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Talip Aydin

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Pennsylvania State University

Penn State Law

# A competency Model for Judges

A Dissertation in Law

By

Talip Aydin

Submitted in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Juridical Science

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ABSTRACT

Throughout most modern and contemporary legal scholarship there appears an unbridgeable division between two dominant approaches to judicial decision making. Put succinctly, legal scholars argue that there exist either objective, foundational, ultimate groundings for legal theory and decisions or legal theory and practice inevitably follow a path to relativism and skepticism.

This dissertation argues for a theory of evaluation grounded in the Pragmatic, practical ontology and epistemology. Grounding the theory in this fashion avoids the philosophical views of extreme objectivism and extreme subjectivism. In contrast to these conventional stances, which are rooted in philosophical dualism, the view argued for in this dissertation perceives the ontological and epistemological relationship between humans and their environment as inherently interconnected or relational. This philosophical relationship is characterized as intentional, perspectival, and dialectical and embodied.

Consonant with the Pragmatic Ontology, the dissertation argues for a conception of rationality termed "embodied reason." Unlike abstract versions of rationality, embodied reason is characterized by its concreteness, situatedness, and intersubjective validation.

The theory clarifies the concept of "legal reasoning" and develops meta-theory underlining practical, expert based, holistic, narrative, argumentative, intuitive dimensions.

Additionally, given the embodied and perspectival characteristic of judicial decision making the importance of individual differences, especially context-dependent, holistic thinking style is underlined.

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## CHAPTER I

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### LEGAL THEORIES-INTRODUCTION

There is no lack of models that have been applied to explain nature of law, legal reasoning and judicial decision making. There has been a problem, however, in synthesizing and appreciating the different perspectives from which different models approach these questions. It is possible to say that each perspective represents a piece of a larger portrait of judicial decision making.

These broad categories of models operate from very different assumptions on judicial decision making and legal reasoning, but they are not mutually exclusive and hold some potential for being integrated into a broader perspective on the interrelated importance of each model in judicial decision making. Therefore, a more complete understanding of judicial decision making can be obtained from a systematic analysis of each of the varying perspectives on judicial decision making and the arguments of their critics and a synthesis of their perspectives.<sup>1</sup>

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<sup>1</sup> Judicial Role and Ideology in U.S. Supreme Court Decision Making: 1953-1989

To this end, firstly, main legal theories are investigated. Secondly, underlined controversies between the different law theories are referred to the researches from a number of strands in scientific psychology, namely cognitive-psychology, social-psychology, and decision making theories.

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#### LEGAL FORMALISM:

Within the contemporary history of jurisprudence, the dominant paradigm of law is characterized as the analytic, positivist or formalist tradition. While this tradition incorporates various legal theories, we get a sense of the perspective from Black's Law Dictionary, where jurisprudence is defined as:

The philosophy of law, or the science which treats the principles of positive law and legal relations. In the proper sense of the word, 'jurisprudence' is the science of law, namely, that science which has for its function to ascertain the principles on which legal rules are based, so as not only to classify those rules in the proper order, and show the relation in which they stand to one another, but also to settle the manner in which new or doubtful cases should be brought under the appropriate rules. Jurisprudence is more a formal than a material science. It has no direct concern with questions of moral or political policy, for they fall under the province of ethics and legislation . . .

According to the analytic/ positivist tradition, jurisprudence is the study of "positive law," that is, a body of data that can be isolated from data of other kinds and studied on its

own terms, apart from questions of politics, ethics, history.<sup>2</sup> It is argued that the very essence of formalism is the idea of treating law "as a self-contained system of norms that is 'there,' identifiable. In connection to that the judges are constrained in their decision making by the system of principles and rules, which contributes to the objectivity, predictability, consistency and determinacy of the adjudicative process.

Under this view, the law is analyzed as a self-contained system of norms—a system independently identifiable and internally guaranteed, without reference to any content, usage or history of the rules comprising the system. One of the central tasks of formalist theorists is the classification of principles and rules within a hierarchical structure where legal maxims become the foundation of the system. All other rules and principles are derived from these foundational concepts.<sup>3</sup>

Within the legal domain, a formalist argue that law is a science comprised of a small number of indubitable, high-level axiomatic principles as well as more numerous, concrete low-level rules.<sup>4</sup> This system of legal principles and rules is conceptually ordered in a hierarchical fashion where lower-level rules are deducted logically from higher-level principles. The role of the jurist is equivalent to that of a scientist, that is, the discovery of principles and rules that govern each case before the court. Accordingly, a correct result is ensured if the judge discovers the appropriate principles and rules, reasons logically, and applies them dispassionately to the case before the court.

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<sup>2</sup> Hans Kelsen, *Pure Theory of Law*, trans. Max Knight (Berkely: University of California Press, 1967) p. 191.

<sup>3</sup> Peter Goodrich, *Legal Discourse: Studies in Linguistics. Rhetoric and Legal Analysis* (London: Macmillan Press, 1987) 35.

<sup>4</sup> 203 Feldman, 666



"[t]he essence of legal formalism" as the idea that "a few basic top-level categories and principles formed a conceptually ordered system above a large number of bottom-level rules. The rules themselves were, ideally, the holdings of established precedents, which upon analysis could be seen to be discovered from the principles."

Legal model underscores legal constraints, such as stare decisis, statutory and legislative intent. The Judge only needed to discover, through his legal skills, what the correct rule was in any given case not through the individual creative experience of him. Legal formalists accept the notion that law as an objective reality has an effect on a judge's judicial decision making and separate subjectivity from judging.

Some advocates of the legal model allege that "the decisions of the judges are greatly influenced by the facts of the case in light of the plain meaning of statutes and, the intent of the Framers, and/or precedent"<sup>5</sup>. This statement suggests that judicial behavior can be explained with painstaking analysis of relevant law. More specifically, one might infer that the "legal model proposes that judges consider what past decisions are relevant to the issue at hand, extract the direction of their conclusions, and use legal reasoning to form their judgments."<sup>6</sup>

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<sup>5</sup> Ibid p.48

<sup>6</sup> Wrightsman, Lawrence. The Psychology of the Supreme Court. New York, New York: Oxford University Press, 2006. p.20

Formalism is also categorized under the title of the legal model. Strict legal model, In essence, it depicts judges as conduits that logically and objectively applied the law, as if they were mere instruments of the law.<sup>7</sup>

The legal model portrays judges as —value free technicians who do no more than discover the law. It implies that, “The judge’s techniques [are] socially neutral, his private views irrelevant; judging [is] more like finding than making, a matter of necessity rather than choice”<sup>8</sup>.

Kelsen's pure theory of law prescribes that legal science investigate only the interrelationships among legal norms within a closed, hierarchical system. Thus the binding validity of norms derives its legitimacy internally from the written law and is discovered in the logical and systemic interdependence of norms. In this sense, law achieves objectivity, independent of subjectivity, values or volition.

The epistemological precondition for a science of law and the legitimation of the binding validity of legal norms is the axiomatic postulate of the logic and unity of the system of norms.

Accordingly, the study of law is viewed as a study of necessary rather than contingent relationships among norms, which entails a conceptual separation between

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<sup>7</sup> Ulmer, Sidney. From Academic Stuff'to Judicial Behavior: A Continuing Search for Identity. Polity, Vol. 6, No. 3, Spring 1974, pp. 375-392.

<sup>8</sup> Segal, Jeffrey and Spaeth, Harold. The Supreme Court and the Attitudinal Model Revisited. New York: Cambridge University Press, 2002.p.87

analytic (demonstrable) and rhetorical (contingent) forms. As a separate system, it also presumes that there is a single correct answer to legal questions that judges must find.

The formalist theory cohere with many scholars' and citizens' perceptions and expectations of how judicial system should operate. First, it gives the appearance of objectivity in judicial decision making, where judges view the law as a set of rules and norms from which to draw their decisions.

Since the legal system of norms contains its own internal logic and a hierarchy of rules to be followed and applied to individual cases, it allows the judges to claim that he or she reached a decision without reliance upon personal preferences, values or political beliefs.

Another appeal of the formalist tradition concerns the counter majoritarian difficulty. The formalist stance seems to uphold the idea that the creation of laws is the responsibility of the executive and legislative branches of government and the duty of the courts is to obey the rule of law, not make law.

According to the formalist tradition, reasonableness does not adequately depict the character of a decision. More appropriate to this view is the idea that the decision is rationally or logically sound, since this is closer to the conceptualization of law as a science. Normally, we do not talk about scientific conclusions being "reasonable," but rather "demonstrable." If one associates the notion of "reasonable" with probability rather than necessity, as persuasion rather than demonstration and value-laden rather than value free, then the concept has no place in the analytic/ formalist tradition.

On the other side of the great theoretical divide stand legal realists and scholars of critical legal studies, whose rallying cry is that legal theory and judicial decision making are always political. I shall term this the "subjectivist tradition." According to this view, law is fraught with inconsistencies and contradictions, allowing jurists to argue equally well for either side of a controversy. The idea that jurists reason objectively is rejected; instead, jurists are perceived as largely unconstrained and reasons given in support of a decision are merely rationalizations that mask the subjective policy preferences of judges.

Drawing upon various conceptions of practical reasoning and argumentation, these theorists contend that justification of legal decisions are not to be assessed by the stringent criteria of analytic or theoretical reasoning. Instead they should be measured against standards of reasonableness discovered and developed by argument theorists.

Legal realism is the theory that posits that the law is unclear, ambiguous, or indeterminate and that the judge is left to exercise his/her subjective preferences.

In this vein, Jerome Frank held that "the human element in the administration of justice by judges is irrepressible. A judicial decision is a decision by a human being called a judge, [who has] human prejudices, passions and weaknesses"

According to Frank "A judge's decisions are the outcome of his entire life history".<sup>9</sup> He believes that judges are just like any other human whose own experiences and predilections come into play when deciding cases. Judges were not realizing that they were

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<sup>9</sup> (Frank 1930, 124) (1970)

acting on their hunches because they were simultaneously deluded by the basic myth of legal certainty.

Bernard Schientag highlights importance of psychological factors in the judicial decision making process, ... the personality of the Judge, likewise, must be studied in light of psychological principles which, in large measure, apply to him as they do to all human beings. We must recognize the importance of judicial personality, with its strength and its weaknesses and endeavor to utilize strength and minimize weaknesses.

According to him “The judge is exposed more than any other thinker to emotional influences” and that misconceptions “produced by emotion are felt most often and easiest in the field of legal thinking.” Thus, If a man believes that his personal values are not supposed to be relevant to decision in his role, can we categorically state that his belief will not affect his behavior in relationship to the maximum attainment of any such values through his decision?

Legal Realists have undelined the impact of the motivated reasoning, personal bias, subjective preferences, and discreation and creative aspects of judicial decision making. They allege that there exists no rational ground for any decision, nor is there a rational standard by which a jurist can make a decision when confronted with diverse choices. Thus, judicial decisions are nothing more than the policy preferences of the justice disguised in the language of conception of legal reasoning.

It is also asserted that “as long as humans are at the helm of the adjudicatory process, judicial decisions are bound to be affected by extra-legal influences. According to them, Judge should be substantially bound by precedent, while the Judge is hardly bound

by precedent, and quite to the contrary, exercises his own value preferences or those that he perceives to be in the best interests of the society.

Frank claims that judges' decisions are not based on a systematic analysis of fact and law, but rather on a perspicacious flash termed the "judicial hunch." Judicial hunch was defined by Judge Hutcheson as the following: [A]nd brooding over the cause, [the judge] waits for the feeling, the hunch – that intuitive flash of understanding that makes the jump-spark connection between question and decision and at the point where the path is darkest for the judicial feet, sets its light along the way. Judge Hutcheson also remarked that "[t]he judge really decides by feeling and not by judgment, by hunching and not by ratiocination, such ratiocination only appears in the opinion.

Again, Jerome Frank recognizes that rules and principles of law, as well as the political, economic, and moral prejudices of a judge, may produce the judicial hunch. However, Frank regards these ideas as superficial. He argues that hidden, more unobtrusive traits, which are unique to the individual jurist, are responsible for producing the judicial hunch.

Chief Justice Earl Warren mentions extra-legal component as experience, according to him, "the proper administration of justice are the products of a lifetime of experience and practice: In my more than fifty years of public service, I have been exposed to both processes, the political and the judicial, and to the interrelationship between the two, until I have what I believe is a clear concept of each in the administration of justice. .

. . One is not born with such a concept, nor is it acquired overnight. It is an evolving thing that stems from one's experiences in life and from interpretations he or she gives them. .<sup>10</sup>

Similarly, Glendon Schubert says "It seems likely that the health-both physical and mental- of the justices has an influence upon their decisions; also their ethnic origins, religion, political affiliation, indeed, their whole life experience" A top- down process where outcome decisions come first and drive legal explanations that appear to, According to this characterization, legal reasoning is more rationalization than deliberation although judges may convince themselves otherwise.

In the same vein Theodore Schroeder hypothesizes that "every judicial opinion necessarily is the justification of every personal impulse of the judge in relation to the situation before him, and the character of these impulses is determined by the judge's life-long series of previous experiences, with their resultant integration in emotional tone." <sup>11</sup>

Max Radin allege that for some cases "logic" and in another cases experience" should be the judge's guide. Equity is seen as the appeal, by the Judge, to something else than reason in the hope that Justice will be served. The usual source of the Just decision, in the equitable procedure, is "intuition." They then launch into a lengthy exploration of the concept of "neutrality" and "objectivity" as it is used in many other disciplines. States that when a choice among competing values is made in a courtroom situation, the decision is the outcome of the "entire biography and heredity of the individual" Judge and not of

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<sup>10</sup> . (1977, 6-7).

<sup>11</sup> Theodore Schroeder, the Psychologic Study of Judicial Opinion, 6 CAL. L. REV. 89, 93 (1918).

"objective criteria." Whatever "objectivity" they may ascribe to the outcome of the judicial process is not to be attributed to the existence of any abstract principles of law.

The reasoning behind this argument is adequately summarized by Judge Frank: [T]he ultimately important influences in the decisions of any judge are the most obscure, and are the least easily discoverable – by anyone but the judge himself. They are tied up with intimate experiences which no biographer . . . is likely to ferret out, and the emotional significance of which no one but the judge . . . could comprehend. What we may hope someday to get from our judges are . . . elaborate explanations of the background factors in his personal experience which swayed him in reaching his conclusions.

"He emphasized the ambiguity and confusion of fact-finding, the basic uncertainty of the judicial process and the multitude of ways in which legal reasoning is used to validate existing beliefs" <sup>12</sup>

For Llewellyn, legal realism was grounded in ideas of a —law [that] is in flux, of moving law, and of judicial creation of law<sup>13</sup>. Judges are influenced by their own biases and philosophies, which to a large degree predetermine the positions they will take on a given question. He concluded that justices are motivated by their own preferences.<sup>14</sup>

Other judicial scholars underlined the importance of Judges' attitudes on judicial making process, Baum and Rowland and Carp have suggested a bottom- up, information-

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<sup>12</sup> 3 Bendix, Ludwig. Review of Courts on Trial by Jerome Frank. California Law Review, Vol. 38, No.4. October, 1950.

<sup>13</sup> Segal, Jeffrey and Spaeth, Harold. The Supreme Court and the Attitudinal Model Revisited. New York: Cambridge University Press, 2002.p.87

<sup>14</sup> Wrightsman, 2006, 124.



processing approach where attitudes act as information filters, exercising their influence by affecting micro decisions that occur in the process of legal reasoning. As Baum states, “attitudes may serve ‘as information filters or intermediaries that influence the cognitive processes of perception, [and] memory’ . . . rather than as direct basis for choice” Baum uses the distinction between “easy” and “hard” cases to argue that judges may have more latitude to make decisions consistent with their preferences when there is “ambiguity” in the law. The analysis of the decision making of justices implies that differential perception of precedent by judges with different policy views could serve as an avenue of motivated reasoning in legal decision making.

