

# THE IMPACT OF GLOBALIZATION ON CITIZENSHIP IN AFRICA

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## Abstract

*The aim of this paper is to examine the effect of globalization on citizenship in Africa. This is necessary because globalization process has put African nations in a predicament. Africa is in a predicament because nations in Africa seem to have no option, like all other nations of the world, as to whether to globalize or not with the rest of the world. In addition the globalization process, as we have it now makes it difficult for nations of Africa and their citizens to make substantial input into it so that we can all operate as equals on the global scene. This is very obvious on the global economic scene because the nations of Africa are poorer than the west. There is a plethora of literature on the economic and political impact of globalization. However this is not true of citizenship in Africa. Hence in this paper, an attempt is made to understand the nature of the impact of globalization on citizenship in Africa.*

## Introduction

Globalization is a process that aims at breaking down barriers separating nations and continents, thereby making the world a global village. It is a process which aims at bringing about a world culture that will eventually overshadow the various existing cultures and influence governments of the world. As a process initiated by the west which it spreads to other parts of the world, it is not a unanimous decision of all nations to globalize. It is a decision indirectly forced on all other nations by the west as other nations of the world do not seem to have an option as to whether to globalize or not. This scenario does not exclude the nations of Africa as they have to globalize. However, the globalization process as we have it now makes it difficult for African nations and their citizens to participate (with pride) and make substantial contribution and input too as we cannot operate with some nations as equals on the global scene.

This is not all, the new world order has made it possible for nations and citizens of other nations to control directly or indirectly, consciously or unconsciously the countries and citizens of African nations to the detriment of African countries. Due to the removal of 'restrictions, free trade, free information flow, unhindered movement of goods and services, privatization, liberalization and deregulation being propagated by the new world order, gradual 'embracement' or 'acceptance' of globalization by African nations has brought some negative effects on citizenship in African nations. It is necessary to note that there is a lot of literature on the effects of globalization on the economy and politics of African Nations. However, one area that is yet to be explored is the nature of the effects of globalization on citizenship in Africa (Idowu 2006; 269-276).

Be that as it may, to investigate the nature of the impact of globalization on citizenship in Africa, the following questions need to be answered. The questions are; what is citizenship? What is globalization? What is the impact or influence of the global world order on citizenship in Africa? Who controls the economic, social, cultural -life of "African Citizens"- the citizen themselves or their government or the citizens of other nations? What then is the way out? To do justice to these questions, we will start by conceptual clarification of the concepts involved - citizenship and globalization.

## Citizenship

Citizenship is often defined as membership of a particular country. It is often used to refer to bonafide members of a political community or polity. In philosophical usage (social and political philosophy), citizenship transcends the idea of mere belongingness of a country by legal definition.

According to Soysal (1994) citizenship defines bounded populations, with a specific set of rights and duties excluding "others" on the ground of nationality. All citizens are entitled to the same rights and privileges in Soysal's view.

For Crompton (1993), citizenship denotes "full and participating membership of a nation state that is, it does not- necessarily incorporate all persons resident within a given territory". Thus a citizen is a participating member in a political community, who is entitled to the rights and privileges of membership as well

### **Globalization**

Globalization is a process which aims at making the world a global village by breaking down barriers separating nations and continents. It is a process that affects all aspects of life - economic, social, cultural, and environmental and relations between governments and nations in the world.

It is an artificial process designed at bringing about a world culture that will overshadow the various existing cultures and impact or influence nations and government of the whole world (Sylvester, 2006: 278). According to Tade (1997:8) globalization depicts the transformation of the relations between states, institutions, groups and individuals, the universalization of certain practices, Identities, structures and perhaps more significantly, the expression of the global restructuring that has occurred in recent decades in the structure of modern capitalists relations.

For Alboro (2002:248), globalization is the process whereby the population of the world is increasingly bonded into a single society. This is often interpreted to depend on the concept of a global citizenship. Hence the importance of the impact of this phenomenon on what is to emerge as a proper conception of citizenship in African nations.

### **The Impact of Globalization on Citizenship in Africa**

The emergence of an ever expanding global world order and its interest in the Africa political- economy has opened the socio-political landscape of Africa to a host of influences which have Impact on our psyches, social status, the world order relationship between governments in African countries and their citizens and so on. Globalization has affected prides of African citizens because globalization has a Eurocentric bias. Apart from the fact that it is a process initiated by the west, it is a celebration of European values and ideals of development that are often antithetical to African values and needs.

This is not unconnected with the fact that globalization is a western concept which the west has been using to spread their culture, language and values which have often played a denigrating role in the comprehension of Africa realities and values. Idowu (2000; 274) has this to say on the impact of the projection and spread of European values and ideas of development of Africa. Whatever values are projected within the scheme of Eurocentricism, it is clear that without a recourse and adaptation to local

realities the contours of Africa political landscape will continue to witness the ills of disappointment regardless of how grand the projects of the west may be. In actual fact many project of support and sponsorship to the Africa continent expressing western notions or paradigms of development have done everything except develop the continent;. As a matter of fact such projects and sponsorship de-emphasize the continents history culture, values environment in the formation of value prints of development and progress.

A corollary of this is that globalization makes it difficult for government of nations of Africa and by extension their citizens to formulate policies as a result of certain technological development it champions, in the words of Khor [2004:4] "the establishment of satellite TV and the availability of small receivers and the spread of the use of electronic mail and internet make it difficult for government to determine cultural or communication policy or to control the spread of information, and cultural products, the effect of this is loss of citizenship pride to participate in policy making and decisions involving oneself, in other words, the freedom of nations [and their citizens] to make policies for the economic, social and political growth of their countries are lost (Khor 2000:5) According to Khor (2000:6) there are some entities being used under the pretext of globalization to do this. These entities include the World Bank and the International Monetary Fund (IMF) and so on.

Like colonialism, globalization is an imperialist policy designed o subjugate and dominate the world especially Africa emotionally, psychologically economically, socially, culturally and technologically. According to Toyo (2000:8) globalization is an imperialist policy from <sup>5</sup>he west to replace the Structural Adjustment Programme (SAP) which ended in the 1990's.

