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Biological and Cultural Inheritance of the Image of God and of Original Sin

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Is the **image of God** in humanity
upheld by the Creator
through our **genes**

or

through our **society**?

-- *or*

through the roles
of the family and culture
and the body and brain
in the **development** of each individual?

Do we transmit [**Original**] **Sin**
to our descendants
through our **genes**
or through our **society**?

-- *or* are our lives pervasively corrupted
through what we **each make** of
our genetic inheritance
and our social inheritance?

My answer in summary

(The third possibility in both cases, of course)

In their created human aspects,

the **image of God** = the gift of God's love

'Original Sin' = our breach of love for God

Neither is more BORN or CONCEIVED in us
than we are BROUGHT UP in it.

Each is both genetically & culturally inherited
- like all natural capacities,
including the distinctively human.

Where I'm coming from

I hold to a
biblically theistic naturalism
in science and history.

I don't believe in a mere 'complementarity'
between current science & biblical faith,
or of mind & brain (neglecting society, & body).

The distinct technically correct accounts
are each near enough to the truth
but we do not (yet) have the means
to inter-relate all their major aspects.

More on this 'Hebraic' rather than 'Hellenistic' view of reality:-

'HEBRAIC' ONTOLOGY

(as formulatable since the 1930s)

God sustains a separate **single reality**
of this time and space,
containing mortal humanity and our earthly home.

= **NEUTRAL MONISM**

(contradicts Physicalism, however 'non-reductive')

Within this one reality, God sustains
several sorts of causal system,
each developed in its greatest complexity
as the unity of a human life.

= **SYSTEMS PLURALISM**

(contradicts all Dualisms, and Deconstructionism too)

God's **material** creation (e.g., the human brain)

God's **cultural** creation (e.g., the global village)

God's **personal** creation (e.g., the believer's whole life)

-- each a complete causal network, with its own science

i.e., contrary to Nancey Murphy & Warren S. Brown, human beings ALWAYS are

"the authors of their own thoughts and actions."

Structure of this talk

(from now on!!)

The image of God

in scripture

in science

Original sin

in scripture

in science

“Always reforming”

- a. Keep going back to the Bible:
re-search the book of revelation
every time we turn a page in the book of creation.
- b. Learn from systematic theology:
Bible-honouring thinkers
from the Early Fathers to
21st century academic theologians.
- c. Listen to the experts outside theology,
especially those who also study the Bible.

How are human beings like God / unlike animals?

a. Bible scholars:

The OT Hebrew word [*tselem* = image, idol] means *unlike* God in being limited to one place and time.
Likeness not specified by context or elsewhere.

b. Biblical theologians:

The likeness is kingship: “let them rule.” Yet if so, what *sort* of King is God? [The ‘King of *love*’, giving justice, security, prosperity *among* his people.]

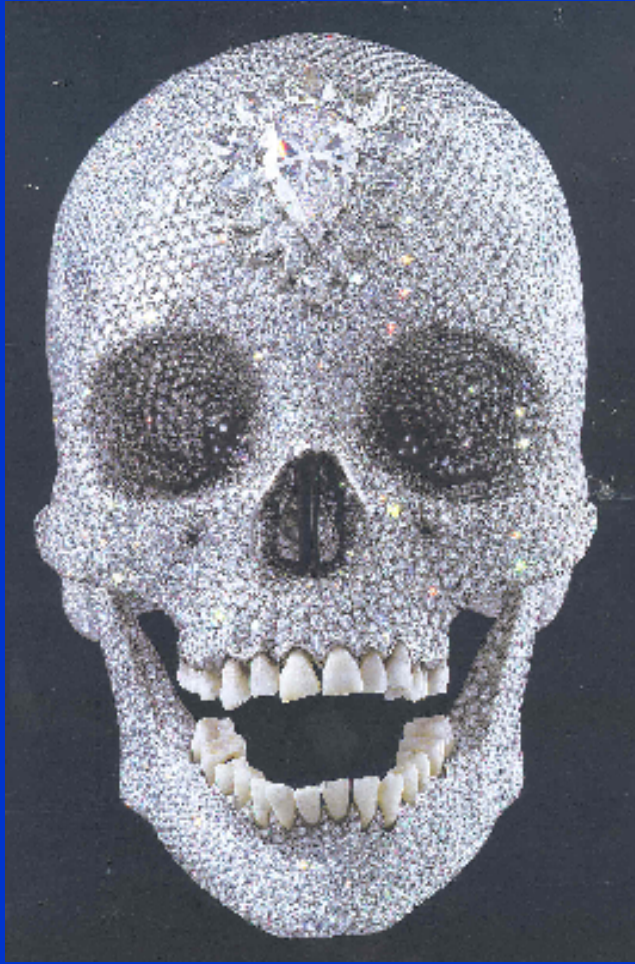
c. Biblical scientists:

