Disclaimer — translations here were mainly done with the help of small dictionaries and in many cases without fluency in the languages. It's just better than no translation at all. Feel free to improve on any or to fill in ones not done and let me know and this document will be updated. — Bill

French:

p81

Victor Hugo (Les Contemplations):
Comme sur le versant d'un mont prodigieux,
Vaste melee aux bruits confus, du fon de l'ombre,
Tu vois monter a toi la creation sombre.
Le rocher est plus loin, l'animal est plu pres.
Comme le faite altier et vivant, tu parais!
Mais, dis, crois-tu que l'etre illogique nous trompe?
L'echelle que tu vois, crois-tu qu'elle se rompe?
Crosi-tu, toi don't les sens d'en haut sont éclaires,
Que la creation qui, lente et par degres
S'eleve a la lumiere, ...
S'arrette sur l'abime a l'homme?

Peuple le haut, le bas, les bords et le milieu, Et dans les profondeurs s'evanouit en Dieu!

p123

sans qu'ils aient jamais ete repris de L'Eglise de ce sujet without ever having been counseled by the church on this subject

p127

S'il se vante, je l'abaisse; s'il s'abaisse, je le vante; et je conredis toujours, jusqu'a ce qu'il comrenne qu'il est un monstre incomprehensible.

If he exalt himself, I humble him; if he humble himself, I exalt him; and I always contradict him, till he understands that he is an incomprehensible monster. (Pascal — Pensees 420.)

p128

il fallait qu'elle eut d'etranges defauts pour etre meprisable; mais elle en a de tels que rien n'est plus ridicule

For this French from Pascal, here's all of Pensees 365

because there seems to be some self-reference in it that is confusing to me (does 'this thought' in the last line refer to the paragraph before it?):

Thought.—All the dignity of man consists in thought. Thought is, therefore, by its nature a wonderful and incomparable thing. It must have strange defects to be contemptible. But it has so many that nothing is more ridiculous. How great it is in its nature! How vile it is in its defects!

But what is this thought? How foolish it is!

p132

l'idee de la diversite infinie que la Nature doit avoir mis dans ses ouvrages, regne dans tout le livre

the idea of the infinite diversity that Nature puts in it's works, is prominent throughout the book

p150

Victor Hugo (Les Contemplations?):

La fin toujours imminente, aucune transition entre etre et ne plus etre, la rentree au creuset, le glissement possible a toute minute, c'est ce precipice-la qui est la creation

The end always in sight, no transition between life and death, backsliding (failure) always threatening, this living on the edge is the creation.

p159

La premiere des Dieux, ou bien loin de souci Et de l'humain travail qui nous tourmente ici, Par toi-meme contente et par toi bienherueuse, Tu regnes immortelle en tout bien plantureuse.

•••

and the toils of man the torment us here, content yourself and by your content you experience eternal life in all ...

p162

il arrive meme souvent que je sois plus parfait de me taire que de parler

it often happens that I am better off saying nothing than speaking

p175

verite primitive que rien n'est sans raison

the primitive truth that nothing exists without cause

p177

point d'appui fulcrum; basis

hors concours beyond competition

p210

Voltaire: Vous criez "Tout es bien" d'une voix lamentable! You cry out "all is well" in a pitiful voice.

Non, ne presentez plus a mon couer agite Ces Immuables lois de las necessite!

No, don't ask more of my wounded heart These bind beyond cause!

p211

Vous composerez dans ce chaos fatal Des malheurs de chaque etre un bonheur general.

From a limitless chaos of individual pain You compose overall happiness.

p236

Tous les corps sont lies dans la chaine de l'etre. La Nature partout se precede et se suit...

Dans un ordre constant ses pas developpes
Ne s'emportent jamais a des bonds escarpes.
De l'homme aux animaux rapprochant la distance,
Voyez l'Homme de Bois lier leur existence.
Du corail incertain, ne plante et mineral,
Revenez au Polype, insecte vegetal.

homme des bois orang-outang

p239

Entre deux infinis l'Homme en naissant place, Se voit de tous les deux egalement presse. Pour confondre ses yeux qu'effraya l'Elephant, Le Ciron l'attendait aux confins du Neant.

p252

parce que la foi nous l'enseigne

p289

les principes de morale communs au genre humain the moral principles common to all humanity

p290

La morale uniforme en tout temps, en tout lieu... C'est la loi de Platon, de Socrate, et la votre. De ce culte eternal la Nature est l apotre. Cette loi souveraine en Europe, au Japon, Inspira Zoroastre, illumina Solon.