What we have today is neo - colonialism under the guise of globalization. This neo imperialist tendency of breaking barriers between nations especially in the economic spheres exposes hidden ' economic and social controls. This is often done through international organizations such as IMF, World Bank e.tc. Since African nations are poorer, the west exercise control over these organizations and, use the organization to control poorer and borrower nations. This neo - imperialist control was amply demonstrated when the international Monetary Fund (IMF) and World Bank contributed greatly in drafting Nigeria's 2001 budget and the query issued to Nigeria by the IMF on the issue of the four hundred million naira for capital expenditure in the same budget (Odukoya 2002:18). Consequently Nigeria and her citizens lost their freedom to make policies and take decisions for the economic growth of the country. They also lost their pride as a sovereign nation and citizens who can handle their destiny.

Since the basis of a democratic state is liberty according to Plato, and since the picture above is a far cry from the one that grants freedom and liberty to decide Nigerians' fate by ' Nigerians economically and politically, then it could be argued that the principle of democratic legitimacy of citizens is undermined directly or indirectly by the western world which propagates the entronement of democracy. What is the use of democracy without participation by citizens? This defiles the concept of citizenship in Africa. Citizens of Africa nations are thereby denigrated in their own lands. There is no doubt this scenario reveals the puncturing of citizenship pride of Africans and right to participate in governance.

A critical look at our educational system and current values also exposes a sort of hidden, socio - cultural control. The educational system in Africa today is western and western languages are the means of transmitting knowledge. Since language reveals more of the culture of a people that is their way of life, material, intellectual and spiritual (Sylvester, 2008: 280 - 281) then the teaching of foreign language (such as the west) involves the teaching of the culture of the people who uses the language that is taught. Consequently, the values and philosophy of the people concerned are being taught. In fact, the teaching of their language also makes us share their views and have a relation of a genuine sympathy with the way of life of the people in question. According to Irele (1982:4). This explains why African philosophers, having studied western philosophy have imbibed consciously or unconsciously, directly and indirectly, western values, world views, methods of assessing realities. To -the extent that some philosophers such as Bodunrin, Wiredu and Hountoridji believe that African Philosophy to be called philosophy must be analytic. In the words of Sylvester (2006:281) "this further explains why some African philosophers are engaged in African philosophy from the^ angle of the traditions in which they have been trained"

It is disheartening to note that two Nigerians from the same tribe may not be able to communicate with one another because the official language; English together with the culture of Britain (west) has been portrayed through training (in western language) as the best]. Today not only that most children can no longer speak our indigenous languages due to western education, the effect of globalization through information technology has made our youths to embrace anything European due to the Eurocentric nature of the programmes transmitted to other parts of the world.

The effect of globalization effect on our moral values cannot be overestimated. African citizens are fast losing their traditional values of morality and religiosity. The negative effect of ail this manifests in increasing wave of violence (e.g. Niger Delta), broken homes, phonograph, juvenile delinquency, drug abuse, lack of respect for eiders and constituted authority, mental diseases, suicide, environmental degradation, individualism and other social vices of the west. Africa moral values have been replaced with European values with the attendant social problems of the west.

Another problem of globalization is that it is an imperialist policy. This is because globalization is a process initiated by the west which it gradually spread to the rest of the world. The west has always been looking for ways to keep dominating the world especially Africa <sub>3</sub> economically, culturally, socially, financially and technologically. Historically, European contact with Africa brought the bitter experience of slavery which was later replaced with colonialism of the Africa nations. Now it is globalization According to Toyo (2000:3) globalization is an imperialist policy from the west to replace the "structural Adjustment Programme (SAP) which ended in the ' 1990's when the campaign for globalization started". The negative effect of ail this is that citizens of Africa nations are now being decided for. What a dehumanizing and degrading status as citizens of sovereign nations. Infact, they have no choice on matters concerning them despite the western propagation of liberty and democracy. What a contradiction. Nations of Africa (citizen or leaders) are now being forced to adopt policies made by other entities which may be detrimental to their countries and her citizens.

Without mincing words, the economies of African nations are being indirectly controlled by the west and developed nations and their citizens.

It is common knowledge that citizens of foreign countries carry out the exploitation and exploitation for Nigeria since oil exploration started in Nigeria in the 60's. In fact the oil sector is controlled by foreign counties (Okolo 1981). If Nigeria, has not had the expertise to explore since the 60's then the citizen's significant control over their economic destiny. This scenario reveals our dependence on others in a globalized world as well as our domination by others.

### **Conclusion**

The globalization process calls for a rethinking of the meaning and social status or citizenship in Africa. The globalization process has had negative effects, on citizens of African nations. This paper revealed the dehumanizing and degrading effects of globalization. The -paper has shown our dependence on the west culturally economically and political and the effects of all these on citizenship in Africa. There is no doubt that Africa is currently dominated by the west. The paper has shown and created an awareness that domination and dependence do not contribute to the making of authentic citizenship.

### **Recommendation**

In view of the fact that the effects globalization on citizenship have been negative in Africa this paper suggests that Africa nations should find other means of solving their financial problem rather than borrowing from financial institutions such as international monetary fund and world bank that are being used by the west to control African Government and their citizens. The paper suggests the development of home - grown technology as well as laying emphasis on African languages and values as a way of enhancing her sovereignty and citizens social-states.

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# **A PHILOSOPHICAL RECONSTRUCTION OF METAPHYSICS IN SCIENCE**

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## **Abstract**

*There have been various attempts at eliminating metaphysics by some philosophers such as Hume, Kant, Ayer, to mention a few. For the logical positivists such as Ayer, metaphysical statements are meaningless. Since metaphysics is chiefly concerned with the "Unobservable", it is not worthy to spend precious time on it unlike science, which consists of observable statements. It is this 'unobservable' nature of "Being" that has marked metaphysics out for study. For instance, since Hume's philosophical idea is based on experiment and observation, so it has no place for metaphysics. This paper therefore examines the criticism against metaphysics and the attempted revival of metaphysics due to its importance.*

## **Introduction**

Different definitions of the branch of Philosophy known as metaphysics have been offered by different philosophers but there seems to be a consensus that metaphysics is concerned with the study of totality of Being that is, the meaning of nature and

structure of ultimate reality. It tries to determine what is in the world as opposed to what merely appears to be. It deals with reality from a holistic perspective unlike other disciplines which deals with fragments of reality in isolation. This is why Anthony Quinton defines metaphysics as "the attempt to arrive by rational means at a general picture of the world". (Anthony 1973, 235). However, there is no agreement among metaphysicians on the actual nature of ultimate reality. For instance, we have the debate between the monists and the dualists. The former are of the conviction that reality is one while the latter on the other hand are of the view that reality is plural. Among the Monists are Democritus, Leucippus, Aristotle, Berkeley, Heppel and Bradley while a good example of the dualists is Descartes.