Justice Cardozo ties legal reasoning even more explicitly to the judge’s “outlook on life,” formed by the “current” of social convention: “Back of precedents are the basic juridical conceptions which are the postulates of legal reasoning, and father back are the habits of life, the institutions of society, in which those conceptions had their origin . . .”.<sup>15</sup>

Holmes underlines judges’ belief system: “The very considerations which judges most rarely mention, and always with apology, are the secret root from which the law draws all the juices of life. I mean, of course, considerations of what is expedient for the community concerned. Every important principle which is developed by litigation is in fact and at the bottom the result of more or less definitely understood views or public policy; most generally, to be sure, under our practice and traditions, the unconscious result of instinctive preferences and inarticulated convictions. Many dissenting opinions are a testament to the differing belief systems of the various justices.

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<sup>15</sup> (1921, 19)

He also adds ... Judges, of course, have their own belief systems, just like everyone else. And it is differing belief systems that make for judges with differing judicial philosophies and for judges to be labeled either liberal or conservative or either activist or restrained. It is obvious that the belief systems of judges are part of the hidden aspects of judging. Many judges openly admit the impact their belief systems have on their decisions, often in an unconscious and unexplainable way.

Judge Cardozo refers to habit, emotional influences and subconscious factors : ... Deep below consciousness are other forces, the likes and dislikes, the predilections and the prejudices, the complex of the instincts, emotions, habit, convictions which make the man whether litigant and judges.

According to real realists, arguments are made logically, step-by-step to a conclusion, almost as if the law were a form of mathematics. This approach is comforting because it shows law to be impersonal and based on rational action. This is the visible part of the law. However, extra-legal factors that make up discretion are an invisible part of judicial decision-making that cannot be explained with any precision given our primitive understanding of how the mind works.

The language of judicial decision is mainly the language of logic. And the logical method and form flatter that longing for certainty and for repose which is in every human mind. But certainty generally is illusion, and repose is not the destiny of man. Behind the logical form lies a judgment as to the relative worth and importance of competing

legislative grounds, often an inarticulate and unconscious judgment it is true, and yet the very root and nerve of the whole proceeding.<sup>16</sup>

The realists argued that traditional legal materials like statutes and precedent were insufficient to determine the outcome of a case. Instead, they suggested that extralegal factors were, at least in part, behind judicial decisions. “The convictions of particular, flesh-and-blood judges-their own views about how to handle difficult questions-inevitably play a role” in judicial decision-making.

Radical Realists also underline the impact of motivated reasoning in judicial decision making. They assert that the justices’ votes depend on their attitudes and policy preferences, and nothing else.<sup>17</sup> According to them, justices are simply motivated by their preferences, with rules such as precedent nothing more than smokescreens behind which to hide attitudes and values<sup>18</sup> or cloak policy preferences with legal doctrines<sup>19</sup>

For Segal and Spaeth, the law does not constrain judicial actors any meaningful way. Instead, the adversarial nature of our legal system facilitates policy-directed behavior because it allows judges to pick and choose authority from arguments made by competing parties. Thus, judges do not use legal authority to reason through cases; rather, it serves as a post hoc justification for choices consistent with their preferences.

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<sup>16</sup> Oliver Wendell Holmes, *the Path of the Law*, 10 Harv. L. Rev. 457, 465-66 (1897).

<sup>17</sup> Hagle, Timothy and Spaeth, Harold. —Voting Fluidity and the Attitudinal Model *Political Research Quarterly*, Vol. 44, No. 1, January 1991, pp. 119-128.

<sup>18</sup> Epstein, Lee and Knight, Jack. *Walter Murphy: The Interactive Nature of Judicial Decision-Making*. In *The Pioneers of Judicial Behavior*. Ed. Nancy Maveety. Ann Arbor, Michigan: University of Michigan Press, 2004, pp. 197-227.

<sup>19</sup> Segal, Jeffrey and Spaeth, Harold. —Norms, Dragons, and Stare Decisis: A Response. *American Journal of Political Science*, Vol. 40, No. 4, November 1996, pp.1064-1082.

Jerome Frank argues that, psychologically, the process of judging seldom begins with a premise from which a conclusion is subsequently deduced. Instead, judgments, including judicial judgments, are worked out backward from tentatively formulated conclusions. In a fashion similar to a stimulus-response, jurists act on hunches triggered by peculiar traits, dispositions, biases, and habits. Accordingly, the judicial opinion does not reflect the process of deciding cases, but provides rationalizations disguised as "good reasons."

For Frank judges act in a result-oriented way. In other words, like all other human decisions, "[j]udicial judgments . . . are worked out backward from conclusions [already] formulated" or from the "results [the judge] desired to accomplish"<sup>20</sup>

Dean Roscoe Pound asserted that "it was quite erroneous for the Judiciary as well as the legal profession to entertain the belief that Judges could ... find the pre-appointed code pigeonhole for each concrete case, to put the case in hand into it by purely logical process and to formulate result in a judgment. . . (and that) application is merely formulation in a judgment of the result obtained by analysis of the case and logical development of the premises contained in the reported decisions." There was need, in law, for the court to always keep in mind the necessity for "individualizing" the application of the law. And, according to Pound, to believe completely in the traditional view or in a totally individualistic approach was a great error since by its very nature the law demanded both orientations from the judge.

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<sup>20</sup> (1970, 109-10).

Another leading American Jurisprudent, Benjamin Cardozo, attacked this same problem about the same time as Pound. Cardozian way of thinking, for his view of the law and of life was that of conflicting tendencies. It was that of paradox. According to him: "Antithesis permeates the structure" To Cardozo the idea of a simplistic, deductive thought process was a poor joke and a dangerous illusion. Rather, he saw desirable constructive conflict in that which is and should be the real creative thought process of the Judge: Analysis alternates with synthesis; deduction with induction: reason with intuition. The who in Geny's words is 'a procedure extremely complex, and full of delicate nuances, all penetrated with casuistry and dialectics.

He argues that the progressive development of rules cannot be a product of the logical unfolding of specific deductions from general principles. The relevant experiences that should be examined as causes of the existing structure of common law rules are "[t]he felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow men . . . ." <sup>21</sup>

Karl Llewellyn advocates a psychological perspective on the study of law in a fashion similar to Frank. He conceives law as a judicial creation and as being constantly in flux .In their insistence that legal decisions could not be divorced from politics and that logical methods of legal analysis (namely, formalism) could never justify legal decisions without reference to non-legal considerations, the realists reduced the idea of "reasonable"—disguised in the language of logic, rules, deduction—to no more than a

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<sup>21</sup> (Holmes 1963, 5).

sham. In the realist view, claims to "objectivity," "detachment," "neutrality," and "autonomous methods" of judicial decision making mask the policy preferences and subjectivity of jurists. For legal realists, rationalization and self-deception lurk beneath claims to objectivity.

For Llewellyn, the study of law requires empirical methodologies with the complex multi-causality of judicial behavior as the object of study, not abstract systems of legal norms and rules. He adds "[t]o a remarkable extent," a judge must "draw upon whatever experiences he or she has accumulated before going on the bench" Similarly, Chief Justice Warren insisted: "It is literally impossible for a person to eliminate from his reasoning process his experiences in life up to that point".<sup>22</sup>

Justice William O. Douglas speaks, more specifically, about the effect of the larger political and social community on the attitudes of the judge: "[C]ommunity attitudes are not without their effect. The Court is not isolated from life. Its members are very much a part of the community and know the fears, anxieties, cravings, and wishes of their neighbors"<sup>23</sup>

Justice Cardozo insists, "Judges cannot escape that current any more than other mortals. All their lives, forces which they do not recognize and cannot name, have been tugging at them – inherited instincts, traditional beliefs, acquired convictions; and the resultant is an outlook on life, a conception of social needs . . ." <sup>24</sup> The result is a strong relationship between "the truth without us and the truth within" – in other words, the

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<sup>22</sup> (1977, 7)

<sup>23</sup> (1980, 38).

<sup>24</sup> (ibid.).

relationship between community and social conventions on the one hand and individual preferences on the other.<sup>25</sup> Community or social conventions thus significantly affect a judge's values, including "moral values," "values of expediency and convenience," values of economic or cultural advancement," and "a host of [other] values".<sup>26</sup> In perhaps his most famous observation, Cardozo concluded, "[t]he great tides and currents which engulf the rest of men do not turn aside in their course and pass the judges by"<sup>27</sup>

Frank sees legal and judicial language as an instance of "word-magic"<sup>28</sup> He sees judicial language as a clever outgrowth of the urge toward rationalization, through which judges carry out their childish myth-making. "Words . . . become our masters because the very nature of language fosters a belief in the independent reality of what are merely verbal contrivances. . . . We therefore make up words like Virtue, Liberty, Democracy, Freedom, and then forget that they are merely handy abbreviations"<sup>29</sup>

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#### LEGAL POSITIVISM

Like the legal formalism, Legal positivism defines law's validity as tracing to an empirically verifiable state authority. Positive law defines law's validity in empirical terms which are neutral toward the content of the law. According to leading legal positivists, law is valid if it emanates from a master rule which constitutes the source of law's validity.

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<sup>25</sup> (ibid., 174)

<sup>26</sup> (1928, 54).

<sup>27</sup> (ibid., 168).

<sup>28</sup> (1970, 92).

<sup>29</sup> (ibid., 91).

The second major influence on early versions of legal positivism was the prestige of the methodology of the natural sciences. They shared with natural scientists the desire to eliminate appeals to authority and tradition and to ground their accounts on empirically observable facts. Reductionism was a central aspect of this approach. This can be seen, for example, in Bentham's effort to develop a legal theory which appealed exclusively to what he called "real entities".

According to Bentham, "real entities" included: persons, objects, and acts of the will. Bentham's ultimate goal was to develop a legal theory which could either: (1) provide a reduction of complex or higher level legal concepts to "real" entities, or (2) show that the irreducible concepts were simply myths, fictions, or unsupported custom and thus were dispensable. Thus, both Bentham and Austin sought to reduce legal notions like sovereignty, rights, and obligations to claims which relied only on empirically observable social facts.

Legal positivism has been seen as view of jurisprudence which present an alternative to natural law theory. The threat that is presented by natural law, is that linking law to morality results in a jurisprudence which is creative, expressing subjective views of the judge's moral or political views.

Legal positivism seeks to give definitional rigor to law by positing law as a system of rules which are dichotomous, obtaining or not obtaining, and sidestepping normative debate regarding what law should be.<sup>30</sup> In connection to this, it seeks to avoid value-laden

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<sup>30</sup> (Dworkin, 1985, pp. 119-45).



debates and the discussion over the merits of the law. It focus what the law is rather than what law should be since this generates plural and divisive views.

H.L.A Hart defines legal positivism as the legal theory which maintains that "it is in no sense a necessary truth that laws reproduce or satisfy certain demands of morality, though in fact they have often done so"<sup>31</sup>Hart bases his conception of legal positivism on two claims, namely the claims, "it could not follow from the mere fact that a rule violated standards of morality that it was-not a rule of law; and conversely, it could not follow from the mere fact that a rule was morally desirable that it was a rule of law"<sup>32</sup>

According to him it is conceptually possible to identify a legal system-to distinguish its laws from its other rules. Thus, Hart must be understood as claiming that although there are many contingent connections between law and morality, there are no necessary connections.

Positivist understanding is the product of whatever the process does. The theory adopts a strict stance of neutrality toward values on the view that the legislature is best equipped to articulate the public interest.

Legal positivists are committed to the view that the world is neatly divided up into factual components and evaluative components and that a legal philosopher can, by appealing exclusively to things which fall into the fact category, provide us with an adequate theory of law.

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<sup>31</sup> ([92], p.181-2).Hart

<sup>32</sup> [97], p.55).

Positivists also claim that it is possible strictly to separate facts from values in the legal domain. That is, legal positivism presupposes that it is possible to maintain a sharp distinction between description and evaluation and that (ontologically) legal facts exist independently of our values and evaluations. Furthermore, it maintains that it is possible for there to be an objective and value-neutral account, description, or interpretation of the law.

They claim that it is possible objectively to determine which terms, concepts, or conceptual schemas are neutral as contrasted with those which are biased, subjective, or laden with ideological concepts.

Some version of legal positivism is committed to a realist metaphysics. That is, the facts which are constitutive of the law exist independently of our conceptualization of them. Such facts do not rely for their existence on being perceived from any particular point of view or interpretive framework. They are also not dependent in any way on the truth of any particular value system.

Legal positivists identify law without looking to law's content but rather to its source or genesis in order to establish its validity.

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#### NATURAL LAW THEORY

"Natural law theory denies the possibility of a rigid separation of the is and the ought, and which tolerates a confusion of them in legal discussion"<sup>33</sup>

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<sup>33</sup> ([63], p.5).

Fuller acknowledges that there are many different versions of natural law theory, but he claims that what unites all of them "is the fact that in all of them a certain coalescence of the is and ought to will be found" In support of this view, Fuller points out that, nature does not, as the positivist so often assumes, present us with the is and the ought in neatly separated parcels. There is no way of measuring the degree to which each contributes to the final result. The two are inextricably interwoven, to the point where we can say that "the story" as an entity really embraces both of them"<sup>34</sup>

Fuller maintains that there is "an 'intersection' of "is" and "ought," since the judge, in deciding what the rule "is," does so in light of his notions of what " ought to be" in order to carry out its purpose"<sup>35</sup>

Dworkin states that, "propositions of law are not simply descriptive of legal history in a straightforward way, nor are they simply evaluative in some way divorced from legal history. They are interpretive of legal history, which combines elements of both description and evaluation but is different from both"<sup>36</sup> It is maintained that "to the extent that this supposed dichotomy is maintained, the resulting theory will be incomplete or fatally impoverished."

For example, Fuller formulates this challenge by stressing the role which purpose plays in the law and Dworkin formulates this challenge by claiming that law is an

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<sup>34</sup> ([63],

<sup>35</sup> 67], p.662).

<sup>36</sup> ([48], p.528).

interpretive concept. Both of these theorists argue for a conception of law according to which it is not merely factual.

On their understanding, law is the kind of entity which precludes the application of the distinct categories of facts and values. Essentially this is the claim that although the strict separation of facts and values might be appropriate in certain domains, there is something about the nature of law which makes this dichotomy inapplicable.

As Philip Soper underlines, “the new non-positivist does not deny that if one can determine a norm is law, further reference to content is unnecessary for determining the norm’s legal status. Instead, in some cases, one cannot determine whether the norm is law at all without first inspecting content: in these cases, at least, the separation of fact and value becomes blurred and the conclusion that the norm is law may entail the conclusion that the norm is not unjust.”<sup>37</sup>

Dworkin concludes that "the question of what our legal practice, as a whole, really is" is "normative rather than (merely) factual"<sup>38</sup> Dworkin says at one point that, "In spite of these explicit statements, it seems to me that expressing this dispute in terms of "is" and "ought" is not the clearest way to make the relevant point. This is because that way of expressing the dispute simply perpetuates the perspective which presupposes that the "is" or the "facts" are given and objective. Since this is precisely the question which is in dispute, it is more accurate to describe this conflict in terms of the denial of the strict separation of facts and values. That is, rather than couching this dispute in terms of the "is"

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<sup>37</sup> ([189], p.21

<sup>38</sup> ([47], p.353).

and the "ought", it is clearer if we couch this dispute in terms of its being a conflict between those who either assert or deny that in all cases one can sharply distinguish the factual from the evaluative, purposive, or interpretive elements when it comes to legal reality. Value and content have become entangled"<sup>39</sup>

He draws the conclusion that, "There is no neutral conception of rationality to which to appeal" He concludes,<sup>40</sup> "we are left with the necessity of seeing our search for better conceptions of rationality as an intentional human activity, which, like every activity that rises above habit and the mere following of inclination or obsession, is guided by our idea of the good"<sup>41</sup>

"Natural law theory sees social facts as an "institutional fact"<sup>42</sup> or "humanly conditioned facts"<sup>43</sup> Accordingly, they are "true in virtue of an interpretation of what happens in the world, an interpretation of events in the light of human practices and normative rules" <sup>44</sup> Social facts are typically thought of as being institutional or conventional facts which require something more for their description than is required for a full description or theoretical characterization of mere physical facts.