German:

p199

Du pralst mit der Vernunft, und du gebrauchst sie nie. Was helfen dir zuletzt der Weisheit hohe Lehren? Zu schwach sie zu verstehn, zu stolz sie zu entbehren. Dein schwindelnder Verstand, zum irren abgericht, Sieht oft die Wahrheit ein, und wählt sie dennoch nicht… Du urteilst überall, und weist doch nie warum; Der Irrthum ist dein Rath, und du sein Eighenthum.

You brag with the future and you never need it.
What good is the wisdom of higher learning to you?
You are too weak to understand, too proud to do without it.
Your declining understanding, prone to error,
Often sees the truth, and yet avoids it...
You are sentenced anyway, and don't know why;
The mistake is taking it's counsel, and you are it's property.

p266

die Schöpfung ist niemals vollendet. creation is never complete

p280

Alle Glieder bilden sich aus nach ew'gen Gesetzen, Und die seltenate Form bewahrt im geheimen das Urbild.

All things are made following eternal laws, And the rare form establishes in it's mysteries the ancient source.

p289

Gültigkeit validity (allgemeine universal)

Gemeinheit commonality

Greek:

p250

αυταρκεια autarchy(?)

Latin:

p11

omne ignotum pro mirifico all that is unknown is mysterious and beautiful

P59, 70

ens perfectissimum

The most perfect Being (perfect in the sense of most complete, absolute)

p68

Non permisit manere Deum in seipso sine germine, id est sine procuctione creaturarum.

The only action which is possible to God is generating, that is the production of created things.

p71

hoc volo, sic jubeo, sit pro ratione voluntas I will this, I command it, for my will is stronger than reason.

ea solumoddo Deum posse facere vel dimittere, quae quandoque facit vel diminttit, et eo modo tantum vel eo tempore quo facit, non alio

God can only make and unmake what He actually does make and unmake and in exactly that quantity and that time and no other.

p77

Non conservaretur vita leonis, nisi occideretur asinus. The life of the lion would not be preserved if the ass were not to be killed.

p78

utrum Deus posit meliora facere ea quae facit whether God could create better things than he does create

p79

nisi per medium except through a medium (a transitional link)

genus corporum

the stuff of bodies (the material, corporeal)

aequaliter complexionatum like a complex or combination of elements

83 cg

Deus omnis laboris, actionis, congectionis non modo fugiens sed fastidiens et despiciens

A god who not only flees from all work, action and thought but indeed detests and despises them (a somewhat extreme characterization of the self-sufficient, uninvolved, uninterested transcendent God)

coincidentia oppositorum meeting of opposites

Sensus eminentior a higher sense, a higher meaning

p101

cicerone host, guide

p107

universi locus, ad quem motus et positio caeterorum omnium conferatur.

a place in the universe to which all motion and position can be related with certainty (i.e. not everything is relative)

p115

Singula nonnulli credunt qouque sidera posse Dici orbes, No one believes that the stars occupy only ten spheres.

Tam paucis, et tam miseris animalibus, et tam Ridiculus? So few, so poor among the animals, so absurd?

p116

Plurima sunt numero, ut posit comprendere nemo.

The number is so great that no one can comprehend it.

p157

ubi nulla indigentia, nulla necessitas; ubi nullus defectus, nulla indigentia; nullus autem defectus in Deo; ergo nulla necessitas.

