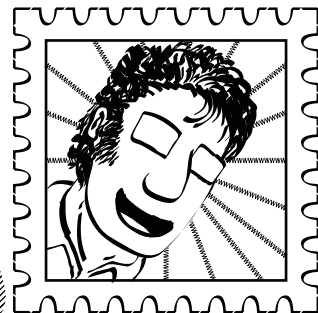
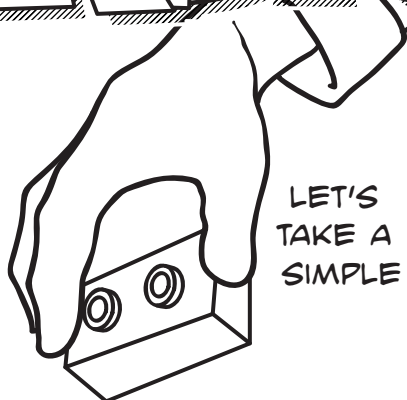


DOOBIES

© 2012 BY RICCARDO MANZOTTI



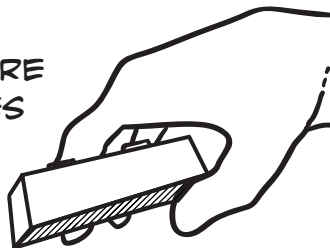
EXIST OR TAKE RATE?



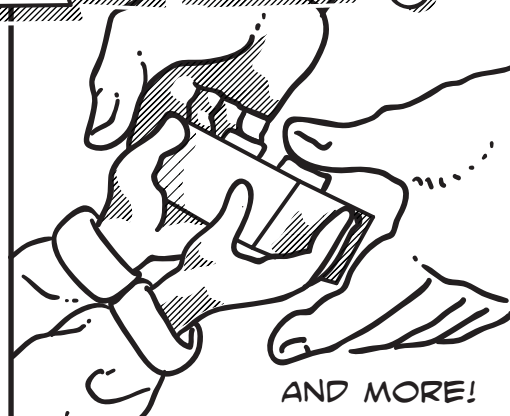
LET'S
TAKE A
SIMPLE

WE HANDLE PORTIONS
OF PHYSICAL STUFF

LET'S
TAKE MORE
SIMPLES



SOMETIMES THESE PARTS
GET TOGETHER



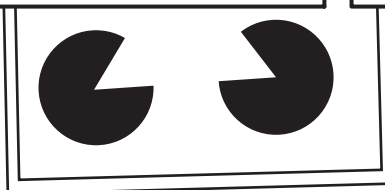
AND MORE!

EITHER BY NATURAL OR BY
ARTIFICIAL MEANS INTO ...



12
FEB
2012

WE DID IT!
WE BUILT THE
CASTLE AS I PROMISED
YOU ... WELL ...
A FEW WEEKS AGO?



MMMMMH
ARE YOU SURE, DAD?
AFTER ALL WE STILL
HAVE JUST A BUNCH OF
PLASTIC BRICKS.
WE JUST CHANGED
THEIR POSITIONS IN SPACE.
HAVE WE REALLY CREATED
SOMETHING NEW?

YOU ASKED A TRICKY QUESTION!
LET ME SEE ...
WE HAVE TWO CASES

2 HUMANS
+
325 BRICKS
=
327 ENTITIES

WHAT IS REALLY THERE, THEN?

CASTLE?
2 HUMANS
+
325 BRICKS
+
1 CASTLE
=
328 ENTITIES?

SINCE THE STONE AGE, HUMANS SHAPED STUFF INTO OBJECT- AND THUS THEY TAKE THEM AS REAL

Sbj + Verb + Obj

AND MY CASTLE?

EVEN OUR LANGUAGE IS SHAPED SO THAT WE CONCEIVE REALITY AS MADE OF OBJECTS WHICH, OBVIOUSLY, ARE MADE UP OF PARTS

SINCE THE EGYPTIANS IN THE ANCIENT WORLD ...

PLATO, ANY IDEA WHERE ENTIA ARE? LOOK UP!

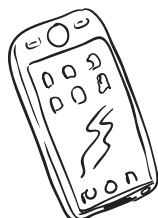
PLATO, ARISTOTLE, AND MANY OTHERS CONCEIVED REALITY AS OBJECTS EVENTUALLY GLORIFIED AS FORMS

DUCCIO DA BONINSEGNA, LAST SUPPER, 1308

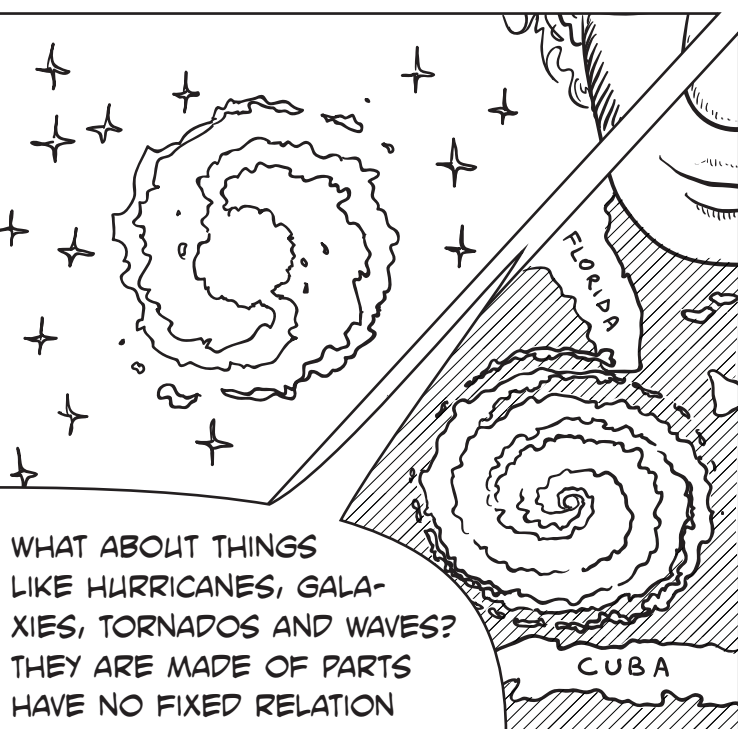
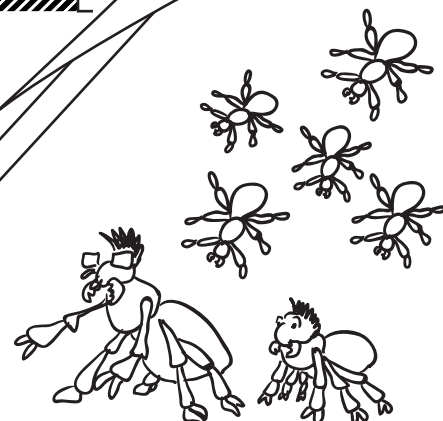
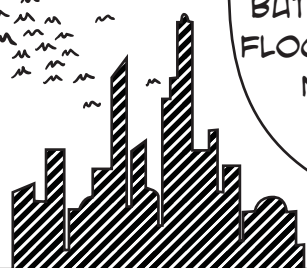
IT WAS THE SAME IN ALL WESTERN CULTURE. FOR INSTANCE, IN MOST MEDIEVAL FRESCOS NO OBJECT IS OCCLUDED. EACH OBJECT APPEARS AS A WHOLE. AS A RESULT, LOOK AT HOW INNATURAL IS THE POSITION OF OBJECTS ON THE TABLE.

SO, AN OBJECT IS SOME KIND OF WHOLE. BUT WHAT IS A WHOLE? WHAT GIVES IT UNITY? AND IS A WHOLE SOMETHING REAL? IS THERE ANYTHING ABOVE AND BEYOND THE MOST ELEMENTARY COMPONENTS OF REALITY? IS ALL JUST TINY PARTICLES?

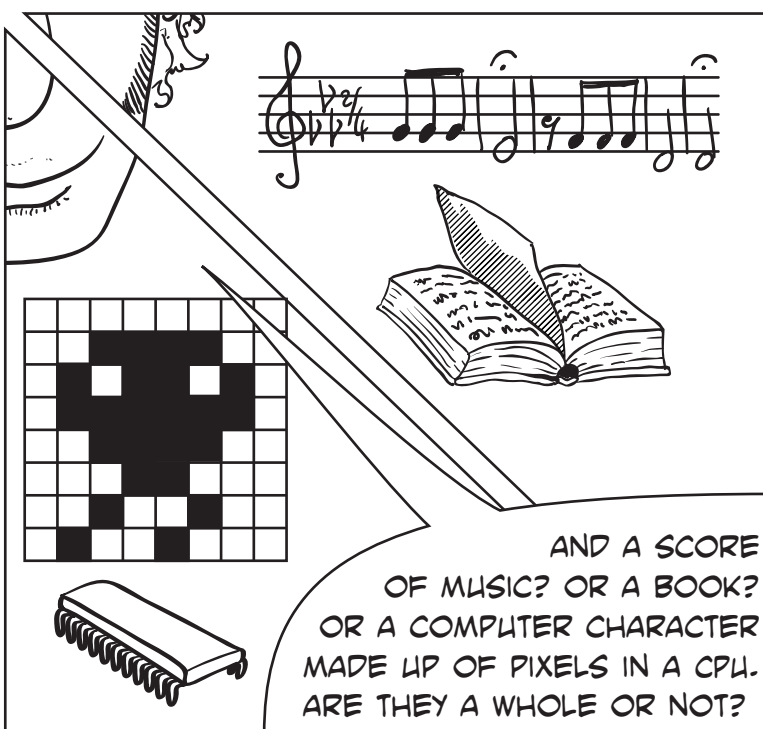
THERE ARE MANY DIFFERENT KINDS OF WHOLE. SOME ARE EASY TO DEFINE LIKE CHAIRS, CUPS, PHONES AND THE LIKE ...



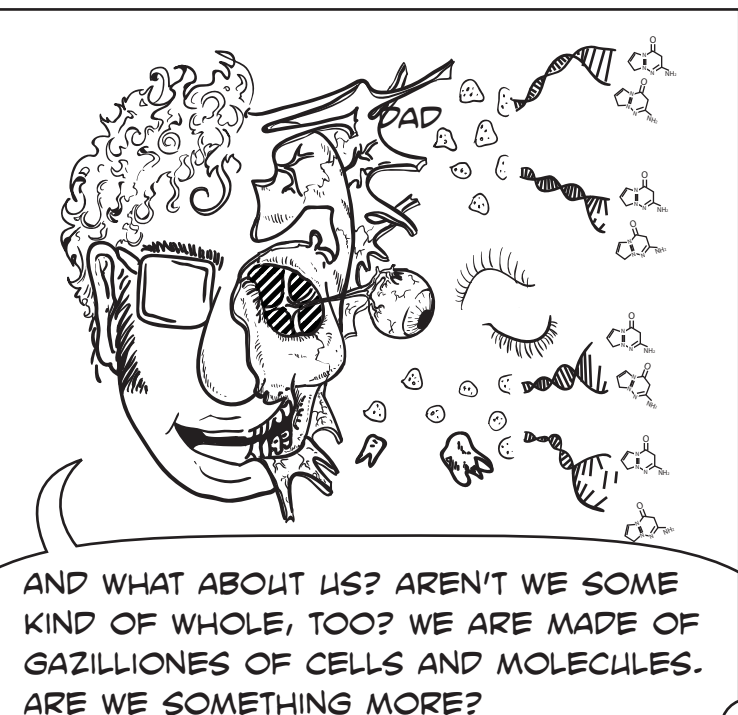
BUT CONSIDER A TOWN, OR A FLOCK OF BIRDS, OR AN ANTS' NEST, OR A HIVE OF BEES. DO THEY COMPOSE A REAL UNITY? WHY NOT?