Fuller points out that reference to some master rule, or rule of recognition, is of no avail. Indeed, referring to the Constitution as the source of legal validity does not stem legal debate since controversy will ensue on the proper reading or interpretation of the

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<sup>39</sup> ([52], p.48).

<sup>40</sup> ([163], p. 136).

<sup>41</sup> ([163], p.136-7).

<sup>42</sup> "([181], p.50-53)

<sup>43</sup> ([139], p.82).

<sup>44</sup> ([139], p.10).

Constitution. The debate over the ends which law should serve implicate political and moral questions not merely social and linguistic ones. The recognition that legal positivism is not neutral but ultimately relies on values has been recognized by legal positivists themselves.

Fuller and Dworkin both defend a version of legal theory which maintains that, at least to some extent, the existence of a law depends in part on our conceptualization of it. On their view, laws do not have an existence which is independent of our conception of it.<sup>45</sup>

Fuller rebuts positivists' characterization that interpretation relies on a commonly understood language game and accepted meanings. According to Fuller, we interpret legal texts in relation to the ends which law seeks; interpretation over what a statute means must take reference of the ends the statute seeks to fulfill. However, according to Fuller, it is exactly these ends that are contested and result in divisive normative, or value-laden debate. Fuller argues that referring to social and linguistic norms in order to determine how we ought to construe the law will not resolve this debate over ends. Rather, the point of departure for legal interpretation is the normative issue of what ends law should serve.

Fuller is committed to the claim that interpretation is a cornerstone of legal theory. According to natural law theorist, the positivistic theory of interpretation is static and devoid of the purposive element which is, the life-blood of the legal process. Fuller denies that there is epistemic or semantic priority to any single point of view. Not only does he deny that there is an Archimedean point. Both philosophical hermeneutics and the principle

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of polarity make the claim that one must resist the temptation to focus only on one perspective at the expense of the other side. Likewise, Fuller claims that in the law there are a number of antinomies or polarities toward which one must maintain a balanced perspective.

Fuller says ...in dealing with this problem we can employ with advantage principle of polarity. Law and Society are polar categories. Though we are under the necessity of opposing them to one another we must recognize that each implies the other. If we deny one, the other becomes meaningless. We may picture Law and Society as the two blades of a pair of scissors. If we watch only one blade we may conclude it does all the cutting. . . . We avoid all of these difficulties by the simple expedient of recognizing that both blades cut, and that neither can cut without the other"<sup>46</sup>

Fuller is influenced by and draws our attention to those perspectives in the philosophy of science which question this account of "facts". The philosophy of science which Fuller accepts emphasizes, among other things, the claim that there are no brute facts, i.e., that all facts are theory-laden. As a consequence of this view, Fuller accepts the idea that there is an element of interpretation, and thus an element of value, inherent in all "facts"

Fuller makes the additional and important claim that purpose infuses all meaning with an evaluative element. He points out that all legal positivists "start with the assumption

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<sup>46</sup> ([62], p.452).

that law must be regarded as a one-way projection of authority, instead of being conceived as a collaborative enterprise"<sup>47</sup>

Thus, just as legal positivists beg the question when they assert that one must first identify the law that "is" and only then engage in an ' 'evaluation of that law, objectivists in general beg the question when they simply assume that the law or social phenomenon is factual, i.e., that social reality is, as Fuller puts it, "presented to us with the is and the ought in neatly separated parcels" But as all anti-objectivists insist, this claim is controversial at best.

Fuller insists that means-ends complexes must be dealt with in their entirety and cannot be severed by artificial analytic methods. He concludes by saying that, "In view of the interaction of means and ends any sharp distinction between a science of means and an ethics of ends is impossible"<sup>48</sup>

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#### RESEARCH QUESTIONS

It can be seen from above-mentioned legal theories that there is a very different understanding within and between main legal theories about the nature of judicial decision making and legal reasoning. Main controversies can be summarized below:

- 1- What is the nature of human reasoning and information processing in general what is the nature of judicial decision making and judicial information processing in particular? How they are the similar and different each other?

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<sup>47</sup> [72], p.227).]

<sup>48</sup> ([65], p.480).



- 2- To what extent different judicial decision making theories are compatible, to what extent they conflict, and in what ways they might enrich or strengthen each other?
- 3- What are the roles of the personality, attitude, values, belief, motivation, hunc, intuition on human reasoning in general and judicial reasoning in particular?
- 4- How the cognition, emotion, motivation interact with judicial decision making processes. What is the role of motivated reasoning?
- 5- Is it possible to separate what truth “is” what the “ought to be” in general and what law “is” what the “ought to be” in particular
- 6- Are personal differences relevant in judicial decision making. How they affect decision making quality.

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## CHAPTER II

### PERSONALITY- REASONING -DEVELOPMENTAL PERSPECTIVE

According to Social Constructivism knowledge is experience based. It can be developed by life experience. People must bring their prior knowledge and experience to bear in interpreting general principles for them to have meaning. <sup>49</sup>

Piaget's developmental perspective leads us to view causality as a concept whose use becomes refined with individual growth. These periods witness the progression from purely practical adjustments to an increasing use of symbols and an orderly conceptual framework, and finally to the use of abstract and propositional thought. With increased

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<sup>49</sup> (Schon, 1983)

experience in the world, and with maturing cognitive structures, the child increasingly objectifies reality and differentiates between physical and psychological causes.

Piaget's perspective on causality is of immense importance, in that it places causality within a general framework of intellectual development. It follows from Piaget's analysis that attributions of causality probably cannot be regarded apart from one's general understanding of "how the world operates," an understanding which develops gradually, with the aid of maturing cognitive structures.

Piaget has stated that ". . . knowledge is essentially construction"<sup>50</sup> Knowledge is constructed by the individual's interactions with objects in the environment. "Intelligence thus begins neither with knowledge of the self nor of things as such but with knowledge of their interactions.

According to him. . . "Knowledge development follows an action-reaction model. Action by the individual receives feedback or reaction from objects. How an object reacts is assimilated by the child."<sup>51</sup>

During different encounters with an object, the child's knowledge of the object becomes altered. As the child plays with the ball, he encounters its weight, texture, composition, shape, size, color, temperature, bounce and roll. The child builds a concept of the object, i.e., the object achieves meaning based on the properties encountered. The activity of the learner is both an external one of situations or scenarios with objects and an internal activity of representing the object's meanings symbolically.

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<sup>50</sup> 59:362).

<sup>51</sup> (60:400).

Piaget states: “. . . the progress of intelligence works in the dual direction of externalization and internalization . . .”. As the child engages in physical encounters, he acquires physical experience or physical knowledge of the world. The physical knowledge is represented practically in action forms and mentally in image forms and language forms.

There are essentially three ways in which human beings accomplish this feat. The first is through action. We know many things for which we have no imagery and no words, and they are very hard to teach to anybody by the use of either words or diagrams and pictures. . . There is a second system of representation that depends upon visual or other sensory organization and upon the use of summarizing images. We have come to talk about the first form of representation as enactive, the second as iconic.

Iconic representation is principally governed by principles of perceptual organization and by the economical transformations in perceptual organization.

Finally, there is representation in words or language. Its hallmark is that it is symbolic in nature, with certain features of symbolic systems that are only now coming to be understood.<sup>52</sup>

Enactive, iconic, and symbolic representation are a developmental trilogy portraying the sequence of the modes of representation or ways in which the child translates experience: from action to image to language.

According to Piaget's theory of knowledge, there is one further important mode of representation mentioned only briefly in his writings—feeling forms. Piaget states that all

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<sup>52</sup> 14:10-11.

thought has a feeling component and that feelings are the subject's reactions to his interactions with the environment; feelings regulate interactions with the environment and energize cognition.<sup>53</sup>

In the course of mental development and due to what Piaget calls the symbolic function, objects achieve an autonomy independent of action. We can picture or conceive of "things" without the presence of the object and without acting upon the object.

Piaget's theory suggests that without the prior sensori-motor experiences, operational thinking is not possible. A key idea in Piaget's theory is the progressive transformation of overt physical actions into mental operations and schemata.<sup>54</sup>

The levels of representation are: (1) signals, (2) symbols, and (3) signs, with actual objects and events initiating all meaning development. Piaget begins an analysis of the levels of representation by observing that meaning development initiates in the phenomenal field of immediate objects and events. The objects and events are signals, indications or evidence of meanings. He notes that to assimilate an object or sensory information is to "insert it in a system of schemata, in other words, to give it 'meaning'"<sup>55</sup>

At the signal level of representation the child also deals with cues which refer to specific objects. The attributes or characteristics of objects such as color, size, texture, shape, and location are cues to an object's existence, identity, and meaning. The signal may

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<sup>53</sup> 62:4-5.

<sup>54</sup> (33:368).

<sup>55</sup> (61:189).

be a concrete object or an event, a sensory impression, or an attribute of or partial evidence of an object.

The symbol level of representation is a psychological step removed from the immediate environment of signals. In Piagetian theory, "a symbol is a translation of reality: The mental image is a symbol of reality"<sup>56</sup>. Piaget explains: A "symbol" is an image evoked mentally or a material object intentionally chosen to designate a class of actions or objects.

The sign level of representation is that of language. Language bears no resemblance to the reality that it represents. Signs are symbols in that they are translations of reality but they are arbitrary symbols whose meanings are culturally determined.

Piaget suggests that the sign system of language can function as a signal to meaning as do phenomena. The idea that language functions as a signal similar to the physical surroundings contains the suggestion that words achieve an object status which is prior to, and perhaps necessary for, the development of objectivity. Piaget identifies three sources of knowledge: the physical environment, the social environment, and the subject.

The physical environment refers to the objects and events in external reality. The physical environment contains the potential stimuli for acquiring physical knowledge. Then there is the subject, the self. The social environment is one of people and the cultural heritage. Piaget states: The human being is immersed right from birth in a social environment which affects him just as much as his physical environment. Society, even more, in a sense, than the physical environment, changes the very structure of the individual, because it not only compels him to recognize facts, but also provides him with

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<sup>56</sup> (67:111)

a ready-made system of signs, which modify his thought; it presents him with new values and it imposes on him an infinite series of obligations.

It is therefore quite evident that social life affects intelligence through the three media of language (signs), the content of interaction (social values), and rules imposed on thought.<sup>57</sup> While social knowledge is not originally constructed as is physical knowledge, it is utilized as data in information processing.

Logical knowledge is an implicit knowledge of mental operations or ways the subject processes and organizes his world. The awareness of the stability of the existence of objects and the ability to conserve objects and their meanings in memory marks the onset of representational thinking. The storage and retention of concepts is necessary for concept development and abstract thinking. Objectification promotes reflective thought since it substitutes the subject's immediate physical actions in the environment with mental actions involving memory and foresight.

Thought, in contrast to action, creates psychological distance between the subject and object allowing one to conceive the nonpresent, invisible, anticipated or past.

Piaget states: This infinite expansion of spatio-temporal distances between subject and object comprises the principal innovation of conceptual intelligence and the specific power that enables it to bring about operations.<sup>58</sup>

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<sup>57</sup> (62:156).

<sup>58</sup> (62:121).

In Piaget's theory the three levels of representation, from signal to symbol to sign, are developmental parallels to the modes of representation, from action to image to language.

Piaget states: "We call perception that most direct or immediate possible knowledge of a present object in the sensorial field (without affirming, however, that there exists a knowledge which is completely direct or immediate)" <sup>59</sup>

Piaget asserts that ". . . there does not exist, at any level, direct experience either of the self or the external environment". <sup>60</sup> Piaget believes that all experience is interpreted. Perception is an interpretive activity applied to phenomena directly accessible to the senses "We not only believe what we see: to some extent we see what we believe" The influence of one's conceptual structure on perception is part of the "theoretical contamination" of perception. <sup>61</sup>

Piaget's developmental approach to thinking suggests that classification is a central function or goal of the individual. Classification allows the individual to represent the world in manageable and efficient forms. The child emerges as a cognitive classification.

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#### CONCEPT FORMATION AND CLASSIFICATIONS

A concept is an idea that includes all that is characteristically associated with it. <sup>62</sup>  
A category is a partitioning or class to which some assertion or set of assertions might

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<sup>59</sup> (33:232).

<sup>60</sup> 61:136)

<sup>61</sup> (43:15).

<sup>62</sup> medin

apply. It is tempting to think of categories as existing in the world and of concepts as corresponding to mental representations of them. Concepts need not have real-world counterparts and because people may impose rather than discover structure in the world. The world could be partitioned in a limitless variety of ways, yet people find only a miniscule subset of possible classifications to be meaningful.

Part of the answer to the categorization question likely does depend on the nature of the world, but part also surely depends on the person and its motivation. Given the fundamental character of concepts and categories, one might think that people who study concepts would have converged on a stable consensus with respect to conceptual structure. However, we have neither consensus nor stability.

The classical view assumes that mental representations of categories consist of summary lists of features or properties that individually are necessary for category membership and collectively are sufficient to determine category membership.

The rejection of the classical view of categories has been associated with the ascendance of the probabilistic view of category structure.<sup>63</sup> This view holds that categories are "fuzzy" or ill-defined and that categories are organized around a set of properties or clusters of correlated attributes that are only characteristic or typical of category membership.<sup>64</sup> Thus, the probabilistic view rejects the notion of defining features. In probabilistic categories is naturally graded, rather than all or none, and the better or more typical members have more characteristic properties than the poorer ones.

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<sup>63</sup> (Wittgenstein, 1953)

<sup>64</sup> (Rosch, 1975)



The term, probabilistic view, seems to imply that people organize categories via statistical reasoning. Actually, however, there is a more natural interpretation of fuzzy categories. Intuitively, probabilistic view categories are organized according to a family resemblance,

This summary representation is referred to as the prototype, and the prototype can be used to decide category membership. If some candidate example is similar enough to the prototype for a category, then it will be classified as a member of that category. The general notion is that, based on experience with examples of a category, people abstract out the central tendency or prototype that becomes the summary mental representation for the category.

Another principle of mental representation is the exemplar view. The exemplar view denies that there is a single summary representation and instead claims that categories are represented by means of examples. It is noted that “both prototype and exemplar theories rely on roughly the same similarity principle”. That is, category membership is determined by whether some candidate is sufficiently similar either to the prototype or to a set of encoded examples, where similarity is based on matches and mismatches of independent, equally abstract, features.

Roth and Shoben have shown that typicality judgments vary as a function of particular contexts.<sup>65</sup> Similarity as a function of common and distinctive features weighted for salience or importance. According to this model, similarity relationships will depend heavily on the particular weights given to individual properties or features. The relative

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<sup>65</sup> Roth and Shoben (1983),

weighting of a feature (as well as the relative importance of matching and mismatching features) varies with the context.

It would be a mistake to assume that people had the ability to read and report their mental representations of concepts in a veridical manner. The general point is that attempts to describe category structure in terms of similarity will prove useful only to the extent that one specifies which principles determine what is to count as a relevant property and which principles determine the importance of particular properties. In that sense similarity is more like a dependent variable than an independent variable.

It is perhaps only a modest exaggeration to say that similarity gets at the shadow rather than the substance of concepts. Something is needed to give concepts life, coherence, and meaning. Therefore, it is possible to say that the concepts are organized around theories, and theories provide conceptual coherence.

The primary differences between the similarity based and theory-based approaches to categorization are summarized. Murphy and Medin suggested that the relation between a concept and an example is analogous to the relation between theory and data.

That is, classification is not simply based on a direct matching of properties of the concept with those in the example, but rather requires that the example have the right "explanatory relationship" to the theory organizing the concept. Best explanation one of the more promising aspects of the theory based approach is that it begins to address the question of why we have the categories we have or why categories are sensible.

One might call this framework "psychological essentialism." The main ideas are as follows: People act as if things have essences or underlying natures that make them the thing that they are. Furthermore, the essence constrains or generates properties that may

vary in their centrality. One of the things that theories do is to embody or provide causal linkages from deeper properties to more superficial or surface properties. The reason is that it may prove to be good epistemology.

