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Lloyd Morgan's interpretation of emergent evolution

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LLOYD MORGAN'S INTERPRETATION OF EMERGENT EVOLUTION

BY

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PREFACE

This thesis represents research in the general field of emergent evolution. The works of Lloyd Morgan and S. Alexander were studied in particular and the works of others in allied fields were used in a supplementary capacity. It maintains that Morgan offers a unique personal interpretation of the universe. Its purpose is to give an understanding of Morgan's scheme and to call attention to certain problems within the limits of his theory.

In the process of the development of this thesis, the following libraries were used: The Library of Congress, Washington, D.C., The Virginia State Library, The Richmond Public Library, and The University of Richmond Library. I wish to acknowledge here the courtesies extended by the staffs of these libraries.

I wish to give recognition to my fellow-student, George Crabtree, who read the manuscript and gave valuable criticisms.

It is with a sense of sincere appreciation that I consider the main advisor to this thesis. The imperfections entailed are in no instances due to his counsel and the positive contribution that it makes may be traced to the teaching and influence of Dr. B. C. Holtzclaw.

J.M.P

Richmond, Va.
May, 1947

TO MY WIFE

INTRODUCTION

The problem of metaphysics is one of the most baffling, yet one of the most interesting in the field of philosophy. From the time of Anaximander, many different views of evolution have been offered as a solution to this problem. The one that we shall discuss is a comparatively modern one and is expounded by Conwy Lloyd Morgan. Twelve books by Morgan have^{been} published and most of these deal with the hypothesis of emergent evolution. His greatest work was the book entitled "Emergent Evolution" which embodies a comprehensive presentation of the hypothesis from beginning to end. Thus, the greatest part of my discussion will be concerning the principles set forth in this work. It is my purpose in this thesis to offer certain problems that confront Lloyd Morgan's scheme. As a preliminary, I believe it is profitable to discuss the two greatest influences upon Morgan to enable us to receive a better understanding of his system. The outstanding influences are Professor S. Alexander and the field of biology. Some of Morgan's most essential views are taken from Alexander, but there is a parting between the two men upon other points. Chapter five will be devoted to these differences. The presentation and explanation of Morgan's emergent evolution is the topic for Chapters two, three and four and the problems entailed are presented in Chapter six. Then, my conclusions are offered

INTRODUCTION (CONT'D)

in the final chapter. It is difficult to say just what another person means in new language symbols. For this reason, I will frequently resort to quotations. In this thesis, I wish to give a complete synopsis of emergent evolution as it is propounded by Morgan and present various problems that arise concerning it.

CHAPTER I
INFLUENCES ON MORGAN

A. Biology

Conwy Lloyd Morgan, an English philosopher and scientist, began his works with the publication of "Animal Life and Intelligence" in 1890. In this volume, he dealt with organisms and their development. He was very much impressed by the close linkage of the structures of the different animals. He was also convinced that life was something that was progressing and capable of all sorts of changes. "Life today is not what it was yesterday, nor will it be tomorrow the same as today"¹. By observing and studying various animals, he concluded that the organism was fitted to respond to certain influences of the external world and that these influences could in turn cause particular developments in the organism. By an elaborate set-up of experiments, he discovered that animals possessed

1. pg. 182 Animal Life and Intelligence by C. L. Morgan

intelligence, but he would not ascribe reason or rational powers to them. This study was basic to his later belief in mental evolution. He inferred that the lower stages of mental development were connected with the perceptual sphere (eye) and the higher stages were connected with the conceptual sphere (brain). His next two works, "Introduction to Comparative Psychology" and "Psychology for Teachers" were both written in 1895 and deal with certain themes of practice for teachers and basic psychological concepts. However, they had little significance in his emergent evolution hypothesis which arose later on. In 1896, "Habit and Instinct" was published. This conclusion was reached "that which is outside experience can afford no data for the conscious guidance of future behavior."¹ He found that experience was a pre-requisite for planning and there existed a close alliance between emotion and instinct. Consciousness was seen as the awareness that characterized the lower level of existence as well as the higher. "Animal Behavior" (1900), "The Interpretation of Nature" (1905), and "Instinct and Experience (1912) were works that brought forth further research in the biological field and thereby offered more hints to emergent evolution. By the time his 1905 publication was made, Morgan had in mind emergence as an interpretation of all reality but the actual

1. pg. 131 Habit and Instinct by C. L. Morgan

expounding of the complete hypothesis was made in the University of St. Andrews in 1922. "Emergent Evolution" followed in 1923. This particular book provides the source for the greater part of this thesis for it is here that the view of emergent evolution culminates and is advanced in entirety. However, Morgan's later publications were intended to shed further light upon the subject. "Mind At The Crossways" (1929) and "The Animal Mind" (1930) are further attempts to elaborate the emergence of mind within the general scheme of emergent evolution. They go into detail but add only a small amount to the original assumptions. His final work, "The Emergence of Novelty" (1933) is a restatement of what is included in his main volume. It attempts to clarify the different kinds of evolution and insist upon the emergence of a new kind of relatedness already discussed in "Emergent Evolution". The most important book, other than the main volume, is "Life, Mind and Spirit" (1926) in which the role of Spirit is discussed in relation to life and mind as emergents.

Because of profound scholarship and genuine interest in the biological field, Morgan was competent enough to attempt a solution to the historical controversy between vitalism and mechanism. A synopsis of this problem will be given here because biology was one of the greatest foundations for Morgan's entire philosophy. In the age-old attempt to explain adequately those things that exist before us involving life, two well-

formulated theories are advocated. These are mechanism and vitalism.

Mechanism, as its name indicates, is the explanation that interprets organisms as mere machines. Organisms act and function in their respective ways because they are so constructed as to produce the result that is obtained.

"Living organisms may be regarded as conscious or unconscious physical and chemical mechanisms."¹ Researches in this field have established certain facts that support the theory. One of these is the fact that the matter of which organisms are composed is reducible to the same chemical elements as are found outside the body. No new matter is formed in the body, or disappears from it. Another argument offered is that the whole of the energy which is liberated in the body, whether as heat, mechanical work, or in other forms, can be traced to sources outside the body. Then, we can conclude that the two great physical laws of conservation of matter and conservation of energy can thus be extended to all living organisms, even human beings. In answer to the objection based on the existence of consciousness, mechanists say it makes no difference to the energy balance of the body whether an animal is conscious or not. So, consciousness is treated as an accompaniment.

1. p. 1 Mechanism, Life and Personality by J. S. Haldane

It is an accompaniment of physical and mechanical action, but not something that alters in any way the physical and chemical changes which it accompanies. This additional set of considerations is offered by the mechanist. "In all biological investigations we are investigating either structure or activity, and when we come to details we find that the structure is physical and chemical structure and the activity physical and chemical activity. Hence, biology can be nothing but the physics and chemistry of organisms."¹ Further support is argued from the history of biology. In the field of physiology, Borelli applied the principles of mechanics to elucidate the action of the muscles on the limbs. Kepler applied the principles of optics to the action of the eye in vision. Harvey made advances relating to the problem of the circulation of the blood by physical observation and interpretation of the facts in mechanical terms. These facts are used to support the primary idea that organisms are physico-chemical compounds and that all behavior may be analyzed in terms of the laws of physics and chemistry. The wonderful complexity, accuracy and co-ordination of the physiological mechanisms found within the bodies of living organisms may be accounted for on purely mechanical principles. There is no real purpose. The thing we call purpose is merely apparent

1. p. 4 Mechanism, Life and Personality by J. S. Haldane

and is in its essential reality, merely a mechanical purposeless physico-chemical reaction.

Vitalism, on the other hand, claims that there is an essential and fundamental difference between living organisms and purely inanimate things. They regard this fact as to some degree self-evident. Anyone realizes that those organisms we see before us are of a different nature than mere stones. They admit the physical and chemical constituency of organisms but go on to insist upon the presence of an immaterial purposive agency. Driesch with his "entelechy" or vital principle and Bergson with his "elan vital" or vital force, insist that there is something outside mere physical and chemical laws that gives life its essential nature and causes it to function in an intelligent, purposive, and harmonious way. Some vitalists offer as a proof of vitalism the fact that we can construct a grain of wheat with the exact chemical proportions of a real grain and give it proper nourishment but it will not come up and grow. We can compose an egg, identical to the hen's, but it will not hatch. This illustrates the fact that life comes from life and there is nothing that produces life within itself. Of course, the strongest basis of vitalism is that there is no scientific evidence at all of the spontaneous generation of life from non-life. Again,

as opposed to the denial of purpose or at least, the extreme skepticism about it, which we find in mechanism, vitalism rests its case on teleology and refers to the harmony of function and regularity of nature to substantiate such a belief.

