

Unveiling Relativity



DEDICATED TO:

Father Time

ON THIS PLANET, THERE IS AN ASTOUNDING AMOUNT OF VARIETY OF LIFE AND DIVERSITY OF SOCIETAL CULTURE. HUMANS HAVE DEVELOPED DIFFERING CUSTOMS, DIFFERING VALUES, DIFFERING LANGUAGES. IN A WORLD AS VAST AS THIS ONE, IT IS EASY TO BEOME CAUGHT IN THE EVER GROWING WEB OF DIFFERENCES BETWEEN INDIVIDUALS THAT EXIST IN TODAY'S SOCIETY. HOWEVER, EVERYTHING ON THIS PLANET THAT WE CALL EARTH IS DEPENDENT UPON THE SAME IDEA. THE REALITY IS THAT THE CONSTANT, MEASURABLE PASSAGE OF LINEAR TIME UNIFIES OUR WORLD.

Dimensional Breakdown

WHAT ARE DIMENSIONS, EXACTLY?

SIMPLY SPEAKING, DIMENSIONS DEFINE THE DIFFERENT FACETS OF HOW REALITY IS PERCEIVED. HUMANS ARE IMMEDIATELY AWARE OF THREE DIMENSIONS. SUPERSTRING THEORY SUGGESTS THAT THERE ARE ACTUALLY TEN DIMENSIONS, AND SOME SUBSETS OF STRING THEORY ACTUALLY CLAIM THAT THERE MAY BE EVEN MORE.

FIRST DIMENSION

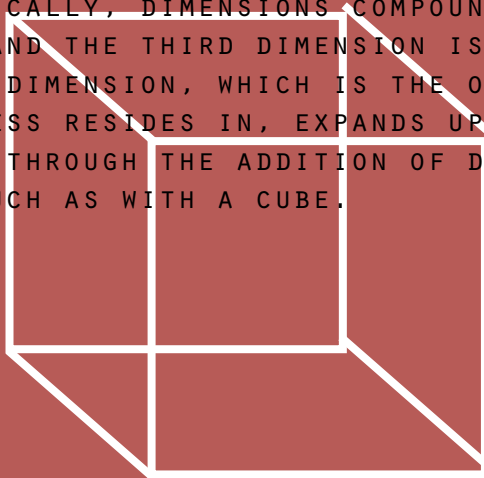
THE FIRST DIMENSION IS NOTED BY ITS ABILITY TO MANIFEST MEASURABLE LENGTH, SUCH AS IN A LINE OR LINE SEGMENT.

SECOND DIMENSION

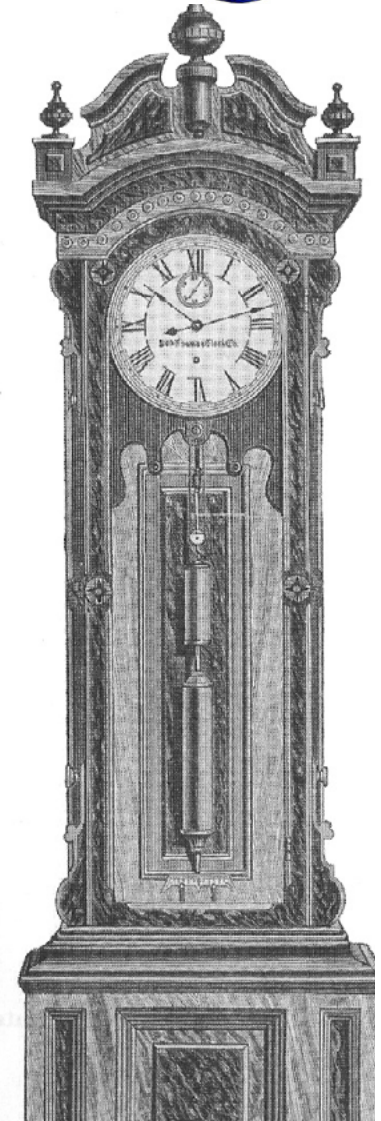
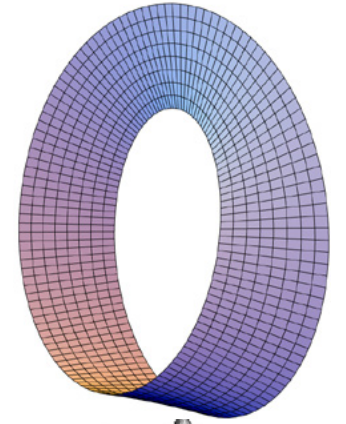
THE SECOND DIMENSION IS BUILT UPON THE FIRST DIMENSION IN THE SENSE THAT IS ABLE TO DEFINE A MEASURABLE HEIGHT THAT RESULTS IN THE FORMATION OF A PLANE, SUCH AS A RECTANGLE.