What mechanism does psychological science find
(i) to be unique to contemporary human beings
(ii) to be like the biblical God in Christ?

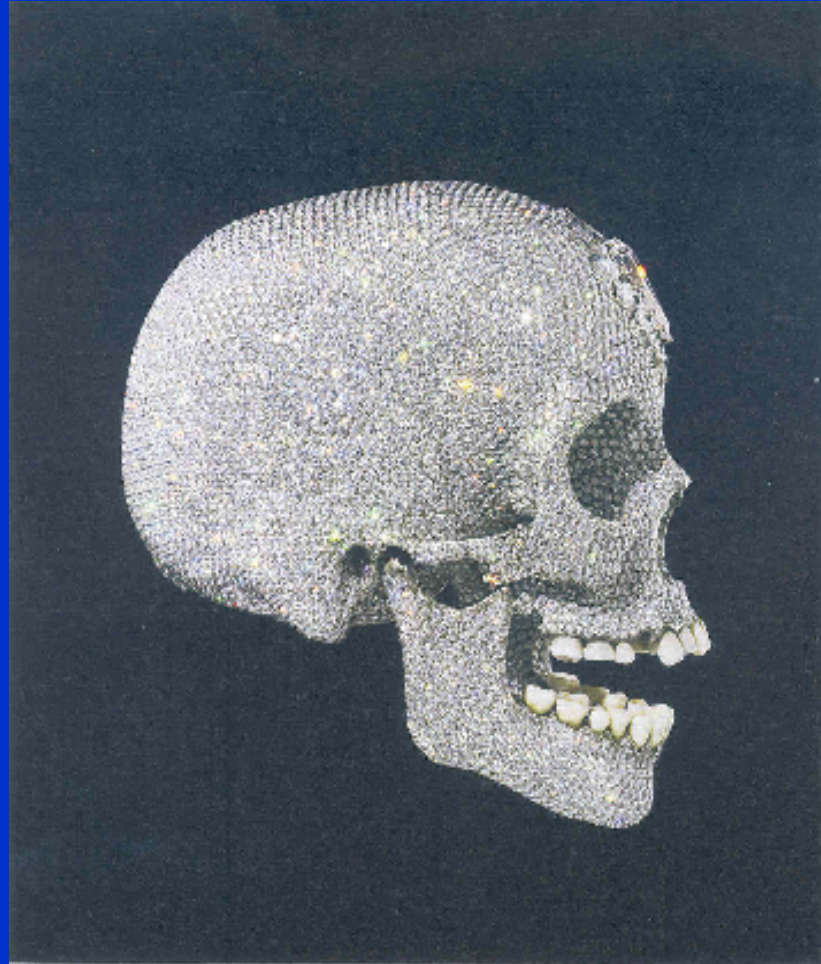
(?) Speculate about how we are like God.

(?) Find out how we are unlike any other contemporary species.

Made by, for & like God's love!



'For the love of God'
sculpture by Damien Hirst



'For the love of art and money'
Damien Hirst: beyond belief.'

For the Love of God, complete with 6,601 diamonds.
Photograph by Prudence Cuming Associates

- title of review by Richard Dormant, *Daily Telegraph*, 2Jun07

THE IMAGE OF GOD: how we're unlike animals

The Bible

THE WHOLE PASSAGE IN Genesis 1 FOR THE NEXT THREE SLIDES

[using a Christian paraphrase of *Elohim* to start Genesis 1: 26]

²⁶God, the Father, Son and Spirit, said,

“Let us make humanity
to be in our image and likeness
and let them rule ... over all the earth ...”

²⁷So God created humanity in his own image ...;
male and female he created them.

²⁸God blessed them and said to them,

“Be fruitful and grow in numbers;
fill the earth and make all in it serve my purpose.”