Why do we need the classifications? Categorization is a precondition of understanding and reasoning in complexity of environment. It is necessary to abstract the information. External world is structured but that the perceiver uses abstract categories to reduce the multitude of external stimuli of information.<sup>66</sup> Categories are derived from the perceived structure of external world.

Categories enables persons to ascribe meaning to new or novel situation, respond to them in terms of their designated category. Thus, without the sense of structure afforded by categorization, life would be perceived as a mass of unrelated objects, persons and events. It is claimed that “if every entity were to be perceived as unique, human beings would be entirely overwhelmed by the sheer diversity and unable to recall objects or events from one minute to the next”.<sup>67</sup> Likewise, “if every new entity in the environment was required to have a distinct name, language as a means of communication would be entirely unwieldy and counterproductive”. Thus, “without categories, human beings would be unable to function in a world that was perceived as entirely incomprehensible”.

Categorization performs a dual function in that it permits an individual to group conceptually equivalent objects together while at the same time distinguishing between objects that do not share the properties of the stimuli granted membership into the category.

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<sup>66</sup> Rosch, 1977; Cantor and Mischel

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Rosch refers to the concepts of “cue validity” and “category resemblance.” Cue validity, which is considered probabilistic in nature, specifies that the “validity of a given cue “x” as a predictor of a given category “y”. The cue validity for an entire category, therefore, can be conceived as the summation of cue validities on each attribute defining a given category. Thus, a category with high cue validity is seen as being more differentiated than one possessing low cue validity.<sup>68</sup>

In addition to cue validity, category resemblance is an additional measure of inclusiveness. According to Tversky category resemblance is defined as “the weighted sum of the measures of all of the common features within a category minus the sum of the measures of all of the distinctive features.” In this scenario, distinctive features are those that belong to only some members of a given category as well as those belonging to members of contrast categories.<sup>69</sup>

According to Rosch and Lloyd, “categories can be conceived as clear instances to the extent that a perceiver places “emphasis on the correlational structure of perceived attributes such that categories are represented by their most structured portions.” Thus, the term “prototype” has been used to refer to a clear or ideal instance of a category. Operationally, prototypes are defined based on person perception of a category member’s “goodness of fit” to a specified category (i.e., typicality). The higher the typicality score, the more representative an item is perceived to be in relation to the category against which it is being judged.<sup>70</sup>

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<sup>68</sup> (1978)

<sup>69</sup> Tversky (1977)

<sup>70</sup> Rosch and Lloyd (1978),

Determinants of Typicality As previously stated, typicality is defined as the degree to which an item is perceived as representing a category, these include the “family resemblance” model developed by Rosch and Mervis and the “feature-similarity” approach developed by Tversky.

Categories under the categorization paradigm can be conceived as schemata in that they consist of a central node that is attached to lower-level nodes (i.e., category attributes). Using this schema-based conceptualization, Pavelchak argues that the each category label has strong links to individual attributes and as such, can be utilized by a perceiver to organize remaining attribute information.

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#### ANALOGY AND METAPHOR AS A CORE OF THE COGNITION HELPING THE CATEGORIZATION

Analogy and metaphor are viewed as the core of classification, cognition and reasoning. All of the higher-level cognitive features typically associated with the neurobiologically normal adult human mind are fundamentally made possible by analogy and metaphor.<sup>71</sup> In this connection categorization can be seen as an analogical process because it requires the adaptation, through a mapping process, of an existing mental entity to a set of incoming stimuli. This means that recognition can be described as a form of analogy. In the real world, we draw on source knowledge deeply rooted in our experiences over a lifetime, and this knowledge has been generalized over time, allowing it to be carried over fluidly to all sorts of new situations.

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<sup>71</sup> Hofstadter, 2001 Hofstadter & Sander, 2013).

It is very rare that in real life we rely on an analogy to a situation with which we are barely familiar at all "both analogical and deductive reasoning cannot operate without structured representations"

Analogy is typically used to solve problems that are new for the reasoner, that it is a process that involves the borrowing of already-obtained knowledge structures, and that it can often involve the reorganization of the retrieved knowledge structures in order to improve the match quality.<sup>72</sup>

Analogy is the cognitive process which operates over structured representations in a source and target domain, making analogical reasoning possible. Analogy simpliciter may be better described as consisting of four different processes, in a division roughly following:

Analogical Retrieval - given a target domain T and an optional set of pragmatic constraints, retrieval searches a knowledge-base for relevant source cases which it may retrieve as a whole or construct from semantically related pieces. It is widely believed that whereas analogical matching relies on structural knowledge, the retrieval step relies on surface similarity," which is not considered to be structural.<sup>73</sup>

Analogical Mapping - Given a source domain S and a target domain T, a mapping M is found between the elements of S and T. The mapping may be subject to constraints

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<sup>72</sup> (Gentner & Forbus, 2011).

<sup>73</sup> ( (Gentner & Toupin, 1986; Holyoak & Koh, 1987; Thagard, Holyoak, Nelson, & Gochfeld, 1993).

such as systematicity, the one-to-one constraint, pragmatic constraints, or any of the others identified by multiconstraint theory.<sup>74</sup>

Analogical Inference and Generalization - This might be considered the ultimate goal of analogical reasoning. Given S, T, and M from the mapping step, new conceptual structures are created and hypothesized to be a part of the target domain T (analogical inference), or to serve as a generalization of both S and T (analogical generalization ).

Re-representation - Perhaps the most poorly understood of the four analogical processes, re-representation involves a reorganization of the conceptual structures in the source and/or target domains to better satisfy one of the constraints in the mapping step, or to produce better results in the inference/ generalization step.

#### METAPHOR

It is believed that metaphor is essentially a comparison between, or juxtaposition of concepts which are literally different to various degrees.<sup>75</sup> For example, Barlow define metaphor as being "an implied comparison between two things of unlike nature that have something in common."<sup>76</sup> Ortony further elaborates on his theory by postulating three purposes for using metaphors. First, metaphor provides a shorthand way by which to provide information.

Metaphors are often able to transfer broad "chunks" of meaning; they can call up many associations and related experiences from our knowledge stores.

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<sup>75</sup> (Barlow, et al, 1971; Green, 1971; Leech, 1969; Ortony, 1975a,b, 1976a,b; Perrine, 1971).

<sup>76</sup> Tez 120 et al (1971, p. 10),

Analogy and metaphor have two implications. One is the basic understanding mechanism as a pattern recognition. First we recognize the pattern then via deductive and inductive reasoning some inferences are made.

Green believes that metaphors are indispensable because they allow us to teach new concepts. "They permit us to construct ways of leading the mind from the familiar to the unfamiliar." The second use that Green sees for metaphor is expressing a new relationship between objects. These new relationships can often lead to new hypotheses and perspectives on how things work.

Similarly in order to make an analogy or metaphor "advanced organizers" are used draw upon and mobilize relevant anchoring concepts that are already established in the learner's cognitive structure and integrate it into current knowledge.<sup>77</sup>

It is also described that concept mapping is a schematic device for representing meaning and understanding relationships between concepts. They described concept maps as a visual road map showing pathways to connect meanings of concepts.<sup>78</sup>

The underlying principle of Ausubel's theory regarding the acquisition and organization of knowledge is that of subsumption. He views the human nervous system as a data-processing and storing mechanism constructed in such a way that new ideas and information can only be learned and retained if inclusive and relevant concepts are already available in cognitive structure to provide "ideational anchorage." If the material is not subsumable, It would form discrete and isolated traces. The significant variable

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<sup>77</sup> Ausubel, 1968 Novak and Gowin 1984

<sup>78</sup> Novak & Gowin, 1984.



determining whether new meaningful material will be incorporated is the availability of relevant subsuming concepts which are appropriately inclusive to provide anchorage.

"The function of the organizers is to provide ideational scaffolding for the stable Incorporation and retention of the more detailed and differentiated material that follows in the learning passage, as well as to Increase discriminability between the latter and related interfering concepts in cognitive structure"

Metaphor involves the understanding of something from one conceptual domain (the source domain) in terms of concepts or structures from another conceptual domain (the target domain). Metaphor is pervasive and ordinary, not deviant and extraordinary. We are largely unaware of this metaphorical nature of our conceptual systems. Metaphors provide systematicity (or coherence) within our conceptual structures. This is due to the fact that for many of these common metaphors, it is not just single concepts but entire conceptual domains that are structured and understood metaphorically. Thus, there is a hierarchy of metaphors corresponding to that found for many categories.

We use specific examples or subcategories to understand and reason about general categories Rosch has referred to this as cognitive reference point reasoning and Lakoff refers to it as prototype-based reasoning. Lakoff considers prototype based reasoning and many instances of framing as examples of metonymy, where either the general stands for the specific (in framing) or the specific stands for the general (inprototype-based reasoning). It is a type of framing in which the structure from a source domain is mapped or projected onto the target domain.

Metaphors always involve partial structuring. They highlight some aspects of the target domain while downplaying others.<sup>79</sup> Due to this partial structuring, we often have more than one metaphor for understanding a domain (especially for abstract domains). Each provides a different framing or perspective and thus a different understanding.

The structure mapped from source domain to target domain in metaphor also provides a logic that is a basis for reasoning. Entailments of metaphors refer to consequences of their particular structuring. Metaphor is “inference preserving” in that it projects the inferential structure across conceptual domains.

Metaphor is especially important for domains such as emotions and abstract domains that do not have much inherent structure of their own. We typically structure these less-structured domains metaphorically in terms of other well structured domains, typically sensorimotor domains. Thus, metaphor provides the basis for abstract thought.

Metaphor is especially important for abstract thinking, for it allows us to project the structure from well-structured domains onto less-structured domains. Finally, our thought is largely unconscious. That is, we are typically unaware of this embodied and imaginative nature of our thought. Abstract domains such as time, events, causation, the mind, the self, and morality are structured by multiple complex metaphors.<sup>80</sup>

#### Nexus between Language and Conceptual structure

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<sup>79</sup> (Lakoff & Johnson, 1980

<sup>80</sup> (Lakoff & Johnson, 1999).

Language is considered as editor of thinking and knowledge. Logical operations are relationship schemes which the individual creates and utilizes for interpreting the environment. Classification and seriation are two major relationship schemes for organizing the world. The logical operations are the skills of representation, e.g., observing, describing, sequencing, comparing, and generalizing.

It should be assumed that people have procedures available for logical thinking and they can develop these procedures naturally or even readily retrieve procedures that may be available. What Piaget's statements suggest is that language contains the signals for the logical operations. The field of logic suggests this as well.

Ennis refers to words which signal part-whole relationships, class inclusion, and conditional reasoning as logical operators in that they signal logical operations. Langer's discussion of language as a logical system further supports the idea of syntax as containing methodological import for information processing. Perhaps the most elaborate structure ever invented for purely representational purposes is the syntactical structure of language. What this structure can represent, is the order and connection of ideas in our mind.

These principles of connection or association unite our thoughts together. This transition of thought from the cause to the effect proceeds not from reason. It derives its origin altogether from experience. This is the whole operation of the mind, in all our conclusions concerning matter of fact and existence; and it is a satisfaction to find some analogies, by which it may be explained. The transition from a present object does in all cases give strength and solidity to the related idea. Here, then, is a kind of pre-established harmony between the course of nature and the succession of our ideas; and though the powers and forces, by which the former is governed, be wholly unknown to us; yet our

thoughts and conceptions have still, we find, gone on in the same train with the other works of nature.

We know, that, in fact, heat is a constant attendant of flame; but what is the connection between them, we have no room so much as to conjecture or imagine. When we say, therefore, that one object is connected with another, we mean only that they have acquired a connection in our thought, and give rise to this inference, by which they become proofs of each other's existence. The mind feels no difference between them in passing from one link to another. Nor is less certain of the future event than if it were connected with the objects present to the memory or senses, by a train of causes, cemented together by what we are pleased to call a physical necessity.

Our ideas are not mere fleeting images without definite relations to each other; whenever we are really thinking, not merely dozing in a haze of passive impressionism, our ideas exhibit sequence, arrangement, connection, a definite pattern. . . . There are many ways of combining the elementary notions in our minds, and the commonest, most general of these ways are reflected in the laws of language, which we call syntax. Syntax is simply the logical form of our language, which copies as closely as possible the logical form of our thought. To understand language is to appreciate the analogy between the syntactical construct and the complex of ideas, letting the former function as a representative, or "logical picture," of the latter.

To put it different way, language can be viewed as a general schema for enabling the individual to organize experience.

Firstly, language brings the three-dimensional environment into psychological existence. The environment is perceived and mapped with language. Carroll observes that the concepts for thinking are coded linguistically. He notes that . . . concepts of identity, similarity, comparison of magnitudes, spatial position, temporal sequence, causation, and the like—are coded in the lexical and grammatical structure of language.<sup>81</sup>

All mental operations have an operational vocabulary and syntax. Language frames are the open sesame for data gathering and knowledge construction overall schemata. Linguists define language as a code of signals. Fries states: "A language is a code of signals through which various sequences of vocal sounds or speech acts get meaning; it is a code of signals by which messages can be sent from one individual to another"<sup>82</sup>

It is viewed that language as a tool for coding experience. Meanings are functions of recurring patterns of words correlated with recurring patterns of environmental situations. It is also noted that meaning is not "in" words or symbols but rather meaning is made by people using environmental, experiential, and linguistic signals to interpret situations.

The background linguistic system is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions, for his synthesis of his mental stock in trade. Formulation of ideas is not an independent process, but is part of a particular grammar.

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<sup>81</sup> (18:111)

<sup>82</sup> (36:100).

Bruner's research on the relationship between grammatical structure and conceptual structure has led him to conclude that. . . . We seem to have found an important correspondence between linguistic and conceptual structure. It relates, however, not to words in isolation but to their depth of hierarchical embedding both in language and in thought. This correspondence has to do not with quantitative richness of vocabulary in different domains or with "accessibility" but with the presence or absence of words of a higher order that can be used to integrate different domains of words and objects into hierarchical structures. No matter how rich the vocabulary available to describe a given domain, it is of limited use as an instrument of thought if it is not organized into a hierarchy that can be activated as a whole.<sup>83</sup>

Bruner considers the linguists' concept of form classes being the categories of thought derived from experience. He refers to sentence frames or patterns as a hierarchical system for nesting categories.

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#### PERSONAL CONSTRUCT THEORY

Kelly calls knowledge structure and schemata as "Personal Construct" the basic position of this theory is that an individual has a system of dimensions which he uses in cognitively representing his environment and that the characteristics describing the relationships among these dimensions refer to an individual's cognitive structure<sup>84</sup>. The units or elements of this structure are the construct dimensions that a person utilizes in order to deal with the environment.

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<sup>83</sup> (16:306).

<sup>84</sup> (Bieri et al., 1966)

This definition of cognitive structure, as well as the others that have been mentioned, makes two basic assumptions. "First, that cognitive structures refer to organized systems whose properties are dependent upon the inter-relation of the various elements in a given system. Second, knowledge of cognitive structures implies that predictions can be made of the way in which the person copes with his environment".<sup>85</sup>

Kelly's fundamental postulate is that "a person's processes are psychologically channelized by the ways in which he anticipates events," "a person anticipates events by construing the irreproducible."<sup>86</sup> This proposition can be seen as addressing the question singled out earlier with respect to how the perceiver orders information according to categories or dimensions. The sensibleness of interpretation or construing an instance of observed behavior. "Repeated theme" in the flow of events.

Basic to our making sense of our world and of our lives is our continual detection of repeated themes, our categorizing of these themes and our segmenting of our world in terms of them.<sup>87</sup> We make sense of our world by giving it the structure we impose is represented in the way we categorize and thereby give meaning to the repeated themes.<sup>88</sup>

In the process of construing, the perceiver is structuring what s/he observes; the resultant structure takes the form of what Kelly calls "constructs." Forming constructs may be considered as binding sets of events into convenient bundles which are handy for the

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<sup>85</sup> Bieri et al, 1966, p. 18.

<sup>86</sup> (1963, P' 50).