WHAT ABOUT THINGS LIKE HURRICANES, GALAXIES, TORNADOS AND WAVES? THEY ARE MADE OF PARTS HAVE NO FIXED RELATION

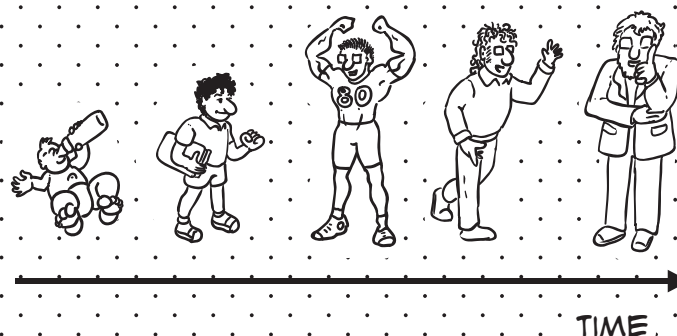


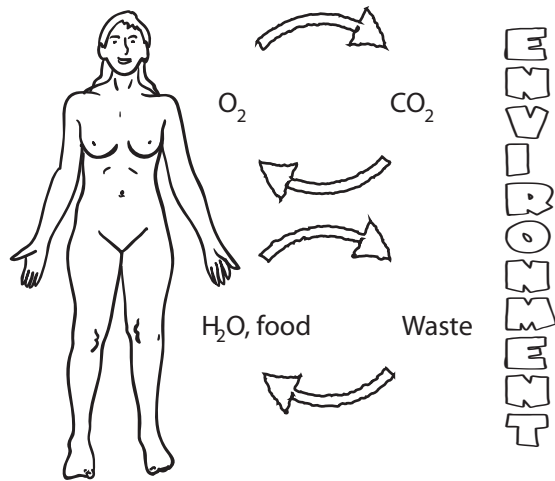
AND A SCORE OF MUSIC? OR A BOOK? OR A COMPUTER CHARACTER MADE UP OF PIXELS IN A CPU. ARE THEY A WHOLE OR NOT?



AND WHAT ABOUT US? AREN'T WE SOME KIND OF WHOLE, TOO? WE ARE MADE OF GAZILLIONES OF CELLS AND MOLECULES. ARE WE SOMETHING MORE?

IN THE SAME WAY, WE LIVE THROUGH TIME. WE ARE MADE OF TEMPORAL PARTS TOO. WHAT IS THAT GIVES UNITY TO DIFFERENT INSTANTIATIONS OF A PERSON THROUGH HIS OR HER LIFE?





THE HUMAN BODY SUBSTITUTES ALMOST ALL ITS MOLECULES IN A DECADE OR SO --- YET THE WHOLE WHICH IS THE PERSON SURVIVES

WELL, IT SURVIVES UP TO A POINT. BEYOND A CERTAIN LEVEL OF ENTROPY, THE ORGANIZATION COLLAPSES AND THE PERSON SADLY ... IS NO MORE

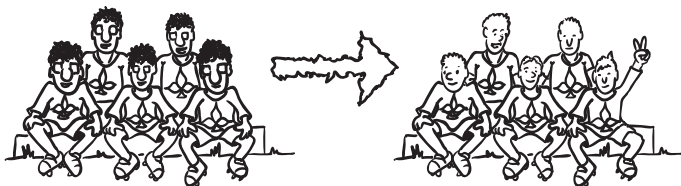


YORICK, MY DEAR FRIEND, WHERE ARE YOU NOW?

FOR INSTANCE, YOU CAN CHANGE ALL PLAYERS OF A TEAM, AND THE TEAM STILL SURVIVES, BUT IF A PARTNER CHANGES, A NEW MARRIAGE OCCURS

LIONS 2011

LIONS 2012



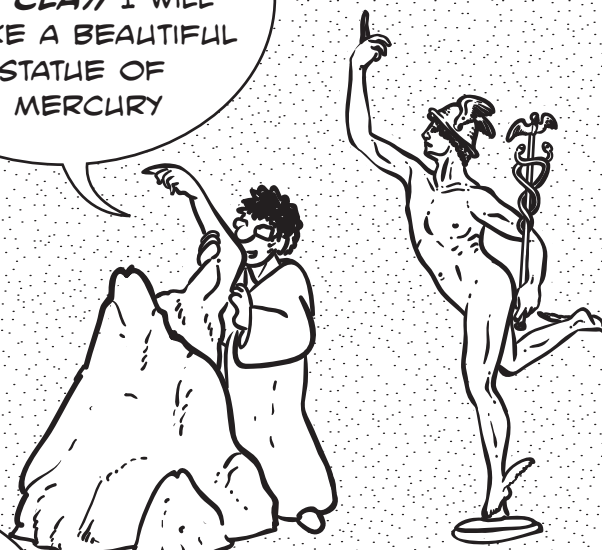
Smith & Smith

Scott & Smith



... AND, OF COURSE, THERE ARE A FEW FAMOUS CASES THAT EVERY SCHOOL BOY KNOWS ...

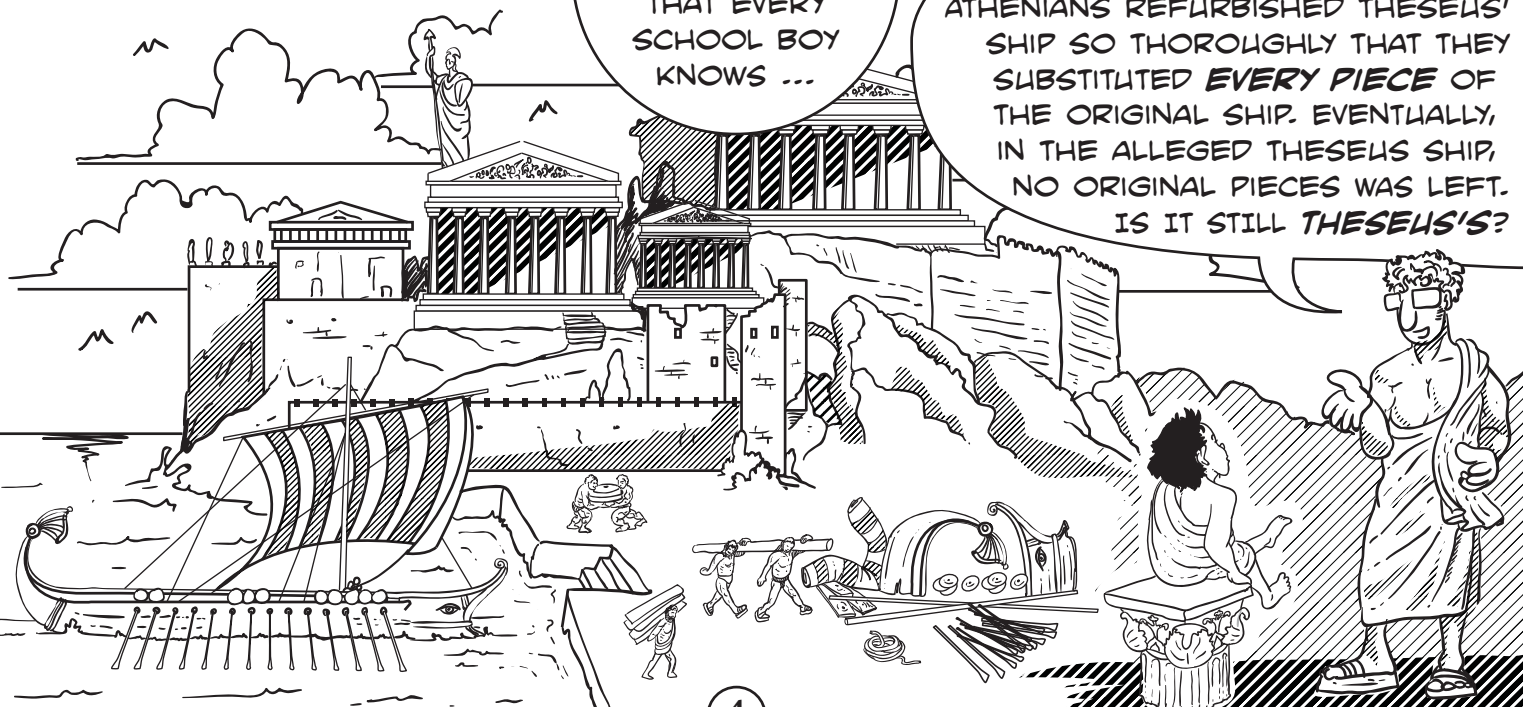
WITH THIS LUMP OF CLAY, I WILL MAKE A BEAUTIFUL STATUE OF MERCURY



BEFORE

AFTER

ATHENIANS REFURBISHED THESEUS' SHIP SO THOROUGHLY THAT THEY SUBSTITUTED **EVERY PIECE** OF THE ORIGINAL SHIP. EVENTUALLY, IN THE ALLEGED THESEUS SHIP, NO ORIGINAL PIECES WAS LEFT. IS IT STILL **THESEUS'S**?



THE ONTOLOGY OF WHOLES IS SO TROUBLESOME THAT MANY SCHOLARS CLAIMED THEY ARE NOT REAL, OBJECTS ARE TAKEN TO BE ARBITRARY SELECTIONS

WE MAKE CONSTELLATIONS BY PUTTING TOGETHER CERTAIN STARS RATHER THAN OTHERS

A 'WHOLE', LIKE A CONSTELLATION, IS NOTHING BUT OUR VISION

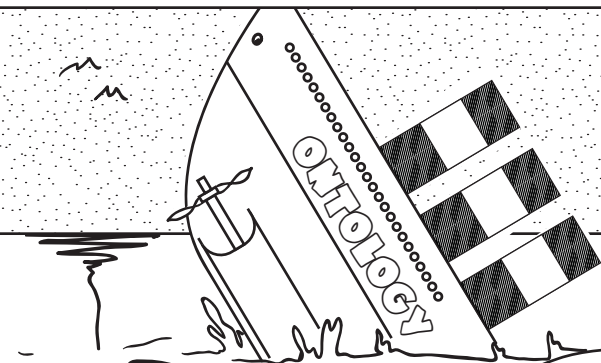


ARE CONSTELLATIONS REAL, THEN?

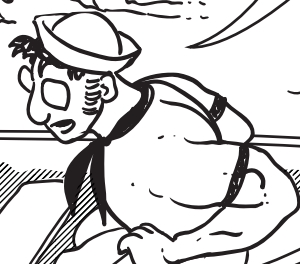
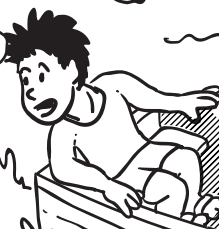


MOUNT NOMINALISMORE!

YET, ALTHOUGH ONTOLOGY SINKS ...



CAN WE GO FASTER?



I FEAR THAT THIS EPISTEMIC LIFEBOAT IS NOT VERY SURE! THE MENTAL-SHARKS ARE HUNTING US!

EPISTEMOLOGY LIFEBOAT

AND THE MIND DOES NOT SCORE BETTER THAN THE WORLD

IF THERE ARE NO REAL WHOLES IN THE WORLD, HOW CAN THERE BE WHOLES IN OUR MINDS? AFTER ALL, A SUBJECT IS A PIECE OF THE WORLD

FILL IN THE AREAS WITH A DOT AND FIND THE NATURAL WHOLES ...

MEREOTOLOGY STORE

ALL FOR YOUR WHOLES!!!