THE IMAGE OF GOD in Genesis 1

Genesis 1: 26a

*God, the Father, Son and Spirit, said,
“Let us make humanity
to be in our image and likeness.”*

Elohim - a plural Godhead, the Trinity prefigured.

“God *is* love” - inherently **social**.

Eternal Lovers - Father, Son & Holy Spirit,
who create and sustain a planet (Gen 1:1-25)
full of lovers just like God, except mortal.

THE IMAGE OF GOD in Genesis 1

Genesis 1: 27-28a

*So God created humanity in his own image;
male and female he created them ...
God blessed them and said to them,
“Be fruitful and grow in numbers ...”*

God's mortal image is
male *and* female
and pro-creative.

The created biological foundation of the family

THE IMAGE OF GOD in Genesis 1

Genesis 1: 27-28a

*So God created humanity in his own image;
male and female he created them ...*

God blessed them and said to them,

“Be fruitful and grow in numbers;

fill the earth and make all in it do my purpose.”

The Creation Mandate:

rear children to loving adulthood,
within a society that runs the earth
in the power of Christ's Spirit.

The created social foundation of the global village

THE IMAGE OF GOD in Genesis 2-4

Like God, the image of God is plurality in unity.

BIOLOGICALLY -

For this reason, a man will ... be united to his wife and they will become one flesh (Genesis 2:24).

Eve said, "With the help of the Lord I have brought forth a man" (Genesis 4:1) -- but God also ordains that *woman [is] taken out of man* (Genesis 2: 23d).

SOCIALLY -

For the Man, no suitable partner was found ... [until] the Lord God ... brought the Woman to him (Genesis 2: 20b, 22b).

In the middle of the garden ... her Husband ... was with the Woman (Genesis 3: 3, 6).

THE IMAGE OF GOD in Isaiah 40-49+

The image of God is politics of global justice.

The prophet declares to the people: *The Lord created you, O Jacob; he formed you, O Israel.* Isaiah 43:1

“Here is my servant whom I uphold,” says the Lord. “I will put my Spirit on him and he will bring justice to the nations.” Isaiah 42:1

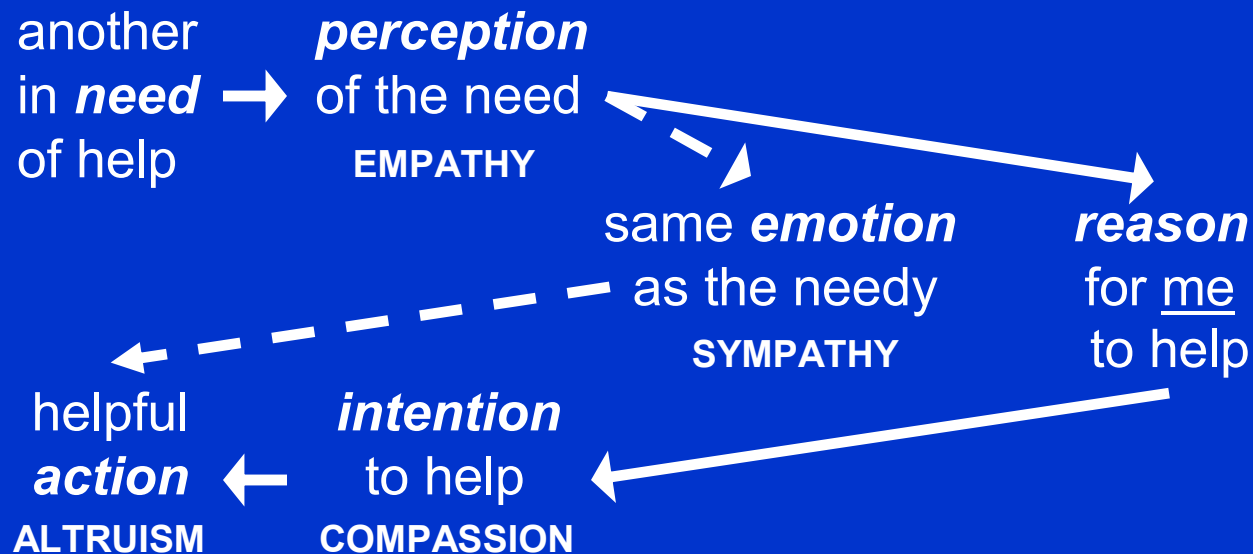
“I, the Lord, have called you in righteousness. I will make you a light to the peoples.” Isaiah 42:6