<sup>87</sup> (Bannister & Fransella, 1971, p. 20)

<sup>88</sup> Bannister & Fransella

person who has to lug them. Events, when so bound, tend to become predictable, manageable, and controlled.<sup>89</sup>

Constructs can thus be thought of as self-derived, cognitive dimensions around which the perceiver organizes, i.e., makes sense of, his or her world. In construing, the person notes features in a series of elements which characterize some of the elements and are particularly uncharacteristics of others. Thus he erects constructs of similarity and contrast, both the similarity and the contrast are inherent in the same construct.<sup>90</sup> According to Kelly's conception, not only "witty" but its contrast as well, "not witty" or "dull," would represent a construct. Viewed this way, it becomes far easier to see how constructs function as dimensions for judgment.

**The individual corollary.** Kelly's second elaborative proposition stresses an important implication of what has already been said with respect to constructs as self-derived, cognitive dimensions for judgment. In proposing that "persons differ from each other in their construction of events"<sup>91</sup>

Kelly simply stressed what is so obvious as to go often unnoticed. Each of us differs from others in how we perceive and interpret situations. Indeed, as Bannister and Fransella have argued, the fundamental mystery of human psychology is covered by the question "why is it that two people in exactly the same situation behave in different ways" The answer is of course that they are not in the "same" situation. Each of us sees our situation

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<sup>89</sup> (1963>p. 126).

<sup>90</sup> (1963> pp. 50-51).

<sup>91</sup> (1963, p. 55),



through the "goggles" of our personal construct system<sup>92</sup>. The individual corollary then, stresses the personal quality of a construct system.

**The organization corollary.** With his third corollary, it is articulated how personal constructs are organized into system "Each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs." <sup>93</sup> Not only do we differ in our interpretations, but we also differ in the particular way in which we organize our interpretations.

According to Kelly, relationships are made according to the particular manner in which the perceiver has structured his or her own personal construct system. When different concepts are connected each other, this connection is made different ways like, relations, reasons results.

**The dichotomy corollary.** With his proposition Kelly argued that "a person's construction system is composed of a finite number of dichotomous constructs"<sup>94</sup>. It is useful to view constructs dimensionally, as having two poles. However, it can be argued that while constructs may often possess contrasts with explicit verbal labels if the contrast is not openly labeled, it is implicitly assumed. Perhaps the point is best illustrated with an example: When we point and say "That is a chrysanthemum," we are not it from every

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<sup>92</sup> (1971, p. 22)

<sup>93</sup> (1963, p. 56).

<sup>94</sup> (1963, p. 59)

other object in the universe, we are usually contrasting it with some other flower it might have been confused with it.<sup>95</sup>

**The choice corollary.** The choice corollary asserts that change or development of a person's construct system will take the form of elaboration: "A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for the elaboration of his system".<sup>96</sup> In discussing this corollary, Kelly pointed out that this elaboration may take the form of either definition, making one's construct system "more explicit and clear cut"<sup>97</sup> or extension, making the system "more comprehensive, . . . making more and more of life's experiences meaningful"<sup>98</sup>

Conceptually, Kelly's view of cognitive change as embodied in the concepts of definition and extension is not unlike the view of cognitive development Werner posited with his orthogenetic principle: "Wherever cognitive development occurs it proceeds from a state of increasing differentiation, articulation, and integration"<sup>99</sup> With Werner's developmental proposition, cognitive change is seen as movement from the general to the specific, from globally to specificity, from the simple to the complex. A systematic development that increasingly differentiates with respect to the range and precision of constructs.

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<sup>95</sup> (1971, p. 24).

<sup>96</sup> (1963, p. 64)

<sup>97</sup> (p. 67),

<sup>98</sup> (p. 66).

<sup>99</sup> (p. 126).

**The range corollary** “a construct is convenient for the anticipation of a finite range of events only.”<sup>100</sup> Kelly stressed that constructs are bipolar and finite in number. This corollary also articulates a notion implicit in the idea of change or development through “definition” and “extension.” As dimensions for judgment, constructs can be said to possess a "range of convenience"; through extension the individual reaches out to increase or delimit his or her range of comprehensiveness by exploring new areas that are only very partially understood. Yet, constructs may also be said to have a "focus of convenience," a term Kelly used to indicate those things for which a construct is specifically developed.<sup>101</sup> As more and more is excluded from constructs' range and as their foci become increasingly specific, a view of cognitive change as increasing differentiation evolves.

**The experience corollary.** Perhaps this corollary represents the developmental keystone of the theory: "A person's construction system varies as he successively construes the replication of events".<sup>102</sup> Kelly's analogy of "man the scientist" is here articulated in fairly specific terms. A personal construct system represents an integrated set of working hypotheses being constantly put to the test of experience.

**The modulation corollary.** It refers to the permeability – impermeability of constructs, the degree to which constructs can assimilate new elements within their range of convenience, generate new implications: "The variations in a person's construction

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<sup>100</sup> (p. 68),

<sup>101</sup> (p. 137).

<sup>102</sup> (p. 72).

system is limited by the permeability of the constructs within whose range of convenience the variants lie "<sup>103</sup>.

**The fragmentation corollary:** It suggests that changes in a person's construct system are not always strictly "logical" in the technical sense of that term: "A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other"<sup>104</sup>. In other words, construing or behaving in certain ways, while making perfect sense to the individual, may not always abide by the more objective, external laws of logic, the formal laws of induction or deduction.<sup>105</sup>

**The commonality corollary.** This corollary actually represents a converse of the individuality corollary. While we may differ from others in the way we construe our world, this corollary asserts that we may also discriminate, interpret, or see the implications of events, construe our social world, in similar ways as well: "To the extent that one person employs a constriction of experience which is similar to that employed by another, his processes are psychologically similar to those of the other person"<sup>106</sup>

#### PERSONALITY –REASONING TRAIT BASED-EMOTIONAL-MOTIVATIONAL DIMENSION

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##### PERSONALITY: SELF

The different approaches to personality are often used interchangeably in different research. Ewen suggests that at present, there is no one universally accepted definition of

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<sup>103</sup> (p. 77)

<sup>104</sup> (p. 83)

<sup>105</sup> (e . g . , Delia, 1970).

<sup>106</sup> (p. 90)

personality. However, there seems to be some general considerations, one of these being that personality originates within the individual and generally refers to important and relatively stable aspects of a person's behavior. It is also regarded as a collection of emotional, cognitive and behavioral patterns unique to a person that is relatively consistent over time.<sup>107</sup>

Allport defined it as “the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to his environment.”

Cattell asserted that personality “permits a prediction of what a person will do in a given situation”. Eysenck defines it, as “the sum-total of the actual or potential behavior-patterns of the organism, as determined by heredity and environment; it originates and develops through the functional interaction of the four main sectors into which these behavior-patterns are organized: the cognitive sector, the conative sector (character), the affective sector (temperament), and the somatic sector (constitution).” He also asserted that personality is “an emergent ‘gestalt’ therefore it cannot be accounted for in terms of atomistic concepts, and the unique totality of personality determines the very nature and meaning of the individual sub-wholes of parts; it is not determined by them”

In psychology, research on personality has historically been directed by two major models of behavior: the trait model; and the interactionist model. In this section the trait based dimension of personality will be underlined and interactionist model will be evaluated later under the General Pragmatic Ontology.

The trait model dimension;

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<sup>107</sup> Ewen (1998)

A common assumption among trait- model personality psychologists is that the basic elements of personality are traits.<sup>108</sup> Traits are defined as enduring dispositions that can be inferred from patterns of behavior; they should therefore be stable across long periods of time and be similarly assessed by different observers.

Allport alleged that all people possess broad predispositions that cause them to behave in consistent ways across diverse situations and time. He viewed traits as real entities that exist inside a person to form an overlapping, interrelated network. They are distributed among all people, but are expressed uniquely by any given person. Most trait theorists have argued in favor of the strong heritability of most traits.

Gordon Allport found that one English dictionary alone contained more than 4000 words describing different personality “traits” Cattell reduced the number of main personality traits down to 171 by eliminating uncommon traits and combining common characteristics. He tested these 171 traits, then through factor analysis he identified similar traits and narrowed his list to 16 personality traits. Cattell identified these traits as the source of all human personality.

Allport identifies three levels in the hierarchy—cardinal, central and secondary traits. At the top of the hierarchy, cardinal traits capture master qualities of the individual, and can be described as the basic, underlying predispositions of individuals. One level closer to actual human behavior, central traits capture individual differences emerging from the interaction of cardinal traits Finally, at the lowest level in the trait hierarchy, secondary traits are described as dispositional differences within a narrow situational context.

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<sup>108</sup> Allport

In sum, each hierarchical tier represents a tradeoff between fidelity and bandwidth, with cardinal traits at the top of the hierarchy containing the most bandwidth and secondary traits at the lowest level of the hierarchy containing the highest fidelity. To put it differently relatively broad traits include a large number of distinct behaviors, whereas relatively narrow traits refer to a more limited range of behaviors.

Even though there is a consensus on three-tier trait hierarchy, there is no consensus on the number of cardinal traits. Allport initially suggested there are between five and ten cardinal traits in the hierarchy. Eysenck three, Guilford thirteen, Cattell sixteen, Hogan six, McCrae and Paul Costa identified five cardinal traits. These differences mainly stem from the tradeoff between fidelity and bandwidth dilemma.

Contemporary scholars argue that five broad factors; extraversion, neuroticism, agreeableness, conscientiousness, and openness adequately summarize the domain of personality. It is often referred to as the "Big Five" Theory.

This theory represents five cardinal traits that interact to form Human Personality. Goldberg states that “it should be possible to argue the case that any model for structuring individual differences will have to encompass—at some level—something like these ‘big five’ dimension”<sup>109</sup>

Goldberg suggests that the five-factor model provides a framework for many theoretical organizations of personality concepts and it is considered the most widely tested and well-regarded model of personality. He adds “It is accepted that the five-factor model of personality ... Is largely sufficient for characterizing normal and abnormal personality

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<sup>109</sup> (p. 159).

functioning. The use of five broad traits as a common currency for personality psychology has been an important counterforce to this Tower of Babel.

Even though different personality theories have different classifications and content dimensions, they have a lot of similarities. When the personality psychology literature is reviewed. Following similarities can be seen:

Openness factor is highly related to Jung's psychological functions of Sensing vs Intuition, Henry Murray's "Understanding, Change, Sentience, and Autonomy, Tellegen's absorption, Gough's flexibility, Rokeach's dogmatism, Fenigstein, Scheier and Buss's private self-consciousness, Holland's artistic interests, Guilford, Zimmerman and Guilford's thoughtfulness, Kris's regression in the service of the ego. Henry Murray's catalog of needs includes understanding, Change, Sentience, and Autonomy, Zuckerman's Experience Seeking.

Agreeableness factor is highly related to Jung's psychological functions of Thinking vs Feeling, Henry Murray's Abasement, Nurturance, and low Aggression, Eysenck's Psychoticism, Erikson's trust vs mistrust, Snyder's self-monitoring, James' tough vs tender-mindedness, Horney's "moving against" tendency, Freud's narcissism, Adler's social interest. Strelau, Angleitner, Bantelmann and Ruth's Inhibition scale.

Conscientiousness factor is highly related to Jung's psychological functions of Perceiving vs Judging, White's competence, Henry Murray's Achievement, Order, Endurance, Cattell, Eber and Tatsuoka's superego strength, Rotter's locus of control, Hartshorn, Lorr's persistence, and McClelland, Atkinson, Clark and Lowell's achievement motive. Windel and Lerner's Persistence scale.<sup>110</sup>

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<sup>110</sup> PAUL T. COSTA JR and ROBERT R. MCCRAE



### **Big Five Factors:**

**Conscientiousness;** a person displaying the factor of “Conscientiousness” has been described as being dependable, careful, thorough, responsible, organized, hardworking, persevering, and achievement-oriented.

Conversely, the opposite pole of the trait has been described as being disorganized, unreliable, lazy, careless, and reckless. In the personnel selection research, the factor “Conscientiousness” has been shown to be a valid predictor of future job performance for all occupational groups. Conscientious people are likely to exhibit outstanding attendance, comply with norms, and be a responsible person in the organization. Research shows that people with high conscientiousness are more concerned with task accomplishment than outcomes such as economic rewards.

**Extraversion;** “Extraversion” is exemplified by such traits as sociability, gregariousness, assertiveness, talkativeness, and activeness.<sup>111</sup> In the individual personnel selection literature, “Extraversion” is positively correlated with interpersonal relations and has been shown to have positive validity in predicting future individual job performance for those occupations that have a large social component.

Meta-analytic studies show that extraversion is positively related to performance in jobs that require interpersonal skills and poorer performance for jobs that are low on the social and complexity domains. This means that extraverts will fit better in a situation that provides greater opportunities for meeting other people. Other studies have supported the relationship between this trait and performance in sales and managerial settings.

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<sup>111</sup> barrick

**Neuroticism;** The factor of “Neuroticism” may also be thought of as a lack of “Emotional Stability”, or “Adjustment. Its sub-components are Anxiety, Anger- Hostility, Depression, Self-Consciousness, Vulnerability, and Impulsiveness. It is characterized by traits such as anxiety, depression, anger, embarrassment, emotionality, and insecurity.

In the personnel selection research, “Emotional Stability” has been found to positively correlate with interpersonal relations and adaptive capacity and performance in service. Barrick and Mount hypothesized that “once a certain threshold of stability had been attained by the person tested, the degree of “Emotional Stability” was no longer relevant in predicting performance”.

According to Costa and McCrae<sup>112</sup> Neuroticism is a broad dimension of individual differences in the tendency to experience negative, distressing emotions and to possess associated behavioral and cognitive traits.

A review of the literature indicates that individuals with high Neuroticism generally experience more frequent and more intense negative emotions, for longer durations, than low Neuroticism individuals.

Neuroticism is a socially expressed trait associated with poor social skills and lack of trust in others. People with high neuroticism are vulnerable to situations that demand high social skills. It is expected that the social aspects of job will further enhance or reduce the effects of job scope. A cognitively demanding situation will be particularly threatening to neurotic individuals. On the contrary, people with high neuroticism will show positive

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<sup>112</sup> Costa and McCrae (1987),

job satisfaction if their job is simple, cognitively less demanding, and requires fewer contacts with others at work.<sup>113</sup>

**Agreeableness:** Agreeableness is described as selflessness, concern for others, trust and generosity of sentiment.<sup>114</sup> “Agreeableness has six facets, these are: Trust, Straightforwardness, Altruism, Compliance, Modesty, and Tender-mindedness.

**Trust:** can be defined as “the tendency to attribute benevolent intent to others; distrust as the suspicion that others are dishonest or dangerous”. Low standing on this facet is associated with cynicism.

**Straightforwardness** implies directness and frankness in dealing with others. This variable is far more important in moral philosophy than it has been in personality psychology, one version of its opposite pole is named as “Machiavellianism.

**Altruism** is selflessness and concern for others. It is called also ‘social interest.

**Compliance** is an interpersonal style that is seen when conflicts arise; compliant individuals defer to others instead of fighting; they are meek and mild. In a positive sense, this trait is seen in a willingness to cooperate.

**Modesty**, or humility, refers to an aspect of the self-concept. Modest people are not preoccupied with themselves; arrogant people have an inflated view of themselves.

**Tender-Mindedness** refers to the tendency to be guided by feelings, particularly those of sympathy, in making judgments and forming attitudes.

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<sup>113</sup>

<sup>114</sup> (McCrae & Costa, 2003).

A person exhibiting traits included in the “Agreeableness” factor is courteous, flexible, trusting, sympathetic, considerate, warm, compassionate, good natured, cooperative, forgiving, soft-hearted, and tolerant. The antithesis of Agreeableness is referred to as antagonism or tough mindedness. They described a highly antagonistic individual as: critical, skeptical, showing condescension, pushing limits and expressing direct hostility. It is likely the largest dimension of personality. It has great implications with social abilities, social and emotional intelligence.