These two views are, however, challenged by Morgan and others with the concept of emergence in biology. "The fact of emergent evolution is more conspicuous in the realm of organism than in the domain of things. All the great steps in evolution - the making of the body, the establishment of a brain, the beginning of the blood, the differentiation of sense organs, etc., were new syntheses with new intrinsic qualities and new extrinsic properties".¹ This idea of emergence in biology says that the characteristics of an organism are novel, and not reducible to physical and chemical laws. It is a general law of nature that when compounds reach a higher degree of complexity, such wholes develop characteristics not explicable in terms of their parts. Such characteristics are called "emergents". Life is an emergent and belongs to the general scheme of emergent evolution. "The naturalistic contention is that, on the evidence, not only atoms and molecules, but organisms and minds are susceptible of treatment by scientific methods fundamentally of like kind.

1. p. 206 Concerning Evolution by Thompson

that all belong to one tissue of events; and that all exemplify one foundational plan. In other words the position is that, in a philosophy based on the procedure sanctioned by progress in scientific research and thought, the advent of novelty of any kind is loyally to be accepted whenever it is found without invoking any extra-natural Power (Force, Entelechy, Elan, or God) through the efficient Activity of which the observed facts may be explained."¹ Therefore, we can not only do away with mechanism with its insistence of physico-chemical essentialness but also with vitalism, with its outside or alien influence that gives life. Wheeler says "We are, I believe, bound to assume that the organization is entirely the work of the components themselves and that it is not initiated and directed by extraspatial or extratemporal things."²

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1. p. 2 Emergent Evolution by C. L. Morgan
 2. p. 159 Essays In Philosophical Biology by Wheeler

B. S. Alexander

In the year 1916, several years before Morgan's "Emergent Evolution", Professor S. Alexander lectured at the University of Glasgow and gave the first comprehensive scheme of emergent evolution. These lectures were entitled, "Space, Time and Deity" and were delivered during a two year period, then published in 1920. There are various things in Alexander's two volumes on "Space, Time and Deity" that are found essential to Morgan's scheme. In this section we shall revert to the most important influences on Lloyd Morgan from Alexander's theory.

The first thing Morgan retains from Alexander is the space-time basis for all reality, and the independent existence of the physical world. Alexander, in explaining his philosophical views on nature as a whole, bids us think away all that has emerged in the course of the evolutionary process. We are to do away imaginatively with ideals and higher values, rational powers and mental abilities. Think away mind itself with its attributes and continue subtracting until the animal world is obliterated. Let all living things fade from existence and reduce the inorganic remainder to purely spatio-temporal relationships. This space-time purports to be an inexpugnable remainder because it is impossible to imagine away beyond this point. This basis must be retained.

It is evident that Alexander would have to stop somewhere in this schematic subtracting process for it transcends the human mind to reduce all things to nothing. If we attempt to conceive the world of existence as space and time in the traditional sense, it is incomprehensible because we are driven to the question of essential relatedness between physical things on the one hand and space and time on the other. However, it is reducible to space-time instead of space and time and the plausability of this will be discussed at a later point. There is no mere duration or mere extension----just space-time. It follows that it is necessary for Alexander to postulate the characteristics of space-time and he does this from a viewpoint of classification traditionally used for space itself. He accepts the triple aspect or tri-dimensional nature of space and includes in his explanation a triadic view of time to enable him to couple the two together ultimately. The first aspect of time is the fact that it is irreversible in direction. A second aspect is that each instant is between two instants. Then, duration in succession offers a third aspect to fit in with tri-dimensional space. "Now the three features enumerated in Space and Time being independent we might content ourselves with saying that as between spatiality and successive duration there subsists such a connection of interdependence

that each new feature in Time is rendered possible by a new dimension of Space and conversely renders it possible."¹

Alexander means here that the reason why Space has three dimensions is that time is successive, irreversible, and uniform in direction.

Alexander continues to explain space-time in the light of perspectives. A perspective space-time is merely the whole of space-time as it is related to a point-instant by virtue of the line of connection between it and other point-instants. From this I believe we are correct in assuming that a perspective in general of space-time from one point-instant, differs from the perspective from another point-instant, whether the perspectives be taken in respect of the instants or points, and we see that points merge into points, and instants into instants each because of the other.

Again, we catch a glimpse of space-time through mathematics. When the universe was in this stage of evolution, there was latent in this space-time all the possible geometrical and abstract laws that apply to space and time. Alexander's empirical and geometrical space, are identical, because both types of point-instants have a universal and identical character or structure. In reality, we discover these laws

1. p. 51 Space, Time and Deity by S. Alexander

of mathematics and do not invent them.

Morgan does not review the details of Alexander's space-time but accepts them under the heading of acknowledgment, which we shall see at a later point. Alexander views time as the "mind" of space and space as the "body" of time. This means that we may think of the relation of time to space in the same sense as we do the relation of mind to body. The mind is the dynamic, driving force of our bodies and we must look to time as the generator of all emergents. The first and simplest relation of all existence is that all finites are merely connected together within the one space-time. Alexander uses the word "compresence" to explain this. A thing affects another, with which it is compresent, differently according to the latter's relative position in space or time, or its intrinsic receptivity. Since space-time is continuous, things are not cut off from one another, and a thing itself contains other things and is part in turn of a larger complex. Every finite is a part which subsists within space-time and so far as it retains its own individual character, it is accommodated or adapted to its surroundings in space-time. From such early relationships of the first point-instants, the physical universe came into being.

A second important point in Alexander's philosophy is the concept of emergence. Alexander claims that new "qualities"

emerge. He would say that at some stage of inorganic evolution this or that so-called secondary quality, such as color, emerged. Then, at some later stage of the evolutionary process, the quality of life emerged and still later the quality of consciousness arose. So, with Alexander the emergent is a new quality. Morgan continues the idea of emergence and attempts to clarify it, as we shall see later, though he views the emergents as new types of relatedness rather than new "qualities". Morgan tries to make his emergence more inclusive than is generally implied by Alexander's "quality", which does not have necessarily the same conditions preceding it as "relatedness" must have. "Out of one level¹ in the heirarchy of levels a new kind of existence emerges." Thus we note that in both systems, the concept of emergence is basic and that new qualities and types of relatedness are the things that actually emerge. Alexander and Morgan both start with space-time and the resulting emergents are considered supernatural or supervenient to that level of existence from which it emerged. In both philosophies the inorganic world comes first, then life, then consciousness; and then mind emerges. There is also a parallel between the hierarchy of levels of existence and their repective orders throughout. Morgan adopts Alexander's concept of the Nisus which is the

1. p. 28 Emergent Evolution by C. L. Morgan

drive towards Deity. The Nisus begins at the level of space-time and pervades the whole of existence. It causes the emergents to go upwards toward Deity. For Alexander, this Nisus is strictly within the process of evolution and any entrance of an outside or alien influence is flatly rejected. Morgan uses the same interpretation and adopts the Nisus for his scheme. The Nisus towards Deity is important in Alexander's scheme and is also essential to that of Morgan. It is used in the same sense by Morgan in the effort to weave direction into emergent evolution.

Finally, Alexander's notion of Deity is employed in Morgan's evolution. Not only do they agree on the emergence of matter, life, mind and values in this order, but the goal towards which all of the evolutionary process is heading is the same---that of Deity. "On the one hand we have the totality of the world, which in the end is spatio-temporal; on the other the quality of Deity engendered, or rather being engendered, within that whole. These two features are united in the conception of the whole world as expressing itself in the character of deity and it is this and not bare Space-Time which for speculation is the ideal conception of God."¹ We see the inclusiveness and yet the transcendent characteristics of Deity in a similar statement from Morgan. "We may

1. p. 354 Space, Time and Deity by S. Alexander

acknowledge physical events as ultimately involved, and God on whom all evolutionary process ultimately depends." ¹ Thus, Deity is included within the evolutionary processes and is also the goal towards which the Nisus is driving all emergents. In Chapter five, we shall review some points wherein Morgan and Alexander are in opposition but from this brief review, we see that Professor Alexander with his concepts of space-time, emergence, emergents, order, Nisus, non-alien influence, and Deity played a tremendous influence upon Lloyd Morgan.