Where there is no need, there is no necessity; where there is no lack, there is no need. But there is nothing lacking to/in God; therefore, there is no necessity (that applies to God).

p166, 292, 332 eo ipso by that very act (ipso facto by that very fact)

ultima ratio rerum ultimate rationale of things

p169

ex necessitate divinae naturae from the necessity of the divine nature

p177

exigentia existentiae the necessity of existence, the need to exist

nisi in ipsa essentiae natura quaedam ad existendum inclinatio esset, nihil existeret. unless there is in the nature of the being itself an inclination (need) to exist, it will not exist (i.e. being/essence implies existence; being is incomplete without existence)

p195

nexus ultriusque mundi
world's ultimate center (?)

p202

ascensio mentis ad Deum per scalas creaturarum

p204 non sequitur

it does not follow

p210

quatenus mens res omnes ut necessaries intelligit, eatenus minus ab affectibus patitur.

In so far as the mind understands all things as necessary, so far has it greater power over the affects, or suffers less from them.

(Spinoza Ethics V Prop. 6)

p241

entium varietates non temere esse minuendas

datur continuum formarum

per saltum

p244

plenum formarum completeness of forms

p246

natura non facit saltus nature does not make leaps

p259

inter alia

among other things

p268

in saecula saeculaorum forever and ever

p272

A maxim of Aristotle - quicquid fieri potest, fit

p292

Cicero — omni in re consensio omnium gentium lex naturae putanda est

p297

A principle of St. Bernard — ordinatissimum est, minus interdum ordinate fieri aliquid.

Notes:

Leibnizean Principle of Sufficient Reason: Lovejoy p174 - "the existence of everything that does exist, and also its attributes, behavior , and relations, are determined by a necessary truth, or a system of such truths." Stanford Encyclopedia of Philosophy (http://plato.stanford.edu/contents.html) -If there is no sufficient reason for one thing to happen instead of another, the principle says that nothing happens (the initial situation does not change). [How does it deal with Buridan's ass (food on either side but the ass can't decide so he starves, mentioned on p 168 of Lovejoy)? the ass decides to eat both and since he can't do both at the same time, picks one and eats it avoiding starvation. Anaximander's argument for the immobility of the Earth as reported by Aristotle is an ancient example of an application of the Principle of Sufficient Reason -

The Earth remains at rest since, being at the centre of the spherical cosmos (and in the

same relation to the boundary of the cosmos in every direction), there is no reason why it should move in one direction rather than another.

A question I still have with all this is how, on p181 does having gaps in the great chain go against the principle of sufficient reason? "In its internal structure the universe is a plenum, and the law of continuity, the assumption that 'nature makes no leaps,' can with absolute confidence be applied in all the sciences, from geometry to biology and psychology. 'If one denied it, the world would contain hiatuses, which would overthrow the great principle of sufficient reason and compel us to have recourse to miracles or pure chance in the explanation of phenomena.'"

p266

tychism (from Stanford Encyclopedia of Philosophy) — Science shows, then, that not everything is fixed by exact law (even if everything should be constrained to some extent by habit) and that spontaneity has an objective place in the universe. Peirce called this doctrine "tychism," a word taken from the Greek word for "chance" or "luck" or "what the gods choose to lay on one." Tychism is a fundamental part of Peirce's view, and reference to his tychism provides an added reason for Peirce's insisting on the irreducible fallibilism of inquiry. For nature is not a static world of law but rather a dynamic world that manifests considerable spontaneity.

Notes from Seth Sharpless:

Bill,

It has occurred to me that a reader of The Great Chain of Being may be somewhat confused about the relation of The Great Chain idea, discussed by Lovejoy, to the biological theory of evolution, and particularly, the Darwinian Theory of Evolution by chance variation and natural selection. The reader might be puzzled as to why Lovejoy, writing in the 1920is, does not refer to the Darwinian theory in connection with the Great Chain idea. Here are some relevant points. (This is not to say that the Great Chain idea did not itself evolve into the Darwinian theory, but only after some very radical changes.)

Seth

Differences between Darwinianism and Great Chain Idea

1. Above all, the Darwinian picture is a temporal one, and the Great Chain idea from early on, until the 19th century, was a static picture, all species of things, living and non-living having existed from the time of Creation if

not eternally.

2. The Darwinian picture was that of a branching tree, each line diverging from the others and terminating at the end of the branch. This contrasted with Great Chain, in which there is a linear order from the lowest to the highest forms, a principle Lovejoy calls *Gradation*.

(In current Darwinianism, it is even disputed whether there is a single tree, that is, one trunk from which all branches emerged. There may be a grove of trees of life, with a mixed root system in which genes were exchanged horizontally at a prodigious rate.

