

# **The Postmodern Condition: A Report on Knowledge Study Guide**

**The Postmodern Condition: A Report on Knowledge  
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# Plot Summary

Nowadays there is the growth of computerized systems. As with all transformations in science, the computer age has resulted in a transformation of social relations in society. Unfortunately, science is yet to come to terms with the fact that the discipline of science, or rather, scientific method, is no longer serving society as a legitimate function. When the stories one tells themselves about the world are not legitimate, then society suffers. Only by recognizing that history will never reach its culmination but will continue on, forever changing, can one recognize that the stories one tells oneself are flawed. The age old stories of the hero as the emancipator have been largely relegated in history. Science is a-historical because the narrative it tells is not justified if the knowledge it attempts to present is objectified and loses its humanity. Historical narrative, on the other hand, relies on the internalization of the story and has been presented by the storyteller whose authority is not questioned because of their place in society and because of the nature of communication as the storyteller.

The language games of science attempt to incorporate the philosophical theories of history. By doing so, it believes it can maintain legitimation. However, this is impossible, because science is not consistent and is in a state of uneven change; when new theories arrive, one is thrown into a state of confusion of a new paradigm. Science itself sets the rules. Truth is made not by addressing knowledge but by finding counterexamples to knowledge. This makes science paradoxical.

Not only is it the method of science that seems contradictory, but the latest findings in quantum mechanics finds that objectification is difficult to find. Theories of quantum mechanics demonstrate the world is not always discrete, consistent, and rational.

Science needs to face up to its system of language games, which are not ethically justified. Supposed legitimation in the language games of science are reduced to adversarial relations, like playing a game, where those that have access to capital are able to perpetuate their social standing while those who cannot are left by the wayside. \*\*This problem results in science being repressive in what Lyotard says can be terroristic by threatening others whom attempt to play the game and are not invited, or those playing the game but refuse to play by the rules. These individual are pushed out of the scientific language game by force by cutting off funding for research for example, regardless of the legitimacy of their scientific research.\*\*

Because of research's divorce from the philosophical underpinnings of the university, research becomes a tool simply for technocrats, bureaucrats, and political leaders. If science does not acquiesce to the demands of the age, then society will suffer and creativity will disappear. \*\*By forcing scientific realism on the world, this results in the degrading of society, with further alienation from the language game of the hero, the emancipator, and the bringer of freedom. This leaves instead a form of delegitimacy emphasizing the continual speeding up in productivity.\*\*



# The Field: Knowledge in Computerized Science

## The Field: Knowledge in Computerized Science Summary and Analysis

Lyotard coined the term postmodernism. This term draws a relationship between modernism and postmodernism. The Postmodern age is born out of modernism. In this book, Lyotard is concerned with language games predominately, which determine social relations. The question is, what is effective knowledge in society? Lyotard claims that the universities, and science in general, are suffering because of delegitimation. He claims that the stories one tells oneself and each other are in conflict with what exactly exists in reality. What has resulted is a science that is based on dominance and repression rather than being focused on truth. Postmodernism's task is to restore harmony in the system by embracing the anarchy that exists in the new scientific paradigm.

Lyotard refers to the technological age as the age of computers. He refers to changes in the past forty years regarding language, communication, mathematics, and computers, including information storage. He talks about the replacing of the narratives of primarily French and German thought. He classifies the French thought as being Post-Marxist, while stating that German thought emphasizes an evolution of thought often epitomized by Hegel. These systems are not always consistent with science. For example, Kuhn talks about paradigms where science undergoes transitions: for example, between Newtonian physics and Einsteinean physics. This paradigm shift results in a completely new way of looking at the world.

Ultimately, when one talks about postmodernism, the term which Lyotard coined, one is talking about a break between the industrial age and the information age. Not only has the distinction between modernism and postmodernism involved technology and its ideologies, but also has raised concerns in the fields of language, aesthetics, language, politics, as well as technology.

Lyotard is concerned that knowledge will become monopolized. He feels it is important for people to have access to information in a just society. Technology has become the province of the politicians and the technocrats. Already knowledge systems have become international in nature. Lyotard makes a distinction between two principal functions in science. He draws a distinction between research and the transmission of learning.

It is apparent that knowledge is the new commodity in postmodern society. The question is, will this knowledge be available to all, or will it be the privy of the technological and political class. It is true that with the internationalization of knowledge, nation states will become obsolete. They will dissolve into multinational corporations trying to protect their



informational commodities. Computer technologies lead to the internationalization of information. One might ask what is the impact of this internationalization of information.

The two continental approaches to knowledge contain a sort of end, which all things are headed. In the present French tradition, there are the neo-Marxists. Marx's theory of historical materialism presents an approach of history unfolding, ultimately culminating in revolution. Similarly, German tradition through Hegel, Marx's mentor, emphasizes a sort of unfolding of spirit approaching an ideal. In addition, Lyotard also cites Frederick Nietzsche. On the other hand, Nietzsche talks about history as something that needs to be forgotten. In other words, history is to be ignored and change is considered a-historical. This is the precursor to postmodernism.

Computerized science has heralded the new age of ideology. It is clear that computers are here to stay. The stories of the philosophers in the unfolding of history have collapsed because human knowledge will never reach a conclusion and these modern beliefs have become untenable. No one knows what the next revolution in science will take; perhaps it will be the artificial construction of life, which will have its own effect on social systems.

Changes in social systems are inevitable. It is not widely recognized, but humanity's social functioning is the result of the nature of the narratives one tells themselves. No one could have seen the advent of computers in the modern age, at least the revolution that they would cause in the world. In the computer age, the world becomes one's office. The home can be monitored by the employers and the privacy of home life is destroyed. With international communication, nation-states find themselves at risk. One can see this today with the internationalization of business and the world networks that are in place where one reaches India when one calls for computer support.

However, not only are international communications changing the way one lives, but that which counts as reality is coveted by all as knowledge. This is the most valued commodity of the postmodern age. With knowledge systems, robots can be constructed, online courses can be tutorials in a computer program. Yet science finds itself losing its grip on the world as scientists and bureaucrats and technologists decide who has access to this information system and whether the dynamic of learning can be perpetuated if this access is denied.



# The Problem: Legitimation

## The Problem: Legitimation Summary and Analysis

Lyotard identifies legitimation as the primary problem addressed by the postmodern condition. In the postmodern age, there is the advent of computers. The question is raised asking what will be the effect of computers on society in civil institutions in general.

Science finds itself in conflict with other types of knowledge. Lyotard talks about the narrative. Because of the changing narratives, Lyotard notes that there is a notable degree of loss of productivity at institutions and universities. This new paradigm of science and its narratives has contaminated these institutions. This demoralization has had an impact on legitimation according to Lyotard.

The supposed legitimation of science is questionable when compared with the narratives of history and stories, although science may claim to have the same legitimation. Science has become a legislator with prescriptions stating how things should be done. History and stories on the other hand talk about truth. Legitimation cannot be forced and cannot be prescribed.

It might seem that legitimization is unimportant, that if society is well managed and people are taken care of then why would legitimization be important? Others might think that the claim of performativity as a value in science is an accurate description of modern science and that social relations will continue to progress.

Nevertheless, there is a practical effect if science is not legitimized. If it is not legitimate, then people in societies rights can be violated. If science becomes a form of ideology, then the risk is that technocrats will use science for their own ends. This would include an ideology justifying denying others access to knowledge, leaving them disenfranchised in the modern age. Science then becomes an ideology of repression and class privilege.

This is not the only worry. Since science is at most marginally interested in truth, science cannot achieve innovations based on creative thinking. Already the speculation of researchers in the university has been moved, surrendered to technocrats in the private and government sector away from the university, denying the need for philosophical speculation.