1. p. 298 Emergent Evolution by C. L. Morgan

CHAPTER II
EMERGENT EVOLUTION

To Morgan, the concept of emergence not only applies in the field of biology but extends though the entire metaphysical scheme of things. In his attempt to clarify his position, he bids us think of a pyramidal scheme (Fig. 1). At its base lies space-time and this extends throughout the entire pyramid of existence. Every event that occurs does so within the limits of space-time.

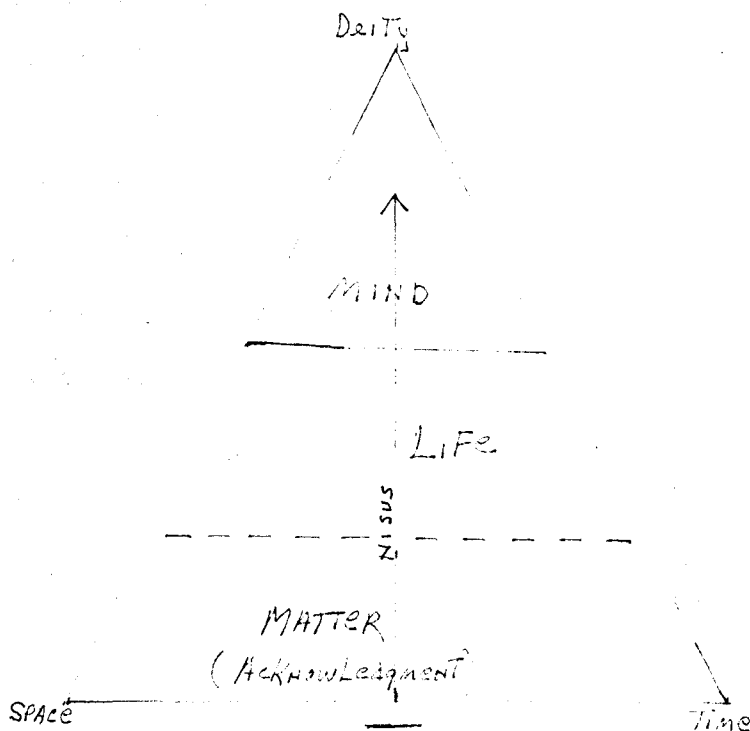


Fig. 1

From minute point-instants in space-time emerged electrons and when these entered into their elaborate structures, atoms emerged. These atoms combined in such fashion as we know them now, and the physical world emerged from them. This is the view of Alexander and it takes us up to the dotted line in Fig. 1. Here is where Morgan's view fits into the scheme. He did not attempt to show how the physical order emerged but puts it under what is known in his philosophy as "acknowledgment". "Now for better or worse my notion of philosophy is that, while it involves the contributions of science in all departments, it should seek to express a constructive scheme of the world -- a consistent scheme which is conceived at a level of reflective thought that supplements, though it does not supersede, science. There must be nothing in this scheme which is discrepant with science; but, on this understanding, there must be constitutive features which complete the otherwise incomplete delivery of strictly scientific thought. That, I think has always been the aim of philosophy. It will, I feel sure, continue to be its aim. It seeks to develop a constructive creed and not only a working policy. In any case, I want to nail my colours to the mast. In credal terms, I believe in a physical world." ¹ Notice Morgan's statement that he believes in a physical world. He admits that this is be-

1. p. 59 Emergent Evolution by C. L. Morgan

yond proof but is so evident that it deserves to have place in the plan of evolution, so he places it under his heading of "acknowledgment".

The stress in emergent evolution is on the incoming of the new. "There may be resultants without emergence; but there are no emergents without resultants. Then, it may be said that through resultants there is continuity in progress; through emergence there is progress in continuity." ¹ It is evident that things already in existence can produce already known resultants and it is a misconception to ascribe novelty to those resultants that really are not new. But, every time an emergent emerges, it necessarily causes new resultants because of its unique character. Morgan illustrates the concept of emergence in this way. Assume that the chemist has some liquid heated to a high temperature. Gradually the liquid is cooled and slowly crystals begin to form that are new. Those crystals were derived from the liquid yet nothing could be paralleled or explicable between the characteristics of the two - so it is in the evolutionary process. Things, when they attain a certain degree of complexity, branch off or emerge into something new. Again in the case of the gases, oxygen and hydrogen, we see an example of this. When the two are combined in a certain fashion something new and different evolves. It came from the oxygen and hydrogen

but you can not characterize it in the former stage before the actual emergence because its complexity has not emerged into a separate unique thing.

Within the whole of our pyramidal scheme, emergence is taking place in smaller pyramids. There are three main emergents --- matter, life, and mind. But in addition to these, an almost infinite number of little emergents evolve. Perhaps here it is best to introduce or explain the "nismus" towards Deity symbolized by the arrow towards Deity in our diagram. This nismus concept is the idea that all emergents have a trend upward toward Deity. Each emergent has its relative level within the pyramid and this presupposes a hierarchy of emergents. The nismus belief is that the emergent trend is forward or towards the higher or "more". This implies that the physical world existed before life, life before mind, and so on. Morgan believes this nismus is pulling or directing everything to the highest possible emergent --- Deity. "It seems, as I think on the evidence, that the higher we ascend in the hierarchy --- and especially when when we reach human persons --- the emergent complexity is such that it appears justifiable to say that no two persons are quite alike. Each person is an uniquely individual product along one of very many lines of advance --- say Shakespeare, Goethe, Newton, and Darwin. If this be so, the nismus towards deity on its strictly central line should cul-

CHAPTER III
EMERGENT EVOLUTION CONT'D.

Now that we see that the emergents pursue higher direction, we may discuss the relation of the emergent to that from which it has emerged. "Each higher stage is in turn supernatural to that which precedes it. In this sense life is supernatural to the inorganic."¹

Keeping in mind the *nisus*, we can easily see that each new emergent would in this sense be above, or supernatural to, the thing from which it has emerged. The concept of involution will throw further light upon this relationship. "Life stands to matter in ^{the} same kind of relation as mind stands to life. And this, I submit, can be better expressed by saying that life involves a basis of matter just as mind involves a basis of life. The relation common to both is that which I call involution."² Involution indicates a state of

1. p. 29 Emergent Evolution C. L. Morgan

2. p. x Life, Mind and Spirit by C. L. Morgan

complication or entanglement. It is a state of being involved. In emergent evolution, each emergent level in ascending order cannot come into being save as "involving" the level or levels that are below it. Or, we might say that each new emergent must be preceded by other emergents with which it is associated. With Morgan then, involution is used in a sense of dependence. At any given level, the manner in which natural events run their course depends on the type or kind of relatedness which has emerged at that level. In other words, life could not have evolved except for the pre-existence of matter, because the concept and reality of life itself necessarily involve an existence of matter. In like manner the emergent, mind, involves the lower level, life, and with each emergent some preceding or lower level is involved. This sense of connection and dependence is called involution in Morgan's version of emergent evolution. The concept of involution is particularly important in ascertaining the order of emergents for we can observe which emergents are involved or dependent upon other emergents. For example, life is not dependent upon consciousness, but can exist before it and independently of it. But, consciousness can not exist before life, neither can it exist apart from it. This is involution. Again we catch some idea of the relation of the emergent and that from which it is emerged. "If one

says, in technical usage, that crystals are emergent in a cooling solution, one implies that they were not actually there, or anywhere, prior to such emergence. Then and there they just come as something new, so far as that solution is concerned. This does not mean that they come into being 'out of nothing' for they come into being out of the cooling liquid. None the less, as crystals, they are new for they were not actually in existence aforetime." ¹ So we see there is a direct connection between the two but that the emergents are not direct descendants of those things from which they emerge.