The biologist, Woese, who established that there is a third cell type, Archea, distinct from both prokaryotes and eukaryotes, has challenged Darwin's theory of common descent; he states that the three cell types emerged not from one, but from many cell types—imagine a tree with three trunks and an interacting root network. The cell types, he theorizes, evolved from a community of cooperative entities freely exchanging genes at unimaginably high rates until particular components became so complex and interconnected that gene transfer stopped. At this point, which he calls the "Darwinian threshold," organisms became less cooperative and followed a more vertical pathway to evolution: Darwin's model of heredity and variation. See note below and: http://www.eurekalert.org/pub_releases/2002-06/uoia-nce061402.php)

- 3. In the Great Chain idea, every logical possibility is fulfilled: The principle of Plenitude. Think of any conceivable entity, however odd, and according to the Great Chain idea, it must occur somewhere in the chain of beings. The Great Chain is an entirely rational creation, a matter of intelligent design, every logically possible idea being realized, no gaps. God would have been unfair and ungenerous, had He left some possible entity unrealized. This is not consistent with Darwinianism. Darwin would certainly have conceded that SOME logically possible branches of the tree of life never sprout; that is, one can imagine living creatures which never come into being in any evolutionary line. So Darwin would not have agreed with the principle of Plenitude. In the modern Darwinian picture, new species emerge by chance variation. There is no predetermined design so there will be many possible gaps, that is, logically realizable creatures which do not come into being.
- 4. Continuity. The principle of Continuity is distinct from that of Plenitude. The idea of Plenitude is that no consistently thinkable form goes unrealized; the idea of Continuity is that between any two existing forms, there must be an intermediate form. Darwin might have accepted a qualified form of Continuity, though he certainly would not have accepted the principle of Plenitude. Darwin thought

changes from one species to another occurred gradually, a series of minute phenotypic changes linking one to the next. No missing link. But Continuity in the strict sense, in which it was embraced by the early Great Chain philosophers, requiring that between any two forms, there be an intermediate form, would have been too strong a claim for Darwin. That evolution occurs by minute changes would not have required, for Darwin, that the changes be so minute that between any two forms, there would have to be an intermediate form. In any case, gradual change is no longer an essential feature of modern Darwinian theory, since mutation and other sources of variation, bringing about minute changes in DNA, may lead to radical changes in phenotype, not dissimilar to the metamorphosis of some insect forms during development.

NOTE relative to ideas of single vs multiple origins of life forms (a single tree rather than many trees with mixed roots), the following from: http://www.biology.arizona.edu/cell_bio/tutorials/pev/page2.htmlr

Carl Woese (born July 15, 1928) is an American microbiologist famous for discovering the Archaea (a new domain or kingdom of life) in 1977 by phylogenetic analysis of 16S ribosomal RNA, a technique pioneered by Woese but which is now standard practice.

The acceptance of the validity of the Archaea, which are prokaryotes but not Bacteria was a slow and painful process. Such famous figures as Salvador Luria and Ernst Mayr objected to his division of the prokaryotes, and not all criticism of him was restricted to the scientific level. Not without reason has Woese been dubbed "Microbiology's Scarred Revolutionary" by the journal Science. Yet, the growing amount of supporting data led the scientific community in general to accept the Archaea by the mid 1980s.

Woese was a MacArthur Fellow in 1984, was made a member of the National Academy of Sciences in 1988, received the Leeuwenhoek medal (microbiology's highest honor) in 1992, and was a National Medal of Science recipient in 2000. In 2003, he received the Crafoord Prize from the Royal Swedish Academy of Sciences. He was born in Syracuse, New York.

Prokaryotes, Eukaryotes, & Viruses Tutorial Prokaryotes

Characteristics of prokaryotic cells.

As mentioned in the previous page, prokaryotes include the kingdoms of Monera (simple bacteria) and Archaea. Simply stated, prokaryotes are molecules surrounded by a membrane and cell wall. Prokaryotic cells lack characteristic eukaryotic subcellular membrane enclosed "organelles", but may contain membrane systems inside a cell wall.