This controversy is unconnected with the fact that metaphysical issues are perennial in nature and do not have final solutions. For instance, most of the metaphysical issues raised in the time of the ancient philosophers such as Heraclitus, Plato and Aristotle are still begging for classification or solution till today (Ayo 2004; 19; Omoregbe 1990; 160).

The result of this is that each metaphysical school of thought propounds theories to justify its views and position. Moreover, each school appears in most cases to be able to show that there are serious difficulties with others views but does not at the same time seem to be able to develop a satisfactory justification of its own.

Conclusively, some philosophers such as Hume, Moore to mention a few have thought that there is something wrong with metaphysical reasoning. These set of philosophers thought that metaphysical reasoning by nature leads to unsatisfactory results and decided to find out why it has not yielded substantial result.

This paper will consider some of these philosophers' claims or arguments and the indispensability and attempted revival of metaphysics as an important branch of philosophical thinking. In addition the paper will express the author's opinions on the matter.

### **Criticisms of Metaphysics**

Hume's criticism of Metaphysics derives from his empirical and skeptical point of view. Knowledge, according to Hume, can only be attained by means of the empirical, experimental method or the mathematical method. So Hume leaves no room for metaphysical speculation. He laid emphasis on observation and experiment. For Hume, metaphysics is not a source of knowledge (Hume 1963; 12,3,25, 132). Hume's contention is based on the fact that only sense impressions or mathematical concepts are meaningful, sense impressions are meaningful because they can be tested by observation while mathematical concepts are meaningful because they express relationship between ideas that we can intuitively see to be true and certain. For Hume, since metaphysics does not contain relation of ideas or matters of fact, then it is not a source of knowledge because on Hume's account knowledge is derived only from relations of ideas and matters of fact (Hume 1963; 25). This is often referred to as Hume's fork (Makinde 1974; 36).

The question now is whether Hume's criticism of metaphysics is justified. This is because metaphysics is concerned with the whole of ultimate reality and not segments of it such as biology, chemistry and mathematics. In addition metaphysics consider

many things through its holistic view of reality - such things as feeling {not only reason} the metaphysical, the spiritual, the mystical and so on. So it is doubtful whether the same method of verification can be appropriate for doing science, metaphysics and mathematics. Hume also overlooks the fact that there are various experiences apart from sense experience. He ignored metaphysical, extra sensory, mystical and other kinds of experiences that we can have. This point is reinforced by Quantum physics as it questions our current observations.

So, the way individuals perceive reality based on observation if Quantum physics is something to go by may not be correct, our perception may be wrong (Stump and Abel 2002; 215-216).'

A corollary of this is that Hume also lay unnecessary emphasis on observation. Science may be done without observation today. Thus today, reality in science is taken a different turn. It goes beyond perception or observation because our observations aren't that reliable (Fodor 1994; 200).

In his own criticism of metaphysics (Kant, 1976; Ando 1974; 43) argues that metaphysical reasoning is a futile exercise, which ends up in illusion. This is because the mind can only grasp anything after applying the categories of human understanding to it. The categories can only be applied to things that appear in space and time that is, the phenomena according to Kant (Kant 1976; vi). What this means is that we cannot know realities that are not perceptible to the senses - realities that do not appear in space and time. Such realities, if they exist are outside the scope of human knowledge. So any attempt to know them will be unfruitful since they are beyond the scope of the realities that the categories can be applied. This is precisely what happens when we apply metaphysical reasoning to know realities that are not perceptible to the senses of realities in the neumenal world.

While Kant's effort is commendable because he recognizes, unlike Hume, the spiritual dimension in man but his theory is grossly unsatisfactory because of the contradiction and inconsistency inherent in it. According to Kant, the neumenal (things as they are in themselves) is unknowable since it does not appear in space and time. The question is: how do we know it exist at all? There is a contradiction and inconsistency in saying it exists since it is unknowable. That is, there is a contradiction in saying that we know the unknowable because the neumenal (its reality or existence) does not appear to the senses {space and time} however if we can know that the neumenal exists, then they are knowable and so the metaphysicians are right in studying it. It should also be noted that knowledge goes beyond reasoning {mind} alone. Mystical experience also yields knowledge of certain things {or information} so also is religious experience.

In his criticism of metaphysics, Auguste Comte argues that the world had developed beyond the stage of explaining the natural world by metaphysical principles or 'method' or religious principles. This is because the human mind had developed beyond the earlier stages of religion and metaphysics which were the first two stages of the development of the human mind. The mind is now at the third stage of development - the scientific stage which uses the scientific method. So, the human mind now confines itself to what is empirically verifiable, since only the scientific method can yield genuine knowledge of the world. This is because the human mind in



the course of its development through the early two stages discovered that the religious and metaphysical stage could not yield knowledge.

So far this paper has shown that Comte's theory is materialistic because it fails to recognize the spiritual dimension in man which is superior. It fails to realise that the deep yearnings of the spirit and soul cannot be satisfied by science and technology. According to Nwoko "Technological production has extensively advanced the material well-being of man but the question of his dignity, his rationality and his destiny is another thing...Technological production generally has tended all along to elevate and emphasis only the material aspect of human life to the neglect of the other aspect, the spiritual which is higher and superior" (Nwokolo 1992; 111-112).

In his own attack on metaphysics due to his dismay at the claims of metaphysicians, Moore, (1903; 433-453) who was initially not a philosopher expressed his shock at the way philosophers such as Berkeley (1956), Mctaggart (1968, 86-97) and others set aside common sense knowledge by claiming that matter was unreal, time was unreal, the universe was spiritual and so on. All this for Moore (1903; 433-453) amounted to a denial of common sense (Schlip, 1952; 14). So Moore made a number of assertions which he called "Truism". For instance, before he was born, many people had lived on this earth; he was living on the surface of the earth and so on. All this, he asserted to show that matter exists and that time exists, and he challenged idealist metaphysicians to refute them. Furthermore, thinking that Berkeley's dictum "essest percipi" {to be is to be perceived} is the basis of British neo-idealism which he detested; Moore went on in his article "The Refutation of Idealism" to show that the act of perception is distinct from the object of perception (Passmore 1966; 204). In the first instance, it should be noted that Moore misfired because Berkeley's dictum is not the foundation of British neo idealism which had its roots in Hegelian idealism.