NIHILISM

UNRESTRICTED COMPOSITION

RESTRICTED COMPOSITION

NOMINALISM

INWAGEN'S VIEW

MERRICK'S VIEW

OK, LET'S TRY SOME OFF-THE-SHELF SOLUTIONS. LET'S BUY SOME MEREOTOLOGICAL THEORY!

LET'S START WITH THE MOST RADICAL VIEW: MAYBE THERE ARE NO WHOLES!

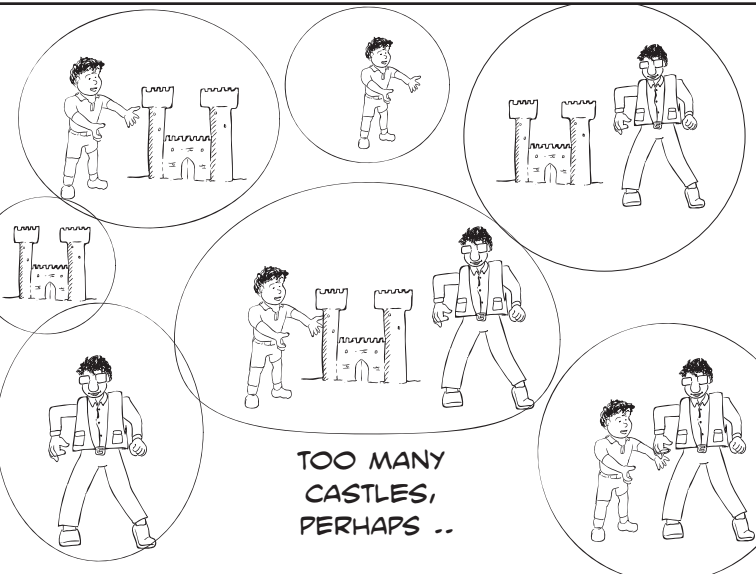
HE!!!! WE DISAPPEARED! AND MY CASTLE DID TOO!!!

NIHILISM
NO WHOLES

ONLY SOME WHOLES ARE TRUE. YET NO WATERPROOF CRITERION IS AVAILABLE!

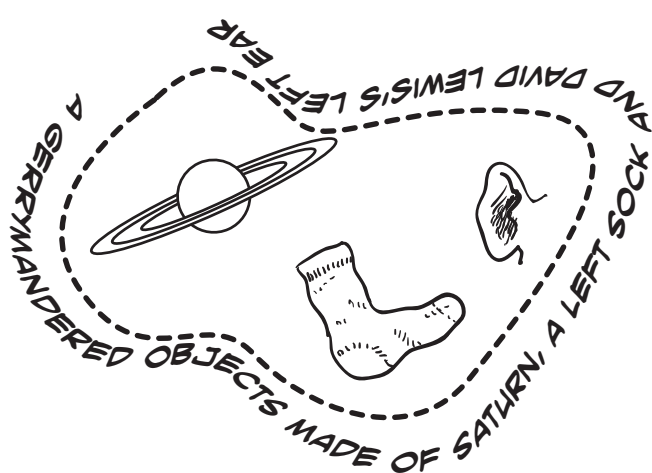
WE ARE BACK!! AND MY CASTLE TOO!

RESTRICTED COMPOSITION
SOME WHOLES ARE MORE WHOLES THAN OTHERS



TOO MANY CASTLES, PERHAPS ..

UNRESTRICTED COMPOSITION
EVERY CONCEIVABLE SET OF OBJECTS IS A WHOLE



UNRESTRICTED COMPOSITION IS FINE BECAUSE THERE IS SPACE BOTH FOR US AND FOR THE CASTLE. UNFORTUNATELY IT GETS TOO CROWDED. INFACIT, IT IS PLAGUED BY GERRY-MANDERED OBJECTS MADE OF THE MOST OUTRAGEOUS COMBINATIONS OF PARTS

THIS TIME ONLY PERSONS OR, AT LEAST, LIVING ORGANISMS ARE ALLOWED!

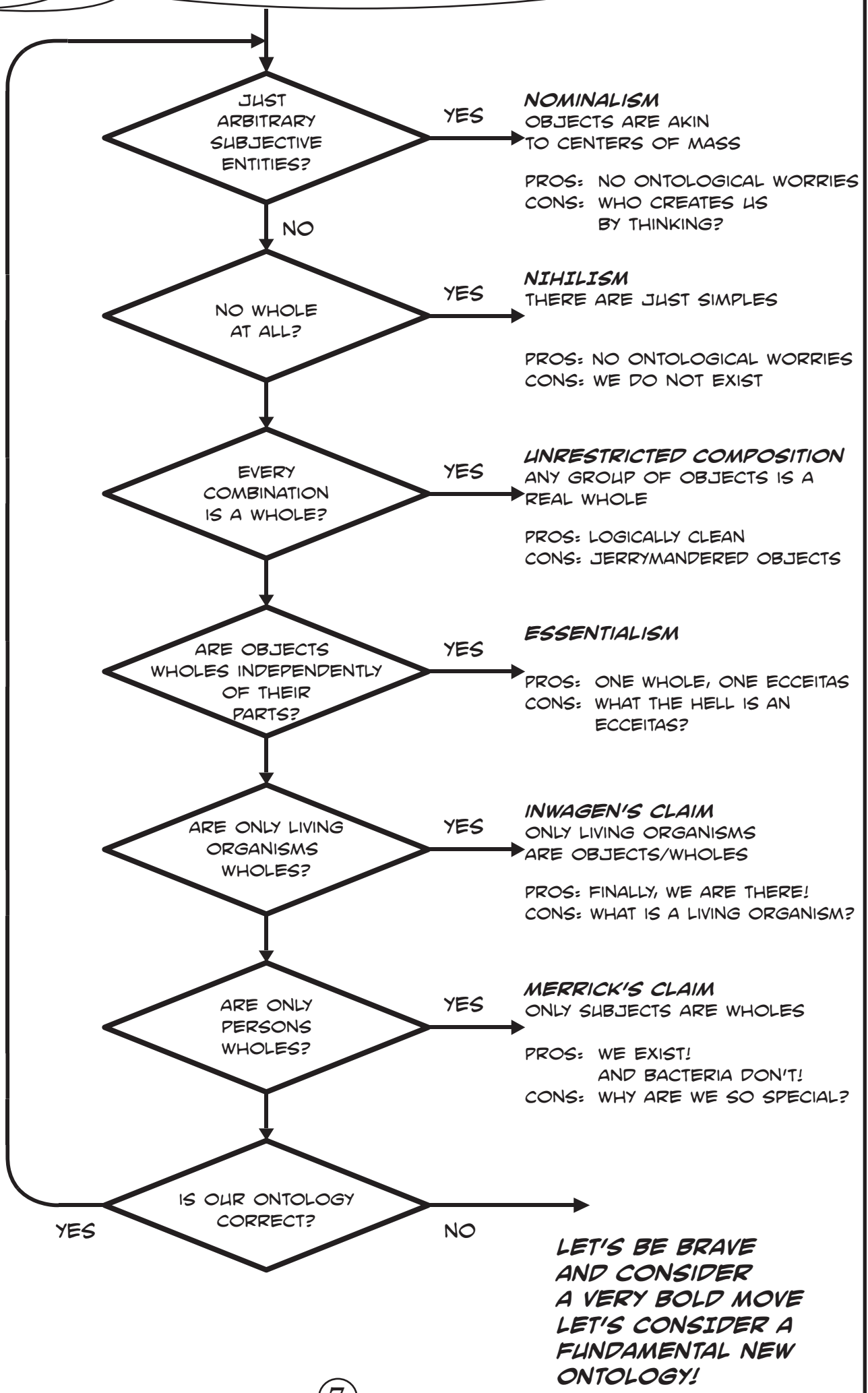
BACK AGAIN!! BUT MY CASTLE ISN'T!

INWAGEN'S AND MERRICK'S:
ONLY PERSONS OR LIVING ORGANISMS ARE TRUE WHOLES



IN SUM, ... WHAT CAN WE SAY ABOUT OBJECTS/WHOLES?
WHAT ARE THEY?

START AGAIN LIKEWISE PHILOSOPHY HAS DONE SINCE PLUTARCH'S TIME



LET'S CHANGE THE ONTOLOGY, THEN!

W	Individuals	Properties	unity
Objects	H	O	L
Form		Existence	
Subject		Time	E

BUT HOW?

LET'S RECAP. OBJECTS ARE SOME KIND OF WHOLES, BUT WHOLES DEPEND ON OUR NOTION OF EXISTENCE WHICH IS BASED ON AN INDIVIDUAL-PROPERTY ORIENTED ONTOLOGY. IS THIS ONTOLOGY A SOUND ONE?

I DON'T LIKE INDIVIDUALS

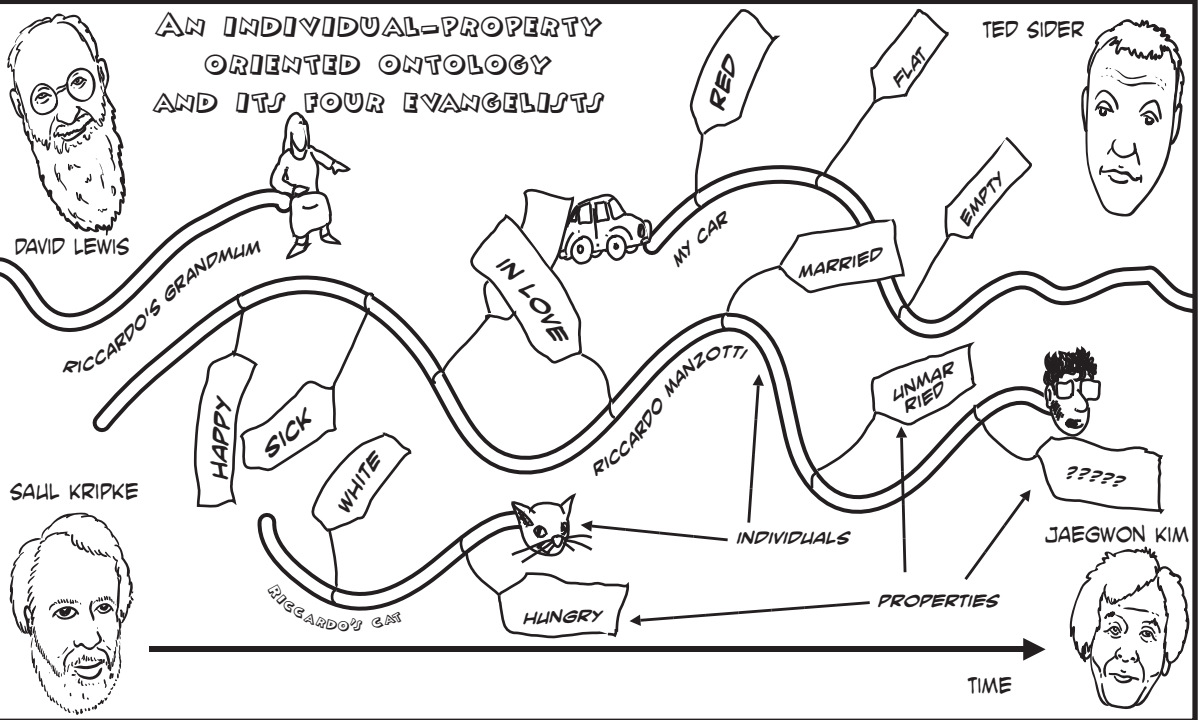
OBJECTS

WHOLES

EXISTENCE

INDIVIDUALS

THE TRADITION IS A RECEIVED ON-TOLOGY BASED ON THE NOTION OF **INDIVIDUALS** AND THEIR **PRO-PERTIES**. ROUGHLY IT ASSUMES THAT THE WORLD IS MADE OF INDIVIDUALS PER-SISTING THROUGH TIME AND INSTAN-TIATING PROPER-TIES ALONG THE WAY. IT IS A VERY APPEALING VIEW, FROM A LOGICAL PERSPECTIVE. YET, IS IT TRUE?