Historically, agreeableness has been defined in terms of social motivation. It is also theorized to have developmental roots in effortful control. “Effortful control” is the ability of an individual to suppress a dominant response in favor of a subdominant response. It is also defined “ability to voluntarily sustain focus on a task, to voluntarily shift attention from one task to another, to voluntarily initiate action, and to voluntarily inhibit action”<sup>115</sup> For example, a dominant response may be to acts aggressively, but an individual with who is able to display greater effortful control may suppress aggression and respond with a more socially appropriate conflict resolution tactic.

“Finally, agreeable individuals have been found to automatically engage neural mechanisms associated with the self-control of emotions, namely the right lateral prefrontal cortex, to regulate negative affect associated with threatening or conflict-related signals”<sup>116</sup>

In addition to effortful control, it is directly related to emotion regulation efforts Agreeableness has been linked to prosocial motives and behaviors, such as helping others

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<sup>115</sup> Ahadi

<sup>116</sup>

and displays of empathy. Agreeableness seems to be the dimension concerned with interpersonal relations. Specifically, it is concerned with individual differences in the motivation to maintain positive relations with others. Agreeableness seems to be a major dimension of personality, perhaps even the largest single dimension.

Theory and research suggest that agreeableness, one of the Big Five personality dimensions, consistently plays a major role in the development of healthy relationships throughout the lifespan. Being agreeable is often characterized by traits such as cooperative, considerate, and kind.

Agreeable individuals are also better able to control their anger, are less likely to be aggressive or bully others and are less likely to be involved in anti-social behavior. In addition, agreeable individuals, in contrast to their less agreeable peers, strive for cooperation rather than competition during group tasks, offer more social support to others, are more likely to help others, work harder to suppress negative emotions during social interactions are more likely to forgive others genuinely like people more are more likely to accept those who are often stigmatized. Individuals who like to work in groups tend to make better decisions in selecting the best ideas from a set of ideas than those individuals who do not.<sup>117</sup> One explanation for why agreeableness is important for group performance is that agreeable behavior may provide a safe context for sharing innovative ideas.

In summary, agreeable individuals engage in specific behaviors meant to enhance relationship quality while avoiding behaviors that can have long-term deleterious effects for interpersonal relationships. Given the behaviors agreeable people often are involved in,

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<sup>117</sup> .(Larey, 1995).

it should be no surprise that agreeableness is strongly related to healthy interpersonal relationships throughout the lifespan- high agreeable individuals have more academic and career stability and success than do low agreeable individuals.

Although agreeableness has been associated with positive outcomes, it has also been suggested that agreeable people are so nice that they can be taken advantage of. However, research does not support the idea that agreeable people always ‘turn the other cheek.’ It has even been suggested that agreeable people actually exhibit more negative affect in situations that represent a mismatch of their interpersonal orientation.<sup>118</sup> A possible reason for this pattern is that people higher in agreeableness may be more sensitive to the damaging effects of destructive tactics and therefore express more anger in conflicts that use destructive tactics.<sup>119</sup>

Agreeableness has been found to correlate negatively with various forms of prejudice as has openness. Indeed, a recent study found that agreeableness obtained a high positive correlation with empathic concern, a moderate one with perspective-taking and a modest one with personal distress.

**Openness to Experience.** This factor of the “Big Five” is also commonly referred to as “Intellect”. Of the five factors, “Openness to Experience” is the least well defined. Traits associated with this factor include imagination, culture, curiosity, originality, broad mindedness, intelligence, and artisticness

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<sup>118</sup> (Suls, Martin, & David, 1998).

<sup>119</sup> (Jensen-Campbell & Graziano, 2001)

It is stated that “Openness is a broad constellation of traits with cognitive, affective, and behavioral manifestations. It cannot be reduced to a single underlying ability”.<sup>120</sup>

There are six facet scales of "openness to experience" in this definition, including fantasy, aesthetics, feelings, actions, ideas, and values.

**Fantasy;** People who score high on this scale have an energetic and vigorous fantasy life. Their vivid imaginations and daydreams are the way they create the interesting inner world of themselves. They use fantasy to produce a rich and creative life.

**Aesthetics;** Aesthetic people have a deep appreciation for beauty and art. Art, including music and poetry has an appeal regardless of their own art talents and tastes. Their sensitivity directs them to develop a greater knowledge and appreciation for art and beauty.

**Feelings;** Emotions are notably valued by people who score high on this scale. A high score implies a wider and deeper range of emotional feelings on both ends of happiness to unhappiness scale.

**Actions;** Openness to action is the behavioral readiness to experience various and novel activities, such as going new places and eating uncommon foods. High scorers prefer novelty and diversity to acquaintance and routine. They are more likely to dig into a variety of hobbies over the long run.

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<sup>120</sup> (McCrae & Costa, 1997, p. 832)

**Ideas,** Openness to ideas is an aspect of intellectual curiosity, open-mindedness, and willingness to consider new ideas. Openness to ideas indicates a potential for intellectual development, but does not guarantee high intelligence.

**Values,** Openness to values are the opposite of dogmatism. It implies the willingness to reevaluate social, political, and religious values. Closed individuals (low scorers) tend to be conservative, elevate tradition, and to accept authority.

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#### BELIEF

Rokeach calls personality and schemata as “belief- disbelief system”. According to him, a belief-disbelief system as the central point of cognitive structure and content. The belief system is conceived to represent “all beliefs, sets, expectancies, or hypotheses, conscious or unconscious, that a person at any given time accepts as true of the world in which he lives”.<sup>121</sup>

The disbelief system is composed of a series of sub-systems rather than just one. He contends that it contains all the disbelief’s, sets, expectancies, conscious or unconscious, that to one degree or another a person at any given time rejects as false. The total belief-disbelief fields are meant to represent each man's total framework for understanding his universe as best he can.

According to him, the belief-disbelief system is structured into three areas.

**The central part** of the system is relative to the individual's primitive beliefs. These are beliefs we all share about the nature of our physical world, of our social world,

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<sup>121</sup> Rokeach, M. (Ed.) The open and closed mind. New York: Basic Books, 1960.



and of the self. For example, these beliefs receive complete social consensus. They are taken-for-granted beliefs which are not subject to dispute because we believe, and we believe everyone else believes. These fundamental beliefs are more resistant to change than are any other type of belief. If such a primitive belief could be seriously challenged, it would be an extremely upsetting experience.

Intermediate beliefs are seen as emerging from this central region. Beliefs as to the basic friendliness or unfriendliness of the world, beliefs about parents and authority figures, loving or punishing, and about people in general. The intermediate belief region is seen as the area in which beliefs on authority are dominant. Here are beliefs regarding how authority is to be used, and differences in the way authority is perceived.

These beliefs develop out of central part beliefs and have a functional relationship with them. "They seem to serve the purpose of helping the person to round out his picture of the world, realistically and rationally to the extent possible, defensively and irrationally to the extent necessary.

We learn to expect differences of opinion and controversy concerning them and for these reasons all men need to identify with authorities who will help them decide what to believe and what not to believe. No one man is capable of ascertaining the truth on these issues for himself. As a result he comes to believe in one or another authority, parents, teachers, and he often takes their word for many things. Thus, we all develop beliefs as to which authorities are positive and which are negative. The particular authority relied on for information differs from person to person and is dependent upon learning experiences within the context of family, class, religion and country.

The peripheral region is relative to beliefs and disbeliefs concerning surface expressions of more basic beliefs. Beliefs of this kind comprise the "content" of the peripheral region. The "structural" components of this region have more importance in that they serve a coding and screening function in relation to information coming in from the environment. Initial screening may lead to the rejection of, or narrowing out of, such information entirely. If the information is compatible with primitive beliefs, and not so with intermediate beliefs, then selective avoidance occurs by way of altering or rationalizing the material so assimilation can take place.

A belief-disbelief system serves a dual function. On the one hand, it provides a cognitive framework for knowing and understanding. On the other hand, it serves as a defense against threatening aspects of reality. Both aspects, in varying proportions, are present in all individuals. Beliefs which are derived from the authorities we identify with. Contained within the peripheral region is every belief which issues forth from positive and negative authority, regardless of whether these beliefs are perceived consciously. Thus, many people adhere to a particular set of beliefs because they identify with a particular authority. Providing that the suggestion for change emanates from one's authority, or, providing that there is a change in one's authority, such peripheral beliefs can be changed.

Finally, there is another kind of beliefs, which Rokeach calls inconsequential beliefs. If they are changed "they have few or no implications or consequences for maintaining other beliefs involving self-identity and self-esteem, or for requiring consistency-restoring reorganisation within the rest of the system." If you should persuade me to believe the opposite, the change is inconsequential because the rest of my belief system is not likely to be affected.

In describing a belief Rokeach indicates that, a belief is any simple proposition, conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase "I believe that . . . " The content of a belief may describe the object of belief as true or false, correct or incorrect; evaluate it as good or bad; or advocate a certain course of action or a certain state of existence as desirable or undesirable.

The first kind of belief may be called a descriptive or existential belief. For example, I believe that the sun rises in the east; the second kind of belief may be called an evaluative belief such as I believe this ice cream is good. The third kind may be called a prescriptive belief as such I believe it is desirable that children should obey their parents.

All beliefs are predispositions to action; thus an attitude is a set of interrelated predispositions organized around an object or situation regardless of whether the content of a belief is to describe, evaluate or exhort.

In addition, each belief is viewed as being made up of three parts: a cognitive, an affective, and a behavioral component. The cognitive component because it represents the individual's knowledge about what is right or wrong, good or bad, etc.; the affective component because the belief, under the right conditions, could arouse positive or negative affect of varying degree around the objects or around the belief itself; the motivational component, because the belief is a predisposition to action, it will give way to action when activated. The end product of the action will be dictated by the content of the belief.

It does not seem reasonable to think of countless numbers of beliefs as being retained in an unorganized state within the human mind. Rather, it must be assumed that man's beliefs somehow become organized into systems which are not only describable but

are also measurable and have observable behavioral characteristics. Thus, we may define a belief system as having represented within it the entire scheme of a person's beliefs about reality.

These beliefs exist in some organized psychological, but not necessarily logical, form. All beliefs cannot be equally important to the person possessing them they must vary along a continuum of importance or centrality. Further, it is assumed that the more important a belief, the greater will be its resistance to change. The more trivial beliefs will give way to change quite readily. It must follow, then, that when an important belief is changed, the more sweeping the repercussions in the rest of the person's belief system. This occurs because many of the beliefs which are "hooked up" with the belief that changes will also change.<sup>122</sup>

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#### ATTITUDE

Asch refers to clusters of attitudes as "points of view," or "perspectives," which indicate that a person has a unified way of viewing an object or experience. An individual's perspectives, then, may be viewed as functioning in such a manner as to control influences upon behavior.

The definition of the tripartite model was formulated by Rosenberg and Hovland<sup>123</sup> According to them, "... attitudes are predispositions to respond to some class of stimuli with certain classes of response and designate the three major types of response as cognitive, affective, and behavioral."

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<sup>122</sup> an audience centered case study law

<sup>123</sup> Rosenberg and Hovland (1960, p. 3)

Krech and Crutchfield proposed that "attitudes are enduring systems of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to social objects."<sup>124</sup>

In tripartite model, the affective component has been described as the emotions and feelings associated with an attitude object; the cognitive component has been thought of as a constellation of ideas, beliefs, and knowledge about an attitude object; and the behavioral or motivational component has been referred to as **action tendencies** directed toward an attitude object.

The support is provided by investigations of the convergent validity of the three components. For example, it was demonstrated that changes in cognitions about an attitude object can bring about change in affective response, and similarly, that changes in the affective component often result in cognitive reorganization in an effort to attain consistency between the components. Other investigators demonstrated that the degree of consistency between attitudinal components is predictive of behavior related to that attitude.<sup>125</sup>

McGuire views the tricomponential view of attitudes as a "tired approach" in light of the frequency with which investigations of attitude structure have revealed a high degree of redundancy among the three components, such that the strength of their intercorrelations is as great as that of the internal reliabilities of the individual components.<sup>126</sup>

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<sup>124</sup> Krech and Crutchfield (1948, p. 139)

<sup>125</sup> Rosenberg (1960)

<sup>126</sup> McGuire (1989)

Accordingly, emotion, cognition, and motivation, from this perspective, exercise varying influences on varying kinds of attitudes; the relationships among components cannot be predicted a priori, but must be determined empirically for each case.<sup>127</sup>

In connection to this, it is unlikely that we ever form pure affect-based or pure cognition-based attitudes. More often than not, affect and cognition, motivation jointly determine the course of attitude acquisition, although to varying degrees.

As we can see that main problem between the different expert revolves around each elements' relative impact on attitude. In connection with this different attitude theories underline different aspects of attitudes. While, in the model presented by Fishbein and Ajzen, evaluations are based primarily on cognitive elements, the model proposed by Zajonc evaluations are based primarily on affective elements. Finally, evaluations are based on inferences from past behavior by Bern's theory of self-perception.

Attitudes are formed not only through reason, but through needs, wishes, and feelings, emotional and motivational factors. It is possible to say that it may be easier to separate "raw" affective processes from cognitive processes when an attitude is in the process of evolving than after the attitude has been crystallized.

As it is suggested, attitudes are imbued with psychological significance and are inextricably associated with motivation and personality. Note that this way of conceiving of affective, motivational and cognitive aspects of attitudes does not undermine the idea

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<sup>127</sup> by Zanna and Rempel (1988, p. 321):

that there are occasions in which the same objective stimulus causes all persons to respond either affectively or cognitively.

The large majority of theorists seem to agree that an attitude is not a basic irreducible element within the personality, but rather represents a group of two or more interrelated elements.<sup>128</sup>

Fishbein suggests that attitudes are a function of beliefs and the evaluative aspects of beliefs combined in an additive, compensatory manner.<sup>129</sup> The Fishbein attitude model has its theoretical roots in learning theory with a primary emphasis on beliefs as the fundamental cognitive element the two major constructs in the model are beliefs and attitudes.<sup>130</sup>

A belief inferenceness from any object considered true is defined as the perceived association between two learned concepts. In an information processing sense, beliefs encode the information one has acquired about an object. Operationally, a belief is usually measured by the degree of association or subjective probability between an attitude object and an attribute of the attitude object. Beliefs may be conceptualized in the behavioristic framework as stimuli to which are related an internal labeling and evaluative response.

An attitude is defined by Fishbein and Ajzen as "the amount of affect for or against an object".<sup>131</sup> An attitude is thus a unidimensional measure of evaluation towards an object.

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<sup>128</sup> Jastrow tells us that

<sup>129</sup> Tez 15(Fishbein, 1967b]

<sup>130</sup> (Fishbein, 1967b)

<sup>131</sup> (1975, p. 11)

Fishbein's expectancy-value attitude model depicts a causal relationship between beliefs and attitudes and eventually intentions and behavior.<sup>132</sup>

An attitude toward an object, action, or event is dependent on strength of beliefs about the object's attributes or about the act's consequences; evaluation of the attributes or consequences; and number of salient beliefs. It is suggested that attitudes are a function of belief strength and the evaluative aspects of beliefs combined in an additive, compensatory manner.

The basic premise of the behavioristic learning approach is that response tendencies toward any and all stimuli are "learned." At the same time, the person is learning to label objects, he is also learning an evaluation of the stimuli. The result is a contiguous relationship between concept labeling and affect so that an evaluation is "automatic" upon exposure to and identification of any stimuli. This implies that individuals have "attitudes" toward all discriminable stimuli.

However, many objects, are very complex and thus represent the combination and interaction of many stimuli. The basis for understanding attitude acquisition involves the learning concepts of labeling responses, evaluative conditioning, and concept formation. Each of these learning mechanisms contributes to the theory that the evaluative or attitudinal response to a complex stimulus object is a function of the specific evaluative responses associated with the attributes of the object. Also consistent with the theory that

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<sup>132</sup> (Fishbein and Ajzen, 1975).



overall attitude toward an object as being derived from the attributes associated with the object.

A number of recent attitude theories have concerned themselves with the relationship between "cognitive", "affective" and "motivational" elements in an attempt to understand the structure of attitudes.