Now that we have summarized the view of the process of emergence and its nisus, this question follows. What is it Morgan claims to be emergent? It is some new relatedness or new kind of relation. It seems that this new emerged relation would be abstract but it is not so with Morgan. It is concrete. Every emergent then, is in reality a different or new type of relatedness. Relatedness includes not only relation-of-terms but terms-in-relation. That is, not only does the new emergent possess a relation among other emergents, it has an internal relatedness as well. Morgan uses the term "intrinsic" to denote relatedness within the unique system of the emergent (terms in relation), and the word "extrinsic" for relation-in-terms (relation to some other system). There are many

1. p.12 The Emergence of Novelty by C. L. Morgan

types of both kinds of relatedness and the different kinds such as consciousness, life, chemico-physical, spatial and temporal relations may exist independently or they may be co-existent. In other words, one emergent or new relatedness does not necessarily exclude another.

What causes these emergents to emerge? It is an all-inclusive Activity or force that is purposive and directive. God or Activity is the source of all evolutionary events and is persistent from the base to the apex of our proposed pyramid. Morgan frankly accepts Activity under his concept of "Acknowledgment" rather than attempting to prove the point. Causation and causality need to be distinguished although they are not contradictory. Causation starts; causality continues or is the source of happenings. Morgan, unlike Berkeley, who denies any difference, differentiates the two, but claims that no gulf exists between them and that they belong to the same realm. So in an ultimate sense, God or Activity is causation and causality. Causality is not external to the pyramid but is in its limits. In fact, there is no alien influence whatsoever that alters or affects evolutionary events in any way. Here we detect a carry-over from Morgan's philosophy of biology. He rejects the outside push of the vitalist and insists that all reality lies within the pyramid. "Any insertion into physico-chemical evolution of an alien influence which must be evoked to explain the phenomena of life

is explicitly rejected under the concept of emergent evolution."¹

We find that Morgan uses the words proficience, inter-venience, and advenience to give us a clue to relatedness. Proficience is attained only on the mental level. It involves the distance-receptor-pattern of vision. It is perceptual reference coupled with distance-receptors. "My doctrine is that all that is minded is within us, and founded primarily on the correlated outcome of receptor-patterns; that there are physical things existent in their own right outside us in a non-mental world; and that the properties which render them objective in mind are proficiently referred to these things."² Morgan means here that outside our individual world of existence lie things different from the mental aspect of ourselves, which are a result of perceptual reference and distance-receptors. When we refer to them, we, in a sense, attach a minded quality to the actual physical reference and this reference from our minds to those things that do not involve the mental, is called proficience. Proficient reference enables us to ascribe to the visual field more than what is actually included in the distance-receptors. For example, if I hold a coin in my hand and turn it until I actually only see an elliptical shape instead of a circular shape, the distance receptors enable me to see that one part of the object

1. p. 12 Emergent Evolution by C. L. Morgan

2. p. 50 Emergent Evolution by C. L. Morgan

is farther away than another, but it does not appear round. But, I know through past experience and general knowledge that a thing like a round coin may be tilted, but not lose its essential character, so I see the coin in my mind as being circular although it appears to me to be elliptical. This is proficient reference. The properties I ascribe to the coin are called proficient properties.

One of these proficient properties brings up the historical controversy of idealism and realism concerning color. Let us look briefly at this controversy and discuss Morgan's views concerning it. Professor John Laird, who is a realist, believes that beautiful colors and sensations are there whether any personal mind appreciates it or not. "A romantic revival may be needed to reveal the stateliness of Gothic cathedrals or the serene grandeur of Alpine summits, but this beauty and the worth of it belonged to the Alps and the sanctuaries all the time."¹ We note that for the realist, color is not dependent upon the mind. On the other hand the idealist maintains the view that color must be perceived by some mind before it becomes a reality. Lloyd Morgan parts company with both the idealistic and the realistic viewpoint in an sense. We notice that, in his departure, he still en-

1. p. 126 Study in Realism by J. Laird

dorses the realistic implication from a pragmatic standpoint. "Beyond question we act 'as if' colour belongs to this thing or that of its very own right. To act otherwise would generally result in confusion."¹ But he goes beyond realism and idealism in maintaining that "Colour-perception involves certain physiological changes in the brain at the level of life; this again involves (if any reliance can be placed in the outcome of research in the field of colour-vision) certain specialised physico-chemical changes in the retina on the choroid, or (more comprehensively) in the retina cerebral system."² "Thus at the top we fringe off into correlated consciousness, aesthetically 'qualified', and at the bottom we fringe off into the physical. There is an enchainment set of events, subject to emergence, from bottom to top, and the beauty of colour is struck out."³ "If the idealists assert that colour lives only at top in the mind irrespective of physical correlates in the organism, or if the realist assert that it lives only at bottom in the thing, irrespective of physical correlates in the organism, I respectfully submit that each goes beyond the evidence. According to the evidence (if I do not misread it) colour lives in the whole situation, in other words it has being in virtue of the extrinsic relatedness

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1. p. 227 Emergent Evolution by C. L. Morgan
 2. p. 228 Emergent Evolution by C. L. Morgan
 3. p. 229 Emergent Evolution by C. L. Morgan

of person (body-mind) and thing; but that which has being in virtue of extrinsic relatedness I call a property, not a quality intrinsic to the thing." ¹ Color then, is accepted as an emergent quality. However, Morgan holds that the instrument (the eye) is necessary to interpret the color. We may conclude that Morgan is neither an extreme idealist or realist here but accepts the essentials of both. These proficient properties go to make up proficient reference, and produce the beauty of the rainbow and the other aesthetic enjoyments that we experience.

"Advenience" is meant to represent the physical influence on the plane of matter. It is simply the relationship of physical existences. The relationship between convenience and proficiency on the plane of life, however, needs further discussion. This relationship is called "intervenience". Morgan states, "The position then is that adventitious physical influence calls forth in the organism a very complex system of intervenient events with psychical correlates; that these events culminate in behavior towards the source from which the adventitious influence was effluent; and that proficient reference endows the thing with all the meaning that accrues under correlation, as the net result of all intervenient events, thus

rendering the acknowledged thing ¹an object of perception, which, for our reflective thought, is always in some measure conceptualised." We see that there exists a complex integrated system of intervenient processes on the intermediate plane of life. Those intervenient life-processes are involved in all proficient reference. They occur within the organism and exist as links between the physical and mental, "they are the intrinsic physical and physiological attributes of events which in their psychical attribute have the quality of consciousness."²

The question is raised now concerning the meaning of consciousness. It seems Morgan uses the term consciousness below the level of mind. Not only does consciousness exist here, we may follow it in emergent evolution on down toward the bottom of our pyramid. Morgan ascribes psychical correlates which purport to be possessing "awareness" even in the lower levels. "But can it confidently be asserted that only at a certain level of neural functioning or even that only in organic functioning does correlation obtain? If this question be regarded as too speculative, let us ask: How far down 'on the inside so to speak' does correlation extend in us? There is at any rate something to be said for the view that no limits can be set to its downward extension;

1. p. 214 Emergent Evolution by C. L. Morgan
 2. p. 52 Emergent Evolution by C. L. Morgan

that not only receptor-patterns but all the physico-chemical changes they involve have psychical correlates which if not directly still indirectly contribute to conscious "awareness"; that just as physical novelty involves the continuance of lower levels of physical existence so does psychical novelty involve a continuance of lower levels of psychical existence."¹ Again, Morgan goes no farther to prove this assertion. It is placed under acknowledgment. When proficience takes place it has been preceded by advenience and intervenience . The existence of consciousness or awareness may however, precede the neural or organic levels of existence.