God reduces the rulers of this world to nothing and increases the power of the weak. Isa 40: 23,29

THE IMAGE OF GOD: how we are unlike the animals

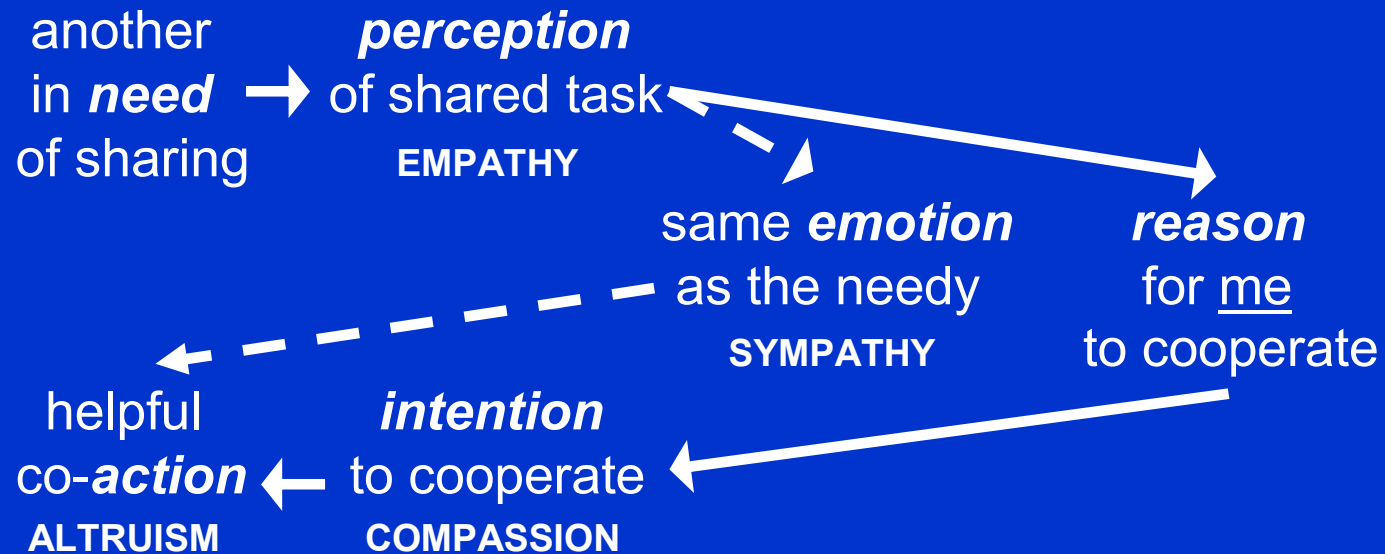
The science (some of it)

a mental system for neighbourly love



<http://www.psychology.bham.ac.uk/research/groups/dsa/empathy.shtml> - a Fund for research into biosocial psychology of empathy, compassion and cooperation (endowed by an attending Quaker for scientific work on the 'spiritual' love taught by Jesus).