THIRD DIMENSION

MATHEMATICALLY, DIMENSIONS COMPOUND UPON ONE ANOTHER, AND THE THIRD DIMENSION IS NO DIFFERENT. THE THIRD DIMENSION, WHICH IS THE ONE THAT HUMAN CONSCIOUSNESS RESIDES IN, EXPANDS UPON THE SECOND DIMENSION THROUGH THE ADDITION OF DEPTH TO CREATE VOLUME, SUCH AS WITH A CUBE.

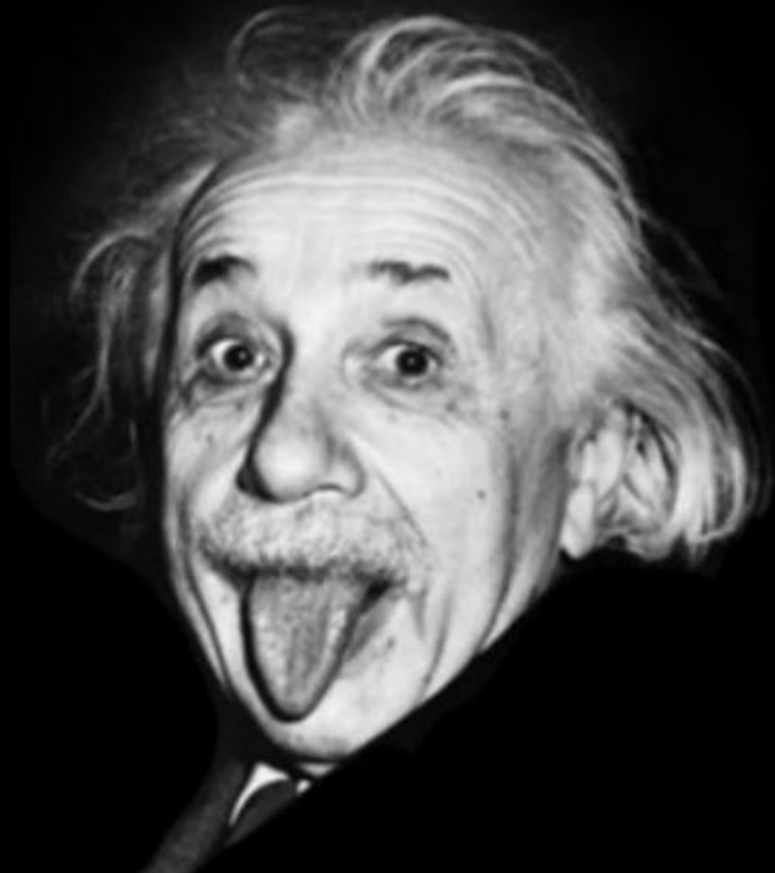


TIME. LIKE A MOBIUS STRIP, TIME IS CONTINUOUS. UNLIKE A MOBIUS STRIP, TIME IS NOT LINEAR. TIME IS EVERYWHERE. TIME IS EVERYTHING. ALL KNOWN PROPERTIES OF MATTER AT ANY GIVEN POINT ARE GOVERNED BY TIME. TIME IS THE BASE OF THE FOURTH DIMENSION. IT BUILDS UPON THE FIRST THREE DIMENSIONS, BECAUSE IF THE POSITION OF AN OBJECT IN TIME IS KNOWN, ITS POSITION IN THE KNOWN AND UNKNOWN UNIVERSE CAN BE PLOTTED. TIME IS, ARGUABLY, THE SINGLE MOST IMPORTANT METHOD OF MEASUREMENT IN THE KNOWN UNIVERSE.



$$E=Mc^2$$

“A QUANTITY OF ENERGY IS EQUIVALENT TO A QUANTITY OF MASS TIMES THE SPEED OF LIGHT SQUARED”



TIME IS RELATIVE TO GRAVITY.

...AT LEAST, ACCORDING TO ALBERT EINSTEIN'S THEORY OF GENERAL RELATIVITY, IT IS. HE THEORIZED THAT, BASED ON THE SUPPORTED ASSUMPTIONS THAT BOTH THE LAWS OF PHYSICS OF THE KNOWN UNIVERSE APPEAR THE SAME TO ALL OBSERVERS AND THAT THE SPEED OF LIGHT IS UNCHANGING, THERE IS NO FIXED FRAME OF REFERENCE IN THE UNIVERSE. SIMPLY PUT, EVERYTHING IS MOVING IN A RELATIVE MANNER TO EVERYTHING ELSE: THE THEORY OF RELATIVITY.

