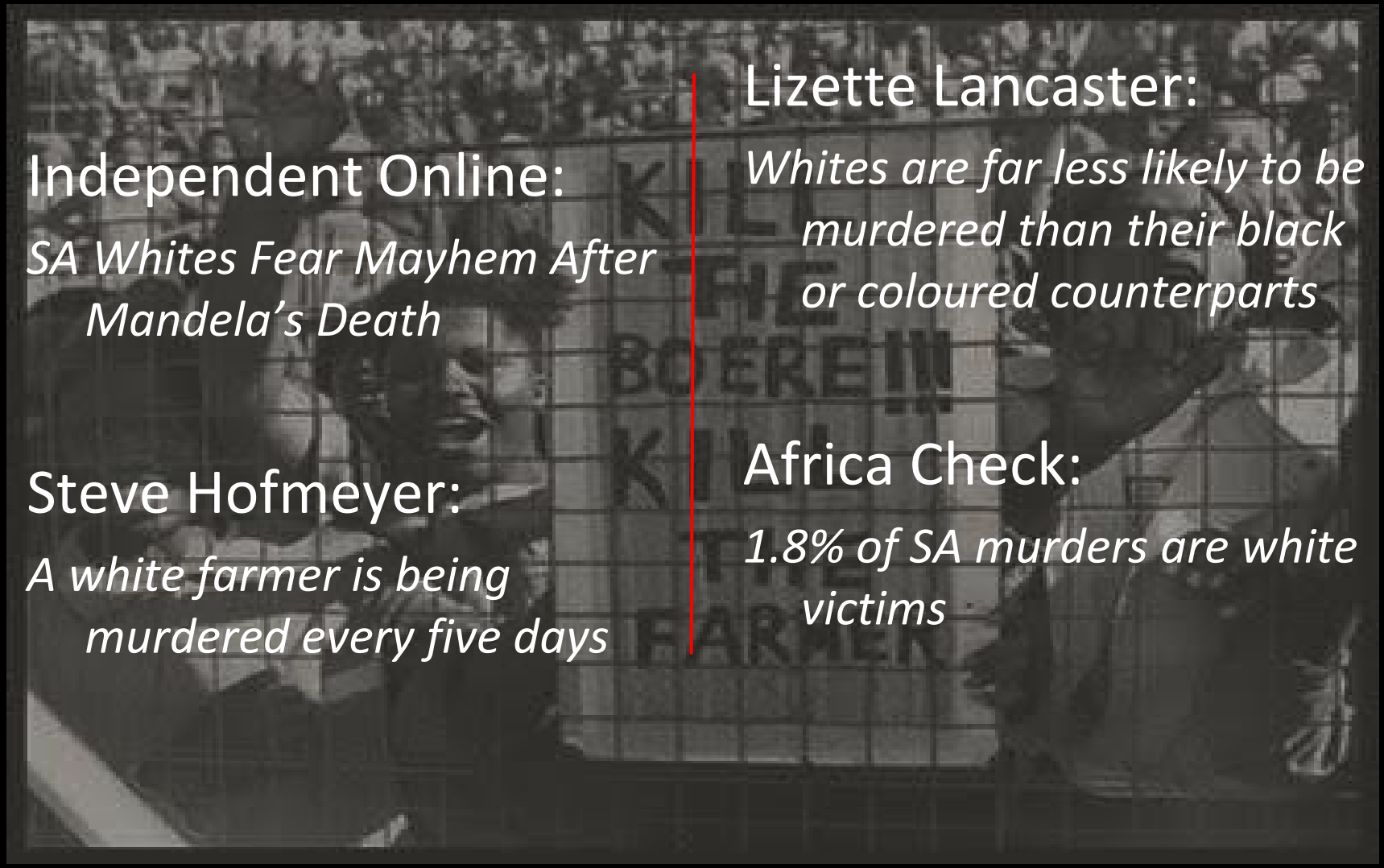
...[Iran] poses the biggest threat to Israel since the war of independence.