Prokaryotic cells may have photosynthetic pigments, such as is found in cyanobacteria ("blue bacteria"). Some prokaryotic cells have external whip-like flagella for locomotion or hair like pili for adhesion. Prokaryotic cells

come in multiple shapes: cocci (round), baccilli (rods), and spirilla or spirochetes (helical cells). Bacteria & antibiotics

Pseudomonas bacteria

The cell wall is the target for antibiotics, as well as for carbohydrates that our immune system uses to detect infection. A major threat to humankind is the antibiotic-resistant strains of bacteria have been selected by overuse of antibiotics. Sympathy for the life of bacteria

If you were bacteria: You have 0.001 times as much DNA as a eukaryotic cell.

You live in a medium which has a viscosity about equal to asphalt.

You have a wonderful "motor" for swimming. Unfortunately, your motor can only run in two directions and at one speed. In forward, you are propelled in one direction at 30 mph. In reverse your motor makes you turn flips or tumble. You can only do one or the other. You cannot stop.

While you can "learn", you divide every twenty minutes and have to restart your education.

You can have sex, with males possessing a sexual apparatus for transferring genetic information to receptive females. However, since you are both going 30 mph it is difficult to find each other. Furthermore, if you are male, nature gave you a severe problem. Everytime you mate with a female, she turns into a male. In bacteria, "maleness" is an infective venereal disease.

Also, at fairly high frequencies, spontaneous mutations cause you to turn into a female.

Eukaryotes have enslaved some of your "brethren" to use as energy generating mitochondria and chloroplasts. They are also using you as a tool in a massive effort to understand genetics. The method of recombinant DNA is designed to exploit you for their own good. There is no SPCA to protect you.

The last laugh may be yours. You have spent three and a half billion years practicing chemical warfare. Humans thought that antibiotics would end infectious diseases, but the overuse of drugs has resulted in the selection of drug resistant bacteria. They didn't realize that this was only the first battle, and now the war is ready to begin.

Humans think this is their era. A more truthful statement would be that we all live in the age of bacteria.

The Archaea are becoming more understood

The methanogenic archaeon, Metanococcus jannaschii: is found 3 km down, at 85 deg C

has 1738 genes, 56% of which are new to science

has bacteria-like genes and operons

but with eukaryotic-like information processing and secretion systems

and eukaryotic protein synthesis

These findings represent the scientific equivalent of opening a new porthole on Earth and discovering a wholly new view of the universe. In decoding the genetic

structure of archaea, we were astounded to find that twothirds of the genes do not look like anything we've ever seen in biology before. This brings to closure the question of whether archaea are separate and distinct life forms.

Notes and Questions from Susan Merwin:

Here are some very broad and general notes on Lovejoy. I have focused on the major questions/problems of interest to the periods Lovejoy discusses.

- I. Greek philosophy (especially Plato and Plotinus). Major concerns: What really IS? How does our world of change, of transient things that are born and die (i.e the world of "becoming") come into existence? How do these two world of Being and becoming connect? The Neoplatonic answer is: the ultimate true and eternal Being (now called God-- transcendent, self-sufficient and "other-worldly") gives itself to creation by emanation of its Being into the existence of all things. Unfortunately this produces two irreconcilable ideas of God: God (ultimate Good) is transcendent (aloof from creation), and God is immanent (creates and involves his being in creation because he is Good). It also produces the ideas of plenitude, continuity and hierarchy which are the essential ingredients of the Great Chain of Being.
- II. Middle Ages/Scholastics. Major concerns: the principle of sufficient reason is brought to bear in two ways: 1. Are the omnipotence and goodness of God reconcilable (especially in relation to the world as we know it)? 2. Are the transcendent and immanent Gods reconcilable? Both these questions lead to much dispute about freedom and necessity in God. Does God create voluntarily and unnecessarily (Aquinas) because he is good but his will is absolutely free? or does his goodness constrain him to create, i.e. his goodness limits his freedom (Abelard)? Lovejoy says the Church opts for a "fruitful inconsistency" in regard to these difficulties.
- III. Renaissance/ New Cosmography: the problem of Infinity. The principles of plenitude and continuity, which say that everything that can exist must exist (with no gaps in creation at all), have produced the notion that the created universe is infinite (since God is All Being with no limit or defect in him, then the universe he creates must mirror his infinite being; it too must be infinite). This is a huge change in thinking. The Greeks had defined space as limitation (i.e. the space something takes up), conflating it with matter and with Necessity, which the Timaeus says is a "First Principle" right up there with God himself. But the principle of sufficient reason says that an infinite cause (God) must have an infinite effect (creation) So now space has become the boundless theatre in which all Being is converted into existent things. But HOW does infinity get into time and space? Isn't this a logical contradiction? And if the existent universe is infinite, how can we know it (we can know that the infinite exists, but knowing infinity itself is quite beyond our capabilities). Soooo: big problems of epistemology result.