MMMMH ... WHAT IF SUCH A TRADITION WERE WRONG? WHAT IF THERE WERE NO INDIVIDUALS AT ALL?

EXISTENCE

INDIVIDUALS

PROPERTIES

THE INDIVIDUAL/PROPERTY VIEW ENTAILS THAT SOMEHOW A WHOLE, TO BE SUCH, MUST HAVE SOME INTRINSIC STRUCTURE. INDIVIDUALS **AUTONOMOUSLY** INSTANTIATE THEIR PROPERTIES. YET, WHAT IF THE NOTION OF THE INDIVIDUAL WERE JUST AN EMPTY SHELL?

WHOLENESS

A FEW WELL KNOWN FACTS MAY THUS BE RECONSIDERED

SINCE PREHISTORY, ARTISTS HAVE EXPLOITED THE CAPABILITY TO SINGLE OUT FACE-LIKE WHOLE FROM THE PHYSICAL CONTINUUM, THANKS TO THE EXISTENCE OF A SPECIALIZED AREA IN THE BRAIN. YET WOULD FACES EXIST IF SUCH AN AREA WERE WIPED FROM EVERYONE'S BRAIN? DO FACES EXIST INDEPENDENTLY OF BRAIN?



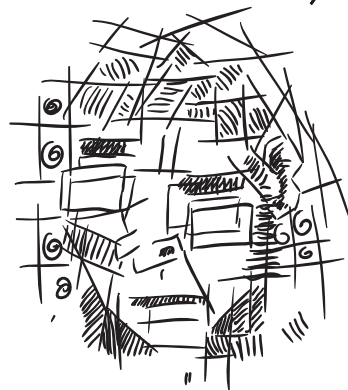
BTW, I AM NO MORE
REAL THAN THE
OTHERS!!!



ARCIMBOLDO, 1527-93

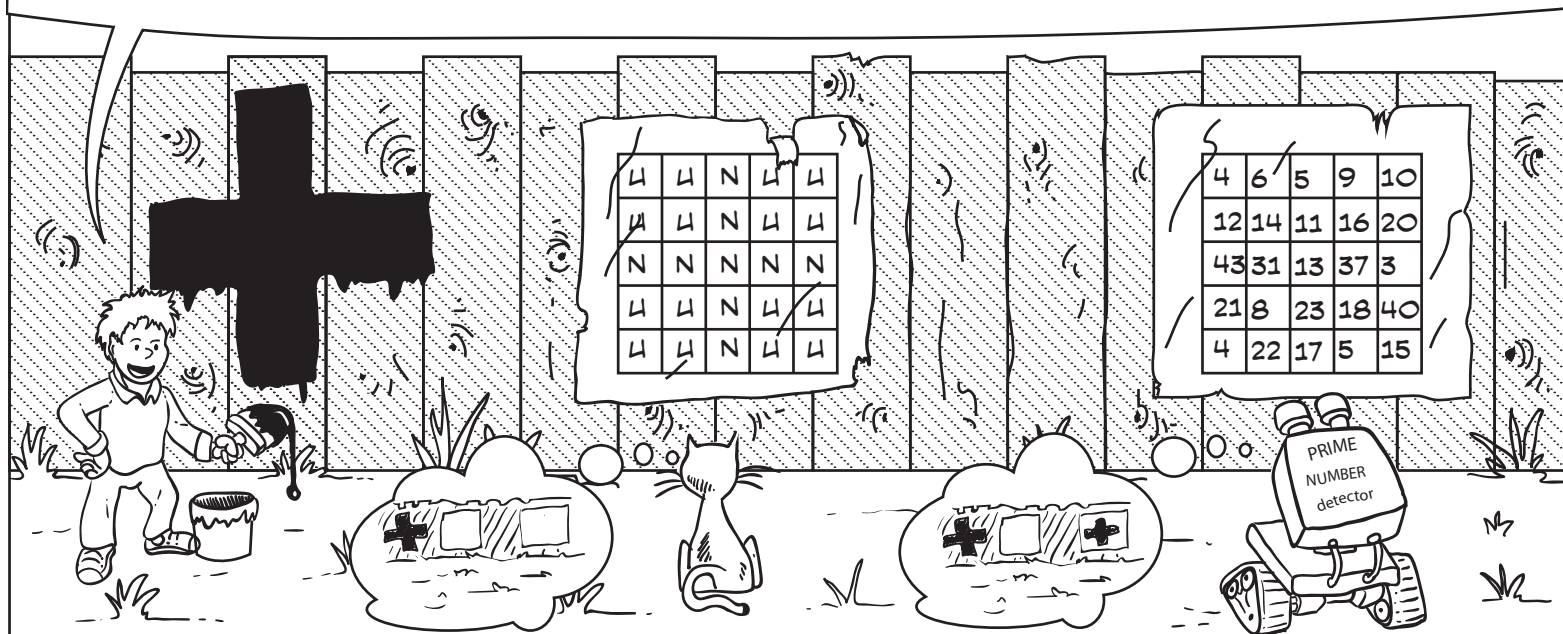


SALVADOR DALI', 1904-89

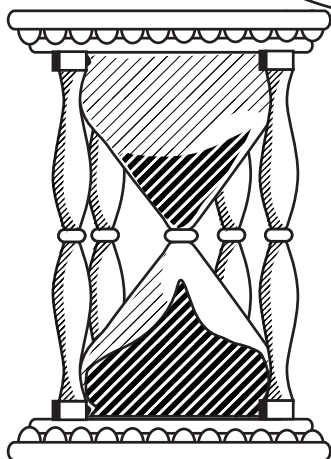


GEORGES BRAQUE, 1882-1963

NOW, CONSIDER THAT MANY OBJECTS DO NOT EXIST FOR DIFFERENT SUBJECTS. LOOK AT THE THREE CROSSES ON THE WALL. THEY EXIST ONLY FOR SOME OF THE SUBJECTS



A HINT MAY BE NOT TO CONSIDER WHOLE AS INDIVIDUALS, BUT AS OCCURRENCES IN TIME. THUS THE TWO CRUCIAL NOTIONS TO (RE)-CONSIDER ARE *TIME* AND *EXISTENCE*.

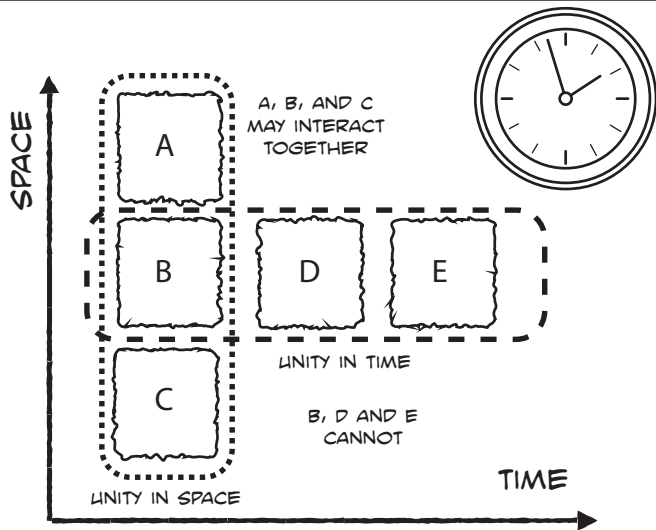


TIME



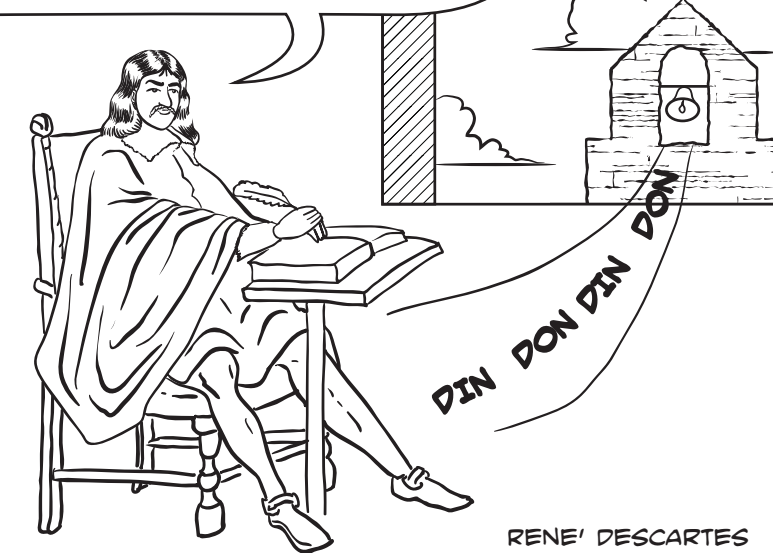
E

EXISTENCE



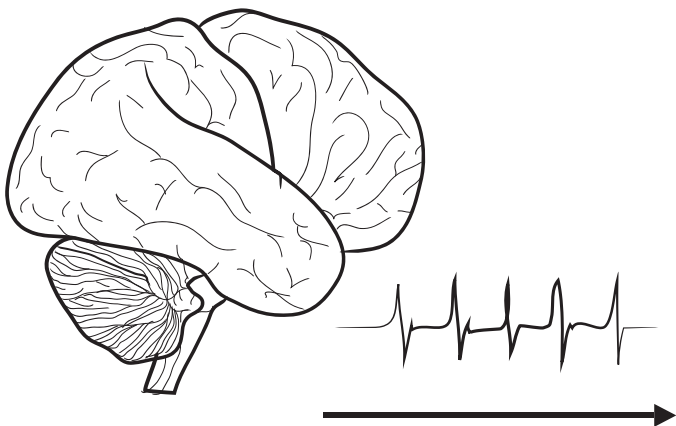
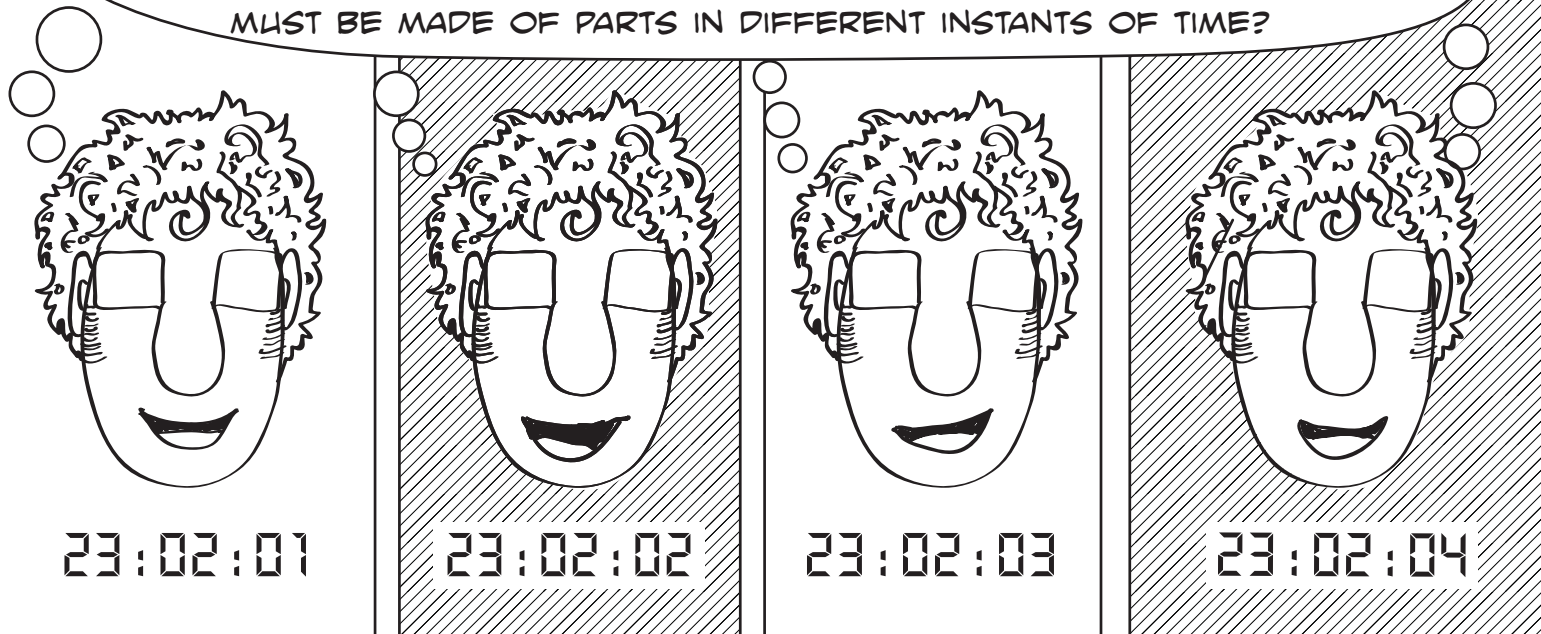
IS IT POSSIBLE TO HAVE UNITIES IN TIME? BUT HOW? SPATIAL PARTS MAY INTERACT, BUT DO TEMPORAL PARTS INTERACT TOGETHER?