National Resilience Survey (Israel):

Israel's Jewish population...is more calm than ever about the possibility of an attack by an enemy country... reporting an all-time low on its..."fear index."

Why CW is puzzling & deserves scrutiny

4



Independent Online:

SA Whites Fear Mayhem After Mandela's Death

Steve Hofmeyer:

A white farmer is being murdered every five days

Lizette Lancaster:

Whites are far less likely to be murdered than their black or coloured counterparts

Africa Check:

1.8% of SA murders are white victims

Nothing in all the world is more dangerous than sincere ignorance and conscientious stupidity.

- Martin Luther King Jr.

We aimed to provide some clarity, or at least more information, about the actual worries people around the world have about potential danger.

Main Question of Interest

What is the nature of potential danger preoccupation and what role does it play in generating human behavior, particularly ritualized behavior and probably cultural ritual behavior?

First a Distinction…

POTENTIAL DANGER	IMMINENT DANGER
Inferred Threats	Manifest Threats
Require behavioral adjustments that may take time	Require a prompt response, the faster the better
May be countered by indirect measures like avoidance or probing	Reactions involve immediate interaction with source of danger
Information regarding presence and elimination of threats is asymmetrical	Information of presence and elimination of threats gained externally

Why Focus on Precaution?

Relevant Domains Are Broad

Psychological development, kin protection, disease avoidance, ritual performance, psychopathology, security motivation, trust and cooperation, violent terrorist motivation, coalitional identification, mate guarding, religious ideologies, etc

"Domain" = Socio-cultural and environmental context to which the mechanisms are sensitive

Aims

Cross-cultural data

Account for variations *and* similarities

Employ multiple, interdisciplinary methodologies grounded in evolutionary science

Compare results with CW

Seminal Literature:

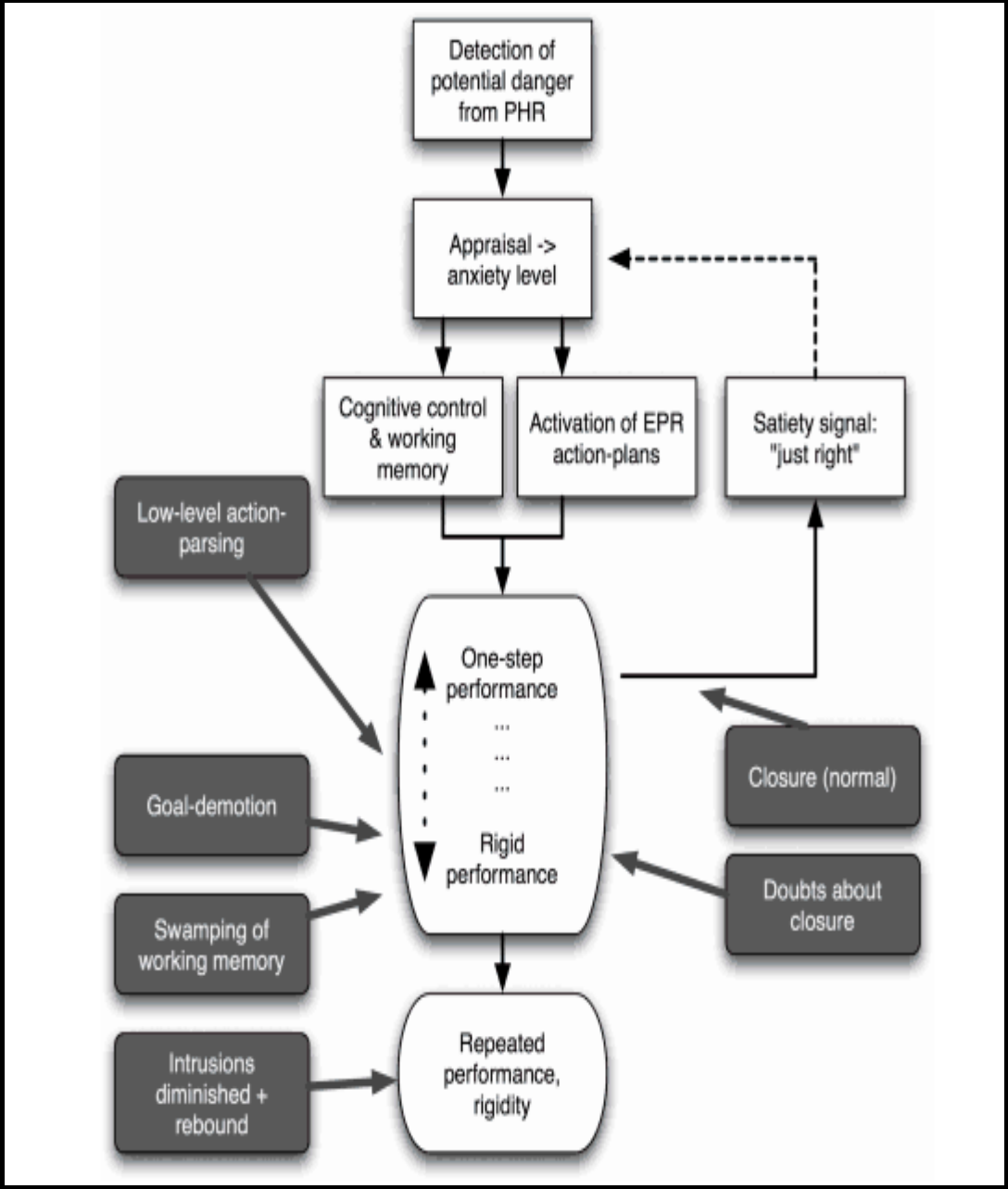
Boyer, P. P., Liénard. (2006). Why ritualized behavior? Precaution systems and action parsing in developmental, pathological and cultural rituals. *Behavioral and Brain Sciences*, *29*, 1-56.