# The Method: Language Games

## The Method: Language Games Summary and Analysis

Lyotard talks about language games. As a model of communication, Lyotard talks about the relationship between the sender, the addressee, and the thing talked about. When making a claim as a knower, one refers to a denotative object. Another type of report that occurs between the sender and recipient and addressee is a performativity statement. These involve some moral prescription.

The statement made draws a distinction between what is traditionally known as historical knowledge and subsequently is classified as science. When someone addresses the addressee, it is an enunciation, which is not open to discussion, simply as a former prescription. Included in prescriptions are orders, commands, instructions, recommendations, requests, prayers, pleas.

So rather than depending on some sort of knowledge, science depends on language games. These games are well defined, and when the rules are violated, everyone knows in the particular language game. When participating in a science oriented narrative, one engages in a sort of competition, for one who wins makes the most efficient use of the language games not unlike a chess game.

The language game is not based on the knowledge of science, but rather the technique that is used to explain the subject of science to oneself and others. Those that can practice science are limited because of status, whether it is social class, wealth, prestige, and so on. Through the game, one's position can be determined; one will be the winner and one the loser, where one expresses joy when arriving at victory and sadness or anger at defeat.

The practice of science is ultimately a discussion of stories or language games among scientists battling about prescriptive statements, which determine what they believe, is truth.

Language games are at the heart of what is Lyotard's project. While narratives have existed since the dawn of humankind, they have undergone remarkable changes through the ages, not excluding the modern age. The relationship one has with others determines the language game. Whether the game is historical or scientific, there is always the sender of the message, the receiver, and the thing discussed or pointed at. Science has always pointed at the denotative as embodying truth. Galileo and others pursued science passionately, and at great risk, to bring about the truth. Science was a privilege and not always the prevailing paradigm in religious political systems.

Historical narratives can tell us about truth, especially virtue epitomized by a great person who protects or liberates the nation from its enemies. The stories are told by

respected elders, who express their stories not only in the utterance, but also in non-semantic communication as well.

Science, on the other hand, tells a story too. There is a sender and a recipient of information, but the stories that modern science tells, while slipping into contradiction in the postmodern age, are to work harder and faster, to increase profit. The virtue of hard work is understood and laziness is not tolerated in this modern scientific culture. This supposed legitimation relies on an adversarial relationship between scientists where the winner gets the goods. Society only can emulate these conflictual values





# The Nature of the Social Bond: The Modern Alternative

## The Nature of the Social Bond: The Modern Alternative Summary and Analysis

To talk about knowledge, one must talk about the method. In Marxist theory, society is like a living organism. All is an organic whole, where all the functions in it serves society at large. Cybernetics is taking up the role of the organism and serves as the functional whole, as opposed to the historical narratives of individual freedom and emancipation. With reason, according to scientists, it was thought that science could displace Marx's theory and regulate an organic society whose social knowledge are determined by information contained in database systems. This relationship in society can destabilize nation states as the computers globalize international relations

It is as if knowledge has become reality. The realism subscribed to by scientists permeates society. Yet the computer naturally leads to a performative function. The world is modeled after the computer, with its logical input and output devices. The process contributes to the system if it is functional and detracts from it if it is dysfunctional. Therefore, if it is functional, it literally becomes what is true in social relations. This is what is referred to as realism in modern science. This cybernetic system uses social structure and emphasizes the unity of all in a sort of realism in the totalizing of experience, which falls under the purview of the system managers.

Cybernetics runs into conflict with Marx's theory of class struggle. Marx emphasizes the aspect of historical materialism where the unfolding of history is deterministic, which includes alienated society. In the supplanting of the historical narrative science, the world is reduced to a giant machine. Emphasis in the modern age is on homogeneity. Opposed is the duality of class struggle between oneself and the masters where one sells themselves through the products of alienated labor. These two approaches are what Lyotard first calls one the positivist position of science, and second the hermeneutic. The first, science, emphasizes the idea of realism, and the second emphasizes the narrative as a system of knowledge.

Science has attempted to continue the narrative of the storyteller. The positivity of science has become the information age of the technocrat, bureaucrat, and scientist.

History ends in the modern age and science reaches its culmination, or so it is supposed. The philosophies of Hegel and Marx end where the end of history has been reached. Speculation dies and philosophy fades both in society and in the academic institutions. The story of Karl Marx's revolutionary fervor is replaced by the ideology of the constant transformations of science. The search for truth is lost and gives way to the ideology of performativity. With the end of the narrative story comes the story of ideology, which attempts to emulate the narrative itself in the story of the successful

technocrats and their wares. Subtly, the language story has changed from the traditional storyteller to a story that scientists and technocrats tell themselves to justify their privilege. The language game rules are all laid out.

Larger still, nature is not the natural world of the logical positivist, but has been displaced to be the knowledge systems that ultimately influence, being the gatekeepers, this wealth of knowledge, determining the future of this modern realism or reality. Science has become objectivity, rather than internalized, as in the traditional storytellers.



# The Nature of the Social Bond: The Postmodern Perspective

## The Nature of the Social Bond: The Postmodern Perspective Summary and Analysis

With the advent as cybernetics, workers being redeployed goes hand in hand with the function of the internationalization of commerce. These functions are more and more being given to the administrators, whose interest in society complies with the demands of the computer. No longer is the emphasis on the narrative of the hero of history or emancipation.

Yet underneath it, all there is is an absurdity evident in science itself, for example, in quantum mechanics, where a photon might be a particle, when looked at some ways as a wave if looked at from another vantage point. This and similar incongruities are persistent in the postmodern age. Yet science persists in explaining reality in terms of pragmatics and through this regulation is the attempt to further enhance performativity.

Language games may be criticized but they are essential in society and its structure to society. All movement within the social system is regulated by these language games. The scientific influence on social structure encourages increased performativity. It is hoped that in doing so the system remains dynamic and escapes entropy.

While it may not seem clear that computers are involved in language games, in fact, they are. While the computer does spread information, its function is contained in the program and may originate in prescriptive statements, which determine the mode of functioning.

Are all things possible with the language games? It seems so. For example, if one is dedicated to a cause while residing in their military barracks, freedom to promote one's cause does not exist. However, all one has to do is simply change the language games and then anything can be permitted according to the language game played.

Narrative knowledge encompasses both the historical narrative as well as the scientific narrative. The scientific narrative has largely displaced its mother, the historical narrative. In doing so, it has attempted to justify itself by appealing to the historical narrative. However, in reality, it views the historical narrative as malformed, sluggardly and awkward. Science sets the rules and calls the shots. Science thinks it can have it both ways, discard the historical narrative, and grab values by the horns. In trying to deny that science itself is involved in delegitimacy, it sets itself up as the only authority that can decide what the method "really means." However, the truth is lost in this sermon, because science is quickly approaching the abyss, where its firm embrace of the historical imperatives dissolves into a form of economic and political narcissism.



The value of language games in themselves are insignificant: it is what they signify that is important. Anyone can set up a game according to arbitrary rules, and some rules will be better than others, but whether the game is fair or just depends on the legitimacy of the language system. In science, it relies on competition where there is a winner and a loser. Nevertheless, the rules could just as easily be changed where the loser becomes the winner. What does it matter if the rules are not legitimate, one might ask?



# The Pragmatics of Narrative Knowledge

## The Pragmatics of Narrative Knowledge Summary and Analysis

There is a distinction between knowledge and science. Science constitutes a subset of knowledge. As knowledge points at denotative entities, so does science. Yet knowledge not only deals with denotative knowledge, but also with how a person should live their lives and concerns about what needs to be done. In the modern age, these concerns have fallen under the purview of science.

Knowledge addresses denotative questions but also deals with moral questions. Knowledge addresses not only prescriptive utterances but also makes evaluative or ethical judgments. Through knowledge, one is able to make judgments, whether they are historical narratives or simply scientific ones.