- IV. 17th CenturyñSpinoza and Leibniz. Problems regarding the logical relations of Being and existence (i.e. creation, existence in time and space). Spinoza says the omnipotence and goodness of God taken together mean that everything possible must be given existence. It is of the very nature of being to exist ("essence demands existence"). So the universe is as it must be necessarily. Determinism rules! A Very Important corollary: the Good has been completely redefined. To Plato, the Good meant the eternal true Being (i.e. the "other world"). Now Good means actual existence in this world. This turn to "this-worldliness" is decisive for the future of Western philosophy. Leibniz tries to avoid determinism, which is morally repugnant (if God isn't free, neither are we; everythingñincluding ourselvesñis as it must be and we can't change it.) But Lovejoy says that Leibniz's invocation of Sufficient Reason really makes his picture of the universe just as necessitarian as Spinoza's; he's merely less logical. For both S. & L., the principles of plenitude and continuity means that there can be no real chance or contingency in the universe, and of course no gaps in creation. This world is not only the best of all possible worlds, it is the only possible world.
- V. 18th Century. This is the apotheosis of the Great Chain of Being idea, and also the time when its inherent inconsistences become most explicit and it prepares to self-destruct. Lovejoy gives the following as the major effects on 18th C thought of the Great Chain idea:
- 1. Man's view of himself: he is not the crown of creation but a middle link in the chainña humbling thought! As the middle link he is half-animal, half-angel, a "cosmic paradox" whose experience is inevitably tragic. So, (despite this being the best of all possible worlds) much pessimism re human life and human nature (Hobbes, e.g.) results. At the same time, the proper study of mankind is clearly man: What is his nature? How does he relate to animals? (This question generates lots of interest in our primate relatives); What are his real instincts, desires, capacities, and how can we formulate moral and political values in terms of these (rather than in terms of a future life in the "other world")? The hierarchical nature of the Great Chain suggests that our political and social world should be similarly static and status-oriented (the King is the king, you are a peasant, that's how it must be). This turn to considering man's existence as an end in itself is Humanism: the focus on man's nature without reference to his "ends" or to "higher powers" (divinization, as conceived by Plotinus, is no longer a viable option).
- 2.A revised conception of human reason. For Plato, nous was Cosmic Intelligence in us, our bit of the web of Intelligence (and Intelligibility) which links the whole. Consequently our mind and the universe were seen as of a piece, continuous; we really can know truth (though, of course, what we know best are the eternal truths of Being in the mind of God, since the world as perceived by the senses (existent things, which are becoming/moving/changing) cannot really be known with any finality). Now, however, both God and the universe are conceived not just as eternal, but as infinite: how can we know that??? Locke, Kant, etc. say we can't. So: Forget metaphysics and concentrate on the things of this world that we can perceive with our senses. Lovejoy calls this unexpected consequence of Great Chain of Being thinking a "rationalistic anti-intellectualism" (p.201)
- VI. Plenitude and 18th C Optimism. What does Good really mean? Optimism turns

out to be very pessimistic indeed: all is necessary and unchangeable, including all the evils of this world. This is not Good as we understand it, as it relates to human experience. The logic of the Great Chain says that Good inheres in the whole (Good means all possibilities being converted to actual existence, including the bad ones), but that there's inevitable conflict (which we, with our lack of cosmic vision, see as moral evil) in the parts. Nothing to be done about this; the Great Chain is a chain that binds tight! All the logical problems arising from the conception of God as both omnipotent and good are out on the table now. The substantive monism inherited from Neoplatonism has resulted in a most unpleasant moral dualism. Page 220: Lovejoy is terrific on the lion and the ass question. He calls this idea of a "Goodness" which is quite disconnected from virtue and happiness a "radical transvaluation of values." In sum, this nasty moral dualism, combined with the intellectual despair resulting from the paradoxes and contradictions entailed in the concept of an"actual infinite," result in a major rebellion: voila Romanticism!