More importantly, Moore's criticism of metaphysicians of his time shows his superficial understanding of metaphysics. No metaphysician denies the existence of the world or time. We are all living and doing our activities in the world, just like any other person. No metaphysician denies some people had lived on the face of the earth before Moore was born {that is, that time exists} what metaphysician like Mctaggart, Augustine, Kant were saying was that time has no objective reality. It should be noted that the phrase "the time" is different from the word, "time" (Pantelon 2004; 22). Furthermore, while the idealists (who were Hegelian - Thomas Hill, Craig etc) say the universe is spiritual, what they are saying is that the earth is a manifestation or self-projection of the ultimate reality, which is spiritual. So it takes a metaphysician to criticise metaphysicians. So Moore's truism and arguments missed the point.

Ludwig Wittgenstein's critic of metaphysics arose from his claim that language is a mirror of the world. So a simple statement pictures a simple state of affairs in the world (Wittgenstein 1963; 5:1). It is the function of language to picture facts in the world. So anything that is not a fact in the empirical world cannot be pictured by language. Since there are nothing like metaphysical state of affairs in the world, then language cannot picture them, even if there is something like that at all. Any attempt to talk of such state of affairs which do not exist results in meaningless utterances. For Wittgenstein metaphysical propositions are meaningless.

It should be noted that Wittgenstein's critique of metaphysics stems from his erroneous premise that language is designed to communicate only sense experience as if sense-experience is the only experience that man has. Man W various experiences such as mystical, religious, metaphysical, psychological etc. Since language derives from human experience and language is man-made according to Quine then language is designed to communicate all human experiences not just only one experience (Quine 1961; 41). So metaphysical utterances are meaningful. Wittgenstein however corrected this view later in his work *Philosophical Investigations* where he developed a new theory of language, the language game according to which language perform different functions and meaning depends on usage (Wittgenstein 1953; 27). On this note, metaphysical reasoning is a legitimate enterprise because the meaning of its statements depends on (metaphysical) usage. So, metaphysics is a worthwhile venture.

Ayer in his book, *Language Truth and Logic* submits that metaphysical propositions are meaningless. He argues that there are two types of propositions - those dealing with matters of fact and those of mathematics and logic. The former are synthetic while the later are analytic and tautological. The synthetic propositions are verifiable by experience and so meaningful. The analytic propositions cannot be confirmed by experience but tautological and so meaningful. He argues that these are the only meaningful proposition and any proposition that does not fall within these two are meaningless (Ayer, 1946; 114). Since metaphysical propositions are neither synthetic nor analytic, they are therefore nonsensical.

It could be seen that Ayer arbitrarily restricted the concepts of meaning and knowledge in favour of empirical experience alone. Why must empirical verification be the only form of certification of the truth or meaning of a statement? It should be noted that Quine has argued in his ontological relativity that meaning is relative (Quine 1969; 49-50). So, you cannot apply verification principle to spiritual and metaphysical propositions or issues. Ayer has refuted his position when he admitted later also admitted that his position is not true. According to him, "I think that the people called metaphysicians were perhaps not doing exactly what I described in the book" (Bryam 1971; 55).

On the issue of observation in science, the logical positivists such as Ayer and empiricists such as Hume seem to have overemphasized the role of experience and observation in science. This is because observation does not mean perceptual data or perception. It has been shown that observation goes beyond perception. According to Jerry Fodor, the data that inform our science do not have to be perceptual and often they are not. According to Fodor, we can have experimental science that relies upon data that do not consist in having experiences. Perception is not the only source of empirical data. So Fodor claims that the data that confirm a theory are just whatever confirms the predictions of a theory and these can practically be anything. Consequently, to think that data must be observable, according to Fodor, is the third dogma of empiricism (Fodor, 1994; 200).

The fact that we do not have the experience or perceptual view or observation of something, it does not follow that it does not exist and at par with those that can be perceived directly. The fact that when we see a person, we do not perceive his character likes and dislikes, emotions, temperaments etc does not mean they are not there just as tables, chairs, etc. are in our rooms.

It might be argued that data in form of chairs and tables can be seen or perceived (observed) directly unlike metaphysical facts. This is not true of all scientific data, there are some that are not perceived but are accepted as natural facts. A physicist who perceives a streak of light in a gas chamber as proton does not see proton and yet claim that there is proton before him because of the language game of physicists.

The physicist does not see proton to believe that proton exists. So, the data that inform our science does not have to be observational. Though it is true that scientific theories are typically constrained by experimental data, it is false that the experimental data are typically observational according to Fodor. Data may not be observable. According to Fodor, (1994; 201) when conducting an experiment, we are not providing the scientist opportunities to have experience rather we are putting ourselves in an environment that would enable us to be caused to have the beliefs (Fodor 1994; 200).

Thus it is not all scientific data that are directly perceivable. There are some data like proton etc. which are deduced from seeing a "streak of light" which are directly perceivable. Proton is not perceivable yet it is an empirical data. If we cannot deny the existence of protons, we cannot deny the existence of metaphysical entities.

Though it might be -argued that we perceive (observe?) some things around us through our natural perceptual apparatus either artificially aided or unaided. For instance, with the aid of a powerful microscope, we see more than we ordinarily see. Our argument here is that there are so many things we cannot see even under the most powerful microscope and which we do not need to perceive to know that they exist. For instance just as we do not see proton under the most powerful microscope so we cannot see a person's character, temperance, likes and dislikes, loves, hatred etc. to know that they exist. When we see a person, the fact that we do not see all these does not mean they do not exist or are not out there. Just as we cannot perceive protons (which is out there), so is character.

In the same vein, no matter how we watch or look intently at a child or children plant we cannot perceive the moment of "gradual growing" of the child (children).or plant. The fact that we do not see this does not mean there is no moment of "gradual growing". The same thing with metaphysical entities. They exist, hence the indispensability of metaphysics.