WHEN THE CLOCK STRIKES FOUR, IF YOU COUNT THE STROKES AS 'ONE, ONE, ONE' WOULD IT BE CRAZY TO SAY "THAT CLOCK MUST BE GOING MAD; IT HAS STRUCK ONE O'CLOCK FOUR TIMES!"



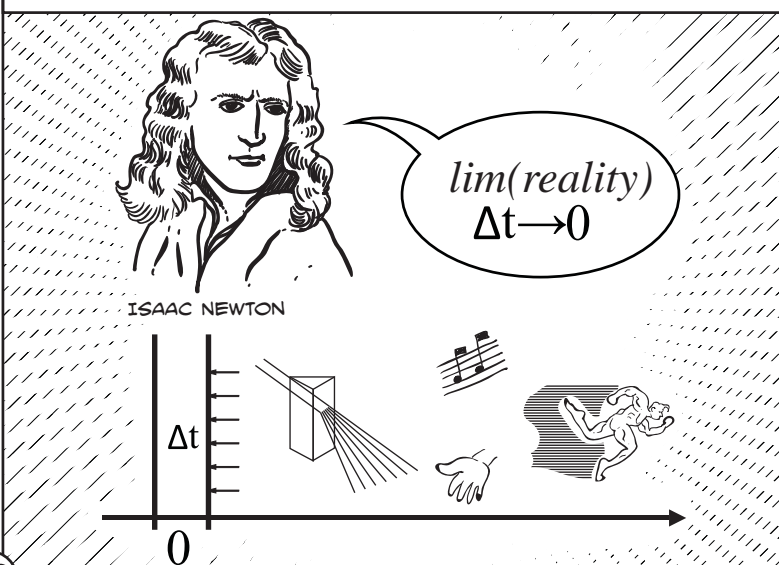
RENE' DESCARTES

MY THOUGHT REQUIRES TIME TO COMPLETE AND YET I FEEL AS IF IT WAS A UNITY IN ITS OWN RIGHT. HOW IS THAT POSSIBLE SINCE MY THOUGHT MUST BE MADE OF PARTS IN DIFFERENT INSTANTS OF TIME?



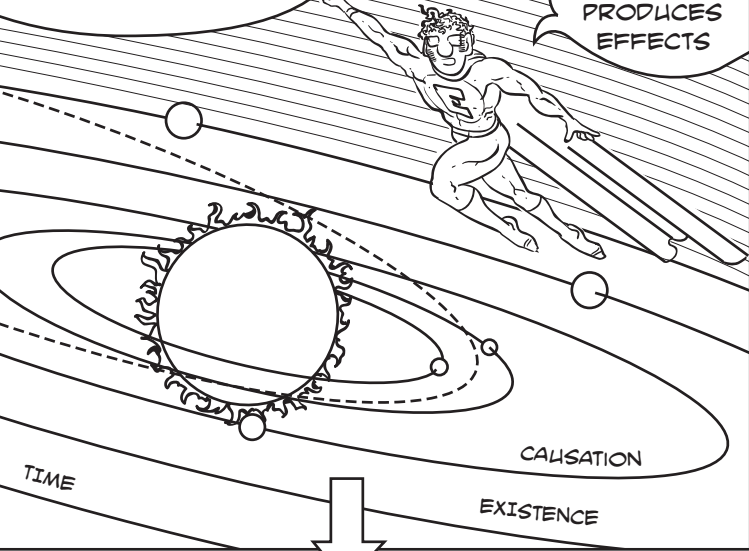
THOUGHTS ARE NOT THE ONLY THINGS SPREAD IN TIME, BUT THEIR PHYSICAL AND NEURAL UNDERPINNINGS ARE SPREAD TOO. HOW COULD THEY BECOME A UNITY? HOW MAY A THOUGHT BE A SERIES OF SPIKES?

ALTHOUGH WE ASSUME NEWTON'S VIEW THAT REALITY MAY BE DESCRIBED BY A TEMPORAL LIMIT, THIS IS NOT THE CASE, MOST OF OUR EVERYDAY WORLD IS MADE OF PARTS SPREAD ON A DISCRETE TEMPORAL INTERVAL. NO TIME, NO FAMILIAR WORLD

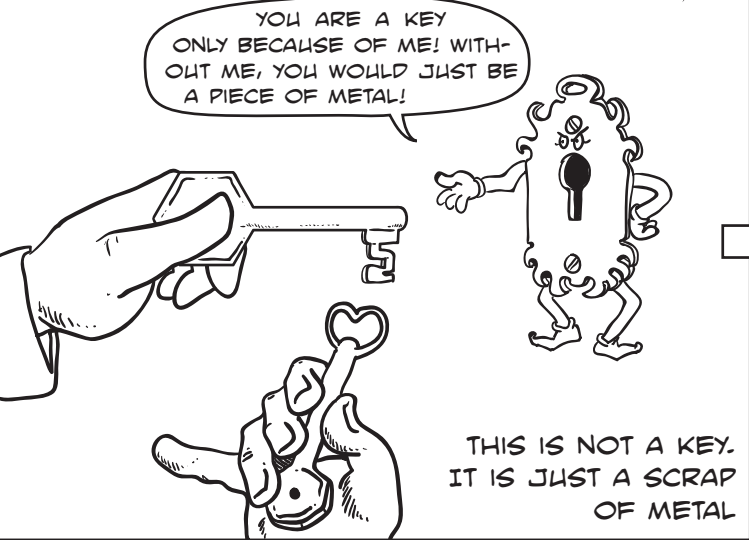


LET'S CONSIDER NOW THE NOTION OF EXISTENCE. WHAT IS THE SIMPLEST CRITERION TO SAY THAT SOMETHING EXISTS?

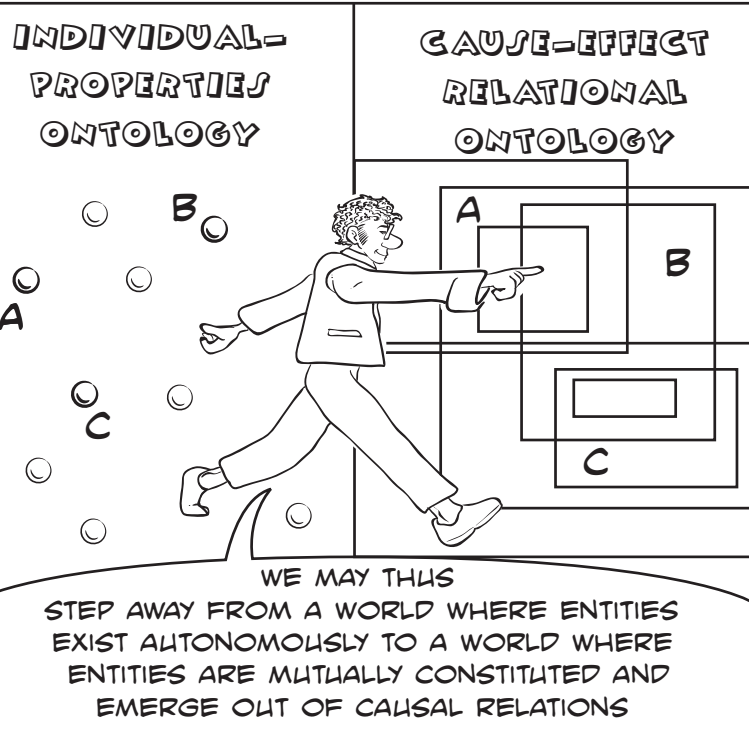
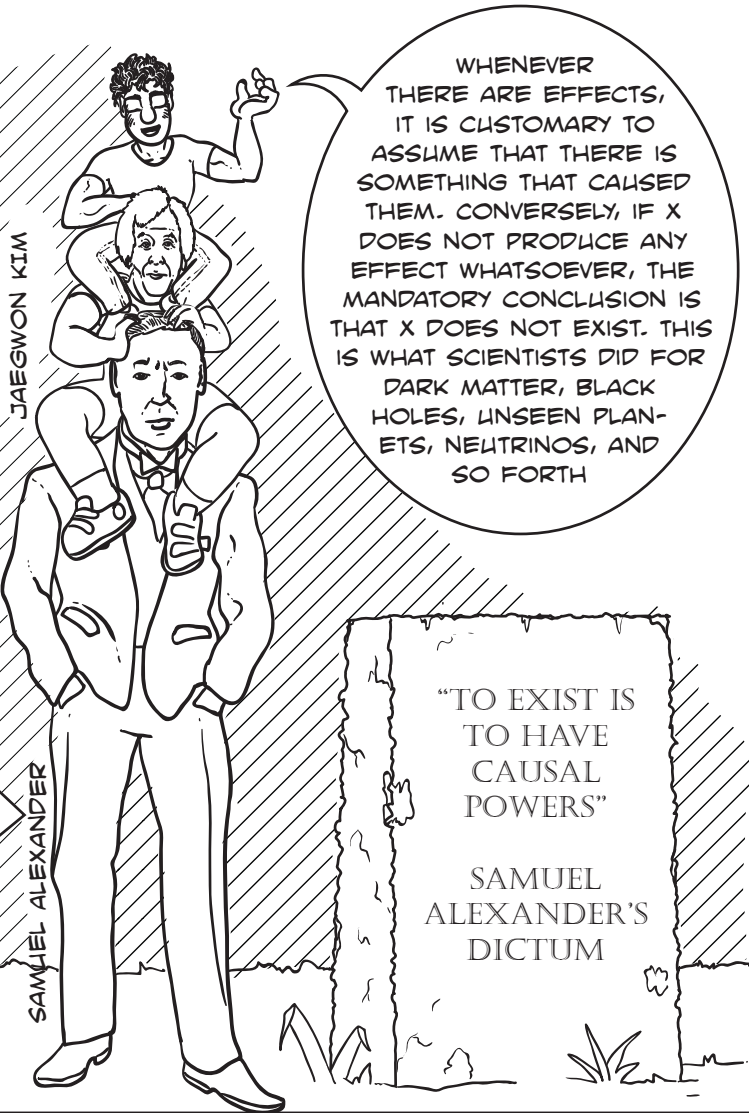
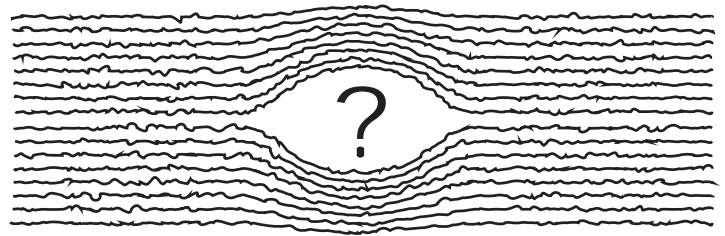
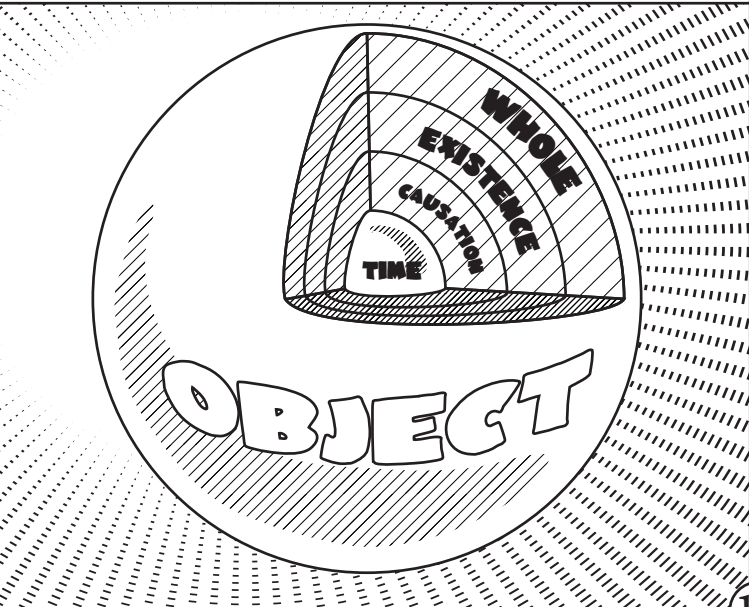
IN SCIENCE SOMETHING EXISTS IF AND ONLY IF IT PRODUCES EFFECTS