VIII. 18th C. Biology. Plenitude and continuum became scientific hypotheses prompting the observation of the actual facts of life in the universe. These principles implied fixed natural species, but actual investigation shows lots of change, evolutionary developments, and plenty of gaps in natureñanother blow to the Great Idea.. However, the ideal of unity within multiplicity (continuity) also influences the conception of the protoplasmic cell as the One which is subject to all possible variations. It is also suggested that the unifying fundamental reality is not static Being, but an energy or force that drives the green fuse through the flower, as it were (this is actually next chapter, but seems to fit here).

IX. Temporalizing the Great Chain. A sort of last-ditch effort to save the Great Chain. idea was its temporalization: if the notion that everything exists simultaneously in infinite space leads to determinism and a bizarre definition of the good, if our human demand for meaningful free choice and for growth and improvement is negated, and if observation shows that not all life exists at once and that the universe of existent things has in fact undergone many changes, then perhaps it is better to conceive of plenitude and continuity as being spread out in endless time. Leibniz suggests that the created universe is a process, a continuing unending progress. The Chain of Being has thus, as Lovejoy puts it, become "endless Becoming." This means that all possibility can indeed be actualized over time, and, even better, there can be genuine evolutionnthings getting better and more complex and more intelligent over time. The temporalized version of the principle of plenitude is cosmic evolution. And that goes for individuals too; we faustian human beings can strive ever upward and onward. The idea that we are already living in the best of all possible worlds gives way to the idea that we can help the world evolve toward the better and better. Progress and perfectibility, hurray!

X. Romanticism, 19th C. Lovejoy says that this is a total revolution, a huge change in human thought, occasioned to a large extent by the moral and intellectual weariness induced by too much Great Chain. Where previous thought had valued universality, simplicity and logical relations, Romanticism values diversity, complexity, irrationality, feeling, passion, originality, difference for its own sake. The artist as original creator is enthroned (for God himself is "insatiably creative" and loves diversity and originality). Individualism and self-realization (which could be self-expressionism or self-transcendence, or maybe both) are major values. All this leads to lots of exploration of other cultures, and finally to cultural relativism, and

another "transvaluation of values." Lovejoy, who is writing in the Thirties, sadly notes that individualism can easily become chauvinismñ a "particularist uniformitarianism" that seeks to impose ones personal, cultural and national values on the rest of the world: Deutschland uber alles. It is interesting that the revival of Neoplatonic monism in 19th C. Germany contributed much to Romantic values, both in the concept of emanations (now as a "life force") and in the subordination of formal logic to direct experiential knowledge. It's also interesting (though maybe only to theology students) that of Plato's "two gods," the transcendent one has all but vanished and the immanent one is now identified with Nature (as in Romantic poetry and Dylan Thomas). He is a more philosophically correct God than the God of the Bible, but, alas, he is not a God one might pray to

Lovejoy concludes: The Great Chain of Being idea finally wore itself out, but it had "an instructive negative outcome." When its implications (plenitude, continuity) were drawn out logically they ended up showing that a rational ordered cosmos is impossible and, even if it could be, we couldn't know it. Complete rationality ends in irrationality. "Sufficient reason"was probably the primary culprit and has been the primary victim (questions about causality are even more acute now). Problems of infinity in time and space have not been solved, even by mathematicians (note Cantor's useful distinction between "potential infinities" (the mathematical sort) and "actual infinities" (the kind envisioned by the Great Chain of Being). Great quote from Whitehead, p. 333, which I hope the Book Club will have time to talk about.