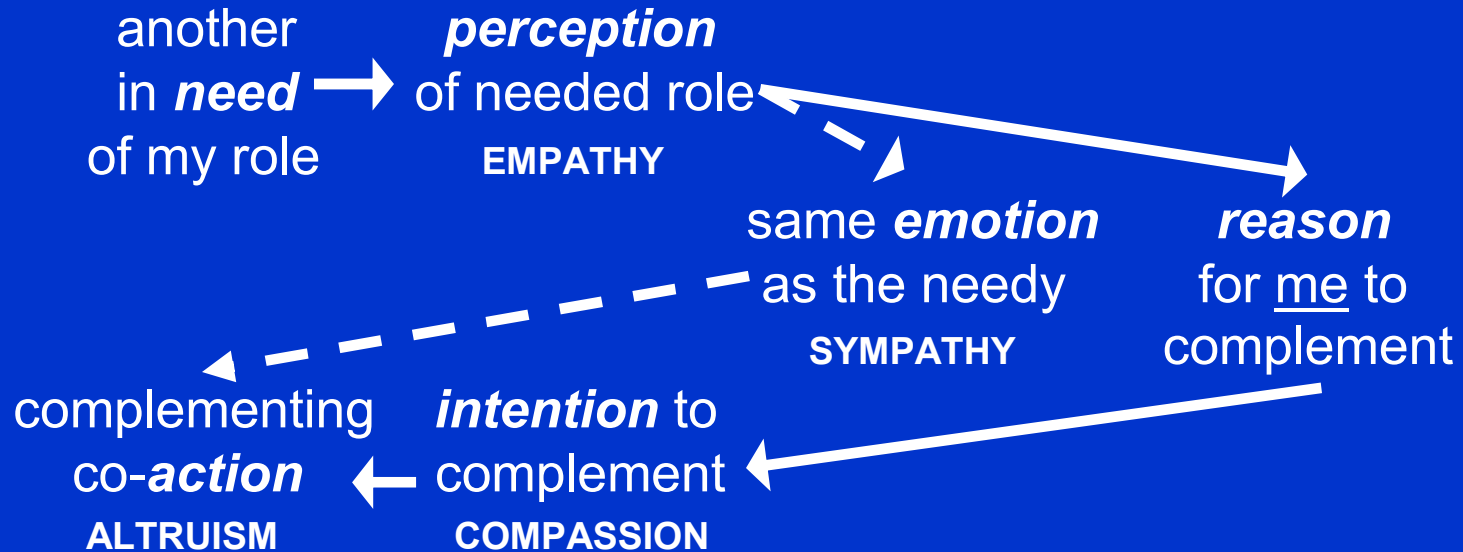
THE IMAGE OF GOD: some of the science
a mental system for neighbourly love
while cooperating in a shared task



Apes have this.

THE IMAGE OF GOD: some of the science

a mental system for divine-like love
-- complementation in a shared task



A one-year-old child can do this; chimpanzees seem never to 'get it':-

THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species

“jointly intending”

COMPLEMENTATION IN SHARED TASKS

By ~1yoa, we develop basic mental mechanisms
of the capacity for full love in action:

play an independent role in attaining a joint end -
choosing to act in one's own way
for a reason shared with another
who also acts in hir own way.

Tomasello M *et al.* (2005) *Behavioral & Brain Sciences* 28, 675-735.
Carpenter M & Tomasello M (2007) *Developmental Science* 10, 121-125.

**THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species**

EXAMPLE OF (EARLY DEVELOPED) SHARED INTENTION

The task: build a tower of bricks (as high as possible)

Cooperation: infant & adult add bricks alternately.

Complementation:-

While infant puts a brick on top, adult holds base steady.

When adult adds brick, infant takes role of holding base.

Not merely mimicking an act or emulating its effect (solo towers)

Not merely acting in concert, i.e. each doing own thing (both add bricks)

Not just awareness of the other's intention (building as high as possible)

Apes do all these (checking the other) but don't share in a joint task.

THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species

bio-social psychology of jointly intending
EMBODIED *and* RELATIONAL

ANOTHER EXAMPLE: **GAZE** - THE GROUNDWORK FOR GREAT LOVE

Newborn baby & mother GAZE at each other during breast-feeding
A baby doesn't yet distinguish self from other but it's as though the
human baby gazes into mother's eyes ("What a wonderful carer!")
whereas a chimpanzee gazes at them ("What fascinating eyes!").

Human **infants** and carers "share 'experiences'":

GAZE at each other while interacting for the sake of doing it together;
it's not mimicry - e.g. one smiles, the other vocalises happily.

In the hidden toy game, when the adult LOOKS at (or points to) a box,
a **young child** picks up the box and opens it to get the toy;
a chimpanzee (brought up with the child) only picks up the box
(Call & Tomasello 2005 review).

Apes perceive others' intentions, e.g. check what another is doing,
but they don't share interests = doing whatever gets to joint goal.

Adult lovers 'speak volumes' in a mutual GLANCE (deep empathy).

THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species

biosocial psychology of jointly intending
EMBODIED *and* RELATIONAL

NATURALISTIC EXAMPLES OF **INFANTS SHARING TASKS**

Pat-a-Cake - not (yet) seen in apes

Note the crucial difference from Peek-a-Boo (unilateral).

Exchanging acts and speech at 12-14 months of age.

Adult conversation is turn-taking in elaborating on the joint topic
(whether neighbourhood gossip or academic argument).