THE CONCEPT OF THE SPACE-TIME CONTINUUM REVOLVES AROUND THE NOTION THAT SINCE THE FOURTH DIMENSION (THE CONCEPT OF TIME) IS BASED ON THE THIRD DIMENSION (REPRESENTED THROUGH VOLUMETRIC SPACE), TIME ITSELF IS INTERWOVEN WITH SPACE AND ALL OF ITS CHARACTERISTICS, RESULTING IN GRAVITY.

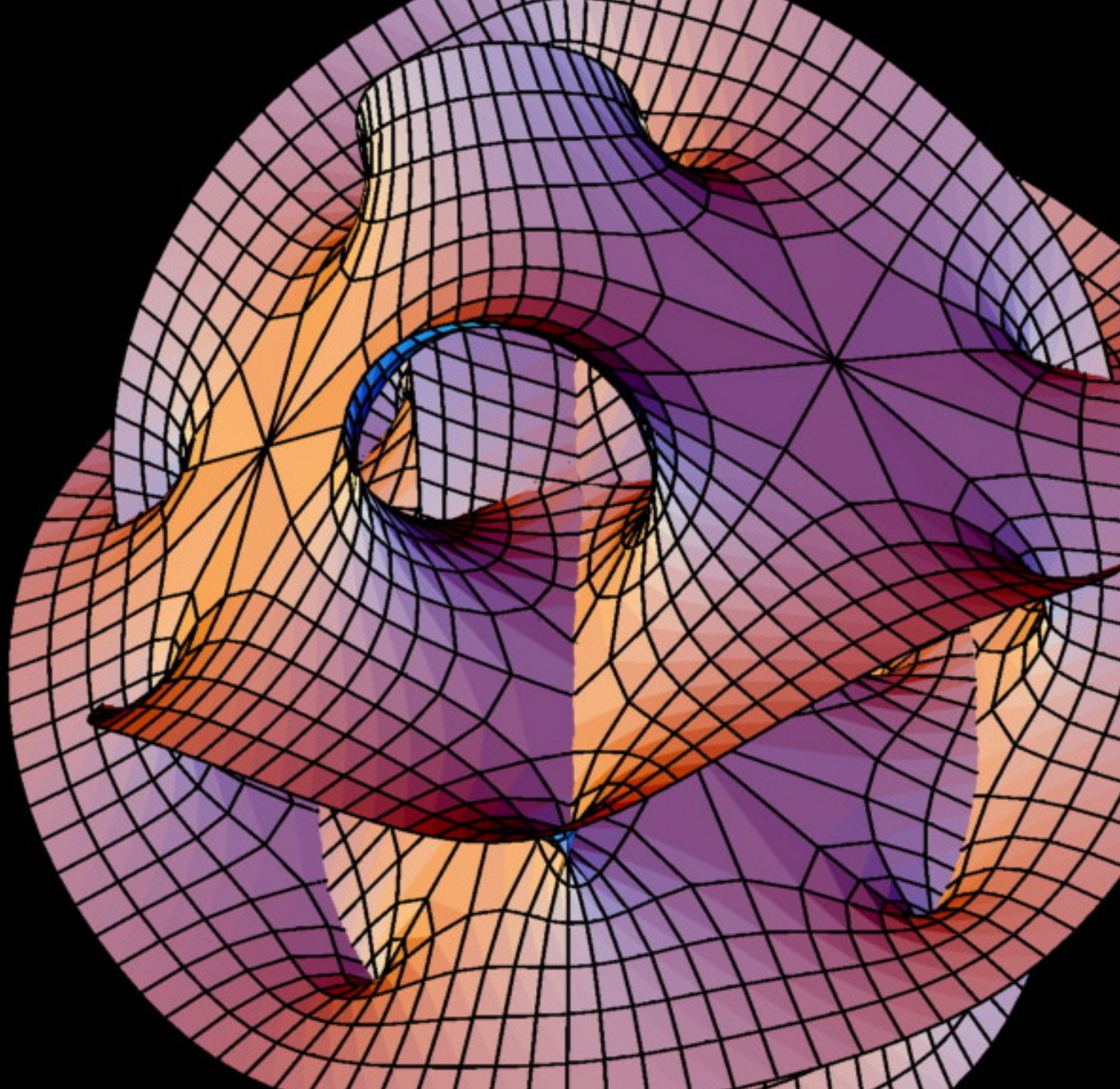
IT CAN BE THEORIZED THAT THE SPACE-TIME CONTINUUM IS DISTORTED BY THE PRESENCE OF MASS. ACCORDING TO THE EQUIVALENCE PRINCIPLE, ACCELERATION PULLING IN ONE DIRECTION IS EQUAL TO GRAVITY PULLING IN ANOTHER. IF GRAVITY IS EQUAL TO ACCELERATION (MOTION), THEN GRAVITY AFFECTS HOW SPACE AND TIME ARE MEASURED. THIS IS CALLED GRAVITATIONAL TIME DILATION.