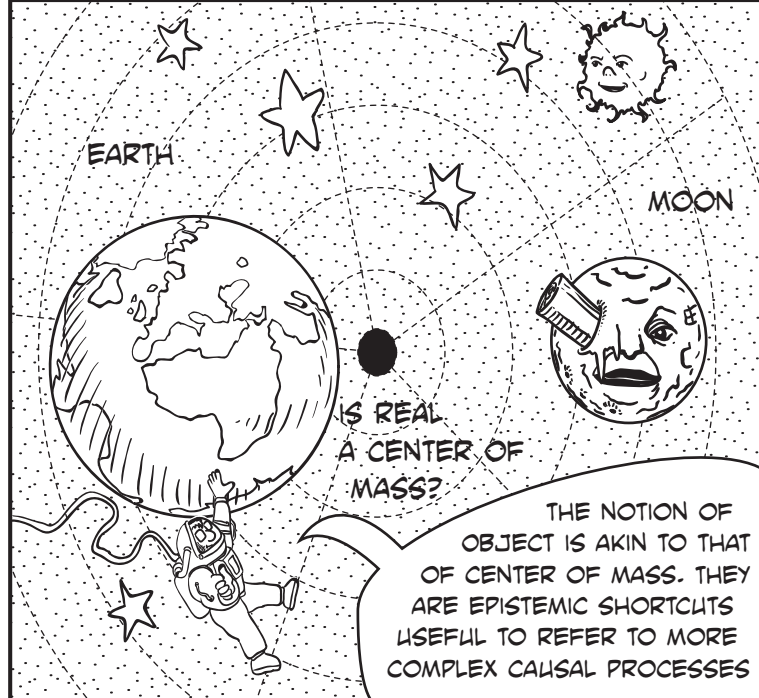


DOES AN OBJECT EXIST BY ITSELF?
NO, IT DOESN'T!!
FOR INSTANCE, WOULD A KEY BE A KEY IF IT WERE NOT FOR THE EXISTENCE OF THE CORRESPONDING LOCK?

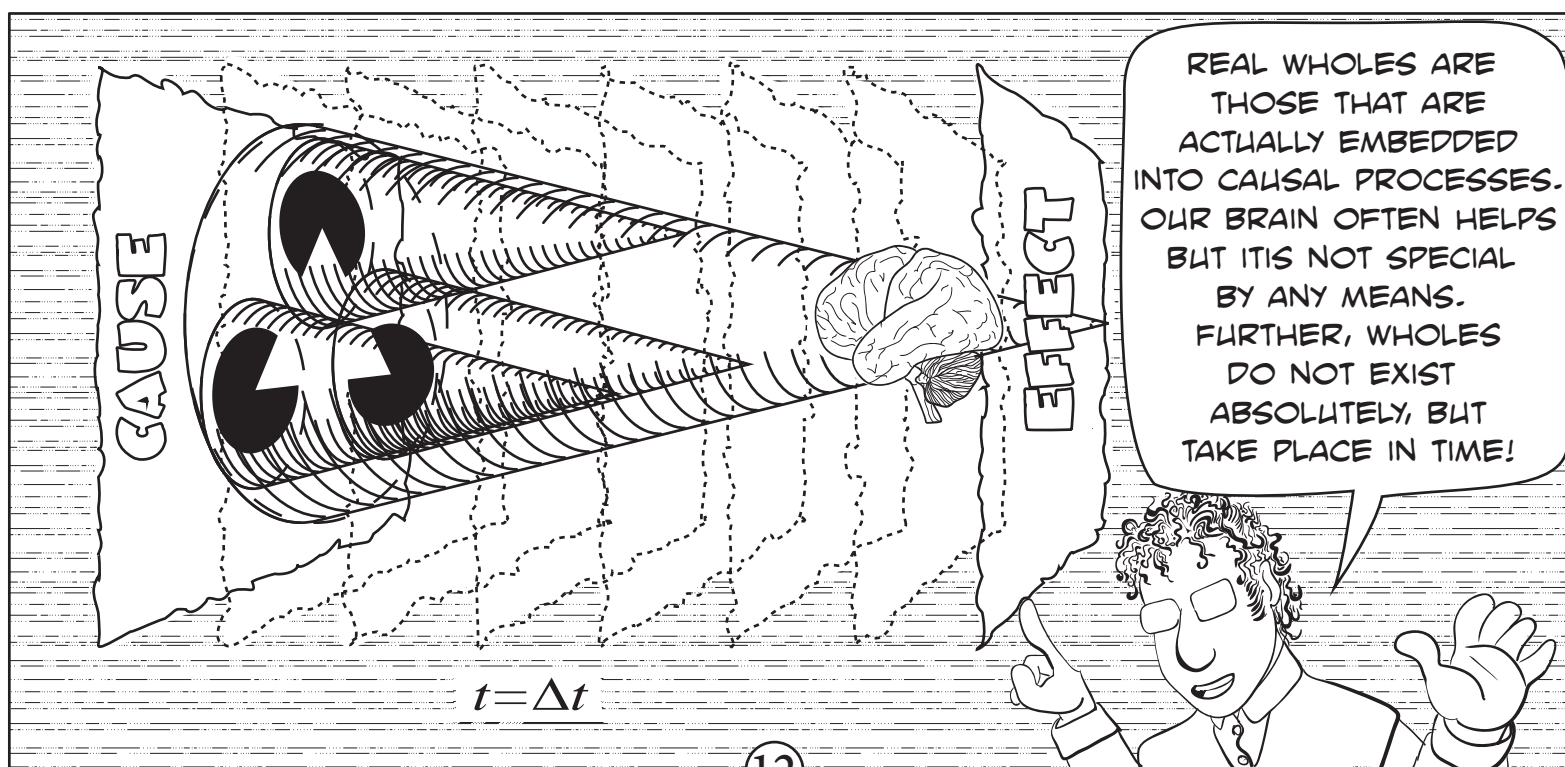
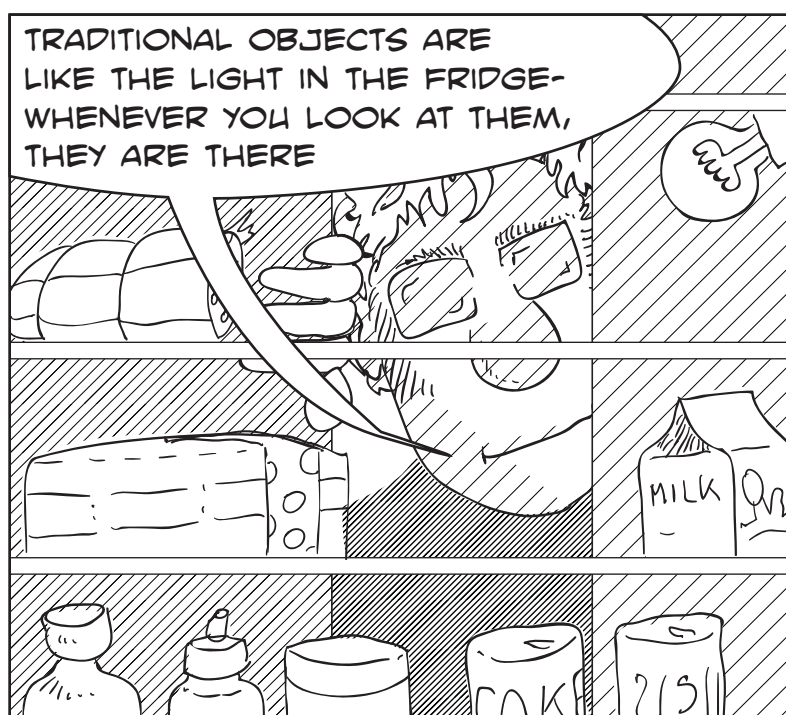
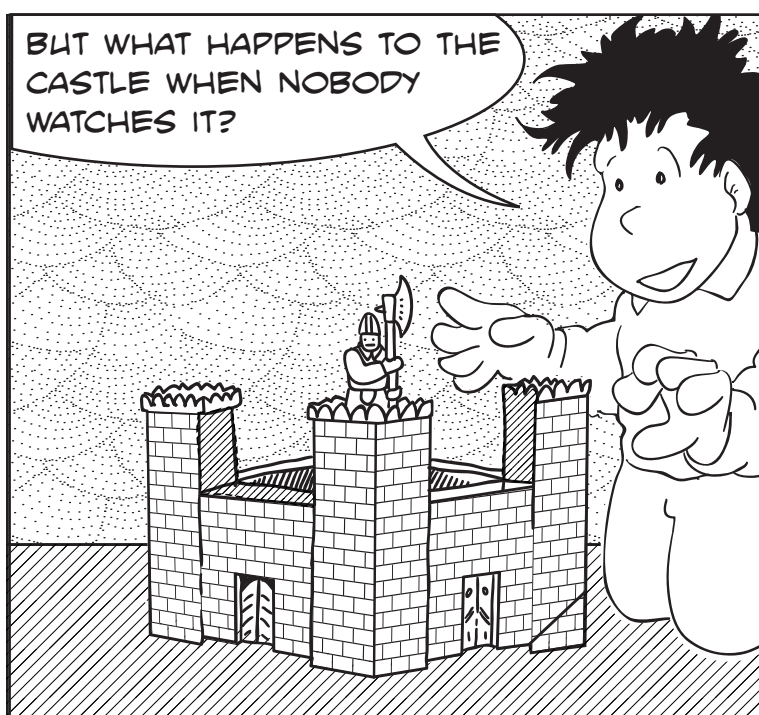
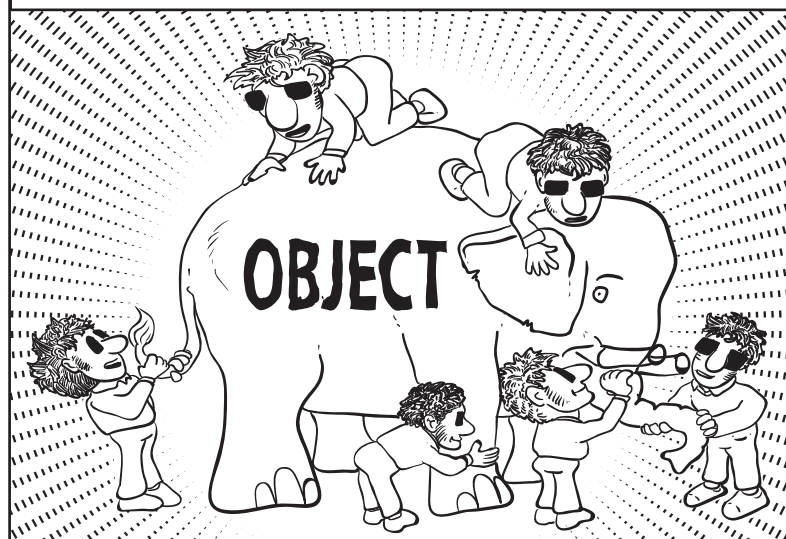