Szechtman, H., & Woody, E. (2004). Obsessive-compulsive disorder as a disturbance of security motivation. *Psychological Review*, *111*(1), 111-127.

Special Issue: "Threat-Detection and Precaution: Neuro-physiological, Behavioral, Cognitive and Psychiatric Aspects." *Neuro & BioBeh Rev*. 2011

Systems

- Some of the mechanisms jointly operate to form systems such as:
  - Security Motivation System
    - Henry Szechtman, Professor of Psychiatry, McGill University, Canada
  - Hazard Precaution System
    - Pascal Boyer, Henry Luce Professor of Psychology and Anthropology, Washington University, St. Louis, USA and Dr. Pierre Lienard, Anthropology, University of Las Vegas, Nevada, USA


Detection of potential danger from PHR
Appraisal -> anxiety level
Cognitive control & working memory
Activation of EPR action-plans
Satiety signal: "just right"
Low-level action-parsing
One-step performance
...
...
...
Rigid performance
Goal-demotion
Swamping of working memory
Intrusions diminished + rebound
Repeated performance, rigidity
Closure (normal)
Doubts about closure

Overview

Populations: UK, South Africa


Individual protocols

- **Likert Scale**
- Thurstone Scale
- Ranking Scale
- Vignette Study
- Budget Allocation Protocol
- Video analysis
- Questionnaires

Foci

Potential danger Preoccupations

Salience in ritualized behavior

Structure of ritual action sequences

Study 1 - Likert Scale Instrument

Item #	Scale phrase (I worry about...)	PDD	Answer
1	...keeping my hands and body clean	CC	1 2 3 4 5 6 7
2	...walking alone in the dark	PA	1 2 3 4 5 6 7
3	...seeing a strange person walking towards me	PA	1 2 3 4 5 6 7
4	...eating raw meat	CC	1 2 3 4 5 6 7
5	...doing something embarrassing in public	SS	1 2 3 4 5 6 7
6	...my co-workers disliking me	SS	1 2 3 4 5 6 7
7	...not earning enough money	DR	1 2 3 4 5 6 7

- Likert Scale (1-7) Items
- 20 Items (5 per domain)
- Administered in random order