WHEN OBJECTS WITH MASSES SO LARGE THAT THEY CANNOT BE FULLY COMPREHENDED BY THE HUMAN MIND EXIST, SUCH AS SUPERMASSIVE BLACK HOLES (WHICH ARE SO TREMENDOUSLY HEAVY THAT NOT EVEN LIGHT, THE FASTEST THING KNOWN, CAN ESCAPE THEIR GRAVITATIONAL PULLS) THE SPACE TIME CONTINUUM WARPS IN SUCH A MANNER THAT, MATHEMATICALLY, *TIME STOPS*.

BUT IF
GRAVITY CAN STOP
TIME
COMPLETELY IN
ONE AREA OF THE
SPACE-TIME
CONTINUUM WHILE
LEAVING THE REST
TO CONTINUE ON
UNINTERRUPTED...

...THEN OUR
LINEAR TIME-BASED
REALITY IS
SHATTERED, AND, TO
THE HUMAN BRAIN,
NOTHING CAN
TRULY EXIST,
BECAUSE NOTHING
EXISTS OUTSIDE OF
REALITY.

. . .YET, HERE
YOU ARE,
PROVING THAT
SOMETHING
BEYOND YOUR
HUMAN
UNDERSTANDING
MUST EXIST.
YOUR REALITY
IS JUST
DIFFERENT,
RELATIVE TO
EVERYTHING
AROUND IT,
AND EVERYTHING
AROUND IT
RELATIVE TO
YOUR REALITY.



Dimensional Breakdown

(CONTINUED)

THE FIFTH DIMENSION

THEORETICALLY, THE FIFTH DIMENSION PROVIDES INSIGHT ON HOW TO MEASURE THE SIMILARITY AND DIFFERENCES BETWEEN THE WORLD AS IT IS KNOWN AND A VERSION OF IT WITH MANY SIMILARITIES, ALTHOUGH NOT EXACTLY ALIKE.

MULTIVERSE THEORY (OR META-UNIVERSE THEORY) IS A HYPOTHETICAL SET OF UNIVERSES (FINITE OR POSSIBLY INFINITE) THAT ARE COMPRISED OF EVERYTHING THAT EXISTS. THIS THEORY COMES INTO EXISTENCE ALONG WITH THE FIFTH DIMENSION. IF LIMITING THE SET OF UNIVERSES TO THOSE THAT CAN EXIST IN THE FIFTH DIMENSION, THEN THE SAME SET OF CONSTANTS AND PHYSICAL LAWS MUST BE APPLIED TO EACH POSSIBLE UNIVERSE.

HOWEVER, THIS THEORY IS NOT NECESSARILY LIMITED TO THE FIFTH DIMENSION...

Dimensional Breakdown

(CONTINUED)

THE SIXTH DIMENSION

IS REPRESENTED BY A PLANE OF ALL POSSIBLE UNIVERSES THAT BEGIN WITH THE SAME INITIAL CONDITIONS AS THE ONE CURRENTLY IN (FOR HUMANS, THE THIRD DIMENSION THAT CONSCIOUSNESS RESIDES IN). THESE CONDITIONS COULD INCLUDE INITIAL QUANTITY AND TYPE OF MATTER AND ENERGY.

IT IS THEORIZED THAT IF ONE WERE ABLE TO MASTER BOTH THE FIFTH AND SIXTH DIMENSIONS, THE DOOR TO THE POSSIBILITIES OF TIME TRAVEL WOULD SWING RIGHT OPEN...



THE SEVENTH DIMENSION PROVIDES ACCESS TO THE PRESENT OF ALL POSSIBLE WORLDS THAT BEGIN WITH DIFFERENT INITIAL CONDITIONS (SINCE THE THEORETICAL BEGINNING OF TIME) BUT THE SAME PHYSICAL LAWS.