For example, science is looked at in the pragmatic sense. Science claims something is good to the extent that it is useful. Other relevant criteria exist for knowledge including justice, beauty, and truth, all of which are particular to the historical narrative, which science is not.

Culture depends on its ethnology. The different aspects of knowledge are different narrative forms. The success or failure of knowledge in the cultural system helps determine the legitimacy of the narrative. First, popular stories affect culture, and the effect of these stories determine the legitimate forms of these stories. Second, the narrative form looks at how one should act based on being an autonomous human being. Third, private property compels one to adhere to the rules of society in order to arrive at an efficient way of determining social relations. The fourth aspect of narrative knowledge recognizes that knowledge is not determined simply by constraints inherent in the language system. There are certain aspects of language that are non-morphemic.

These non-morphemic aspects include rhythm, lexical aspects, syntactical anomalies, and monotone chants. Narrative knowledge depends on a speaker, the morpheme, and a listener. These narrative stories find a special significance for the authority of the speaker. In addition, the narratives find there is justification in the narration themselves. They are legitimized by what they do. Yet science has objectified the narrative and therefore it loses its legitimacy.

Science being a subset in the narrative of knowledge makes an appeal to the historical narrative. All knowledge involves narratives that instill language games in a culture, which determine social relations. Even science has a narrative, although because the narrative is not legitimate, society suffers. In Plato's dialogues, a precursor for modern science, a story is told which demonstrates the principle of the platonic dialectic. These beginnings of scientific systems are fleshed out. However, the dialogues rely clearly on logic and the Socratic conclusion follow invariable from the premises. The logic is

impeccable, while at the same time telling a story about ethics, politics, and the world in general.

However, this attempt to carry along science in the historical narrative has failed. Nevertheless, science is represented as the greatest minds worthy of emulation, instilling in its people freedom in the modern age. In addition, the work saving devices of science emancipate one from the dregs of the modern age. However, of course, this is not the historical narrative, but rather, one is held fast in the modern age. \*\*People in society, by attempting to be useful and profitable by becoming technocrats, or bureaucrats, become a success by emulating what society values.\*\* In the scientific narrative, only the enunciation has become important, because there lays the prescriptives that run the show.



# The Pragmatics of Scientific Knowledge

## The Pragmatics of Scientific Knowledge Summary and Analysis

There are certain prescriptives that determine whether knowledge is scientific. The fact that this is true is because these prescriptives follow certain rules. One must provide proof of what one says. Not only is science supposed to provide proof that a scientific assertion is true, but it also must be able to defend itself from other alternative theories. Under this formulation, there is a speaker, a referent, and addressee that are particular to prescriptives.

Science claims that what it asserts exists naturally in the world. Science in its language game appeals to the results for the steady march of further research. However, if this research is true, this truth does not depend on certain proofs.

First, one can provide a proof that makes sense, to believe the assertion if the proof is true. According to a Lyotard, the second rule is metaphysical. The system is not only an accumulation of rules, but rather these rules must be consistent and non-contradictory. The knowledge that one has must be reliable. What all science claims must be able to be falsified in principle.

The scientific narrative has caused the lessening of influence of the university. The university has two aspects, which include research and teaching. In addition, these two include a third aspect, where the didactic brings the student into the discourse of the researcher. This enables further research. Technocrats have largely taken over the task of research.

Comparing scientific knowledge and narrative knowledge, science requires specific language games where if one does not follow the rules of these games, then they must be excluded. Science ultimately gives rise to institutions and the rise of a professional class. What this professional class engages in is a competition with each other in order to facilitate the good of science. It seems clear that the practitioner of science does not need to be a primary mover in the scientific method but in fact can be a manager and requires no particular scientific skill. This increases the size of bureaucracy.

All science depends on falsification. If it cannot be falsified in principle then it is not science. However, it is also science when science refutes another paradigm in science and therefore claims preeminence. Science is different from a traditional narrative story. The meter is not important, but rather the rules of science are. A polemical function takes precedence.

Drawing a parallel between scientific and nonscientific knowledge, narrative knowledge, one understands this knowledge has aspects that are necessary in society. Science



simply follows prescriptive rules while the historical stories provide justification by the stories themselves.

In modernity, the narrative of knowledge, which has supplanted the historical narrative, is no longer a legitimate narrative. Science addresses itself as an outgrowth of the narrative. Yet at the same time science classifies the historical narrative as being a different sort of discourse, as outmoded, primitive, and backward.

Science adheres to different rules than the historical narrative. These rules are defined in the language games. Because the historical narrative is internal, the language games are no longer prescriptive. Those that follow the hero, or the emancipator, or the just, do it out of a sense of wonderment and awe. On the other hand, science's narrative is a proscription that supports the stories about itself. In order for the logic of science in the proofs to be legitimate, they must be valid, otherwise the proof is of no use. In supposed good science, new discoveries reinforce the beliefs that were held prior. However, the nature of science is not only to provide further justification for old proofs, but to also lie ready to refute established proofs through counterexamples. These counterexamples throw science into a quandary because rather than forming a foundation for truth, it is used to tear things down. While this is useful in finding aspects of science that are not grounded in fact, the question comes up is if has proved some fact; later, other counterexamples may come to an alternate assessment of the very same fact.

Research and teaching are essential to the training of scientists. Also important is the didactic of training students to become the next generation of scientists and researchers, yet this function of the university has fallen in disuse as research at the university has been taken over by the technocrats and the government bureaucrats because of the revolution of cybernetics.





# The Narrative Function and the Legitimation of Knowledge

## The Narrative Function and the Legitimation of Knowledge Summary and Analysis

One must play by the rules of the narrative game. There is some confusion between the narrative of science and the narrative of the epic. Science itself attempts to pass itself off as a narrative of an historical epic. By doing this, science attempts to find its own legitimation, not unlike the narrative of the hero.

Perhaps the innovation of the narrative of science originated with Plato. Plato's dialectic aims at finding a narrative for science, which allows legitimation. Plato's technique is the dialog where the discourse takes place where the conclusion follows from true propositions like a sound syllogism. This is what is called Plato's dialectic.

This dialectic aims at the pragmatic, which combines story and teaching. This too is a language game controlled by certain rules. For these logic rules, he provides and accepted conceptions for the paradigm of science, which at the same time describes a social function. This comprises Plato's effort at legitimation. This narrative is an attempt to find legitimation by the narrative of the hero by finding legitimation through its own consistent cultural and social system. This is necessary in order to find a way where the system will be accepted socially at large. Otherwise, it becomes a sort of act of oppression supported through a system of tyranny.

Descartes tries to find legitimation through a sort of story as is shown in his work of the Meditations. Descartes tries to find a dialogue of social discourse that helps define the legitimation of science. Using skepticism, he attempts to show that the senses are reliable. Aristotle, on the other hand, came up with discrete rules to explain the nature of science since setting up a sort of language game using logic and metaphysics.

Narratives adopted by science are common in European models. For example, Hegel talks about the unfolding of spirit through the ages arriving at one ultimate point where knowledge is complete. This, like science, shows an impetus for greater and greater knowledge, which eventually comes to completion.

Ultimately, science rules by consensus. When one is evaluating scientific principles, it becomes apparent in history, which at some point the prevailing view of science must undergo a radical change. This is what is called a paradigm shift. The subsequent social consensus enables science and politics to join hands and form the technological base from which to advance science. Therefore, science and politics are inseparable from ethics and norms.



Science has adopted many of the philosophical traditions to advance science. For example, Hegel talks about spirit that lifts one higher and higher in wisdom as his logic dictates history. Science too considers itself as a continued culmination of the educational model. Using the Hegelian model, science will follow a path of increasing edification and in fact, according to science the perfect union of science and nature will be arrived at. Unfortunately for science, Einstein's science was not the last word as he had thought with the advent of quantum physics, which supplanted it.