SO WE CAN RETHINK OUR ONTOLOGY. EVERYTHING IS RELATIONAL. REALITY IS GROUNDED IN THE CAUSAL GEOMETRY THAT FLESHES OUT EVERYTHING

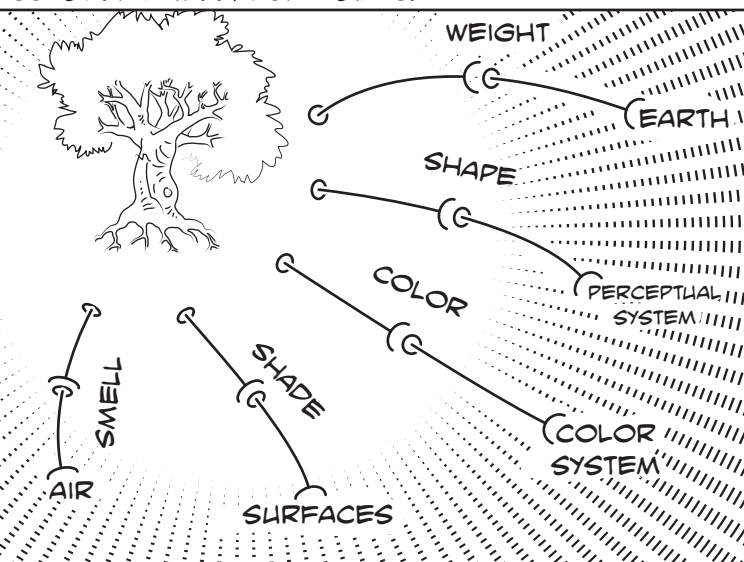




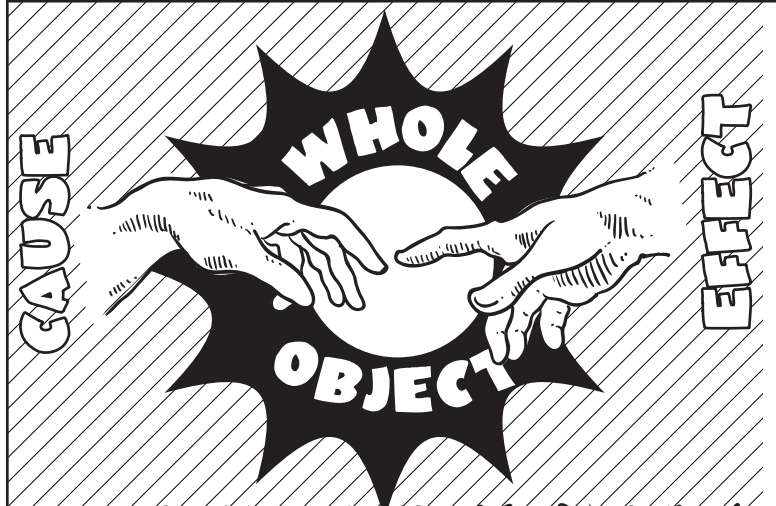
LIKE THE SIX MEN AND THE ELEPHANT, THE TRADITIONAL IDEA OF AN OBJECT IS AN INVENTION. THERE IS NO INDIVIDUAL WAITING TO BE TOUCHED BY THE BLINDS, THERE ARE ONLY MOMENTARY CAUSAL COUPLING BETWEEN PARTS



THE SAME RATIONALE HOLDS FOR OBJECT PROPERTIES
CONSIDER A TREE, FOR INSTANCE



ANY PROPERTY IS EMBEDDED INTO A CORRESPONDING CAUSAL PROCESS. IF THE WORLD WERE DIFFERENT THE OBJECT WOULD BE DIFFERENT TOO

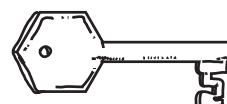


IN SHORT, A **RELATIONAL VIEW** OF OBJECTS AND WHOLEs SUGGESTS THAT AN OBJECT DOES NOT EXIST IN VIRTUE OF ANY INTRINSIC REASON.

THE OBJECT IS THE RESULT OF A CAUSAL ENTANGLEMENT BETWEEN DIFFERENT PORTIONS OF THE PHYSICAL CONTINUUM.

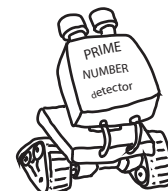
INSIDE AN ALLEGED OBJECT THERE AREN'T ANY HIDDEN PROPERTIES. EACH PROPERTY IS THE RESULT OF THE INTERACTION BETWEEN THAT OBJECT AND THE EXTERNAL WORLD. CLEARLY IF AN OBJECT IS DEFINED BY THE SUM OF ITS PROPERTIES IT MEANS THAT THE OBJECT **IS NOT INSIDE**, WHATEVER "BEING INSIDE" MIGHT MEAN. THE OBJECT AND ITS PROPERTIES ARE SPREAD IN THE WORLD.

TO RECAP ...

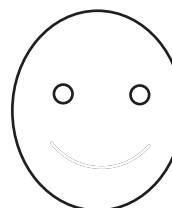


TO BE A KEY, A PIECE OF METAL NEEDS A LOCK

4	6	5	9	10
12	14	11	16	20
43	31	13	37	3
21	8	23	18	40
4	22	17	5	15



TO BE A CROSS, A SET OF SIGNS NEEDS A DETECTOR



TO BE A FACE, A SET OF SIGNS NEEDS A FUSIFORM GYRUS

THIS MEANS THAT NEITHER OBJECTS NOR THEIR PROPERTIES EXIST IN ISOLATION. EVERYTHING WE KNOW IS THE RESULT OF A CAUSAL INTERACTION

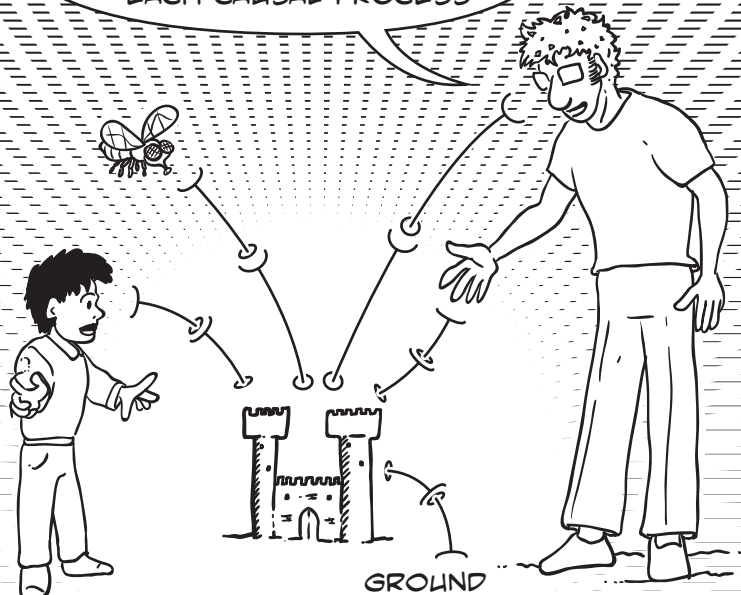
I WOULD NOT EXIST IN ISOLATION!

NEITHER WOULD I!

NEITHER OBJECTS NOR PROPERTIES IN ISOLATION

AND SO FORTH --- SO I SUGGEST THAT A PROPERTY IS ALWAYS A FUNCTION OF TWO PHYSICAL EVENTS (THE CAUSE AND THE EFFECT) AND, IN TURN, THAT THE OBJECT/WHOLE IS NOTHING BUT A BUNDLE OF PROPERTIES AND THUS A BUNDLE OF CAUSAL PROCESSES. IN SHORT, YOUR CASTLE IS A CASTLE BECAUSE IT MAY INTERACT WITH YOU AS A CASTLE!

LIKewise, THERE IS NOT JUST ONE CASTLE BUT MANY ... ONE FOR EACH CAUSAL PROCESS



LUIGI PIRANDELLO
(1867-1936)



I FORESAW A
SOMEWHAT AKIN VIEW WHEN I SUGGESTED
THAT EVERY MAN IS SINGLED OUT BY HIS OR HER
PEERS. ANYONE IS "ONE, NO ONE AND ONE
HUNDRED THOUSANDS"



LET'S GO BACK
TO THE
TRADITIONAL
QUESTION:
GIVEN N SIMPLS,
HOW MANY
WHOLES
ARE THERE?