Teaching-Learning

e.g., from being fed to feeding oneself with cup or spoon:

infant's hand over adult's → adult's hand over infant's.

Teach-Learn in general can be viewed as a shared task, e.g.:

first, the teacher leads/guides and the learner follows;

then they take their roles simultaneously;

finally, the learner leads and the teacher corrects any error.

THE IMAGE OF GOD: some of the science

a fundamental mechanism unique to our species

biosocial psychology of jointly intending

EMBODIED *and* RELATIONAL

SUMMARY

Social culture shapes genetic expression into action capacity.

Each of us **inherits**

a **brain & body** and

a **family & wider culture** that

through **individual development**,

endow us with the **capacity**

to work with others in **complementary** ways

towards the **same goal**, be it

material, social, intellectual, ethical, religious or any other.

Jesus the Christ showed
this 'substitutionary' love*
when he atoned for us.

Only he could meet our need
for reconciliation with God.

... which thought brings us to human **sin**:-

*'The penalty for which Christ was our substitute: spiritual death or human suffering as well?', David Booth, Additional Papers, C-A-N- Publications, www.c-a-n.org.uk

IMAGE OF GOD and ORIGINAL SIN

To act lovingly is a choice -
an action done for reasons that are
informed about the recipient.

In other words, love is only possible by beings
who are independent (free) agents -
i.e., whose actions are determined
by their own reasons.

Loving mortals are created (even) to be those who
assert their independence of those they love:
“For this reason a man will leave
his father and mother and be united to his wife.”

Genesis 2:24

IMAGE OF GOD and ORIGINAL SIN

To **see** how to love and how not to love
is to know of the difference between
good and evil.

Not to carry out the loving act is to know evil
and hence to **become** that difference.

Sin turns the image of God against itself.

Deepest love is to be tempted and not to fall.

The mechanism of unselfishness (altruism)
is also the mechanism for selfishness:
- seeing a reason to help and *not* helping;
- seeing an option to harm and harming.

IMAGE OF GOD and ORIGINAL SIN

Good News: it's part of God's plan

God always knew that women and men would assert their independence of him.

From eternity, the Father, Son and Spirit made provision to turn us self-isolates back to loving companions John 1:1-4,12-14

The enemy of God as a poisonous snake "will strike the heel" of a human offspring, but God as that human being "will crush the head" of the serpent. Genesis 3:15b
Jesus died and was raised to destroy evil.

ORIGINAL SIN: in our genes or in our society?

The Bible

'Proof text' for the doctrine = Psalm 51: 5:-

*Surely I was brought forth in sin,
in sin my mother conceived me.*

Is the Psalmist implying that Original Sin is inherited biologically? - i.e. it's 'in the genes'.

More precisely, is sin in the germliness(!) and (normally) expressed in brain structure and the rest of the body without modulation by environmental conditions?

Not necessarily! A human cultural universal in 4 parallels between Psalm 51: 4-6 and Genesis 3, the Fall and the Curses (the Psalmist here focusing on maternal environment).

ORIGINAL SIN: the Bible (1)

Psalm 51: 5a. *Surely I was brought forth in sin.*

Genesis 3:16a. *To the woman the Lord God said,
“I will greatly increase your pains in childbearing.”*

Turning away from the Creator is to cease from being absorbed in the glorious task of bringing into the world another being in God's image.

Mental involvement in physically extreme activity, like boxing or battle, can stop serious injury from being painful (cp. 'hypnosuggestive analgesia').

What the Creator intended to be a 'labour of love' is made into a labour of agony by lack of love.

Psalmist's birth: gruelling to his mother, from sin.

ORIGINAL SIN: the Bible (2)

Psalm 51: 5b. *In sin my mother conceived me.*

Genesis 3:16b. *The Lord God said, "Your desire will be for your husband and he will rule over you."*

The woman exploited her unity with her husband
by embroiling him in her satisfying of her lust
for the forbidden fruit.

So he will exploit their marital unity by deciding
when he will get his sexual satisfaction from her.

Indeed, what she will desire from the partnership
is satisfying her husband sexually.

The Curses are all self-inflicted intensification of bodily suffering
and this is the second one that the woman brought on herself.