Descartes too tells a story about how knowledge can be reliable. Using logical argument, he "proves" that the senses are indeed reliable so that one can have definitive knowledge about the world. That is, science is reliable. Nevertheless, the reliability of observation in science is largely thrown into chaos in the postmodern age.

The only artifice that remains is the narrative of performativity. Supposedly, with the advent of more efficient methods, production can be increased and all can benefit, although this benefit not be given by the powers that be. With the advent of the postmodern age, there is no place for science to run in this ideology of pragmatism.



# Narratives of the Legitimation of Knowledge

## Narratives of the Legitimation of Knowledge Summary and Analysis

There are two major approaches to the narrative of legitimation: the first is political, and the other is philosophical. The political narrative emphasizes, among others, what Lyotard calls humanity as the hero of liberty. Science is not always found here because of religious leaders and dictators who have forestalled these narratives. This narrative does not emphasize education, but rather looks at a class of administrators and professionals with whom to provide a stable society. The second approach, philosophy, considers the university central in society. Not only is it a repository of educated people who spread knowledge and do research, but also their training has implications for spiritual and moral training of society in general.

These universities are constituted to achieve a unifying principle of spirit or life. Science, on the other hand, serves the ideal for governing by ethical as well as social practices.

The university emphasizes speculation in knowledge and therefore is philosophical in bent. Therefore, legitimation is not political revolving around state, but rather it is philosophical. In the modern age, there are attempts to reconcile all the different disciplines in the universities. One aspect of this may be to increase productivity in the modern age. This rational narrative is what Lyotard calls the metanarrative. This idea then is to rise up into a state of complete knowledge that enables the speculative narrative of the completion of knowledge.

However, the problem with education in the modern age is that it is forced to serve the state, especially the intermingling of science and the state. According to Fichte and Hegel, the narrative of the unfolding of history in regards to the state and civil society must be useful to a state.

These narratives try to find their legitimacy in the narrative itself because of the nature of social narration, but under Hegel's formulation, true knowledge is in fact indirect and not objectified. Stories we tell ourselves are incorporated into the narrative so that the legitimacy of the narrative can find substance in its own story.

These metanarratives cannot depend on themselves for validity, but rather as a keeper of humanity. These stories can be used in the same way as the narrative of the hero, liberty, and justice. Justice forms a sort of imperative Kant talked about when one acts out of duty to an ethical prescription. People act ethically because of the prescription of the impersonal stories. They act this way out of duty to these narratives in a rational manner.



These stories give the state the flexibility to apply prescriptions to regulate society, as people will obey these prescriptions they question because they fall within the realm of liberty, justice, and the hero. This then forms a sort of autonomous melding together of society. The narrative is objective, independent, and free, at least it seems that way for them.

The author notes in remarks that the university is a composite of the political party according to Marx, which is the proletariat. Speculative idealism comprises dialectical materialism. Dialectical materialism is the method that Karl Marx uses to explain the unfolding of history. Unfortunately, another approach comes from Martin Heidegger, which inserts a narrative of race and work as a way in which the state can legitimize knowledge and institutions. This had severe consequences for the German people, as one can subsequently see in the history of the Nazi regime.

There are two legitimate narratives in society. First is the philosophical, second is the political. The political aspect can contain a historical narrative celebrating the hero of liberty, for example. The philosophical on the other hand is particular to the university. Modern science does not enter directly into either of these narratives. Science, prior to the modern age, fits well into the university and has easily found its home here. The emphasis in historical science was finding truth.

Justice is central in these narratives. For if the knowledge is not just, then it is not a narrative that provides justification for itself. Justice can be formed for example through the logical systems of Kant, where the categorical imperative is acted on out of the necessity of following a moral principle, which is just. This justness makes the imperative necessary to be ethical.

Because the historical narrative is self-legitimate, one must not objectify knowledge. Once knowledge becomes independent of its legitimacy, then certain other justification for legitimization must be arrived at so that society's institutions run properly.



# Delegitimation

## Delegitimation Summary and Analysis

The two narratives, the narrative of emancipation and the narrative of speculation no longer apply in the postmodern world. This is primarily because of the advent of the technological age. Nowadays people are more interested in getting results than finding the value in their actions. With the dissolution of commodities in the postmodern world replaced with information, communist alternatives as well as Hegelian notions are discarded; the impetus toward a transformation of economic capitalistic structure is no longer possible. The commodity loses its use value.

The important question is, is science legitimate? The problem of science that is important is that science is always transforming, which leads to whole different worldviews. For example, society went from the Ptolemy and the geocentric universe to Copernicus' heliocentric universe. Another example from physics is the transition from Newtonian physics to Einsteinian physics. These positions are not commensurable. What happens are called paradigm shifts. The change between paradigms is not consistent. So where is one to find the foundations for science?

A referent in discourse tells one about what is being denotative but not about the thing in itself. Truth is absent. Lyotard states that science that has not legitimated itself is not true science. What is the foundation for science if it does have a foundation? Science becomes little more than ideology, a belief system.

The university is no longer called on to do much of the research. Technological innovations come about in the technological service industry. Science is no longer based on the philosophical approach found at the universities, emphasizing truth. Science is simply a story one tells oneself to maintain the status quo. The function of research is becoming less bound to the university and more bound to private technological enterprise. It is becoming more and more so that the university is not a repository of free thinkers, but rather those bound by ideology.

The distinction is made in modern science between the denotative statement about truth and a prescriptive statement with practical value in science. The criterion becomes who is most able to perform the function rather than what the function is based on. Science cannot be both cognitive and practical at the same time. It is either one or the other, not both. This is the turning point of the postmodern age, to decide which reigns supreme: the practical, or the cognitive.

To address sciences as a discrete enterprise may be misguided. However, for science to be consistent, there must be a basis of specific claims that science makes. What happens instead is that science is simply a language game relying on game theory of its own dialogue of what constitutes good science. To learn is to acquire wealth, and as



Lyotard states, technocrats are turned into scientists with no connection to the university.

Technocrats claim that science forms a history of where knowledge is accumulated. In fact, science never seems to be well grounded. At one point, the pre-Socratic philosophers claimed all was water only to find out this was not true. The Pythagoreans claimed that geometric forms were mystical entities that were not only ways to measure things but constituted reality.

Each change in science tells a story about how humanity sees itself. In the geocentric universe of Ptolemy, all revolved around the earth and the people who inhabited it. When moving to a heliocentric model, the world was transformed and found it hard to accept that one is not in a privileged position among the planets.

Just as Newtonian Science revolutionized physics, so has Einsteinean physics and finally quantum physics and beyond. More and more one finds they are not the center of things and light travels away from the point of origin at the same speed as all frames of reference. With quantum mechanics, the whole world of certainty is thrown into disorder. Science, which was so reliable and prescient, finds itself in a quandary. All these things have resulted in the radical shifts in social relation because of the different stories one tells themselves.

However, science finds that it cannot now be both cognitive and practical at the same time. The age of reason and science has ended. The only narrative that serves science is the narrative of performativity and pragmatism.



# Research and Its Legitimation Through Performativity

## Research and Its Legitimation Through Performativity Summary and Analysis

The denotative is subject of the pragmatic in the modern age. No longer is there a need for a universal metalanguage as all things are combined, relying on systems that are based on axioms. That which constitutes a scientific observation is a subject of the senses and sensory input can be unreliable. The use of science is often fallen on the use of devices that augment certain organs for body function. This has been taken so far as to replicate the human mind, as in the computer.

The importance of science is no longer its truth-value, but rather its usefulness. Like all technology, it requires investment and the return on that investment should be greater than the amount invested. This is possible because greater performance increases productivity. Ironically, the emphasis is on technologies for improvement in the condition of life for all but rather improves the lot of the status quo.