Within the framework of consistency theory, Rosenberg predicted that the affect attached to an attitude object would be some function of (1) the perceived instrumentality of the attitude object, the judged probability that the attitude object would lead to or block the attainment of "valued states," and (2) the "value importance," the intensity of affect expected from these "valued states.

"Fishbein has arrived at a quite similar formulation within the framework of behavior theory that an individual's attitude toward an object is a function of (1) the strength of his beliefs about the object, and (2) the evaluative aspects of those beliefs.

Generally speaking, this position may be summarized as follows: (1) an individual holds many beliefs about any given object, many different characteristics, attributes, values, goals, etc., are positively or negatively associated with a given object, (2) associated with each of these "related objects" is a mediating evaluative response, an attitude; (3) these evaluative responses summate; (4) through the processes of conditioning and mediation, this summated evaluative response becomes associated with the attitude object; and thus (5) on future occasions, the attitude object will elicit this summated evaluative response, this attitude.

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## MOTIVATION

The most popular motivational theories based on this premise are expectancy-value models of Edward Tolman and Kurt Lewin are frequently recognized as the founders of the expectancy value models of motivation<sup>133</sup>

The more cognitive expectancy-value models popularly had the strongest impact on contemporary formulations of motivation which link motivation to self and situations.

Tolman developed his expectancy-value theory as an alternative to the behaviorally-oriented accounts of motivation based on drive theory. Drive theorists believed that behavior is the result of learned associations between a drive and a response. Tolman sharply disagreed with this account. He proposed that behavior is the result of the learned meanings or perceived/anticipated consequences of a response, and not the response, per se. specifically, individuals in acting out their daily lives learn the consequences or results of performing various behaviors. They learn which behaviors satisfy their motives and which do not. Gradually, individuals develop memory representations of the associations that connect their motives with the specific objects of behaviors that satisfy them. Tolman called these associations "means-end beliefs" in which the objects or behaviors are seen as means to achieve the salient motive or the end.

Because of the cognitive connection between an individual's motives and the behavioral means to satisfy these motives, motives stimulate demand for goal-objects with which they are associated. According to Tolman, to understand behavior we must understand the motives goals or ends to which the behavior is cognitively connected.

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<sup>133</sup> Edward Tolman (1932, 1955) and Kurt Lewin (1935)

Tolman's concept of means-end beliefs provided an explanation of how motives are linked to behavior.

Lewin's field theory<sup>134</sup> of motivation is strikingly similar to the ideas of Tolman.<sup>135</sup> Lewin defined motives more broadly as the expectations and evaluations of the future consequences of behavior. Motives, then, were not restricted to physiological needs or very self-related ends, such as values. Rather, motives were the cognitive representation of any desired (or undesired) consequence of a behavior.

Tolman's and Lewin's expectancy-value approaches to motivation were markedly different from most drive theory accounts because they included cognitive factors in their explanations of motivation. The perceived relationship between the means (the response) and the ends (the motives) captures the essence of motivation. Means-end beliefs (learned associations between a response and a motive) are cognitively represented in memory. Environmental forces interact with these means-end beliefs to determine an individual's motivation in a situation. Like the expectancy-value models of Lewin and Tolman, the "new" theories of motivation once again consider motivation as a cognitive concept, rather than conceptualizing motivation and cognition as distinct constructs.

As underlined above, there is general agreement among contemporary motivation researchers that motives are cognitively represented in memory. Specifically, goals or motives are the cognitive representations of future consequences<sup>136</sup>. A second question that

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<sup>134</sup> Lewin's (1935)

<sup>135</sup> (Atkinson 1964).

<sup>136</sup> Hamilton 1983; Lewin 1935; Markus 1983; Nuttin 1984, 1985;

arises concerns how motives or goals are represented in memory so that they can direct an individual's behavior. A widely shared view regarding the representation of motives in memory is that a person's goals, values and motives are hierarchically organized in memory in terms of their level of abstraction<sup>137</sup>

A goal's level of abstraction refers to the generality and inclusiveness of that goal. A goal that is "more" abstract is very general and may subsume several "less" abstract goals. More abstract goals, such as the basic motives described by Tolman and Lewin, usually cannot be attained through a single behavior.

To achieve abstract goals, the person must identify less abstract goals that, when achieved, will lead to the attainment of the more abstract motive. Less abstract goals are more concrete and specific, and are less inclusive. In fact, at the most concrete level, a goal is an intention or plan to engage in a specific behavior.

With experience, we learn what behaviors lead to satisfying our goals. In this case, by learning "what leads to what," a person forms and cognitively represents less abstract strategies or sub-goals that are linked to the more abstract end goals.<sup>138</sup>

Attaining these very abstract goals are of central importance to the individual. Feelings and emotions are often associated with the attainment these very abstract goals. Because of their abstractness as well as their importance, these goals and values are evoked or activated across many situations.

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<sup>137</sup> cf. Bandura 1978, 1982; Bettman]

<sup>138</sup> (cf. Kahle 1983; Rokeach 1967).

Relatively less abstract sub-goals or strategies, and behaviors which help attain the "core" self-goals and values may be represented in one of more of the social roles. In sum, the self-schema contains very abstract, unifying values that are stable across situations as well as less abstract goals and motives that vary with social roles that are activated in different situations. The activated means-end relationships linking the very abstract, self-related ends, to sub-goals and behaviors provide the basis for motivation in a given situation.<sup>139</sup>

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#### VALUES

Values can be considered more abstract goal for motivation. Values are also highly related with self and basic beliefs. The cognitive elements which have personal importance as their primary property are referred to in this model as values. The identification of values as a mediating variable in resistance to attitude change has a precedent in the theory of ego-involvement: According to this theory. . The content of any single individual's ego, what he regards as himself, is a rather distinct constellation of social and personal values. And when any stimulus or situation is consciously or unconsciously related to them /values/ by the individual, we can say there is ego-involvement. An attitude bonded to values is an ego-involved attitude.

The consequences of value bonding for the individual are described by Sherif and Cantril as follows: "This degree of ego-involvement . . . will determine in large part which attitude he will cling to, how annoyed or frustrated he will feel when his attitudes are

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<sup>139</sup> 18

opposed, what action . . . he will take to further his point of view."<sup>140</sup> "Ego-defensive attitudes are highly resistant to change and require some modification of the personality before they can be extinguished."<sup>141</sup>

A number of theorists have argued that attitudes are instrumentally related to values. It is also founded that high correlations between level of value importance and the favorability of related attitudes.

Rokeach formulated a structural model in which beliefs, attitudes and values are arranged in a pyramidal hierarchy.<sup>142</sup> In this model, a few critical values representing desired end states are given a governing role over the attitudes which are related to them.

This review of the background of the cognitive bonding model and its relationship with other areas of research has shown that values and attitudes, as cognitive elements, can be highly interconnected and that this relationship has definite consequences for resistance to attitude change. It is appropriate at this point to describe those special properties of value-attitude structure identified by Ostrom and Broc; the elements of the model are the values which comprise the individual's ego, and the particular attitudes held by the individual. Three properties of value structure are posited which determine the level of involvement and consequently the degree of attitude change resistance:

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<sup>140</sup> (1947» p. 131).

<sup>141</sup> (Katz, 1968; p. 180).

<sup>142</sup> Rokeach (1968)

A] The centrality of a value is defined as the extent to which the value is integral to the individual's self-definition or ego. Operationally, value centrality is determined by its rated position on a dimension of personal importance.

B] The degree of relatedness of an attitude to a value refers to the amount of similarity, relevance, associative dependency, or cognitive implication between them.

C] The third structural property is the number of values which are engaged by the attitude.

All three of these value structure properties are suggested to influence the degree of ego-involvement directly. The greater the centrality and relatedness of values bonded to an attitude, and the greater the number of such values so bonded, the greater the ego-involvement. The magnitude of involvement is formally defined as the sum over values of the products of value centrality and relatedness.

#### PERSONALITY-REASONING- INFORMATION PROCESSING DIMENSION

The concept of the schema can be traced to Plato and Aristotle.<sup>143</sup> Kant considered schemas as organizing structures that mediate how we see and interpret the world. For Kant a schema stood between or mediated the external world and internal mental structures; a schema was a lens that both shaped and was shaped by experience.<sup>144</sup> Schemas color our reality-and applying different schemas to the same events typically transforms the construals and memories of those events. Once we have focused on certain things, we begin

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<sup>143</sup> Marshall, 1995

<sup>144</sup> Johnson,1987

to categorize and encode them into our mind. Encoding is a process by which an "external stimulus" is converted into an "internal representation."<sup>145</sup>

Bartlett discussed schemas' an "organized setting" and not as some uniform feature of the mind.<sup>146</sup> Schemata play a vital role in information processing; they shape what we see and hear, how we store that information, and how we access it for later use.<sup>147</sup> They allow us to parse the perceptually seamless flow of incoming information into meaningful units.

In general, information processing may be seen as consisting of schema formation or activation, of the integration of input with these schemas, and of the updating or revision of these schemas to accommodate new input.<sup>148</sup> Schemata or our knowledge structure interact with our information processing at every step, at all levels, and on every parameter.

Their effect on the information processing can be summarized as:

- (1) Attention and categorization,
- (2) Inference and problem solving, and
- (3) Memory and retrieval.

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<sup>145</sup> See FISKE & TAYLOR, *supra* note 111, at 245

<sup>146</sup> Bartlett, 1932/1961, p. 200

<sup>147</sup> Inhibitory Effect of Schematic Processing on Perceptual Encodin William von Hippel, John Jonides, James L. Hilton, and Sowmya Narayan

<sup>148</sup> zajong



The effects of schemas on attention, perception, memory, interpretation, comprehension, sense-making, categorization, classification, information processing, problem solving, judgment, decision-making and thinking are well documented.

According to Bartlett, a schema refers to: an active organization of past reactions or of past experiences. Which must always be supposed to be operating in any well-adapted organic response. That is whenever there is any order or regularity of behavior, a particular response is possible only because it is related to other similar responses which have been serially organized, yet which operate. Not simply as individual members coming one after another, but as a unitary mass.

Bartlett suggests, schemas are constructed afresh. Bartlett expresses the point eloquently: Together with the immediately preceding incoming impulse it renders a specific adaptive reaction possible. It is, therefore, producing an orientation of the organism towards whatever it is directed to at the moment. But that orientation must be dominated by the immediately preceding reaction or experiences. To break away from this the 'schema' must become, not merely something that works the organism, but something with which the organism can work.<sup>149</sup>

To summarize, Bartlett thought schemas to be “unconscious mental structures” that operated on incoming information. Schemas are characterized by the following: they are organized, composed of old knowledge, serially organized, holistic, interactive, stored, and dynamic, flexible and adaptive.<sup>150</sup>

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<sup>150</sup> (Brewer & Nakamura, 1984, p. 126)

Minsky summarizes what he perceived the nature of knowledge structure to be as follows: “It seems to me that the ingredients of most theories both in Artificial Intelligence and in Psychology have been on the whole too minute, local, and unstructured to account — either practically or phenomenologically — for the effectiveness of common sense thought. The “chunks” of reasoning, language, memory, and “perception” ought to be larger and more structured, and their factual and procedural contents must be more intimately connected in order to explain the apparent power and speed of mental activities.”<sup>151</sup>

Schema is called as “Frames” by Minsky. A frame, according to him, is “a data-structure for representing a stereotyped situation”. This knowledge structure is activated when an individual encounters a new situation or when a person re-evaluates a previous problem.

Structurally, a frame can be thought of as a network of nodes and relations. The top levels of the frame are fixed, while the lower levels have slots that can be filled by specific instances or data. These lower levels or “terminals” are normally already filled with loosely attached “default” assignments or values. These values can be displaced by items that fit better the current situation.

At a phenomenological level, the idea of default values can be thought of in terms of expectations and other presumptions about the content of a situation given an absence of information to fill the many terminals. In doing so, default values not only reduce the

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<sup>151</sup> Minsky (1975) (p.211).

amount of information needed to “make sense” of the situation but also help in making useful generalizations and allow for developing shortcuts to bypass logical thinking.

Minsky discusses other structural characteristics of frames. First, frames are linked together in what he calls “frame-systems”. Important actions among frames are represented into “transformations” between the different “terminals”. Transformations represent changes in attention and emphasis and allow the terminals in frame-systems to make certain calculations more economical. Different frames can share the same terminals. A feature that allows frames to coordinate information gathered from different points of view. Second, at a more general level, frame-systems are attached through an information retrieval network. According to Minsky, the interframe network makes it possible to generate new frames in case an already existing frame cannot accommodate the terminal marker conditions of the new situation.

The operation of habit upon encountering a new situations is as follows: if an information retrieval network cannot accommodate the new situation, then a new frame is created. If the network can accommodate the new situation, a process called "matching" tries to fit aspects of the situation to a corresponding terminal according to the rules contained in the terminal's "marker". Minsky suggests that this matching is controlled partly by the system's current goals and partly by information associated with the frame.

Rumelhart defined schema as a "data structure for representing the generic concepts stored in memory"<sup>152</sup> Variables have value constraints that define what the typical values of each variable are. Variables also have default values, or values that get assigned in the

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<sup>152</sup> (1980; Rumelhart & Norman. 1988)

absence of other information. A second characteristic of schemas is that they can also embed one with another. That is, schemas are composed of “sub-schemata corresponding to the constituents of the concept being represented”<sup>153</sup>.

Schemas can be considered as theories about the nature of events, objects and actions. Once instantiated, a schema constitutes the internal model people have of the event or object the person is confronted with.

The unconscious operation of the schema gives rise to the specific conscious contents of the mind. Individuals ‘interpretations, therefore, are the end result of interactions among available cues and the particular cognitions that are active during information processing.

Rumelhart assumed that “all knowledge, beliefs, and attitudes like all other forms of knowledge, exists in the form of schemata”<sup>154</sup>

Schemas provide automatic processing of information, where attention to stimuli in the environment and the initial perceptual stage of processing may operate without the need of conscious attention or controlled processing within the awareness of the individual<sup>155</sup>. Automaticity only requires a stimulus object to function as a trigger and does not involve any conscious intervention. Additionally, automatic processes are well learned, stored in long term memory, difficult to change or inhibit, not impacted by capacity demands, and are activated without the need of conscious awareness or control. An

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<sup>153</sup> (p. 37)

<sup>154</sup> Ibid

<sup>155</sup> Bargh 1984

individual may be unaware of the stimulus the manner in which it is interpreted or categorized.<sup>156</sup>

Schemas “allow one to attend selectively to common aspects of the stimulus while effectively ignoring other aspects that do not fit into the activated framework”.<sup>157</sup> As a result, the individual is able to disregard features of the stimuli that do not have a relevant association with the schema.<sup>158</sup>

Schemas are dynamics and active processes.<sup>159</sup> Typically, information that is in accordance with one’s expectancies appears to be preferentially encoded and better remembered than information that is not consistent with the schema.<sup>160</sup>

Schemas have “gap filling” function. They provide necessary background information about a given situation or stimulus while typical to that stimulus may not actually be present at the time of encoding. It is pointed out that these assumptions are made with such confidence that an individual may not be able to determine which aspects of his or her beliefs are based on direct observation and which result from extrapolation.<sup>161</sup> This occurs through utilization of memory stores of the instances that were the building blocks of the schema in the first place. Human reasoning necessarily involves the filling in

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<sup>156</sup> Ibid.

<sup>157</sup> Rumelhart 1984

<sup>158</sup> Anderson, 1980; Fiske & Taylor, 1991.

<sup>159</sup> Rumelhart and Ortony 1977

<sup>160</sup> Higgins & Bargh, 1987; Fiske, 1993; Goffman, 1974.

<sup>161</sup> Rumelhart (1980)

of numerous “default values,” that capture necessary background information and allow one to infer parts of the stimulus input.<sup>162</sup>

Schemas are not solely facilitating mechanisms, but in a variety of circumstances, inhibit perceptual encoding. Therefore, they are also considered as “a sort of bias inherent in the mind.”<sup>163</sup> Walter Crockett has identified three types of inferences that individuals make based on the schemas that they apply: default inferences, inferences about future events, and inferences to other schemas.<sup>164</sup> It can be called as “default inferences,” they refer to the phenomenon of filling in unobserved default information based on a schema.