For these reasons and related ones, attempts to dislodge metaphysics which is the heart of philosophy have not been successful and seems indispensable and is not fated to die.

### **The Indispensability of Metaphysics**

As we have seen in the previous section the arguments of critics of metaphysics are unsatisfactory and unsound. For this reason and for the facts that metaphysics is indispensable, the attempt failed. For instance, Metaphysics is the core of philosophy. Any call for the elimination of metaphysics is therefore a call for the death of philosophy. In the words of Barnes (1947; 26) "Metaphysics is the heart of philosophy, its most vital and sensitive organ - people have, shot at it but it is not fated to die". So philosophy without metaphysics is a corpse. Philosophy cannot be done without metaphysics.

Immanuel Kant (Wundt 1924; 158 see also Ayo 2004 Rep. 2008; 110) in his own contribution argues that the phenomenon is not all that are in existence and so there is man's propensity to transcend the realm of the physical. For him this need has made metaphysics a necessary part of human knowledge. So for Kant, to eliminate metaphysics completely is impossible because it also plays a regulatory role in man epistemological framework.(Prince 1935; 316)

Even the logical positivists such as Schlick, recognize that metaphysics cannot be eliminated. For instance Schlick made it clear that "if we are to obtain any scientific knowledge at all, that we must also accept as real some things that are not given otherwise empirical science will come to an end". (Stegmulla 1959; 269).

In fact Philip Frank in his article "Foundation of Physics" blames physicist for using equations containing terms such as "coordinate", "time", "force", "magnetic field", "intensity" etc (Neurath 1971; 45) which cannot be checked to see whether they correspond to physical facts. This paper observe that using this concept and terms which are unobservable in theory constitution is inevitable. This is because knowledge extends beyond the physical and empirical and so metaphysics is indispensable. As a matter of fact, mathematical statements are tautologies and as such do not picture facts in the world. This is why Charles Sanders Pierce says metaphysics is the ape of metaphysics (Prince 1935; 314). So, any attempted elimination of metaphysics, many disciplines will go. This is because metaphysics is the foundation of other disciplines. While other disciplines study one-aspect things as we see it {appearance} metaphysics studies reality as distinct from appearance. This explains why there is metaphysical element in every discipline and why there is philosophy of every discipline such as philosophy of science, law, social science etc. Philosophy studies the metaphysical elements underlying those disciplines. Metaphysics goes beyond the realm of sense perception and matter that science itself cannot go beyond and in search of truth and solutions to questions that science and other disciplines cannot answer due to the limit of their methodology. This is why Jacque Maritain ranks metaphysics as the highest science, higher than empirical science.

Considering the above reasons, we can see that the attempted elimination of metaphysics is an effort in the wrong direction. Due to the indispensability of metaphysics and its role in life, there have been attempts to save it from some of the criticisms leveled against it.

### **The Revival of Metaphysics**

Attempts to revive metaphysics in the contemporary times could be traced to philosophers such as Green, James McTaggart, Bradley and Whitehead, to mention a few. In contemporary times, Thomas Green's philosophy marked an important step in the development and revival of metaphysics especially Neo-Hegelianism in Britain (Omoregbe, 1996; 193). Green's idealism started with a criticism of Hume's empiricism in which human ego disappears in mere perception. Green argues that this cannot be so because for the subject of perception to perceive series of perceptions, the subject of perception must be outside and beyond the series of perceptions. So we have to assume the existence of an infinite mind of which the human mind participates. The human mind tends toward the finite mind to attain the full self-realization in the infinite mind. In his own contribution, Edward Craid, having rejected Kant's

unknowable thing-in-itself, sought the basic unity underlying the subject-object duality. This basic unity, he called God who manifest himself in subject and in object.

However, it is in James McTaggart we see full-blown Hegelianism (Omogbe, 1996; 94). For McTaggart, whatever exists is substance but there is a plurality of substance. There is one substance which unites all other substances, this is the all embracing substance {the ultimate reality} he calls universe which contains all other substances. This is a spiritual substance as well as the substances within it. So matter is spiritual.

Bernard Bodanquet's metaphysics like McTaggart's talks of the ultimate reality. However for him, the ultimate reality is the absolute which is the totality of being, this absolute is infinite and undergoes a process of self-development in and through finite beings which it-uses as means to achieve its goals.

In his attempt to revive metaphysics, Bradley defines metaphysics as an attempt to go beyond appearance and get to the reality which then reveals itself as a coherent totality, an unfragmented whole (Omogbe 1996; 196). For Bradley, the ultimate reality is one, the Absolute which is beyond mere appearing. The Absolute is an inclusive reality, it underlies all appearances, so finite beings are mere appearances.

However, discussion on the revival of Metaphysics in this contemporary period without mentioning Bergson and Whitehead the process metaphysicians is incomplete. They are philosophers of evolution and were influenced by the development in science. Bergson's metaphysical position for instance grew out of an attempt to use scientific findings to sustain an especially anti-scientific conception of reality. While he denied capacity of reason to know the inner nature of reality, he argues and concludes: that intuition is the key to knowing it (Bergson 1912; 1-19). The question is what does intuition disclose the real to be? Duration is Bergson's answer. This duration, which flows and is also creative, is the underlying cause of the visible and studied in the sciences. So metaphysics is the study of this reality and thus the foundation of all sciences. To construct his metaphysics, each philosopher turn to his intuition within. And what he finds are "duration" "mobility" and "life" - an experience of change not of states that change rather, of change itself. It is an experience in which past infiltrates the present through and through that is, we have an experience of duration. This self {duration}, which is revealed in intuition, he maintained is the continuous unfolding of new experiences that include and incorporate the past while moving steadily into the future. So duration is the metaphysical principle according to Bergson, which explains all evolutionary change (Bergson 1912; 21, 39-40).

However, the problem with Bergson's position is that, the claim that species evolve is an empirical hypothesis, subject to verification or disverification by biological evidence, the claim that duration is underlying force behind this evolutionary development is not an empirical hypothesis but a metaphysical hypothesis' or claim for which there is no evidence for or against. So there is a leap from the empirical to the metaphysical. Be that as it may Bergson's attempt is commendable, as it represents an attempt to use scientific findings to explain and sustain anti-scientific conception of reality. We should also remember that he was influenced by the prestige accorded to the sciences during his period.