The truth of the matter is secondary to the performance of technology. The question is if performance a legitimate criterion for legitimation. The emphasis is on looking to the return on investment. The criterion is the return of capital to the elite classes. The pragmatic theory of truth trumps the correspondence theory of truth as being important in the quest for knowledge. As it turns out, those with the most capital are able to dictate the nature of the technology and act successfully in the innovation and implementation of such.

The capitalist political technological class determines what is true based on what is efficient or pragmatic. No longer do the technologists aspire to truth, but rather aspire to wealth and social status and privilege. The question is if its power a form of legitimization. No longer is the game primarily denotative, which is where research decides what is true or false; instead, a prescriptive technical game is played, one which emphasizes what is efficient and what is not. No longer is it decided that the language rules are moral ethical codes; rather, only performance is what is relevant. Morality is rather based on progress that is made in achieving greater profit rather than greater truth. This then is the claim to legitimation made by the modern capitalist's class.

This new form of self-legitimation is served well by the computer. Being a mass of information, information becomes the key to increased performance. These ideas encoded in language are embraced by culture. This performance is enhanced by the amount of information about the claim, as being made for the referent. Therefore, the computer provides a good justification for self-legitimation being in a mass of prescriptive and denotative information.



The computer age is surrounded by ideology. This ideology can be and is repressive. Not only must the players in the language games adhere to the rules, but also, in order to play the games, they must follow the rules of the technocrats who determine who get the resources to apply the pragmatic ideology.

The technocrats, bureaucrats and the politicians hold all the cards. In modern science, not all were part of the narrative of the language game of science. Because of the performativity criterion, the university has been released from its philosophical function of researcher and student and the didactics are no longer being reinforced. The data banks of the computer with the internet make information available to all that peruse it. Yet ready access to all web information is in doubt. The professor as a font of knowledge is reduced to obscurity.

The prescriptive language games can be enforced because the tools of science are not available to all. Because of training or financial constraints, the prescription of science and the bestowal of wealth are provided to the chosen few. Even the internet is restricted and many databases are blocked. The internet is not free. However, if it were free, then society would be just and the hero could blossom again rather than the faceless technologist who controls the dispensation of research funding.





# Education and its Legitimation Through Performativity

## Education and its Legitimation Through Performativity Summary and Analysis

As the performativity criteria affects politics in business technology, with computers there are also indications for performativity in an academic arena. The emphasis on education is to produce more for the social system. Education is expected to fulfill the country's social needs. By doing so, the culture remains cohesive and vibrant. Formerly, the emphasis in society by education was the formation of emancipation through the hero. This was the old narrative. This is the narrative that emphasizes the narratives of the social aspect of doing what is right, just and true. The university is served as a formal model for life and is disseminated into to society.

No longer is it the role of the university to produce heroes in emancipation, but rather to produce usefulness and produce bureaucratic posts, which serve science and politics. Their two classes of students are those that are the professionals and those that are trained in technology. No longer is it necessary for a liberal arts education, to be trained in skills necessary for society, but rather the function of the university is to fill needs in society or to enhance skills of the individual to make themselves more useful. These skills learned in academia produce promotions and greater salary to enhance one's potential.

Secondary, the emphasis is not on doing what is good, just, or right, but rather focuses on the instances of the legitimization of the narrative of performance, which emphasizes an increase in productivity. In order to do this, the student must learn the language games that constitute this supposed legitimization of the performance criteria.

With the emphasis on means rather than ends, the university is no longer the repository of those that serve the idea of a role of emancipation exclusively. Nowadays, the university serves as a repository of information that is passed on to the next generation of students climbing the ladder of education while neglecting research.

The university is just a repository of information that can be readily served by computers more efficiently. It is clear that more information can be served on a computer memory banks, libraries, data banks, terminals, more efficiently and more completely than individual professors who serve the same function can.

For performativity, with the emphasis on culture and power, the worth of information as purely practical is found to be useless. All the information that advances the status quo is valued and supported, while other types atrophy and die. Now no longer is the natural world important, this positivity is the important thing, the most real thing is the



information contained in the database. These databases constitute the system of what is now called nature in the postmodern world.

That which is most important is to design a strategy or to organize information in such a manner that increases performativity. This is the natural man. The emphasis is on the reproduction of skills and education with the transmission of information that will need to be generalized in order to be more efficiently transmitted. This has led to the desire of the status quo for programs in interdisciplinary studies. However, a unification of knowledge does not serve the foundation of legitimization. An attempt is made to find a way that science can become universal, because otherwise the education model is distorted in the supposed legitimization of performativity. The attempt is to go back to the historical narrative, which is self-legitimized.

When trying to do interdisciplinary studies, there is no metalanguage used that relates interdisciplinary studies to this supposedly new language. The question of the legitimation of performance is called into question with this new approach. The emphasis is on teamwork, not truth and justice. There is no way truth and justice can be important if they serve the performativity criteria.

The university system originally was more for the production of knowledge in research rather than transmitting information from generation to generation with their students. Research can be more easily attained in technological institutions without special skills, stimulating imaginative minds. The death of the professors comes. Data banks computers are sufficient with more information at transmitting knowledge.

With modern science, the university is becoming decimated as a research institution. Research has been acquired by the private and public technologists who perform their function according to the language game of performativity. The university now serves the function of didactics. The professor trains the student and what is learned is applied to society. The connection between research and didactics has been severed, maybe forever.

However, even the didactic function of the university is being brought into question. No longer is education important in this formal setting. The university nurtures the narrative of the hero and freedom, but without research, the university sits stagnant. Online and long-distance learning has taken the place of the professor. Even computers in some cases comprise the instruction in tutorial course collecting and scoring ones efforts.

With the narrative of performativity, there has been an attempt to synthesize and criticize all knowledge and bring it into a whole. This attempt, modeled after the historical narrative, is actually intended to make the university and therefore society more efficient, more pragmatic, and more homogeneous, fitting in with the language game, for example, of Hegel's evolution of spirit coming to know itself, or Marx in his historical materialism. \*\*Unfortunately, what has been accomplished is the more dreadful forms of Marxism; rather than utopia, what is formed a sort of dictatorship.\*\*



# Postmodern Science as the Search for Instabilities

## Postmodern Science as the Search for Instabilities Summary and Analysis

Science has come to a crossroads. In Hegel's phenomenology of spirit, it is discussed about unfolding of spirit toward a culmination of perfect wisdom. Marx borrowed from Hegel in his doctrine of historical materialism. Yet a crisis exists in the postmodern age. Science is thought to be determinative, reliable and consistent, and complete. However, in fact, science is none of these. This belief in determinism is based on the positive philosophy of efficiency.

Science traditionally is not acquiring knowledge through building on previous building blocks. Rather through counterexample, a scientific theory is proved invalid. This fact reduces science to near anarchy in scientific systems. There are many examples, including quantum mechanics. Classical determinism finds that the basic stuff of science continues to be out of science's reach. For example in quantum mechanics, the more one tries to observe an object, the more difficult it is to find the place where that object is in nature. Nature is unpredictable.

Therefore, the performativity criterion does not fit. Postmodern science depends more on induction and therefore probabilities. In modern science, the axioms form the basis for logical conclusions and are deterministic conclusions and the language games form this basis for this sort of deterministic ideology.

Lyotard gives the example of a dog that is torn between fight and flight. It is thought that if the flight response gains precedence then the dog will flee. On the other hand, under different conditions, the dog will fight. Yet if these thresholds are reached simultaneously, it is uncertain how the dog will act. Lyotard says the control variables are continuous while the state variables are discontinuous. The idea of scientific control points again toward ideology.

Therefore, the fight is on between determinism and non-determinism. For a process to be known, one must know the local state of the process and not the process as a whole. This sort of situation is paradoxical. The conclusion then is that science in the postmodern age is without a firm foundation for knowledge. The information is incomplete and leads to contradictions and paradoxes.