1. p. 308 Emergent Evolution by C. L. Morgan

CHAPTER IV

EMERGENT EVOLUTION (CONT'D)

"In the natural course of evolutionary advance, one may say that life is emergent on non-living matter"¹ Morgan's view is that life is supervenient upon nature or that the emergent life, followed after the physical world was in existence. Things of a physical nature were being continued by Activity and being drawn upward by the Nisus and when a certain degree of complexity was attained in the highest form of inorganic things, life came forth as a new emergent. What is the differentia of life? This question is said to be unfair and irrelevant by Morgan. "Those who would single out from among the multitudinous differentiations of an evolving universe this alone for special interposition would seem to do little honour to the Divinity they profess to serve."² We note that there are no great gaps or distinction between

1. p. 52 Emergent Evolution by C. L. Morgan

2. p. 84 The Interpretation of Nature C. L. Morgan

these emergents. They are simply in accordance with the general scheme of emergent evolution. Inorganic emergents reached a certain state and life emerged supervenient to it. In its earlier stage, life was of course very primitive and it gradually began to take on new horizons and develop itself through Activity and the Nisus to the highest form of life that we experience today. Life, when it emerged, was an entirely new kind of relatedness and therefore caused a new set-up of relations throughout the world of existence. Though it came from the inorganic, it was unique and different in its essential nature, as are all genuine emergents, and is not explicable in terms of nature. However, Morgan uses the example of "living" radium atoms to try to fill in the link from the non-living to the living. "...as I put it, consciousness is supervenient on life."* The upward development of life and the complex cell advancement finally broke off into a unique phenomenon which we call consciousness. Thus, we note that consciousness is used here as an emergent. In the last chapter, we cited where Morgan seemed to believe that it preceded life. As beings became aware of things and other beings, development was correspondingly accelerated and another high degree of complexity was attained, and mind emerged. It was largely the capacity and ability of the eye that brought this emergent about. The nervous system

* p. 49 Emergent Evolution by C. L. Morgan

developed and the physical basis (brain) of mind was intact before this main emergent took place. Morgan can not seem to decide whether this emergent occurred in the animal organism or the human body. He made a lengthy study of animals and proved certain "mental" powers to be in their possession. "One may picture the organism starting with a certain amount of congenital automatism of the more or less definite instinctive type and passing on to reach a certain amount of the acquired automatism of habit. The latter state is in part superadded elements as well."¹ These instincts can be however, developed to a high degree. "The foundations of animal intelligence rest on individual choice or selection, which in turn is dependent upon association."² He assumes that some animals do have intelligence and offers many illustrations and experiments to substantiate this view, but finally concludes that they are incapable of reasoning. So, the thing that differentiates the "mind" of the animal from that of the human is the power to reason, but mind in the sense of intelligence originated in the animal realm. "The evolutionary ascent of mind has been as I believe, an advance through new products to further novelty."³ This means that mind is a new "newness" and arose supervenient on life.

1. p. 142 Habit and Instinct

2. p. 152 Habit and Instinct

3. p. 115 The Great Design by Frances Mason

Is reason an emergent or is it a development of the innate capacity of mind? Morgan indicates that it, along with other little pyramids, is an emergent. "When this kind of reflective procedure characterises the life of a rational being, have we here the emergence of something generally new in mental development? I believe we have." Emergent evolution believes there are chief emergents and those which are considered as little emergents within the boundaries of the large ones. Reason is a small emergent under one of the main emergents - mind. Therefore, some lower forms of species may possess a mind and consciousness but not be influenced by the emergent, reason. In the development or unfolding of memory we get a good clue to the ascent of mind. First, it is evident that there had to be something to experience an occurrence ---this, Morgan calls a "register". The register was by definition capable of "registration". When the register was able to retain something in its consciousness and consider it, "retention" was being introduced. If at a later stage the same registration could be recalled to mind, "revival" was employed. Revival also might have been stimulated by something outside the register and if it strongly invoked the register's attention, "recognition" was developed. Finally "reference" was existent when the original registration

1. p. 211 Emergent Evolution by C. L. Morgan

could be classified.

The mind is capable of a high degree of development. Morgan gives good instructions and theory concerning this. "Mental development is not only a matter of cognition but also of the emotions and the will."¹ Values and aesthetic capacities are unfolded after mental emergence, and we are in a trend to receive more and more as the evolutionary process continues. "Emergent evolution works upwards from matter, through life, to consciousness which attains in man its highest reflective or supra-reflective level. It accepts the 'more' at each ascending stage."²

The nisus is attracting everything towards Deity. But before we view this concept, let us note again the essential nature of emergence within our scheme. "Just as a combination of two gases, oxygen and hydrogen, results in the production of water, having new properties, or as the chemist creates a new carbon compound by synthesis, so man is something genuinely new."³ It is to be noted that Morgan claims that each ascending emergent is evolved "with" and not merely "from", just as the crystals are emergent with the liquid. This difficult point in Morgan's philosophy may be more clearly understood if we realize that the new emergent, though it is in a sense related to that from which it is emerged, is unique and is a new

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1. p. 159 Psychology for Teachers by C. L. Morgan
 2. p. 228 The Emergence of Novelty by C. L. Morgan
 3. p. 230 The Emergence of Novelty by C. L. Morgan

type of relatedness.

Now, we shall consider briefly the apex of our pyramid--- Deity or God. First we see God as directive Activity. This is a force pervading all of emergent evolution which aims at constructive consistency. The "manner of going" in all natural events ultimately depends upon this Activity. Secondly, Morgan uses God as identical with the Nisus that draws all things upward. "God as being, is the nisus of the universe pressing onwards to levels as yet-unattained, or as I should prefer to say, is the Nisus directive of the course of events."¹ In the third place, we view God as Efficiency. "But there may be something more in the heart of events than such effectiveness----namely that which one may speak of as Efficiency---- something more than causation, which I shall call Causality-- something more than dependence which I capitalize as Dependence!" (We are to assume here that Dependence refers to the evolutionary process and not to God.) "In virtue of this, should it be accepted, not only does something happen under effectiveness, but all that is emergent has being through Efficiency. This, which of course may be rejected, is, for those who take the risk of the higher acknowledgment, the Creative Source of evolution--- this is God."² God is eternal.

1. p. 34 Emergent Evolution by C. L. Morgan
2. p. 89 Emergent Evolution by C. L. Morgan

but finds expression within the pyramid of being. The entire concept of God is included under Morgan's "acknowledgment".

The concept of Spirit deserves consideration here because it is an important aspect of Lloyd Morgan's evolutionary hypothesis and because it has connection with the idea and concept of God. It is mentioned in "Emergent Evolution" but a more detailed discussion is found in "Life, Mind and Spirit", which is a later work. "Since it is part of my aim to distinguish life and mind from Spirit I seek also to use distinctive words. Hence, I speak of 'manifestations of Spirit'. But Spirit is nowise separable from life and mind, nor they from it. What is given for reflective contemplation is a world-plan of natural events. I hold that this world-plan is a manifestation of Divine Purpose. We human folk are, in life and mind, integral parts of that world-plan. We too, are manifestations of Spirit which is 'revealed' within us. Each of us is a life, a mind, a Spirit and instance of life as one expression of world-plan, of mind, as a different expression of that world-plan of Spirit in so far as the Substance of that world-plan is revealed within us." ¹ The world-plan or evolutionary process from the lowest form of inorganic matter or space-time event to deity is a "manifestation" of Spirit or of God. Then, Spirit is being partially revealed

1. p. 32 Life, Mind and Spirit by C. L. Morgan

in you and me. I say, partially because we are only an individual instance of that which in full manifestation is universal. But not only are you and I manifestations of Spirit, even the emergence and development of the rose is in accordance with Divine purpose and weaves its part into the great pattern of evolution. We notice then that Spirit is not something emergent or divorced from life and mind but something that pervades the entire world of existence and causes it to develop in a teleological, harmonious way. It seems that Morgan feels that evolution alone is insufficient and because the realization of this inadequacy is so pertinent, he injects the idea of Spirit, which supplements and is an indissoluble part of each stage of emergent evolution. Morgan replies to the assertion that evolution might bring disastrous results to religion in this way. "There is no disjunctive antithesis of evolutionary progress and Divine purpose. The question: Is there one or the other, has no meaning if there always be one with the other. My chief concern is to present the point of view of one who accepts both."¹ This is an attempt to make the natural and supernatural not only continuous but equally divine and the expressions or manifestations inherent within our pyramid are an expression and manifestation

1. p. IX Life, Mind and Spirit by C. L. Morgan

of Spirit which ultimately is God.