Whitehead (1929, 520 - 531) unlike Bergson (1946; 206; Ayo, 2004 Rep. 2008; 96) was closer to Hegel by reaffirming the capacity of reason to know reality and sought to establish a new categorical scheme of metaphysically valid concepts. While Hegel derived his categorical scheme by reflecting on the meaning of an alleged identity-in-difference, Whitehead attempted to generalize the concepts underlying modern physics. So Whitehead claimed to be empirical and scientific in a way Hegel had scorned. Whitehead rejects the dominant scheme because it makes (development in physics {in the 20th century} such as the discovery about the property of electrons) interpretations in terms of simple location difficult - hopelessly complex and even contradictory. Furthermore, the dominant scheme will also create problems for induction because the idea that there is no connection between *heres* and *theres* means that inference from what happened at one instantaneous configuration of matter to what may happen at another is quite impossible (Whitehead 1919; 1-3). In addition, another difficulty with the concept of simple location is with regard to the theory of perception which holds that the subject {mind} which observe nature is supposed to be a different sort of things, {objects} from the nature it observes. This notion of 'bifurcation of nature' is hopelessly contradictory according to Whitehead. This is because the ordinary objects of sense perception {for example the house at a distance} are unreal according to this view. For Whitehead, "Such a philosophy is too simple minded or at least might be thought so (Whitehead 1919; 10-11). Consequently Whitehead proposed a new categorical scheme to replace the dominant scheme. This categorical scheme is not only the centre of Whitehead's philosophy but it represents the last of the great efforts of speculative philosophy (Jones 1952; 319-320).

Unlike in the dominant {old} scheme in which I see myself as different from what I see, the categorical scheme holds that everything is unified. What I am conscious of is merely the relation of my "bodily events to the simultaneous events throughout the rest of the universe (Whitehead; 1919; 13). So on the categorical scheme an event is the interpenetrating of all the infinitely various aspects of the universe at some particular standpoint. That is why he used 'Prehensions' instead of perceiving because the term prehension suggests the unifying function of perception and unconsciousness without definitely implying the perception and consciousness. In contrast to the very simple material points that the old scheme took as its ultimate reality, events are very complex affairs. The old scheme were dealing with simple locations which the new scheme replaced with organism which is simply an event that is coming into being of a prehensive unity whose present includes the past and also looks ahead into the future. So in Whitehead's metaphysics every event in the universe is interrelated. Nothing is isolated and the universe is therefore an organic whole. Unlike traditional metaphysics, which sees simple locations as static, on Whitehead's metaphysic reality and events are dynamic. However, Raymond Dovetterre, (1980; 309-322) in his article "Whitehead's metaphysics and Heideggers critique", criticise Whitehead's metaphysics as guilty of the Heddegerian charge of ignoring being itself while concentrating on the being of beings. Like traditional metaphysics, Raymond argues that Whitehead ignores being which the central problem of metaphysics is. However, I think Whitehead is right because by calling God an entity, an actual entity along with other entities, Whitehead is not taking God to be being itself which Heidegger is talking about (Whitehead 1938; 233-234). Since Whitehead does not separate being itself from beings as Heidegger does but ties them (beings) together in a pantheistic manner, so Whitehead ignores the distinction between Being itself and beings.

## Conclusion

This paper observes that unlike Permenedes metaphysics, which concentrates on being, process metaphysics including Whitehead's concentrates on the being of beings. This notwithstanding, metaphysics still searches for ultimate reality even though process metaphysics is trying to see reality from a dynamic point of view rather than a static point of view of traditional metaphysics.

In both traditionary and contemporary metaphysics, there is a distinction between appearance and reality, between common sense and reality behind it. So this distinction is still a basic feature of metaphysics. So metaphysics presuppose a distinction between appearance and reality. Thus, metaphysics is an investigation into the reality beyond appearance. It is the science of reality as distinct from appearance. This is because the understanding of the immediate brute fact requires its metaphysical interpretation as an item in a world with some systematic relation to it (Whitehead 1929; Partich.I). While the natural and social sciences study the brute facts or simple location, metaphysics study what is behind the brute fact - the reality behind the appearance. This is why it is the foundation of all sciences. Every science studies appearances in the possible world that is, things as they appear to us while metaphysics goes beyond to study the general truths about the actual things in the common world of activity.

Finally, once we accept the distinction between appearance and reality and admit that things are not always the way they appear to us to be, then we will appreciate the role and value of metaphysics as an indispensable discipline. Once we accept that there is more to reality than we can perceive with our sense, then we will see the importance of metaphysics in taking us beyond appearance to the reality itself.

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## IMPORTANT INFORMATION FOR TEACHING INDUSTRIAL CERAMICS IN TERTIARY INSTITUTIONS IN NIGERIA

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### Abstract

*The teaching of ceramics in Nigerian schools has been only from the tertiary institutions. This makes thorough impartation of pottery and ceramic knowledge somewhat condensed by teachers, therefore subjecting such exercise to be a rushed short - cut of knowledge impartation without making room for adequate experiences, ideas and diverse knowledge(implied and applied) by teachers. Production in ceramics includes preparations and use of various clays and glazes which are taught to students because it is considered necessary prerequisite to the student ceramist further training. Therefore the student is made to understand the import of levigation of clays to remove impurities, calcinations of rocks and other ceramic raw materials in preparing and condition them for use in production of various wares. This process of taking the student through different rudimentary preparation stages of various pottery and ceramic materials is considered vital to the student potter's training. Should it therefore not be considered a grave omission, should the teaching of ceramics continue without equipping the student with the ample knowledge of how an important ceramic material such as gypsum plaster is produced for use in ceramics? A focus on the aspect of using raw gypsum for processing plaster of Paris and its use in ceramic production is the focus of this study.*

### Introduction

There are various types of moulds; the plaster of Paris mould appears to be the type common with most ceramic mass production. Ceramic moulds are made from plaster of Paris processed and produced from gypsum. It was developed in Montmartre France around 1770, which gave rise to its name plaster of Paris. The discovery revolutionised mass production by slip casting, gypsum is a rock or natural mineral that is mined from the earth, usually referred to as hydrous calcium sulphate or ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ). When gypsum is exposed to heat treatment, 75% of water loss is recorded to change to hemihydrates ( $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ ). In other word; gypsum + heat = plaster (and  $\frac{3}{4}$  water which evaporates). The making of plaster is done by grinding gypsum, and then heating it until the chemically-bonded water partially evaporates from 100 degree centigrade to about 180°C.