The scientific language game of performativity is at a crossroads in the postmodern age. The history of science claims that science is predictable. However, with each new paradigm, this predictability becomes more and more uncertain. When the scientific paradigm changed between the Newtonian views of the universe to the Einsteinian view, theories of physics needed to be modified. While it was thought that the speed of



light was consistent to one point of origin, Einstein proved that the speed of light always escapes from a frame of reference at the speed of light, and there is no central origin that can explain this. Not only is one not the center of the universe, but one is not even central in the place one stands, and all is relative.

With the theory of quantum mechanics, not only is one not central in the place one stands, but nothing at all is central in itself. \*\*This fact that empirically everything is predictive in science must be rejected.\*\* So many questions face science because of these undecidables, that science cannot be thought of as being reliable at all. This fact forces modern science to throw out the performance criteria because there is no regularity basic to science, and ultimately, modern science is not doing traditional science at all.

In order for science to retain the mantle it has built for itself it must either embrace legitimacy or let all people have access to knowledge, or society must atrophy and perhaps eventually die.



# Legitimation by Paralogy

## Legitimation by Paralogy Summary and Analysis

No longer is the grand narrative of Hegel's dialectic of spirit or the emancipation of Marx, and the hero no longer serves as a validation for postmodern science. To the contrary, Habermas rather feels that the state is known through intellect and the freedom of the will. However, the problem with this is that science has been delegitimized. Science must search for new forms of legitimization. Can paralogy be a form of legitimization?

One must embrace the fact that modern science's ideology destabilizes one's ability to explain it and therefore to derive norms. It is not without rules. In order for society to function, there must be knowledge in complexity. The outcome of this is anarchic in unmanageable narratives of science, which results in paralogy. One must decide that the systems that rely on language games do not change in a consistent manner according to the changing paradigms. In order for the system to manage information, it must be reduced in complexity.

This atomization of the perspectives of knowledge must not be avoided in order to decrease the excess of complexity into the system. The performative criterion eliminates metaphysical discourse, including fables, and promotes clear minds and steely wills. His recognition of the anarchy in scientific realism elevates knowledge and leads to what Lyotard calls metadiscourse. Science has a different role in its pragmatic role approach that ultimately leads to the opposite of a stable system. Carried over from the modern age to the postmodern age, one must cooperate with the authorities or one is in violation of the rules of the language game.

Rules are not in themselves denotative but prescriptive. These metaprescriptives compel the person to accept different prescriptions. Habermas seems to be incorrect that one can reach universal consensus in the postmodern world that can be applied to the language games. Language games are not consistent with science and require creative rules.

The recognition that language is contained across different aspects of society that are not internally consistent is clear. The nature of knowledge seems infinite, so to reconcile these inconsistencies seems to be impossible.

Therefore, the emphasis must be around paralogy. In order for science to be consistent, knowledge must be accessible to all. For to do otherwise would lead to an incomplete system of knowledge which is not legitimate. Only under such a scenario where justice is served and one's pursuit of desire for the unknown would be preserved, enables the system to function under the new narrative of paralogy.



As it turns out, science is paradoxical and paralogous. In order for the legitimacy of the language game to be addressed, one must recognize that no position in the world is sacrosanct. The world is not objective. Data changes in relation to how the data is observed. Things when they are observed manifest different properties than when they are not. Nothing is discrete and regular. The only regularity that can be talked about resides in anarchy.

Science must recognize this anarchy. The philosophical narrative of the unfolding of history lies with a different paradigm in the modern age. It is becoming painfully clear that the performativity criteria cannot be justified based on what one knows about science today. To hold on to the pragmatic emphasizing production amounts to cynicism that the scientist must adopt to maintain hegemony. As time goes on, it becomes clearer and clearer that the language games of modern science are simply ways of blatantly enforcing prerogatives and modern science is reduced to greed.

For society to prosper, traditional science must be performed again. By engaging all in the dialogue of science by allowing free access to the computer databases society will thrive and the world will mature. The new paradigm can be actualized and the social relations can once more be transformed, at least until the next age raises its head.



# Appendix: What is Postmodernism?

## Appendix: What is Postmodernism? Summary and Analysis

Habermas posits that in changing the status of the aesthetic experience, one is no longer primarily interested in exploring the historical aspect of art. He states that the arts and experiences bridge the gap between the cognitive, ethical and political discourse, which leads to a unity of experience. This then is in keeping with Hegel, who emphasized the totalizing of experience.

When one looks at realism from the perspective of the avant-garde, inherent in capitalism is only brute power, where familiar objects, institutions, and social rules are mocked by the avant-garde. The age of enlightenment is over in the postmodern world. All realistic art is reduced to pornography, and people are told what is art rather than art speaking for itself. This leads to degrading of art. The attack on art as it is as reactionary, and the politically oriented academic decides what is art in a sort of hegemony. This again shows the ideology of a scientific culture. The patrons are told what to consider is great and what to dismiss.

The anything goes of realism in modern art is that of money in the realization of power. The important thing is the testimony of people in politics in language games relying on certain knowledge and commitments. This ideological bent can lead to nihilism, according to Nietzsche.

Modernism does not end in the postmodern society, but rather, postmodernism comes out of modernism and modernism gives birth to postmodernism. Lyotard finely states that man is waging war on the fatality of experience like Hegel or Marx. One must seize reality and the witnesses of that which is undecided in order to save the honor of the language games in the new narrative where the emphasis is on paralogy and paradox.

Postmodernism is born out of modernism. Yet there are reactionary forces that wish to forestall the transition from the modern age to the postmodern age. Art is often called the mirror of society and the nature of art provides the mirror where one can understand this nature.

Realism is the driving force behind the modern age. Art reflected realism, but the transmission of mores point in a different direction. To enforce realism on art can lead to the atrophy of art. Present society is in retrograde and realistic determinations are enforced to prevent the avant-garde from gaining influence. However, the avant-garde can enter the stage in any age and criticism is inevitable.

It must be recognized that times change and things will continue to change in the future. There is no culmination of thought, no ideal condition.



If conformity is enforced through language games, then art will cease to be art. Art only represent the truth of the world in the eyes of society. A mismatch inevitably leads to dissolution and atrophy in the body politic. If art does not tell us about the nature of the world as the positivists might have it, then nature no longer conforms to the language games in spite of the facts of the positivists.

Reality is no longer, discrete, continuous, and reliable. Realism is no longer legitimate as a representation of nature, and if "reality" is enforced with threats of economic sanction, then this amounts to terrorism, wherein the language rules threaten one against legitimacy and truth.





# Characters

## Karl Marx

Karl Marx originated communism. He wrote the Communist Manifesto, Capital, and others. He was a famous social critic of capitalism. He believed that history was determined. Nevertheless, he also believed that the masses of people can change history. Contrary to historical materialism, this is called the class struggle view.

The emphasis is on the hero, liberation, and salvation. According to Lyotard, Marxism is no longer applicable to the cybernetic age. This is because commodities are no longer based on use value of a product but rather the source of value is derived from information itself. Marx's narrative depends on a pre-cybernetic age. With social structure based on information, alienation from the products of one's labor is not produced in the dialectical process of Karl Marx. The only change that occurs through the modern age in history is an increase in performance, not an emphasis on when there is the search for truth.

## Hegel

Hegel was a German philosopher who came up with the idea of the evolution of spirit. His most famous work was the phenomenon to spirit, which traces the evolution of this self to absolute knowledge from self-awareness. Karl Marx borrowed his theory of historical materialism from Hegel. Hegel was popular in Germany and Karl Marx was popular in France.

\*\* Both undertook describing the unfolding of history, whether Marx's humanism or Hegel's idealism, where a sort of telos or end culminates in perfection at the end of history.\*\*

These ideas of the totalization of knowledge are in conflict with the postmodern age. That is because science is not a system of knowledge in itself but rather composed of prescriptive language games.