ORIGINAL SIN: the Bible (3)

Psalm 51: 6a. *You desire **truth** in the inner parts.*

(Psalm 51:4b. ... so you [God] are proved right when you speak)

Genesis 3:3-4. *The woman said, "God did say, 'You must not eat fruit from the tree ... or you **will die**.'" The serpent said to the woman, "You **will not** surely die."*

Genesis 3:13b. *The woman said to the Lord God, "The serpent deceived me."*

Sin is lying to yourself
about what you know deep down
is truly what God is saying to you.

ORIGINAL SIN: the Bible (4)

Ps 51: 6b. *You teach me **wisdom** in the inmost place.*

Gen 3: 5-6. *The serpent said, “You will be like God, knowing good and evil.” The woman saw that the fruit was desirable for gaining **wisdom**.*

The human likeness (‘image’) of God is
knowledge of good & knowing good by doing it,
plus the knowledge of evil
& the wisdom not to know evil by doing it.

‘Wisdom’ is knowledge deeply rooted enough
to ensure actions appropriate to that knowledge.

[As scientists, we must act on what God teaches us
about the social, material and mental creation.]

ORIGINAL SIN: the Bible and science

Sin is not (entirely) a behavioural phenotype,
programmed by the genes.

Sin is (at least in part) a cognitive stereotype,
inculcated by the culture.

Indeed, the first sin was a fully social act:

... the woman ... took ... and ate ...

She also gave some to her husband

who was with her and he ate it. Gen. 3: 6

- as recognised in Paul's apparent self-contradiction:

In Adam, all die. 1 Corinthians 15: 22

It was the woman who became a sinner. 1 Tim 2:14

Shared intention

Joint responsibility

Sin turns the image of God against itself.

Deepest love is to be tempted and not to fall.

ORIGINAL SIN: in our genes or in our society?

a new sort of science in its infancy

mechanisms of neuro-cultural developmental psychology

G x E: selection among cerebral connections

where sensory receptors (e.g. colours, odours)

can't meet the requirements, e.g. visible verticals.

Language-specific developmental disorders

(oral as well as written) - some surprises:

Auditory deficits ('physical') are largely

environmental in origin.

One 'mental' deficit is largely genetic

- poor at holding sounds in attention

e.g. hearing the sounds of words you need to remember.

Dorothy Bishop (2006) 'Psyc informs genetics & vice versa' *Q.J.Exp.Psychology* 59, 1153-69.

Genetic disorders of psychobiosocial development

Parental gene 'imprinting'

gives contrasting behavioural phenotypes.

Prader-Willi syndrome: "from age of 2, unable to stop eating"; rapidly becomes obese; ??'nutritional autism'.

- paternal shutdown of chromosome of UBE3A@15q11-q13.

Angelman syndrome ('happy puppet'): laughter/smiling, hyperactive; ataxia, feeding problems in infancy.

- maternal deletion of the same gene, UBE3A@15q11-q13.

Yet these genomic deficits in social performance depend on the current interpersonal environs: C. Oliver (2003) *BJCP*.

ORIGINAL SIN: in our genes or in our society?

Another example of some of the science (speculative possibilities)

e.g., **CRIMINALITY AND RELIGIOSITY**

Anti-social

Pro-social

Sociopathic

Conforming

CULTURAL

child's upbringing in or adult induction into
a criminal fraternity or a church community

BIOLOGICAL

'crime gene(s)' = absence of 'church gene(s)',
or *vice versa*

-- polygenic neuro-genetics --

-- familial & local subculture --

interact throughout the individual's development
to produce that person's own reasons for actions
when there are options to choose amongst.

The IMAGE OF GOOD and ORIGINAL SIN: the sciences

GENES OR ENVIRONMENT? -- *or* BOTH AND NEITHER?

SUMMARY OF MY PROPOSED ANSWER

Neither the capacity to love nor the failure of love is inherited genetically or inherited environmentally.

Each human being inherits both through developmental interactions between neurogenetic expression and sociocultural inculcation.

Thank you for your attention

Email D.A.Booth@Bham.ac.UK for a copy of this PPT file, including the following supplementary slides.

Supplementary slides

The transforming power of the Spirit

How big is your GOD?

Biblical creationism

Evidence for children, not chimps, complementing in a shared task (3 slides)

Supplementary slides follow.

The mechanism of love and the transforming power of the Spirit

We love Him because He first loved us.

God upholds all things, including mortal responses to the love shown in Jesus.