THE EIGHTH DIMENSION IS REPRESENTED BY A PLANE OF ALL OF THE UNIVERSE HISTORIES FROM THE SEVENTH DIMENSIONS WORLDS.



THE NINTH DIMENSION IS WHERE ALL POSSIBLE HISTORIES OF EVERY POSSIBLE CREATED UNIVERSE, WITH ANY AND ALL INITIAL CONDITIONS, SUCH AS ANY POSSIBLE SET OF PHYSICAL LAWS AND ANY TYPE OR QUANTITY OF MATTER OR ENERGY.

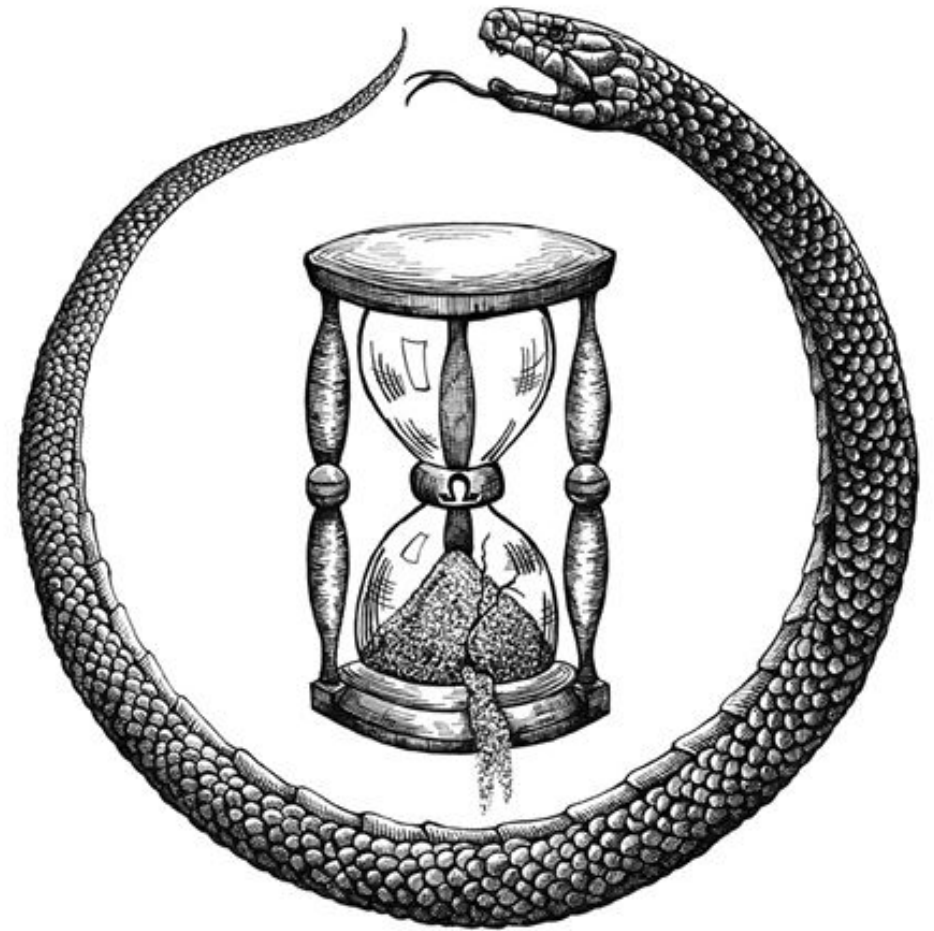
THE TENTH AND (POSSIBLY) FINAL DIMENSION IS A POINT IN WHICH EVERY POSSIBLE OR IMAGINABLE THING THAT COULD POSSIBLY EXIST IS EXISTING.

ALL AT ONCE, AND NOT AT ALL.

FOREVER AND NEVER.

THE HUMAN BRAIN IS INCAPABLE OF CONCEPTUALLY THEORIZING ANY DIMENSION BEYOND THE TENTH POSSIBLE DIMENSION, AND IS THEREFORE INCAPABLE OF MATHEMATICALLY REPRESENTING ANOTHER DIMENSION.

EVEN THOUGH THE HUMAN BRAIN CANNOT CONCEPTUALIZE ANOTHER DIMENSION BEYOND THE TENTH, THE QUESTION STILL STANDS...



... do the dimensions ever end?

Only

Time

Can

Tell

...EXCEPT FOR THAT IT DOESN'T EX-
IST, REMEMBER?