SUMMARY OF CHAPTERS II, III and IV

To explain adequately the general scheme of Lloyd Morgan's emergent evolution, a pyramidal scheme must be introduced. Everything that takes place, does so within the limits of the pyramid. There cannot by any type of alien influence or force outside that affects the happenings inside. At the base of the pyramid is space-time. Alexander tries to account for the emergence of matter from this inexpugnable basis but Morgan merely accepts it as a fact that cannot be proved. Morgan introduces the idea of "acknowledgment" to reconcile such things as the inorganic world and activity. He uses the concept of acknowledgment because he feels that things are not adequately explained without it. To have a complete comprehensive system, acknowledgment of certain things is an essential. In the evolutionary scheme, there are countless resultants and emergents. Resultants may occur without emergents but emergents always cause new resultants. The law of emergence does not coincide with the general idea of evolution. Emergence in biology and in other spheres of the evolutionary set-up means that the arrival of a new thing, broken off from a high degree of complexity in the preceding stage. It is

exemplified by the cooling of a hot liquid and the emerging crystals. The relation of the crystals is not altogether foreign because they actually emerge with the liquid not from it, but the crystals are certainly different and unique and have new form, so they are said to be emergents. The line pointing towards the apex of the pyramid is intended to symbolize the nisus or force that is pulling the entire process of evolution towards Deity. It causes emergent evolution to want the "more" and the more or best is found towards the apex of the pyramid. The thing that Morgan actually claims to be emergent is a new type of relatedness. There may be extrinsic or intrinsic relatedness, but the emergent comes as a novelty from the preceding state of affairs. One wonders about the cause of emergence. Morgan differentiates between causation and causality, as being the starting and continuing of the process respectively. The source of emergent evolution is Activity which is included under acknowledgment. In further explanation of emergence, the three different types of relatedness are used. Pro-jcience is that relatedness that is obtained only on a mental level. It is perceptual reference coupled with distance-receptors. It enables us to view a thing on a higher level than the bare physical. Advenience is the physical influence on the plane of matter such as the space relationship between physical objects. Intervenience is a

type of relatedness found on the plane of life. The intervenient processes are essential to the proficient processes because life emerged before mind. Matter, life, and mind are the chief emergents. Matter is acknowledged, and life emerged after the inorganic process had attained a high degree of complexity. Life is supervenient to matter, but as the general law of emergence states, it is not explicable in terms of matter. There is no greater gap here than in the other emergents. The same general law characterizes the entire process. Consciousness is considered as a forerunner of mind and it too, is an emergent. In the ascent of mind, one of the main factors was in the complex development of the nervous system, largely the eye. When the perceiving process was highly developed, mind emerged to recall the perceptions, and to function in an entirely new realm. Animals are considered to have intelligence but not rational powers, although Morgan is not dogmatic in denying them all reason. The unfolding or developing of memory involves the register, the registration, the retention, the revival, the recognition and the reference. God is used in several ways; first, as the directive Activity; secondly, as the Nisus; third, as the Efficient; and finally, as Causality. The process of emergent evolution started and generated by God is heading upwards to Him and during this accomplishment, things exist and develop and new emergents are supervenient

to them. The concept of Spirit is used as the Divine Plan or way in which everything progresses. It is the "manifestations" of God. The most subtle appreciation of the artist or the poet, the highest aspiration of the saint, are no less accepted than the blossom of the water-lily, the crystalline fabric of a snow-flake or the small intricate structure of the atom. The theory of emergent evolution urges that the "more" of any given stage, even the highest, involves the less of the stages which preceded it and continues to exist with it. It does not interpret the higher in terms of the lower. This would imply the denial of the emergence of those new modes of natural relatedness which characterize the higher and make it what it is. All things are upon the river of evolution floating towards deity and final development.

CHAPTER V

MAJOR DIFFERENCES OF MORGAN AND ALEXANDER

In the second section of chapter one, we considered the way in which Alexander influenced Morgan. We shall now discuss briefly, not the mutual concepts and coinciding elements, but the points wherein Morgan and Alexander disagree. A divergence is found in the interpretation of the status of sense-data. Alexander says: "In our ordinary experience of color, the color is separate from the mind and completely independent of it. In our experience of the color's beauty there is indissoluble union with the mind." ¹ I think Alexander tends towards realism here for he means that color resides in the thing seen, with which an organism having the quality of consciousness may or may not be compresent. In other words, color to Alexander is intrinsic to the thing as its own emergent quality. We recall that Morgan ascribes

1. p. 244 Volume II Space, Time and Deity by S. Alexander

color to the entire pyramid of the whole situation both mental and physical. Thus, we see that Morgan rejects the view that color is an intrinsic quality of the thing because the higher level (mind) is necessary. Alexander leans heavily toward realism. Morgan leans in the opposite direction towards idealism, at least in his insistence that the psychical factor is necessary for the existence of color.

This divergence leads farther. Alexander postulates a non-mental world in which colors, odors and sounds are emergent qualities. This is opposed by Morgan. "I am concerned to state distinctly that a sense-datum is not, for my interpretation, a gift until it is received, and that the person as recipient, only has it when it reaches him."¹ With Alexander, it seems that the secondary qualities emerge right along with the emergent but Morgan waits until mind has emerged in order to apprehend these qualities, and they are not real until a mind has received them.

The God Concept of both thinkers coincides in one respect (Hesus), but Morgan's idea of God differs in many ways from that of Alexander. Alexander considers Deity as an emergent quality toward which everything is yearning but never attains. "God as actually possessing deity does not

1. p. 42 Emergent Evolution by C. L. Morgan

exist but is an ideal, is always becoming; but God as the whole universe tending towards deity does exist."¹ Thus we note that deity is the goal that is never attained. God is the whole pyramid tending towards this emergent quality. Lloyd Morgan considers God as something in a sense outside the yearning and striving, as He seems to be represented as having already attained what the process is tending toward. "If one may claim that acknowledgment of God, on whom all natural events in their ascent, notwithstanding lapses to lower levels, are ultimately dependent, is less permissible at the bar of philosophy than that other acknowledgment of a physical world, our current experience, so largely infected by the relativity of appearance, swings between the infra-vital beyond of materialism and the supra-personal Beyond of Immaterialism. Both, as beyond, are strictly speaking, outside the realm of appearances in the body of our pyramid... There should be no disjunctive antithesis between the timeful and the timeless. They are not to be regarded as incompatible contradictories. Difficult as the task may be they must in some way, be combined in a higher synthesis"². "God is All in all but in diverse modes and degrees of manifestation."³ God is an object for contemplation in the same sense as is

1. p. 428 Mind by S. Alexander
 2. p. 63 Emergent Evolution by C. L. Morgan
 3. p. 302 Life, Mind and Spirit by C. L. Morgan

a personal self in social regard. In other words, what is objective is a concept of God. It is God that we contemplate and God or Deity that has what we are seeking. It boils down to this, it seems. Morgan's God is the Nisus plus Activity plus Efficiency plus Spirit plus Divine Purpose plus God as an eternally existing goal of the evolutionary process.

Alexander's Deity is that highest emergent quality toward which all things are striving, which has never been attained. Then we may conclude that Morgan is less pantheistic than Alexander who includes God within the process altogether. But, in contrast with Alexander's Nisus, we know Morgan assumes a personal, purposive, spiritual Being.

Though both men accept the concept of emergence, there is a distinct difference between their interpretations. Alexander views the emergent as something that evolves "from" a lower level of existence. He calls his emergent "quality". Things are emerged "from" things. Morgan accepts the idea of "from" to a certain extent but for his particular interpretation, the emergent must emerge "with" the thing from which it emerges. A new type of "relatedness" instead of "quality" is what Morgan claims to be emergent. The concepts are in a way similar but Morgan attaches the idea of "with" to Alexander's "from".

Again, there is a parting of the ways in the concept of the mark of the past or memory. Morgan says, "Note that

againness is a character of certain presentations in full swing; that passing awayness characterises the fading presentation; but that comingness attaches to a re-presentation which forestalls a like presentation and therefore implies prior experience of normal routine. They are quite distinctively characters within the emergent quality of consciousness and enter into composition only when this level of evolutionary advance is reached. But they involve physiological and physico-chemical processes on the planes of life and of matter; and they cannot adequately be interpreted, under emergent evolution, if these be not taken into consideration."¹ Thus, we see that the past for Morgan is no more, the future is not yet, and their marks are characteristic of present events. They offer data for reference to a "conceptual scheme of the past and the future no less present in mind."² But, on the other hand, Alexander considers that the past is present and essential to the enjoyment of memory. When we speak of memory we may mean remembering. This is universally admitted, I think, to be mental. But what is remembered is not universally so regarded. There are some who consider the thing that is remembered to be non-mental, Professor Alexander is one of these who supports such a belief. When this or that is

1. p. 146 Emergent Evolution by C. L. Morgan
 2. p. 148 Emergent Evolution by C. L. Morgan

remembered, "experience declares the memory to have the mark of the past on its forehead, and the expected, the mark of the future."¹ This mark, I take it, is not put there by us. It is found there and therefore can be considered as a non-mental mark. In other words, Alexander maintains that we can experience now and then at the same time. He says, "A tract of brain may be occupied either by a present or a past enjoyment."² Morgan explicitly rejects this as has been shown.