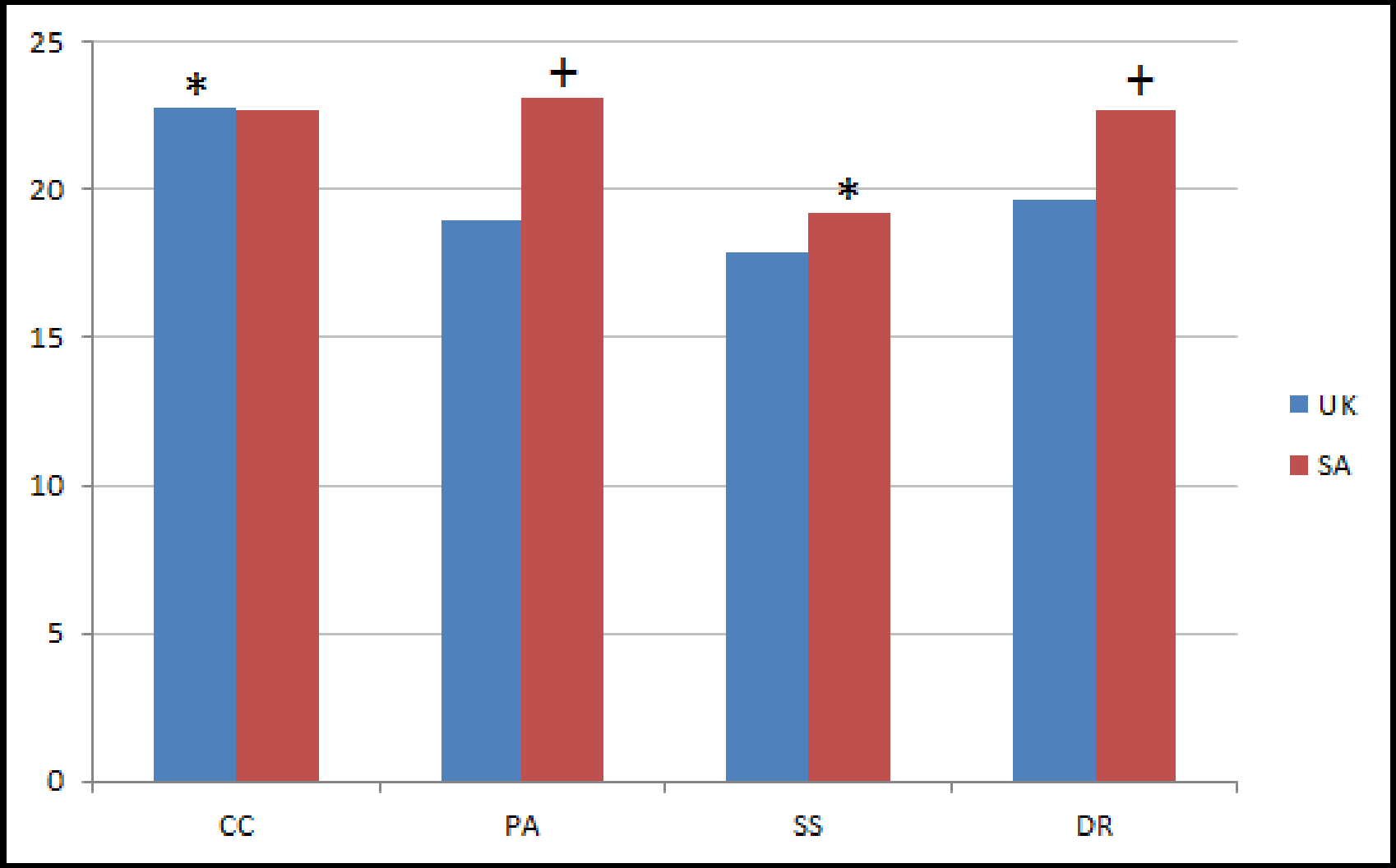
- No. of subjects
  - UK - 98
  - SA - 88
- Data collection: 2009-2012

Analyses and Results (highlights)

- Participants from South Africa reported significantly higher scores for the Depletion of Resources (DR) and Predation/Assault (PA) domains compared with the UK participants
- Female participants scored significantly higher on the Predation/Assault (PA) domain both in the UK and SA populations
- In the SA population, non-whites scored significantly higher on ALL threat domains