It is evident from past studies that gypsum is available in Nigeria. Researchers and writers alike have tried to establish this fact from their findings. Examples of such reports can be found with the Ministry of Solid minerals Development 2000, and Mohammed-Sani, 2002. According to Akpakip, (1993), moulds may come in various forms but the medium which can best be adapted for ceramic production is gypsum plaster. This is so because moulds made from plaster have the ability or tendency to absorb large quantity of water from casting slip, thus making it a cheap and reliable medium for ceramic production that cannot for now be substituted with other media.

Generally, moulds may be produced using other media such as metal, cement, wood, earthenware, silicone gel, polyvinyl etc. (Sullayman, 2006, Akomolafe, 1991). Moulds of different types are often used to execute both small and large projects. These could work well for non-clay processes and allied disciplines but not with ceramic mass production due to the peculiarity of its production. This may be due to the fact that most ceramic productions use clay in wet state (plastic or slurry) or such materials (ceramic bodies) that form or dry on plaster moulds. An exception is when other mechanical processes like dust / granular pressing, isostatic pressing, tape casting, and rain pressing, etc are involved.

However, the fact remains that whether mould is made in a single one piece, two-piece, three-piece or multiple-piece form, its production helps in replicating art, craft or other industrial products exactly, either in the relief or three – dimensional ceramics. In other words, to attain accuracy, uniformity in weight, size and spotless finishing, mould making and its usage are desirable. Akpakip, (1996) worked on using gypsum in the area of plaster of Paris production.

### **Schools that Offer Ceramics / Pottery in Nigeria**

Ceramic art or design is taught in most institutions offering Fine and Industrial Art or Industrial Design in tertiary institutions available in Nigeria. These schools in no specific order or mention, include among many others, Ahmadu Bello University, Zaria; University of Benin, Benin; University of Nigeria, Nsukka; Federal University of Technology, Akure; University of Lagos, Akoka, Lagos; University of Uyo, Uyo, Akwa Ibom State, Abubakar Tafewa Balewa University. Other schools are various Polytechnics and Colleges of Education in Nigeria that time and space will not permit mention of all.

### **Brief background on Gypsum and Anhydrite**

Several studies have been carried out on both the physical and chemical environment that favours natural formation of gypsum and anhydrite, the replacement of one mineral rock by another. Anhydrite is a mineral very like gypsum but without the water of crystallisation, and with chemical formula  $\text{CaCO}_4$ , it is found most frequently in evaporate deposits with gypsum. The name anhydrite was given by A. G. Werner in 1904 because of the absence of water of crystallization in contrast to the presence of water in gypsum. ([en.wikipedia.org/wiki/Anhydrite](http://en.wikipedia.org/wiki/Anhydrite)) Based on these studies, many theories or concepts have been put forward in an attempt to try and explain the various thick deposits of gypsum found around the world. According to available literature, the formations of earthy or non-metallic minerals take a period of thousands and hundreds of years. However, it is assumed by some writers that the word gypsum is from the Greek word “gypso” meaning “chalk or plaster” Gypsum (or calcium sulphate) generally occur as sedimentary deposits and this is common in much of the geological records evident from literature. Gypsum is rampant among carbonate rocks especially dolomite and do occur in saline lakes. In fact, gypsum is commonly formed in the marine environment of sea-water as opined by Deer et al (1985), Palache, (1951), Wright et al (1985) and also around oxide portion of ore deposits. However, two of the three authors state that gypsum could be formed in volcanic environments associated with metamorphic rocks.



*Fig.1 Sample of Gypsum from Dange, Sokoto Sokoto State of Nigeria.*



*Fig. 2 Raw Gypsum from Wurno, Sokoto State of Nigeria.*



*Fig. 3 Raw Gypsum from Weppa, Agenebode-Edo State of Nigeria.*

### **Basic Knowledge on Gypsum Plaster Production and Usage**

Gypsum in its natural form also finds applications in the manufacture of hydraulic cements, ammonium sulphate fertilizer, sulphuric acid and soil reclamation for agricultural purposes. When crushed and calcined into powder form it is plaster of Paris and if enriched with additives like accelerators, retarders, fillers and binders, the use of gypsum are varied and extensive. The calcined gypsum or plaster of Paris is used in building / engineering / architecture, pottery, ceramics and orthopaedic medicine according to plaster grades. ( British Geological Survey (BGS), 2006).

### **Locations of Gypsum in Nigeria**

However in Nigeria, according to available publications, Ministry of Solid Minerals Development, (2000) and Mohammed-Sanni, (2002) gypsiferous shales are reported from the upper Cretaceous Dukamaje Formation and the Paleocene Dange Formation is available in the Sokoto area. The 1.46-million tonne gypsum deposit at Wurno also in Sokoto State is currently being mined by small-scale miners to supply the Sokoto cement plant. Other gypsum prospects are reported from Nafada/Bajoga in Gombe State, at Fika in Yobe State, Weppa area of Agenebode in Edo State, and at Guyuk/Gwalura in Adamawa State (Ministry of Solid Minerals Development 2000).

Gypsum is a natural mineral which has the formula  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ . Gypsum is a soft, transparent or translucent mineral composed of crystallized calcium sulphate ( $\text{CaSO}_4$ ), found naturally primarily in sedimentary deposits. According to literature there is gypsum in Nigerian soil, Mohammed-Sani, (2002) claims there is an occurrence of gypsum in Mutwe area of Yobe State, Nigeria. In yet another development, it is also stated by Aribisala and Adegbesan; in (Ministry of Solid Minerals Development 2000). The reserve estimate of the Sokoto phosphate deposit is about 5 million tonnes. The Raw Materials Research and Development Council (RMRDC) has therefore set up pilot plants for the mining and processing of phosphate rock in Sokoto State (Ministry of Solid Minerals Development 2000). Mining is currently ongoing according to this source.

### **Uses of Gypsum Plaster**

Gypsum is used for the manufacturing of various items e.g. wall boards, paper, paints, plasters, cement etc. According to Gypsum Recycling International (2007), in total 80 million tons of plasterboard, wallboard and dry wall is produced every year.