To exclude the science of psychology from empirical study of the work of the Spirit through the natural processes of the fallen and redeemed life is another form of 'the god of the gaps.'

How big is your God?

reflecting Biblical Creationism* in our everyday language

Was what happened to you --

- LUCKY? Your god is Lady Luck.
- FORTUNATE? Your gods threw the dice.
- PROVIDENTIAL? Thank the Lord of all.

* See next slide. Cp., 'Biblical creationism: faithfully reading both of God's books,' by David Booth, under Additional Contributions on www.c-a-n.org.uk

(truly) biblical creationism
as distinct from Young-Earth Creationism
or god-of-the-gaps Intelligent Design

Take the Bible literarily as the authors wrote
-- each passage in its own literary terms,
interpreted in the light of the whole Bible --
rather than imposing on Genesis the unbiblical notion
that it is the script of a documentary on the history of
the universe. “All Scripture ... is useful for teaching ...
and training in righteousness ...” (2 Timothy 3:15-16),
rather than for replacing the evidence of God’s work.

More detailed versions of slides in the talk on Tomasello's views and evidence (2007)

**THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species**

Jointly Intending

Capacity to take complementing roles in a shared task

Michael Tomasello and team (Leipzig M-P-I) have put forward the experimentally tested theory, fitting existing field observations, that the unique mental mechanism of *Homo sapiens [sapiens]* among contemporary species on Earth is shared intention.

Tomasello *et al.* (2005) *Behavioral & Brain Sciences* 28, 675-735.

That is, we inherit brains & bodies and family & wider cultures which endow each of us with the capacity to work with others in complementary ways towards the same goal, be it material, social, intellectual, ethical, religious or any other.

EXAMPLES OF (DEVELOPMENT OF) SHARED INTENTION

- how the culture shapes the genetic expression into the capacity:-

THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species

biosocial psychology of jointly intending
EMBODIED *and* RELATIONAL

Naturalistic examples of youngster's participation in a shared task:

Shared actions: Pat-a-Cake - not (yet) seen in apes

Share experiences: gaze at each other while interacting;
not mimicry, e.g. one smiles, other vocalises happily.

Teaching-learning generally can be viewed as a shared task:

first the teacher leads/guides and learner follows;

then they take their roles simultaneously;

finally the learner leads and teacher corrects any error.

e.g., from being fed to feeding oneself with cup or spoon:

infant's hand over adult's -> adult's hand over infant's.

Mental tasks are most easily studied under controlled conditions as
structured games (in children) or physical puzzles (in adults)

- solo or duo (minimally social),

e.g., between an infant and an adult for shared tasks.

THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species

biosocial psychology of jointly intending

- (1) *Shared goal*: build a tower of bricks as high as possible -
Adult holds base steady while infant puts a brick on top.
When adult adds brick, infant takes role of holding base.
- (2) *Shared task*: using a basket to hold things in -
Adult holds out a basket and infant puts a toy in it.
Adult picks up a toy and infant holds up a basket under it.

Not just awareness of the other's intention, object of gaze etc.

Not mimicking an act or emulating its effect (solo tower/basket)

Not merely acting in concert, i.e. doing own thing (e.g. both adding bricks, putting toys in basket, pulling an object along)

Great apes do all of the above but only check, not share.

Human infants form joint intentions and speech at 12-14mths

- (3) Conversation is turn-taking in elaborating on the joint topic.

THE IMAGE OF GOD: some of the science
a fundamental mechanism unique to our species

biosocial psychology of jointly intending

Understand Tomasello's theory better by refutable contrast with cooperation and empathy in non-human species.

Apes understand other's intentions, e.g. check what other is doing, but do they share interests (want to do anything for a goal)?

Apes point (and follow eye gaze) but just to the object, not to the use that the object could be put to in attaining a shared goal .

A child, e.g., in the hidden toy game, goes for the toy hidden under the covering when adult points at one of the coverings but an ape sees only the covering itself (Call & Tomasello 2005 review).

Chimpanzees switch roles in hunts (Boesch)

but according to own main chance, not flexible shared strategy.

A child has shared intention if s/he both understands the other's intention and also shares the other's potentially joint goal.

Chimpanzees brought up with children have yet to take a role in role-switching games (but has the chimp had *all* the 'build-up'?).