Analyses and Results (overall)

SA vs UK overall



+ Significance between populations, * Significance within population

Analyses and Results (overall)

SA vs UK overall

Table 1 Univariate ANOVA and post-hoc comparisons for country groupings

	UK *M(SD)*	SA *M(SD)*	*F (1,186)*	η_p^2	*Group Comparisons*
Contamination/Contagion	22.81 (6.29)	22.66 (6.26)	0.025	.000	
Predation/Assault	18.95 (5.46)	23.08 (5.97)	24.279***	.117	b>a
Social Status	17.87 (5.49)	19.22 (6.03)	2.548	.014	
Depletion of Resources	19.62 (6.25)	22.72 (5.35)	12.998***	.066	b>a

Notes: a = UK; b = SA * = p< .05; ** = p< .01; *** = p< .001

Analyses and Results (gender)

Gender (UK and SA overall)

+ Significance between genders

Analyses and Results (gender)

Gender (UK and SA overall)

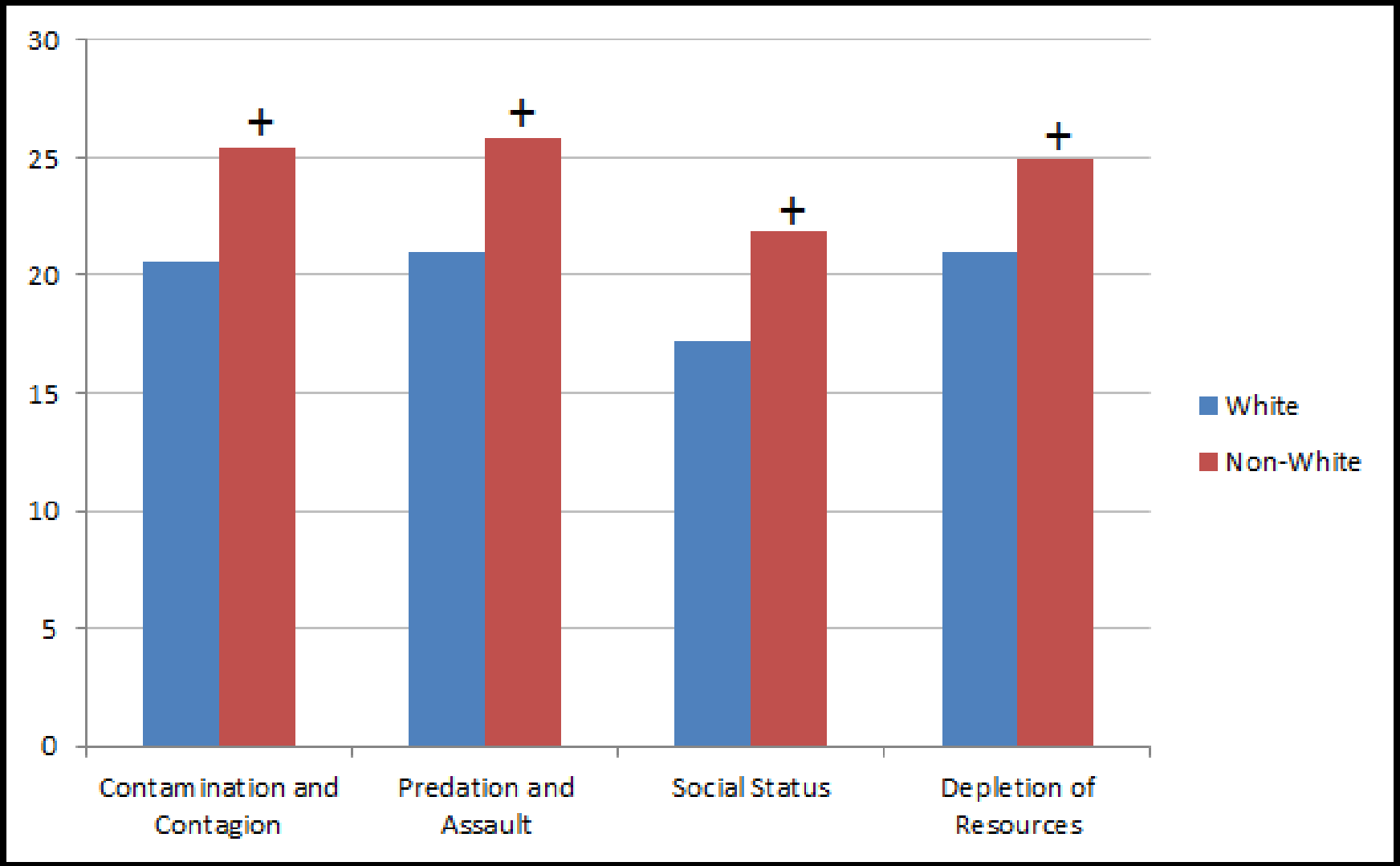
Table 2 Univariate ANOVA for gender groupings