## Habermas

Habermas is a twentieth century philosopher with a different take on the postmodern age. He seemed to take the side of the pragmatists which Lyotard does not. Habermas sees no contradiction between the scientific age and the possibility of reason, emancipation, and rational critical communication. \*\*Lyotard feels that the narrative of Hegel and his student Marx reveals a sort of end or telos in the unfolding of history, adopted by science, which brings about a grand culmination and a finality of history where change ends and history is fulfilled.\*\* Habermas does not seem to recognize that



with the advent of the cybernetic age the social relations are forever changed and are ultimately not subject to all of Marx's critique.

Of the philosophers that Habermas embraces, many of them are criticized by Lyotard. With the continued existence of rationality and not examining the changes brought about by the age of quantum mechanics, Habermas misses the point of the end of pure rationalism embraced by science. Habermas does not question the road of legitimation as a road for social health.

## Frederick Nietzsche

Lyotard references Nietzsche as being a-historical and showing the end of the Apollonian approach to knowledge. He believes that the narratives contained by Hegel and Marx are historical but not relevant in the postmodern age.

## Kant

Lyotard references him when talking about the imperative of acting morally and ethically. He also references him when talking about all art as engaging the emotions in a sort of answer to realism's stark reality. Kant does not emphasize the objectification of knowledge, but rather, in his work, identifies the synthetic a priori that embraces both the being in the world and the being in oneself together.

## Many Scientists

Lyotard references many scientists for support for his theory of paralogy and paradoxology, which illustrates among other things the nature of quantum mechanics which delineates the shortcomings of Einstein and Newton. He talks also about Gödel, Laplace, Brillouin, John Perrin, and others.

## Descartes

Descartes is discussed in reference to his position on skepticism. His story of skepticism is a narrative of science. \*\*Rather than emphasizing the historical narratives of the hero, emancipation and justice, his ideas are founded on rational analysis where he asserts he proves the reliability of the senses.\*\* It is questionable that this narrative is legitimized because of this rational content in the postmodern age.

## Plato

Plato, like Descartes, presents himself as a historical narrative. Plato's writings emphasize proto-science. Also used is the scientific method of deduction to determine

ethical principles, not unlike how science uses the modern language game and the narrative of pragmatism.



# Objects/Places

## Postmodern Society

A time that follows the industrial age. Taking that which intuitively seems to be unrepresentable and representing it (i.e., in art). Searches for new way to present the world which lies beyond realism. Application of a way of understanding the world that reflects the seeming undecidability of truth in science.

## Social Class

Described by Marx in understanding the economic strata of society. In the industrial age this is formed by the proletariat and the bourgeoisie. The idea has become largely obsolete, displaced by bureaucracy and technology in the age of computers and cybernetics where knowledge forms the bases for power.

## Stalinism

In the former Union of Soviet Socialist Republics there was a communist revolution where communist leader Joseph Stalin who followed Lenin, led the communist party. Through intimidation and murder he established a totalitarian society. Has come to represent the nature of communism as being totalitarian in nature.

## Pragmatics

Has come to represent the goal of the scientific method becoming the basis for ethics, valuing industrial performance. Pragmatism asserts that that which works comprises the truth of the matter. This has become the prevailing paradigm in modern industrial society including science whose values are assimilated by the workers at large.

## Scientific Knowledge

The idea that all in the empirical world can be known at least in principle. Science presents itself as a way to get greater and more concise knowledge of the universe. The method of science in contrast is to refute other scientific theories through counterexamples. This leads to confusion in the nature of science.

The present scientific paradigm ostensibly relies on precision and logic, as well as the accepted language games, which reduces the technocrats and bureaucrats to faceless automatons embracing an ideology (e.g., greater precision), which conflicts with it's mission (e.g., in refuting other scientific research).



## Terrorism

The practice of science, where those that do not agree to adhere to the rules of the language games, which are delegitimized. Where to find ways of understanding the world that doesn't rely on pragmatism, are marginalized. This marginalization is forced hence what Lyotard calls terrorism, where these scientists are threatened and coerced to follow the prevailing protocol, or are denied funding effectively being removed from the language game. Also other methods to have them removed through force are used.

This terror action is to enforce the fiction of pragmatism as a legitimization of modern science, when in fact science has been thrown in confusion because of theories of quantum physics and other theories. This pragmatism serves the technocrats and the bureaucrats who are unable and unwilling to give pragmatism up.

## Quantum Physics

A new paradigm which is marginalized by the technocrats and bureaucrats emphasis on realism. It has been found through quantum physics that the understanding of matter is governed by imprecision and the resulting lack of control. This is a threat to the ideology of pragmatics and the telos or end of knowledge as posed, where history culminates into a state of perfection. With the new paradigm demonstrated by Quantum Physics the reliability of knowledge seems to be breaking down conflicting with the ideology of realism and its corollary pragmatism.

## Marxist Utopia

The ideology that history is coming to a sort of culmination where through revolution one reaches a heaven on earth. This utopia results from the final revolution between the workers and the capitalists where the capitalists are overthrown.

This belief is outmoded in the postmodern age. In the industrial age there were commodities that were quantified to identify value. But with the postmodern age the value is based on information and not commodities.

The position of the Marxist Utopia is the unfolding of history which accords with Hegel's culmination of history, is a sort of idealistic splendor where the end is the resolution of all social contradiction that previously existed, resulting in universal harmony.

## Performativity

Ultimately the ethical valuing of hard work inculcated in society by the "ethical" person. This formulation for ethics relies on scientific realism where the knowledge states are forever advancing toward some supposed legitimate goal. Through the pragmatism of science, the usefulness of knowledge is emphasized as being a continual effort to



increase production by becoming more and more practical. The performance of all in society is emphasized.

## **Avant-gardism**

The position of a group that confronts the prevailing world order as outmoded. Advocated for new modes of knowing especially in the arts although can apply to culture and politics. Means literally advance guard or vanguard usually bringing to light art or literature that is innovative and that divorces itself from the status quo.



# Themes

## Legitimation

One major theme of Lyotard book is legitimation. \*\*Legitimation is where those in society embrace the narrative of the prevailing worldview, when this worldview fits the current cultural and societal attitudes.\*\* That is, if the story is coherent. The narratives of old, for example, emphasize the coming of age of the hero, the emancipator. These narratives emphasized the unfolding of history and taught the triumph of the just in fair society. These narratives serve society well and are legitimized. Because stories are based on a search for truth, in this truth, one can arrive at in the stories' ethical prescriptions. That is, the stories are consistent.

However, science is always going through transformations. A paradigm that is apparent in one age may not apply to a different age. In the past, science was a search for truth; nowadays, the prevailing paradigm emphasizes performativity, which expresses itself as an increase in productivity. Just as the universe was understood through scientists as the earth being the center of the universe, followed by the belief that the sun being the center in the heliocentric paradigm, such to will social systems change as a reaction to science.

As science changes, so does society; in fact, science has a direct effect on the social factors of society in the narratives one tells. At the time of cybernetics, societies are thrown into confusion. The words someone tells oneself are real are set in the language games and have no basis and reality.

One might think of a computer as simply a repository of knowledge, while in the programming are involved the language games. These language games are outmoded in the postmodern world. However, the former language games are in fact an artifact of the modern age. In order for society to grow to be just and free, society must express a legitimate narrative of science, which becomes a basis for the social system and cybernetics. Only then can there be a legitimized system.

## Language Games

In language games a role is practiced, whether in the past or in the present, and will be in the future. Language games set the rules of society. This is not an issue for the older narratives, where these narratives are self-legitimized. The rules of society are based on language games. Social relations are determined by language games. The stories one tells oneself are determined by social functioning. Depending on the paradigm of knowledge, this determines the nature of social intercourse. The postmodern paradigm of language games are neither embraced by modern science nor are allowed in society. The language games are reduced to competition and those with the greatest resources determine the nature of the language games.