Some questions I would like to ask (if I were there...sigh!):

- 1. Throughout the book Lovejoy notes that pushing one sort of monism ends of requiring some other sort of dualism (e.g. Neoplatonic substantive monism ends up in an almost Manichaean moral dualism). In connection with our Consciousness topic, does it seem that the human mind absolutely requires some sort of dualism? Possible dualisms include: two Gods (immanent vs. transcendent); flesh/matter vs. mind/spirit; the One/Being vs. the Many/Becoming as ontologically distinct; the unlimited (eternal, infinite) vs. the limit; the moral dualism of good and evil; the knowing subject and the known object; the epistemological dualism a la Plato of reality as known by the mind and by the senses; others???
- 2. Does the focus on Consciousness Studies in our time suggest a return to Platonist epistemology?
- 3. Does the suicide of the principle of Sufficient Reason in relation to the Great Chain idea suggest any conclusions about the relation between consciousness and reason?

Stuart,

I don't think I understood what you were saying about hierarchies in Buddhism as compared with Western religious traditions during our last meeting. I found the following passage in Religious

Traditions of the World, (ed. H. B. Earhart) Harper and Collins, 1992, pp. 874-5.

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Early Buddhism assimilated the gods and spirits of Brahmanism and popular folklore, interpreting their nature and existence in terms of karma--merit and demerit. They are conceived as part of a hierarchy of life-forms running the gamut from existence in extreme pain to existence in great pleasure as the result of good and bad deeds.

THE SIXFOLD HIERARCHY OF BEINGS

I. The Realms of the Gods--twenty two levels, above the earth, for example:

Sublime Gods
Richly Rewarded Gods
Radiant Gods
Great Brahmas
Satisfied Gods
The Thirty-three Gods (of Brahmanism)

- II. The Realm of Humans--mixed pleasure and pain
- III. The Realm of Demons in the atmosphere, near the earth
- IV. The Realm of Hungry Ghosts, on the earth
- V. The Realm of Animals
- VI. The Realm of Hell-dwellers, below the earth.

...Demerit earned as a human leads to rebirth as a demon, a hungry ghost, an animal, or an inhabitant of hell; merit leads to rebirth as a god or, again, as a human being....

For some reason, I believe you felt that the Buddhist hierarchy was fundamentally different from that which dominated the Western mind, but I was not clear why. Could you elaborate a little, if not in email, then during our next meeting?

Thanks, Seth

Hi Seth,

First,!I was certainly not clear!at our last meeting about hierarchies, or the lack of them, in Buddhism.! Second, you are absolutely right about hierarchies in early Buddhism, or as!I think Lovejoy!calls it!"primitive" Buddhism, which borrowed heavily from the!gods and spirits

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of Brahmanism as your article points out, Brahmanism being an integral part of the roots of Hinduism.!
What I was groping around for is that in later developments within Mahayana Buddhism I feel the is a fundamental approach which seems to preclude hierarchies in sentient beings.! It has to do was fundamental concept in Mahayana Buddhism of Sunyata which is the philosophical idea of the "emptiness" of all things.! In Mahayana Buddhism all things are totally empty of any defining essence.! They have no fixed identity or inherent existence, all phenomena exist purely by definition in terms of other things, and one of those other things is a sentient being whose mind generates those definitions.
The idea of inherent existence is deeply ingrained in most western thought and philosophy, and is rejected in Mahayana Buddhism.! Emptiness in Mahayana Buddhism is not to be confused with Nothingness.! Emptiness implies the potential for existence and change.!
There is, some think,!an interesting convergence in the!concept of Sunyata and Quantum Physics Here is an excerpt from Sean Robsville's thoughts on "Quantum Sunyata": !
"Fundamental particles such as electrons and photons do not have any obvious causes. Either they have always been there or else they come into existence as the result of random quantum events.!! Mathematical equations of quantum physics do not describe actual existence they describe potential for existence.! Working out the equations of quantum mechanics for a system composed of fundamental particles produces a range of potential locations, values, and attributes of the particles which evolve and change with time.! But for any system only one of these potential states can become real, and this is the revolutionary finding of quantum physics!what forces the range of the potentials to assume one value is the act of observation.! Matter and energy are not in and of themselves phenomena, and do not become phenomena until they interact with the mind."
A most interesting linking. I think, with an old idea from Mahayana Buddhism to Quantum Physics!