	Female	Male		
	M (SD)	*M (SD)*	*F (1,226)*	η_p^2
Contamination and Contagion	22.66 (6.45)	21.44 (6.88)	1.868	.008
Predation and Assault	22.59 (6.07)	18.31 (6.44)	26.424***	.106
Social Status	19.01 (6.55)	17.83 (5.73)	2.061	.009
Depletion of Resources	20.79 (6.67)	19.82 (6.44)	1.250	.006

* = p< .05; ** = p< .01; *** = p< .001.

Analyses and Results (ethnicity)

White vs Non-white (SA only)



+ Significance between white and non-white

Analyses and Results (ethnicity)

White vs Non-white (SA only)

Table 3 Univariate ANOVA for SA ethnicity groupings

	White	Non-White		
	M (SD)	*M (SD)*	*F (1,88)*	η_p^2
Contamination and Contagion	20.56 (6.041)	25.42 (5.480)	15.132***	.150
Predation and Assault	21.00 (5.750)	25.82 (5.151)	16.552***	.161
Social Status	17.20 (5.253)	21.87 (6.019)	15.031***	.149
Depletion of Resources	21.02 (5.293)	24.95 (4.609)	13.266***	.134

* = p< .05; ** = p< .01; *** = p< .001.

Discussion

[Compare with CW points]

Like the Israeli National Resiliency Survey, our results do not match anecdotal and intuitive CW about actual potential danger preoccupations; in this case of white vs non-white South Africans.

Discussion

[Universality and Variability]

Our gender and ethnicity analyses support the notion that the outputs of precautions systems are both universal in some respects *and* variable as a result of developmental calibration or social learning.

From Hazard Precaution system to Religious Rituals

- Cognitive capacities → Hazard precaution system → Ritualized behavior → Cultural Rituals → Religious Rituals
- Reverse Engineering

Discussion

[Next Scale Data to be Analyzed: Thurstone]

SURVEY B

Thurstone Scale (24 items)

I will now read you a series of questions. I will read each question twice. Please answer "yes or no" to each question. (Investigator will read as "Is [A] more worrying than [B]?"

Example

Is driving a car to Johannesburg more comfortable than taking the bus. Y or N?

#	Scale questions ([A] / [B])	Cond.	Answer
1	Eating raw meat / Walking alone at night	CC/PA	Y or N
2	Touching a dead cat / Seeing someone with a gun	CC/PA	Y or N
3	Walking alone at night / Eating raw meat	PA/CC	Y or N
4	Seeing someone with a gun / Touching a dead cat	PA/CC	Y or N

Discussion

[Future Directions]

Continue data analysis of economic and behavioral (video) protocols.

- Delineate unambiguous precaution domains
- Biobehavioral protocols
- Clarify evolutionary framework
- Integrate evidence from other studies and disciplines (De Dreu 2010)

Discussion

[Conclusions]

One stands out:

The tenets, theories, and interdisciplinary methods of evolutionary science (especially psychology) are crucial, and heretofore neglected, tools for understanding human behavior AND informing policy decision-making.

End

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