Many researchers and writers, USG, (2014), Naturesway Resources, (2014), British Geological Survey (BSG, (2006) including Mohammed-Sanni, (ibid) and Akpakip, (ibid) agreed that plaster usage could be multi – purpose for the production of plaster of Paris which can be used for diverse purposes, ranging from orthopaedic, dental, wall/roof spraying, plastering or decorations, and production of ceramic moulds for mass production purposes as presented by Environics, (2002) and Akpakip, (1993), supports the use of plaster of Paris in ceramic mould making for mass production, while Okojie, (1978) favours the use of plaster moulds for slip casting; Sullayman, (1991) used plaster moulds for jiggering and jolleying techniques and Lee et al, (2012), used plaster moulds for a modified slip casting methods as in the case of denture casting (Giordano and McLaren, 2010). Therefore all agree on the use of plaster of Paris for ceramic mould making.

Ceramic production, it is described by various writers and researchers over the years, that it is tedious, strenuous and slow, Akinbogun, (1997), Kashim, (2002), Soyinka, (2015) and so on. Mass production of ceramic products otherwise understood as industrial ceramic production method, offers the ceramist the easier way of production. This is where the design, production and use of gypsum moulds are utilised effectively and the use of gypsum plaster powder is prevalent. For the student of ceramics to be well grounded in their chosen area of specialization, the knowledge imparted must be seen to be rich in all areas, namely materials, techniques, tools and equipments, production methods to mention but a few.

Knowledge and experience is needed for enriching all research work, teaching, professional practice, even for acquisition of knowledge in itself. For the sake that the graduate ceramist is the product and most time an extension of the tutor or teacher, it is best that they are sufficiently equipped with professional practical knowledge for all the above mentioned reasons. On this note, below are selected areas considered for the purpose of enriching students with basic knowledge on the use of plaster.

- Safety issues in working with Plaster of Paris in the Ceramic Studio.
- For the student of ceramics, physical identification and basic knowledge of raw gypsum may be important.

- The chemical representation of both the native or natural gypsum and what happens to gypsum before and after calcinations.
- Various plaster ratio mixes available from literature and the one suitable for use in ceramic practice.
- Important processes such as that of weighing plaster and water in correct ratio, mixing correctly and pouring in the right way for optimal mould making in ceramics.
- General procedures necessary to good plaster mix.

Many students of ceramic in Nigeria may not be able to identify natural rocks relevant to his/her field of study which powder he/she regularly uses. It is therefore necessary that in every ceramic section or everywhere this subject is taught, effort should be made such that a collective display of some of these rocks is available to the student both to examine and be familiar with.

Plaster is produced when raw gypsum is ground or crushed to powder is placed in a heated enclosure like kiln or oven for a period ranging from three to six hours. During this time, plaster is monitored and stirred to avoid local overheating. When calcinations is done the powder is poured on to a dry open space to cool, after which, it is wise to pour produced plaster into dry airtight container for sieving before future usage. The chemical representation of natural gypsum is  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ . This indicates the presence of calcium sulphate with two molecules of water. With calcination process, a change is recorded according to Soyinka, (2015),  $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ , it indicates a loss of 75% of the two molecules of water of crystallization remaining about 25% or  $\frac{1}{4}$  of the two molecules. This change is temporal as plaster returns to its rock like nature with an introduction of water to calcined gypsum plaster. The unique ability of plaster mould to absorb water or liquid makes it a very important material to ceramic mass production.

It is important to know that with the production of plaster, there is need to protect it from moisture and water, otherwise plaster is quick to absorb back earlier driven out water and return back to the rock like nature it was when it was in the native or natural state. For this reason, plaster must be placed in a plastic airtight container.

There are various ratio mixes suggested which are considered suitable for ceramic mould making, however Akpakip (1993) and Soyinka, (2015) posit the use of 70/100 and 75/100. Plaster is usually stable at 100 while water could be varied. It is important that plaster is first weighed out before water to forestall premature setting of plaster. However, it is equally important that the student should note that it is correct to gently pour plaster into water and not otherwise.

A moment of slaking or “slaking time” should be allowed, usually a period of between two to about five minutes. This period of slaking allows plaster in water to dissolve sufficiently before mixing, with little or no lumps, making stirring easier and quicker, otherwise, stirring could become tedious and with multiple lumps. Stirring should be done first slowly and gently in a clock wise or anti clock pattern. “Marking” method is used to determine plaster readiness of pouring. This is reliable for some, the finger is used in marking the surface of plaster and if the surface remains marked even remotely, the mix is ready for pouring on to intended surface. Other method for determining plaster readiness is through time check. It is usually agreed that plaster should be ready between eight to twenty five minutes.



*An example of three - piece mould*

Plaster should also be poured slowly, smoothly and evenly, not in a hurried manner. Once the plaster surface hardens, the finishing work on the mould should begin. All containers should be promptly washed when plaster has been poured to avoid plaster sticking to the container making it impossible to wash off.



*Tools for plaster work*

### **Benefits of Teaching Industrial Ceramics in Schools**

Teaching of industrial ceramics is the course that exposes both students and teachers to the practicality of mould making and use. It also draws their interests towards material study and examination. The long term benefit being that apart from throwing and hand building techniques, the industrial ceramist is trained to respect set targets and work persistently to meet them. Among many other benefits is that producing bigger moulds may not be such a big challenge, because in this case mould making is already part of the ceramist and therefore establishing confidence at work.

In conclusion, the above discussed issues in industrial ceramic design and practice are aimed at closing the gap of detailed and constructive teaching in schools offering this course, thereby enriching students' knowledge/ curriculum in tertiary institutions in Nigeria. Working with plaster of Paris demands that these ethics of practice and proper plaster use is taught to students willing to excel in the study and therefore develop in the practice of ceramic design and art for the masses. There may be a need to focus on other areas of study in ceramics so that the study of the course in tertiary institutions in

Nigeria could be the better for it. It is crucial in ceramics as in all profession that students go through a period of tutoring and mentoring such that should prepare them for proper foundational advantage in their chosen field of practice. Absence of expected knowledge may result in none preparedness of graduate potters who may not acquire expected professional confidence in the field, could become much eager to do anything for survival after graduation rather than practice ceramics design as a choice profession.

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