The greatest contrast that appears between Morgan and Alexander is found in the concept of plan. For Morgan, every happening is a manifestation or expression of the great world-plan. Morgan states, "As a matter of direct observation and under such reflective treatment as enables the observer to furnish a descriptive plain tale, this, that, or the other set of events, which affords subject-matter for special inquiry, runs its course on a plan--not infrequently in a routine with recurrent phases. The subsistent plan or the routine--this, that or the other--is a plain-tale inference from the several instances which are directly observed."³ Thus we notice that Morgan fits the idea of concept of plan into the entire explanation of plain-tale of evolution. Everything runs its course in a plan and there exists a great

1. p. 146 Emergent Evolution by C. L. Morgan
 2. p. 148 Emergent Evolution by C. L. Morgan
 3. p. 62 Life, Mind and Spirit by C. L. Morgan

world-plan or Spirit. We search vainly for a great plan or Spirit in Alexander. Things happen due to their individual natures and are in a sense independent. There is no Divine Purpose or fulfilment of a pattern.

Thus we see that Morgan differs from Alexander in regard to sense-data, memory, emergence, God, and the world-plan. These differences do not divorce the two systems altogether but indicate that there is a definite "parting of the ways" concerning certain concepts between Morgan and Alexander.

CHAPTER VI

PROBLEMS

1. Reconciliation of Novelty

In emergent evolution, "each ascending stage in the one attribute is evolved with that of the other."¹ Each emergent is supposedly new, yet it has evolved in some way with the thing to which it is supervenient. For the sake of clearness, we shall use a simple compound for illustration, that of water. The view of emergent evolution seems to indicate that with the union of hydrogen and oxygen, water emerges as a new type of relatedness with new relations but still with the things from which it emerged. Water is the emergent and the characteristics and union represent the high degree of complexity from which water sprang. Now, the difficulty is found in this question. Is water something intrinsically new or is it a mere combination of two physical existences that take on

1. p. 116 Emergent Evolution by C. L. Morgan

a different set-up? Or, does water contain hydrogen and oxygen or did these two things by union produce something radically new? This seemingly ambiguous idea in Morgan's philosophy, I believe is one that forces itself into view. Any possible alternative would contradict the system in general - hence the ambiguity. Let us first assume that emergence entailed the idea that each emergent evolved from the lower thing. This would bring difficulty to Morgan. Alexander uses emergence in this sense, "The emergence of a new quality from any level of existence means that at that level there comes into being a certain constellation or collocation of the motions belonging to the level, and possessing the quality appropriate to it, and this collocation possesses a new quality distinctive of the higher complex."¹ This is the general connotation of the word emergent evolution. However, Lloyd Morgan attempts to inject a close affiliation or a deeper sense of relatedness between the emergent and that from which it is emerged. The idea of descendance or complete "fromness" is disastrous to his scheme. Morgan illustrates his claim of "withness". "A simple and familiar illustration must suffice. When carbon having certain properties combines with sulphur having other properties there is formed, not a mere mixture but a new

1. p. 45 Space, Time and Deity I by S. Alexander

compound, some of the properties of which are quite different from those of either component. Now the weight of the compound is an additive resultant, the sum of the weight of the components; and this could be predicted before any molecule of carbon-bisulphide had been formed. One could say in advance that if carbon and sulphur shall be found to combine in any ascertainable proportions, there will be such and such weight as resultant. But sundry other properties are constitutive emergents which (it is claimed) could not be foretold in advance of any instance of such combination. Of course, when one has learnt what emerges in this particular instance one may predict what will emerge in that like instance under similar circumstances. One has learnt something of the natural plan of emergent evolution.¹ We understand that the process not only involves involution between the lower stages and the higher, but that each particular emergent pyramid is pervaded by both a "with" and "from" nature. Morgan repeatedly emphasizes the fact that the lower level is not left out in the process, but that it evolves "with". Thus, we see that we cannot ascribe merely a sense of fromness to his scheme. On the other hand, we are not able to interpret emergent evolution purely on terms of withness because of his insistence of novelty. "But if nothing new emerge - if there be only regrouping

1. p. 69 Emergent Evolution by C. L. Morgan
 2. p. 64 Emergent Evolution by C. L. Morgan

of pre-existing events and nothing more - then there is no emergent evolution."¹ There must be an emergence of novelty - a type of newness. The real emergent is a new type of relatedness.

The issue may also be stated in terms of quality and relations. Does Morgan mean that from the lower level of relations a new quality arises? No - this is rather the definite clear-cut idea we derive from Alexander. In fact, Alexander claims that the emergent is simply a quality that emerges from the lower level. Does Morgan mean that from an old relation a new emergent relation or relatedness arises? This is his view. But, he insists that this is concrete and not abstract, to account for material substance. "I want to make quite clear what I shall always mean when I use this word. It has rather an abstract look, but what I call an instance of relatedness is through and through concrete. It includes not only the relation-of-terms but also the terms-in-relation. An atom is an instance of relatedness; so, too, is an organism; and a person. Any entity, as such, is an instance of relatedness."² Here we review Morgan's attempt to attach concreteness or physicalness to the new emergent. But he claims a relation in the actual emergent. "If it be asked: What is it that you claim to

1. p. 2 Emergent Evolution by C. L. Morgan

2. p. 69 Emergent Evolution by C. L. Morgan

be emergent? - the brief reply is: Some new kind of relation."¹

Now, if the new emergent could be seen as a relation and yet be concrete, a problem arises. Can qualities be reduced to relations and nothing else? It seems that Morgan would have to say that not only does a new relation arise, but an accompanying quality. For instance, in the emergence of the color red. If anything comes near being a quality it is this, and apparently red is not a mere relation and nothing more.

There seem to exist emergent qualities and if this be true, Morgan would need to assume that qualities plus new relations compose the new emergent. If we consider that this new emergent is evolved with and not from the lower level, we arrive at the mentioned difficulty of novelty. Does Lloyd Morgan add to the concept of emergent evolution or does he needlessly complicate it? I believe he confuses it here because of the simultaneous use of opposing or incompatible ideas-- namely, "fromness" and "withness". There should be a reconciliation of novelty within the limits of Morgan's philosophy but it seems that this problem remains unsolved.

1. p. 69 Emergent Evolution by C. L. Morgan
 2. p. 64 Emergent Evolution by C. L. Morgan

2. Minor Problems

a. Spatial-Temporal Relatedness

In the beginning of this essay, this question was alluded to in brief. The inquiry was concerning the possibility of the existence of space and time apart from physical things. But, since Lloyd Morgan uses the concept, space-time, it would be best to state the problem in this manner. Is spatio-temporal relatedness capable of existence apart from physical events?

It may be asserted that this problem does not apply directly to Lloyd Morgan. It is fundamentally an aspect of Alexander's philosophy, but Morgan accepts it and uses it, under "acknowledgment", so my contention is that the assumption is needed in his scheme, therefore it is permissible to question it here. It seems that time is not something to be considered as pre-existent because it is merely an attribute or characteristic of capacities of a physical nature. My view here is not, however, that motion preceded time. The point is that motion which involves time is something applicable only to something physical. It is incomprehensible to consider the physical movement of abstractions. If we agree that motion necessarily involves physical existences, we can then ask if motion presupposes time. The answer, I think is in the affirmative. Time, as we commonly speak of it, is

either the period during which an action or process continues or that which purports to be measurable. If no action or process occurs or there is nothing to be measured in a durational sense, then there is no time. So, because of this fact we conclude that time presupposes or implies the physical, so we say time presupposes physical existences and cannot possibly exist without them. Space is that which is characterized by extension in all directions, boundlessness, and indefinite divisibility; the subject of determinations of position and direction. It is difficult to imagine a world of space and it also is difficult to imagine no space. However, from an observational point of view, we are able to see that the only terms that we can know space are those involved in physical existence. In the mental world, there exists no space in the sense of extension. To me, it is nonsense to advocate that space occupies space. Space seems to be rather a relation or a capacity of physical objects. If so, then we may apply our argument again and contend that space presupposes physical objects.