N

1) USING NIHILISM
THEY ARE JUST N



$2^N - 1$

2) USING UNRESTRICTED
COMPOSITION THEY ARE
MANY MORE



3) USING THE CAUSAL
VIEW PRESENTED HERE,
THEY ARE AS MANY AS
THERE ARE ACTUAL
CAUSAL PROCESS

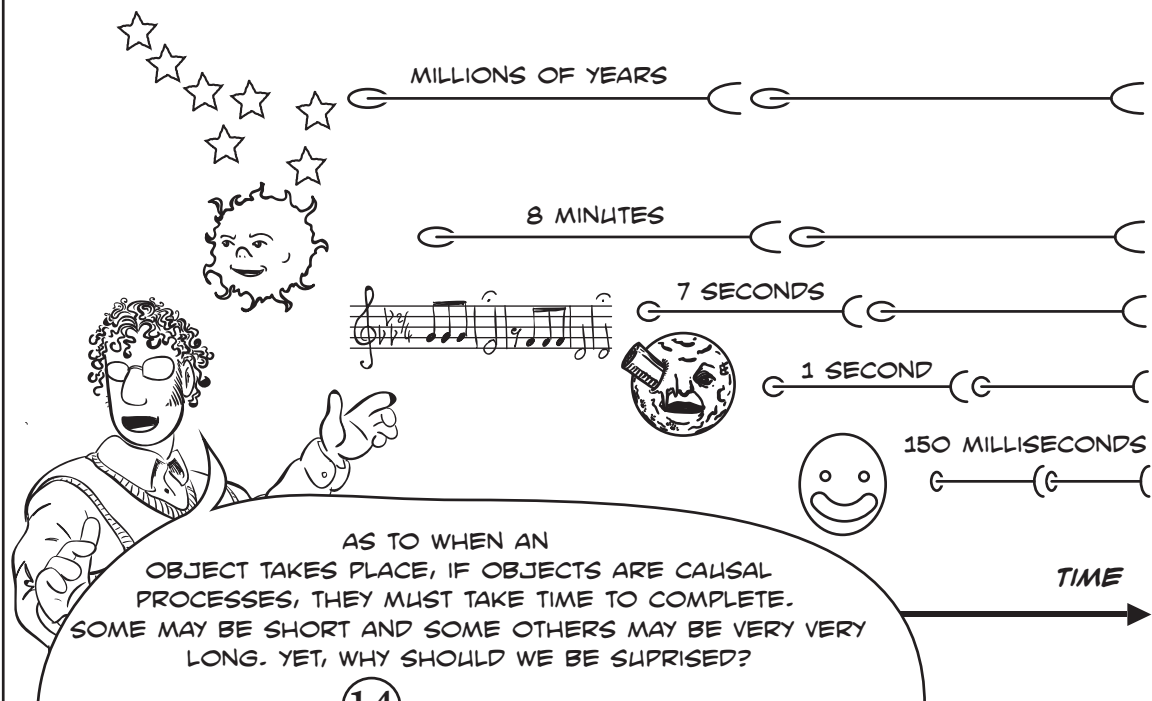
SO,
WE SHOULD NOT
ASK
WHETHER
OBJECTS EXIST
BUT RATHER

WHERE

AND

WHEN

DO THEY
TAKE PLACE?

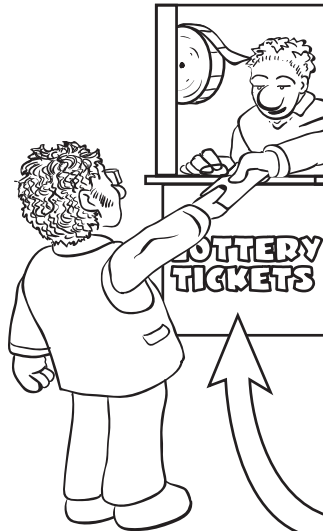


THE RELATION
BETWEEN OBJECTS
AND TIME IS A VERY
INTIMATE ONE.

AN OBJECT IS
UNDEFINED
UNTIL IT PRODUCES
AN EFFECT

THUS ITS EXISTENCE
DEPENDS
ON THE
PASSING OF TIME
IN WHICH EFFECTS
CAN OCCUR

CONSIDER THIS
EXAMPLE.
ON 30 OCTOBER YOU
BUY A LOTTERY TICKET



TIME GOES BY.
DID YOU BUY THE
WINNING ONE?
NOT YET

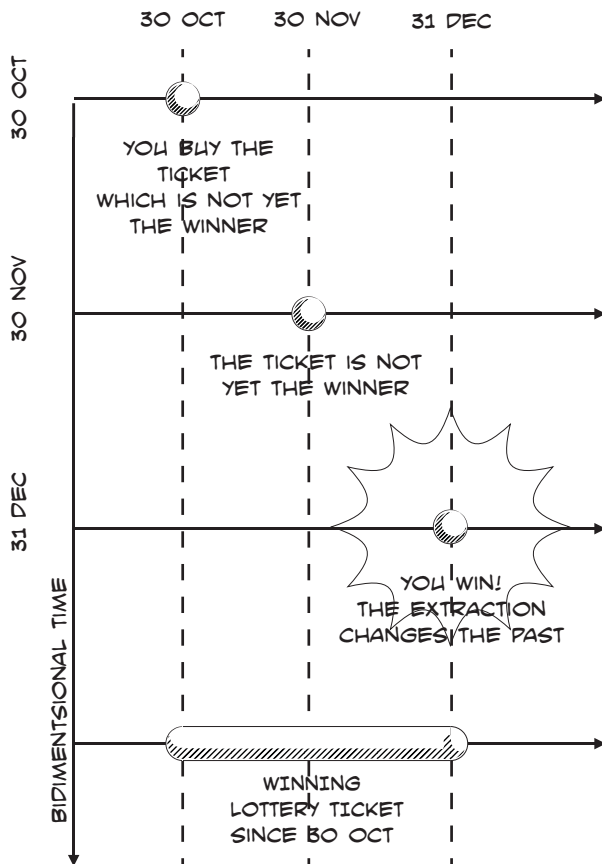


THE NIGHT OF 31
DEC YOU WIN!!!
NOW THE TICKET IS
THE WINNING ONE!
WAS IT BEFORE?



THE PRESENT
CHANGES THE PAST

THE TICKET YOU BOUGHT WAS
NOT THE WINNER UNTIL THE EX-
TRACTION, BUT AFTERWARDS IT
BECAME THE WINNER SINCE THE
TIME YOU BOUGHT IT.



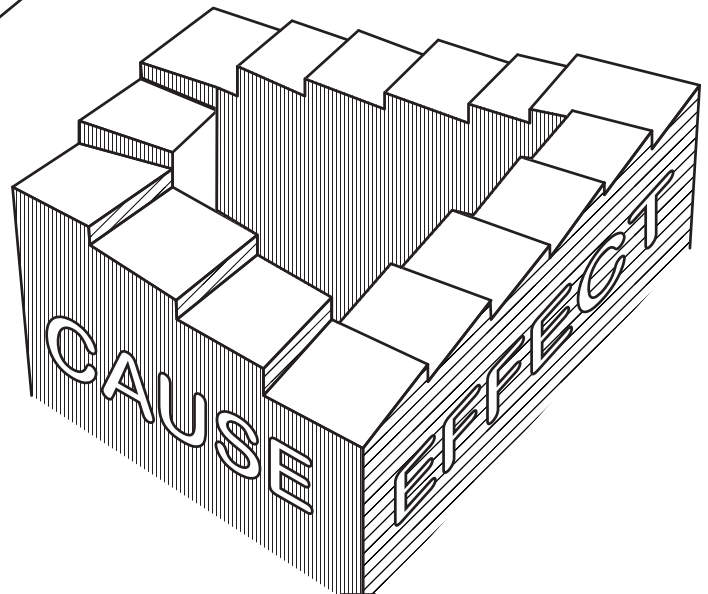
AFTER 31 DEC THE TICKET WAS THE
WINNER AND THAT IT HAS BEEN SO AS
FAR BACK AS OCT 30

WE HAVE AN APPARENTLY
PARADOXICAL SITUATION IN WHICH

THE CAUSE OF THE CAUSE IS THE EFFECT

AND

THE EFFECT OF THE EFFECT IS THE CAUSE



OBJECTS ARE LIKE THE WINNING
LOTTERY TICKETS!
THEY TAKE PLACE AGAINST ALL ODDS.

OUT OF GAZILLIONS OF POSSIBLE
OBJECTS ONLY A VERY FEW BECOME
ACTUAL OBJECTS.

AN OBJECT TAKES PLACE ONLY WHEN
IT PRODUCES AN EFFECT, BUT WHEN
IT DOES IT WAS THERE SINCE THE
BEGINNING

OBJECTS

HERACLITUS

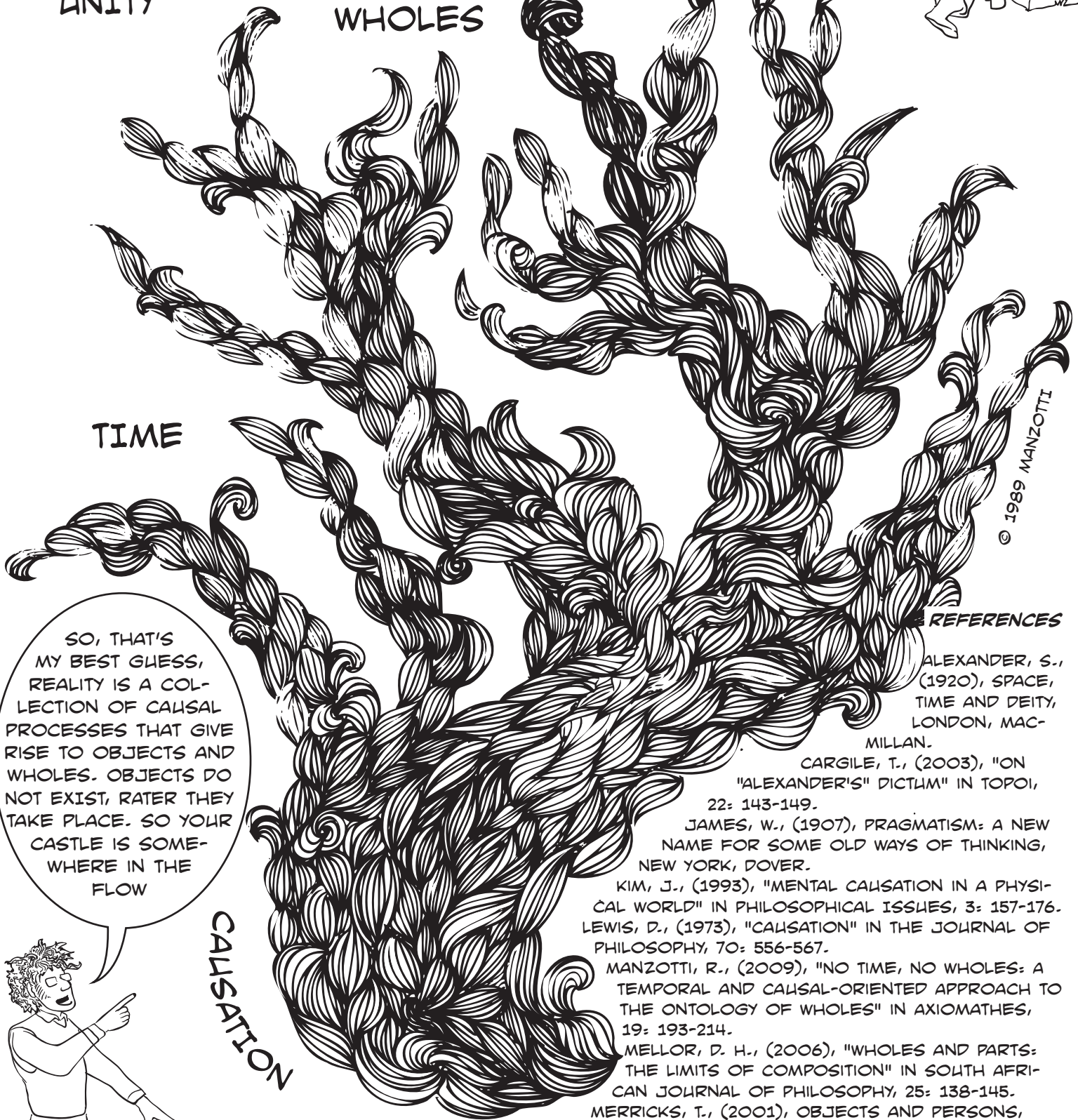


UNITY

WHOLES

TIME

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SO, THAT'S MY BEST GUESS, REALITY IS A COLLECTION OF CAUSAL PROCESSES THAT GIVE RISE TO OBJECTS AND WHOLES. OBJECTS DO NOT EXIST, RATER THEY TAKE PLACE. SO YOUR CASTLE IS SOMEWHERE IN THE FLOW



CAUSATION

I HAVE LOTS OF OTHER QUESTIONS BUT ...

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