However, since commodities are no longer products of labor, but rather information, the alienation contained in the theory of Marxism or the unfolding of spirit in Hegel have met a brick wall. Because of the new paradigm of science, in which regularity cannot be predicted in the natural world, it is necessary for all people of society locally to be involved in order to arrive in a discourse of justice. Otherwise, the language game is merely a form of repression, which is delegitimized and simply the result of ideology.

## The Postmodern Age

The postmodern age is born out of the modern age. The modern age can be thought of as the industrial age, while the postmodern age can be thought of as the cybernetic age. Science undergoes transformations continuously. Its quest for knowledge, or lack thereof, is a form of repressive ideology; it has not kept up with the demands of truth and justice. Therefore, the ideology of science is reduced to dominance and repression. This dominance is not a remedy and it is clear that knowledge cannot progress.

In order to address this issue, one must find a different language game. With the age of quantum mechanics, nothing is certain in science. The relationship of the scientist to the thing studied results in paradox and contradiction. All experimentation to be complete must examine the discontinuous nature of reality. In order to prevent the disintegration of science into the hegemony of terrorism, one must address the shortcomings of the language games of modern science.

In the postmodern age, one seeks the unanimity of all, and research involving all the language games must be freed from the performance criteria. Some scientist's unreliable data prevents a firm foundation in the modern age; only then can the shortcoming be addressed in the postmodern age. It is addressed by engaging all people in the discourse of knowledge contained in cybernetics, and therefore can contribute to the system. Universal access to knowledge is necessary in order to have a language game not based on ideology. In the postmodern age, all must have access to knowledge, or else disintegration of institutions is unavoidable.





# Style

## Perspective

The perspective of the writer is objective. It is clear that the writer is concerned about the nature of the change was transformed society. He objects to reactionary approaches to the accumulation of knowledge. He is critical of science but has great hopes for the cybernetic age, with his compassion for the disenfranchised. He is also hopeful about the future but is cynical about the prospects of future society reconciling the contradictions inherent in science.

Lyotard is biased against the capitalistic structure that reigns supreme in the modern world. He was a professor emeritus of philosophy at the University of Paris-Vincennes. Lyotard strives to be objective, but in a work of this nature, there is no view from nowhere. Lyotard is critical of Heidegger then sympathetic with Nietzsche. Overall, he is biased against centralized government and looks for society where all contributed in a sort of democracy in an organized whole. His opinions clearly show that he believes in postmodernism, where science must change. He states as much.

He is not well versed in science. He uses specific examples of science, which is not consistent and complete, but he is unable to explain why this is so, lacking a background in physics. His attempt to explain science from a philosophical perspective is clouded because in his book, science is to be flawed and has taken itself out of the discourse of philosophy. However, the fact remains that it would be hard to decide how exactly science separates itself from philosophy, which of course he values for science.

## Tone

**\*\*His tone is objective but there may be some bias.\*\*** He is neither accusatory, nor sarcastic or bombastic. The statements about science reveal the partisanship because of his focus in education on science. Of course the Professor of Philosophy is partial to philosophy. It is said that when all one has to work with is a hammer, the whole world looks like nails.

## Structure

This is a short, pithy book. This book has approximately 147 pages. There is a forward, an introduction, fourteen sections, an appendix, extensive notes, and an index. The notes are extensive and detailed. In all, there are 231 notes comprising twenty-three pages. The notes are exhaustive, and his mastery of the major schools of thought in the twentieth century is apparent. His extensive use of philosophers demonstrates his acumen. The index is three pages long. The front matter does contain a short and simple table of contents. The forward is useful although it is not basic. It appears that this book is not separated into chapters, but rather headings. Being that the book is

relatively short, it seems natural that he would use headings. Some of the sections are very short, comprising only a few pages. Later on in the work, the sections become longer. There are not discrete sections separate from other sections in this book and material tends to be redundant, but this is necessary in order for Lyotard to present his complex position.



## Quotes

"Knowledge in the form of an informational commodity indispensable to productive power is already and will continue to be a major—perhaps the major—stake in the worldwide competition for power."

chapter 1 page 5

"In this case legitimation is the process by which a "legislator" dealing with scientific discourse is authorized to prescribe the stated conditions (in general conditions of internal consistency and experimental verification) determining whether a statement is to be included in that discourse for consideration by the scientific community."

chapter 2 page 8

"Copernicus states that the path of the planets is circular. Whether this proposition is true or false it carries within it a set of tensions all of which affect each of the pragmatic posts it brings into play: sender, addressee, and referent. These "tensions" are classes of prescriptions which regulate the admissibility of the statement as scientific."

chapter 7 page 23

"Take, for example, a closed door between 'the doors closed' and 'open the door' there is no relation of consequence as defined in propositional logic. The two statements belong to two anonymous sets of rules defined different kinds of relevance and therefore of competence. Here, the effect dividing into cognitive or theoretical on one hand, and practical reason on the other is to attack the legitimacy of the discourse of science. Not directly but indirectly, by revealing that it is a language game of its own rules."

chapter 10 page 40

"If education must not only provide for the reproduction of skills, but also for their progress then it follows that the transmission of knowledge should not be limited to the transmission of information, but should also include training in all the procedures that can increase one's ability to connect the fields is jealously guarded from one another by the traditional organization knowledge."

chapter 12 page 52

"Science does not expand by means of positivism of efficiency. The opposite is true: working on a proof means searching for and "inventing" counterexamples, in other words, the unintelligible; supporting an argument means looking for "paradox" and legitimating it with new rules in the games of reasoning."

chapter 13 page 54

"The conclusion we can draw from this research this research (and much more not mentioned here) is that the continuous differentiable function is losing its preeminence as a paradigm of knowledge and prediction Postmodern science— by concerning itself



with such things as undecidables, the limits of précised control, conflicts characterized by incomplete information. 'Fracta,' catastrophies paradoxes—is theorizing its own evolution as discontinuous, catastrophic, nonrectifiable and paradoxical."

chapter 13 page 60

"It cannot be denied that there is persuasive force in the idea that context control and domination are inherently better than their absence. The performativity criteria has its 'advantages'. It excludes in principle adherence to a metaphysical discourse; it requires the renunciation of fables; it demands clear minds and cold wills; it replaces the definition of essences with the calculation of interactions; it makes the 'players' assume responsibility not only for the statements they propose, but also for the rules to which they submit those statements in order to render them acceptable."

chapter 14 page 62

"To the extent that science is differential, its pragmatics provide the antimodel of a stable system. A statement is deemed worth the moment it marks a difference from what is already known, and after an argument and proof in support of it has been found. Science is a model of an open system in which a statement becomes relevant if it 'generates ideas,' that is, if it generates other statements and other game rules. Science possess' no general metalanguage which all other languages can be transcribed and evaluated."

Chapter 14 page 64

"The objects and the thoughts which originate in scientific knowledge and the capitalistic economy convey with them one of the rules which supports their possibility: the rule that there is no reality unless testified by a consensus between partners over certain knowledge and certain commitments."

appendix: page 77



# Topics for Discussion

1. What is the meaning of Postmodernism?
2. What future does Lyotard see for the universities and knowledge in general in the postmodern age?
3. How has science become a source of ideology in the postmodern age?
4. What does Lyotard mean by "terrorism" which is used by science?
5. What are the pragmatics of science and how do these pragmatics effect social, political, and technological systems.
6. What are problems with legitimation and delegitimation and how does this effect science and the arts?
7. How are narratives important in understanding legitimation?
8. What is the role of information in the postmodern age and how have computer transformed the universities and society in general?