However, it must be acknowledged that the actual basis Alexander and Morgan use is not space and time but space-time. This is offered as a supplement to the three spatial dimensions and is known as the space-time continuum. Their assertion is that this basis is not apart altogether from a

physical nature because the essential nature of space-time is that it is the actual stuff of which all reality is composed. "In truth, infinite Space-Time is not the substance of substances, but it is the stuff of substances. No word is more appropriate to it than the ancient one of hyle (ὕλη). Just as a roll of cloth is the stuff of which coats are made, but it is not itself a coat, so Space-Time is the stuff of which all things, whether as substances or under any category, are made. If I call it the stuff and not the material, it is to avoid confusion with the very much more specific idea of matter, as matter is commonly understood."¹ Yet we realize that things may endure without occupying space. For example, I remember my barefoot days. This is an existent but it requires no space. The contention of these men is that the two (space and time) are inseparable. "In like manner there is no mere space or mere time but only Space-Time and Time-Space."² Although this contention is made, I believe we have a good case for their separate existent in the realm of abstraction and memory. It seems that duration may be ascribed to those things which are recalled or used by the mind but they do not occupy space. They could not be characterized by space-time because they are not made of "physical" stuff and space-time purports to be composed of

1. p. 341 Space, Time and Deity by S. Alexander
 2. p. 48 Space, Time and Deity by S. Alexander

"physical" attributes. The contention here is that there seems to be a reality of time as a thing independent of space. Memory shows us that we may attach time to events which have occurred and do not involve space for their existence. The fact of historical events is an illustration of this point. We can use the concepts "before" and "after" to characterize past events and fit them into a definite chronological scheme. Again, in the case of arithmetical or abstract reasoning we are able to ascertain durational aspects though space is unnecessary. A premise in a logical problem is retained while the conclusion is being reached and things may precede or follow one another in abstract reasoning throughout. If this is possible and absolute or pure time is admitted, then there exists a problem at this point in emergent evolution.

b. Life and Mind

There seems to be a vagueness concerning the beginnings of life and mind and their distinction from each other in Morgan's evolution. There are many indications that Morgan reverts to the "attributes" of Spinoza. He seems to substitute matter for "extension" and mind for Spinoza's "thought". Mind is to be found down at the lower levels of existence and is an attribute of nature. "Within the whole domain of those integral entities we call organisms there is concomitance of

of mental events with bioses - that is physical and physiological events."¹ We see that the mental exists in the life level and also on the level of nature. "For me, in the good company of Spinoza and his followers, mind is within one of the two "attributes" of nature. It is the natural correlate of certain physical events which belong to the other attribute."² "Throughout the story of reference there is an accompaniment of bodily action; throughout the story of influence there is an accompaniment of reference and enjoyment. But both are included in one synthesis: and underlying both -- common to both -- is substantial unity, one and indivisible. In the distinction I draw between two stories I do but echo Spinoza. For me, as for him, 'substance thinking and substance extended are one and the same substance, comprehended now through one attribute and now through the other."³ We see here than Morgan adopts Spinoza's concept of "thought and extension" at least in its essential function. He not only speaks of mind in this sense but it is also treated as an emergent. "Under what I here call emergent evolution stress is laid on the incoming of the new. Salient examples are offered in the

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1. p. 11 Life, Mind and Spirit by C. L. Morgan
 2. p. 27 Emergent Evolution by C. L. Morgan
 3. p. 249 Life, Mind and Spirit by C. L. Morgan

advent of life, in the advent of mind, and in the advent of reflective thought." ¹ The problem that arises concerns the double aspect or role of mind. How can it be used in an innate or developing sense and also as an emergent? An emergent is by definition something new and unique and if mind persists along with extension or matter from the base of our pyramid, there is no chance for it to be an emergent. Thus, the mind concept in Morgan brings confusion instead of clarity. Again, when we attempt to classify life in Morgan's theory, we have difficulty, "Life and mind alike belong to a different order of being which cannot arise out of - can only act into - the material order of being." ² Apparently, Morgan adds life to this other idea of thought and extension because it is treated in the same way as mind in this sense. Could Morgan mean that matter, life and mind are everlasting existents? He seems to hold that this is true. However, he regards the same three levels of existence as his chief emergents and considers them as being supervenient on the other (mind on life and matter). The problem may be summarized briefly: Things can not be used as immanent, everlasting as in Spinoza's sense, and still be an "emergent" in emergent evolution. Morgan seems particularly vague concerning the concept of life.

1. p. 1 Emergent Evolution by C. L. Morgan
 2. p. 136 Emergent Evolution by C. L. Morgan

He asks us not to question the gap between it and the thing from which it emerged and gives examples of the close resemblance between the higher form of the inorganic and the lower form of life (radium and one cell organisms), and yet asserts that it does not emerge from the "material order of being". This confusion is closely related to the problem we mentioned concerning novelty. It seems Morgan needs to postulate unique emergents but also needs to retain everlastingness and development.

3. God

By Morgan's concept of Spirit, we see that the pyramid of evolution is in accordance with Divine Purpose or a great plan. Different developments in evolution are groaning or yearning for greater attainment. In this sense, God is the Nisus towards deity. Deity belongs to the order of perfection. As the universe flowering to deity, God has no rival, just as on the level of mind, there exists no un-mind. Deity in the universe as a whole is like life in a healthy body. God is the power which makes for deity. He is the Nisus causing the emergents to go upward. Emergent evolution is really not sufficient. God is the eternal perfect Energizer, a god who transcends the evolution process but not space-time. He is the directive Activity. He is the Cause and Causality. He is the Efficiency and the goal and apex of the pyramid. This complex conception of God has definite elements of the Idealistic philosophers. Fichte, Schelling, Schelkiermacher and Hegel all agree that the goal of the Absolute's striving or the immanent purpose is self-expression, self-realization and self-development. The Absolute is the infinite activity of which all else is a manifestation. However, the Absolute Idealists do not confine everything to space-time as does Morgan. Morgan may be classified as a ~~Absolutist~~ but he is not an

Idealist. However, the problems that confront Morgan are similar to those that confront the Absolute Idealist. The real problem for Morgan with his God concept is to present a reasonable synthesis between the traditional God and the God or drive of the evolutionist. He wants to retain the idea that God is eternal and that the goal of the striving found in the evolutionary process is God but he also attempts to use God as the Nisus and in a sense everlasting or within the process. It does not seem plausible to conceive God as a goal and yet be used in the world-plan in an immanent capacity. My contention here is that it is difficult to synthesize the two somewhat opposing concepts of God and that, for the sake of clarity and plausibility, Morgan should make a choice to include in his emergent evolution.

CHAPTER VII

CONCLUSIONS

Emergent evolution is an attempt to account for what is before us. It, in a sense, predicts the future, retrospects the past and explains the present. It offers the best explanation that we can find from an evolutionary viewpoint because it gives the most comprehensive interpretation of the universe.

The interpretations of Alexander and Morgan are superior to those of Smuts and Sellars I think, because of their inclusion of God and the Nisus within their respective systems. Alexander, I feel is the most brilliant of all, for he offers the most plausible scheme. He is in reality, the basis for Morgan's theory. However, Morgan does present a unique, individual scheme that reflects philosophical genius and his theory is a contribution to metaphysics. But, Morgan raises difficulties in his system that Alexander does not have to cope with, namely, the

reconciliation of everlasting existents and the "from and with" idea of emergence, and conflicting attributes of God. Alexander asserts that the emergents are emerged or qualified "from" the lower levels and not "with" and God plays a single comprehensive role.

More than the others, Morgan leans toward a personal or somewhat "orthodox" God. He gives us an attempted synthesis between evolution and God and presents the best theological theory. In this sphere, I believe, Lloyd Morgan makes a positive addition to emergent evolution. Biology initiated the scheme; Alexander supplied a comprehensive ground-plan; the novel concepts of emergence and God gave it the proper distinction; thus, Lloyd Morgan's interpretation of emergent evolution gave its metaphysical contribution to the field of philosophy.

THE END

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