Default inferences describe much of the more common situations in which we apply our prior knowledge to the information we have categorized. The second type of inference, inferences about future events, is closely related to the first: it refers to our tendency to base predictions to fill in a type of missing information on our schemas. The final type of inference, inferences to other schemas, refers to the ability of one schema to enable broad inferences based on its relationship to another schema.

Schemas do not facilitate recall of all information equally; schemas are particularly influential in aiding our memories for schema relevant information. The evidence indicates that even if the schema-relevant information is inconsistent with the schema, it tends to be recalled more readily than information that is irrelevant.

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<sup>162</sup> Clark, 1993

<sup>163</sup> Campbell, 1989, p. 90

<sup>164</sup> Walter Crockett

We often remember information as particularly consistent with the schema[s] we used to understand and process that information. Memory leaves out many details that were never recorded or which have been forgotten. In connection with this, our memories are influenced by assumptions we make and inferences we draw. As Ziva Kunda explains "When we observe our social world, we do not merely watch an objective reality unfold before our eyes. Rather, we take part in shaping our own reality; the schemas we impose on events determine the meaning we extract from them." Schemas operate silently to influence what we see, what inferences we draw, and what we remember.

Schemas can be classified as self- schemas, role schemas, event schemas (scripts) and content free schemas (causal schemas). <sup>165</sup>

**Self-schemas**” refer to the trait dimensions or conceptions people have about themselves. The presence of self-schemas highlights the idea that individuals process information about themselves in ways similar to which they process and manage information about other people. Self-schemas may influence the manner in which we encode, retrieve, and interpret information about ourselves. <sup>166</sup>

**“Person schemas**” are conceptual structures that contain the psychological understanding of the traits and goals of particular people. Person schemas permit the classification of particular individuals according to prominent personality traits.

**“Role schemas**” contain information about the behaviors of individuals in certain social positions. Role schemas are associated with ascribed roles and help account for the

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<sup>165</sup> Fiske & Taylor, 1991.

<sup>166</sup> Augostinos & Walker, 1995; Fiske & Taylor, 1991; Markus, 1977

influence of stereotypes. Stereotypes are considered a type of role schema that organizes expectations and knowledge about individuals from different social categories.<sup>167</sup>

“**Event schemas,**” also known as scripts, outline the sequencing of events for familiar, everyday activities or situations. The event schema contains complex and sequential behavioral steps or procedures a person in a particular situation may follow in order to get things done or achieve certain goals. People are able to anticipate what will happen in the future, establish.

“**Content-free schemas**” contain processing rules or procedures that stipulate the relationship or links between elements. Content-free schemas facilitate such processes as balance, linear-ordering, and causal connections. Very little actual information or knowledge content is contained in these schemas because their purpose is more procedural.<sup>168</sup>

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#### NEURON BASED ASSOCIATIVE DIMENSION OF PERSONALITY AND MIND

Since the time of Aristotle, the human mind has been assumed to be associative. All concepts are represented as nodes in a network. These nodes are connected via bidirectional relational links [pathways] representing the type of relationship involved between the two concepts.<sup>169</sup>

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<sup>167</sup> *ibid*

<sup>168</sup> Fiske & Taylor, 1991.

<sup>169</sup> In Quillan's model (1968),



This wave of "spreading activation" moves through all connected nodes.<sup>170</sup> The links between the nodes also take on characteristics of distance and strength. The closer two concepts are related, the shorter is the link. The more frequently a link is used the stronger it becomes, thereby decreasing access time between the two nodes.<sup>171</sup>

Alternatively, if a link is not used it begins to decay and eventually breaks. In this model, forgetting is not believed to be a matter of losing concepts from long term memory, but rather an inability to retrieve the concept due to a lack of appropriate links.<sup>172</sup> As learning is attained, the network becomes increasingly complex and interrelated.

This results in a dichotomy of processing types, controlled and automatic.<sup>173</sup> "Controlled search is highly demanding of attentional capacity" Consequently, the rate of processing is relatively slow and has limited capacity. In exchange for speed, the individual acquires the ability to conduct a unique search while meeting the exact demands of the current situation. In contrast, "automatic processing can be defined within this system as a sequence of nodes that nearly always becomes active in response to a particular input configuration where the inputs may be externally or internally generated"<sup>174</sup>.

Conscious thought is not required for such processing, and consequently, great speed is obtained. This qualitative change from controlled to automatic processing takes time to develop, but once established is difficult to reverse.

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<sup>170</sup> (Collins & Loftus, 1975)

<sup>171</sup> (Collins & Loftus, 1975).

<sup>172</sup> (McClelland & Rumelhart, 1981)

<sup>173</sup> (Shiffrin & Schneider, 1977).

<sup>174</sup> (Shiffrin & Schneider, 1977,p. 155)

Experience causes modifications in the initial links. The strength of the links increases each time the two concepts are seen together. Supplemental links are created when a third condition occurs. Links to an appropriate intervention are created when an action is taken and the desired result occurs.

When a person encounters a situation similar to a past experience, sensory input activates the corresponding concept nodes. A wave of activation spreads automatically to other connected nodes within the accurate network that responds with rapid automatic activation to a minimal number of external cues.

In summary, this network of nodes and links are created through education and experience. Its ability to process incoming information allows expertise to develop. The capability of responding quickly and accurately to minimal cues within a situation exists because the incoming sensory information is processed by the cognitive network 'turning on' a node representing the appropriate action.

To incorporate new information into the existing body of knowledge already stored an individual must relate them each other. The process of identifying such relations generates linkages between knowledge bits, ultimately yielding an associative network organizing them.<sup>175</sup>

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<sup>175</sup> (Anderson, 1983; Anderson & Bower, 1973; Collins & Loftus, 1975; Collins & Quillian, 1969; Conover & Feldman, 1984; Quillian, 1969; Tourangeau, Rasinski, & D'Andrade, 1991).

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According to Hebb, repeated exercise should result in correlative changes in the anatomy of the brain. The Hebbian notion, reminiscent of James' law of association, can be summed in Carla Schatz's catch-phrase: "Neurons that fire together, wire together."<sup>181</sup>

Experience is at the root of shaping our nervous system to learn new habits. These habits, once developed enough, translate into autonomous habits that do not typically require the intervention of the conscious mind. Thus the desirable results produced by these habits become more effortless.

According to James, habits obey the law of association. The law of association means that if "processes 1, 2, 3, 4 have once been aroused together or in immediate succession, any subsequent arousal of any one of them whether from without or within will tend to arouse the others in the original order."<sup>182</sup> James even argues, presciently to neuroscientific research carried out later in the 20th century, that such association must also have a neural basis: A path once traversed by a nerve-current might be expected to follow the law of most of the paths we know, and to be scooped out and made more permeable than before; and this ought to be repeated with each new passage of the current. Whatever obstructions may have kept it at first from being a path should then, little by little, and more and more, be swept out of the way, until at last it might become a natural drainage-channel.<sup>183</sup>

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<sup>181</sup> (Doidge 2007)

<sup>182</sup> (James 2007, p. 24)

<sup>183</sup> (James 2007, p. 108.)

By consciously taking the effort to learn new habits we can create new non-conscious neural structures that enable us to put the massive non-conscious processing capacity to use to produce viable results.

As James noted, we are bundles of habits.<sup>184</sup> The nature of our habits, in turn, is determined by the neural structures created by exercise and experience. By practicing in a given domain sufficiently long, a person can generate the required non-conscious capacity to produce viable and desirable results without having to think any longer about the processes that produce those results consciously.

Likewise, by practice and experience in a domain, a person learns processes central to that domain so that in time they become automated. Automated nonconscious processes are, in turn, the foundation of generating intuitive insight.

The scope of human conscious processing at around 30–50 bits per second.<sup>185</sup> The non-conscious information processing capacity of the human afferent nervous system is an impressive 11.2 million bits per second, out of which 10 million bits are dedicated to visual processing and the rest to the other senses.<sup>186</sup> It is no wonder, then, that Zimmermann ends up arguing, “What we perceive at any moment, therefore, is limited to an extremely small compartment in the stream of information about our surroundings flowing in from the sense organs”<sup>187</sup> conscious capacity

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<sup>184</sup> (James 2007, p. 104)

<sup>185</sup> (Dijksterhuis et al. 2006, p. 82.).

<sup>186</sup> (Zimmermann 1989, p. 172.)

<sup>187</sup> (Zimmermann 1989, p. 172).

Once the activation level of internal representations reaches a particular threshold, the object or thought corresponding to the internal representation enters into awareness, or consciousness. When this occurs, the internal representation utilizes some portion of one's limited channel capacity, hence reducing the number of additional representations that can be activated. As representations become more compact, however, their associated activity level drops, resulting in a reduced demand on channel capacity. This reduced demand, in turn, permit simultaneous activation of a greater number of representations. With increasing experience, however, the entire process becomes simpler and more automatic, Over time, internal representations may become so compact that their associated activity no longer reaches the threshold necessary for them to enter consciousness. Though these representations may continue to influence one's decisions and judgments, their hidden nature can cause these thought processes to appear simple, intuitive, or obvious. The processes of recognition and prediction may seem intuitive to the expert. As already mentioned, increases in the compactness of internal representations and the strength of associations among these representations may cause activity to drop from awareness. When this stage is reached, it is often difficult for people to explain the process by which she has made a judgment or decision; it is simply "obvious."

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#### DECISION MAKING AND INFORMATION PROCESSING MODEL

In general, it is possible to say that information processing, reasoning and decision making theories come in different forms, but all agree in positing two different processing mechanisms for a given task, which employ different procedures and may yield different, and sometimes conflicting, results.

The dual process dichotomies have been referred to in the literature by quite a few different names. For example, experiential–rational<sup>188</sup>, automatic– intentional<sup>189</sup>, reflexive–reflective<sup>190</sup>, unconscious–conscious<sup>191</sup> and System 1 and System 2.<sup>192</sup>

Typically, System 1 processes is characterized as associative, holistic, parallel, fast, effortless, intuitive, automatic, non-conscious, , heavily contextualized, and undemanding of working memory, and the System 2 as analitic, slow, effortful, controlled, rational, rule-based, linear, sequential, conscious, flexible, decontextualized and demanding of working memory.<sup>193</sup>

As shall be seen below, it should be underlined that this division into two completely separate systems is not a very viable one. However, as a rough division it conveys some of the essential nature of human cognition.

First of all, System 2 or Analitic system does not mean a cognitive system completely under our volition; but rather it is where volition can be applied. If System 2 requires working memory then as a system, it must also include many other resources, such as explicit knowledge and belief systems together with powerful, type 1 processes, for identifying and retrieving data that is relevant in the current context, not to speak of the role of attention, language, and perception in supplying content for type 2 processing.<sup>194</sup>

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<sup>188</sup> (Epstein 2002)

<sup>189</sup> (Bargh and Chartrand 1999)

<sup>190</sup> (Lieberman 2000, 2009)

<sup>191</sup> (Dijksterhuis 2004; Dijksterhuis and Nordgren 2006)

<sup>192</sup> (Stanovich and West 2000).

<sup>193</sup> (Frankish and Evans 2009, p. 3.).

<sup>194</sup> (Evans 2009, p. 37). (Evans 2009, p. 42.)



To put it another way, working memory does nothing on its own. It requires, content. And this content is supplied by schemata or long term memory. For example, the contents of our consciousness include all representations of the world, extracted meanings of concepts so on. So working memory or analitic rule based reasoning or type 2 system are supplied by type 1 processes.

Type 2 processes can take place only one at a time, for example in a logical inference or a decision tree, where one step is evaluated at a given moment. Type 1 processes can, on the other hand, take place simultaneously, and there can arguably be a great number of such simultaneous processes ongoing.

Finally, as Evans underlined there is a Type 3 system that mediates between Type 1 and Type 2 processes. It involves decision making and conflict resolution.<sup>195</sup> According to Keith Stanovich, both System 1 and System 2 are broken down to smaller subsystems. Instead of separating them, the two systems can be construed as a nested system.

In the recent decades, a substantial amount of research has been gathered that points towards a large portion of advanced cognition occurring autonomously. It can be underlined that intuitive decision making is, in fact, superior to analytic decision making, at least if the problem at hand is complex enough.<sup>196</sup> The smart unconscious is powered by highly advanced and complex ontogenetic Type 1 cognitive processes that can address issues where the limited-capacity System 2 cannot come up with enough novelty.

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<sup>195</sup> (Evans 2009, p. 50).

<sup>196</sup> (Dijksterhuis and Nordgren 2006, p. 96.)

It is underlined that nature of problem or task characteristics and individual differences in cognitive style determine the choice of one information processing system over the other. For example, mathematical problems are associated with the analytic system, whereas interpersonal problems are associated with the holistic system. The individual differences in cognitive style translate into a preference for processing information either intuitively or analytically.<sup>197</sup>

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#### INDIVIDUAL DIFFERENCES

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#### INFORMATION PROCESSING STYLES AND INDIVIDUAL DIFFERENCES

Individual differences in information processing and decision making can be referenced to Carl Jung's Personality Theory. Even though Jungian Theory is named as personality theory as its' strong relations with cognitive styles and information processing we prefer to evaluate it under the title of cognitive styles than personality concept.

Current personality researchers recognize the Jung's theory and the Myers-Briggs Type Indicator as a cognitive style theory. They allege that it gives a deep insight to understanding individual differences on information gathering and decision making. Therefore, several researchers have focused on its theoretically sound system of the perceiving and judging **functions** which are highly related to cognition leaves **attitudes** part of extraversion-introversion and Judging-Perceiving dimensions<sup>198</sup>.

The Swiss psychologist Carl Jung 1933, 1971, developed a typology of psychological types that originally proposed eight psychological types. Jung's typology

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<sup>197</sup> Ida cucera cognitive styles and decision making

<sup>198</sup> Messick, S. (1984). The nature of cognitive styles: Problems and promises in educational practice. Educational Psychologist, 19, 59–74.

was later expanded and operationalized by Myers and Briggs. The original Jungian typology centers around two sets of psychological **functions** and one set of **attitudes**, each set consisting of two elements or functions. One set of functions, which Jung called **perception**, deals with how individuals take in information from the environment. Perception consists of sensing (S) and intuiting (N). The other set of functions, judgment, concerns how we process and make decisions with the information we take in. Judgment consists of thinking (T) and feeling (F). Jung believed that these functions are archetypal in that they have been evidenced by all peoples overall periods of history. Mitroff considered the four functions so basic to human behavior that he likened them to fundamental "elements" in the physical sciences.<sup>199</sup> They are considered that a person cannot use both functions in the same set at the same time. That is, at any one time a person can use thinking or feeling but not both. Two Kinds of Perception, Jung classified all perceptive activities into two categories:

Sensing perception; the term sensing perception refers to perceptions observable by way of the senses. Sensing establishes what exists. Because the senses can bring to awareness only what is occurring in the present moment, sensing people focus on immediate experiences enjoyment of the present moment, realism, acute powers of observation, memory for details, and practicality. When sensing attacks a problem, it wants to see the facts of the case. The Sensor prefers detailed information and focuses on the individual elements of a problem. As a fact finder Sensing is powerful.

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<sup>199</sup> Ibid

Intuitive perception; refers to perception of possibilities, meanings, and relationships. When intuition attacks a problem, it wants to see new possibilities, because intuition sees beyond the immediate experience, intuitive persons are imaginative, theoretical, abstract, future-oriented and creative. They attempt to find relationships or patterns that help explain the problem. As a concept constructor intuition is preferable.

The Two Kinds of Judgment; Judgment dimension includes all the ways of coming to conclusions about what has been perceived. It includes decision making, evaluation, choice, and selection of the response after perceiving the stimulus.

By thinking judgment, thinker links ideas together by making logical connections. They rely on principles of cause and effect and tend to be impersonal. Persons who are primarily oriented toward thinking often develop characteristics associated with thinking: analytical ability, objectivity, the Thinker weighs the pros and cons of each alternative solution and makes decision accordingly.

By feeling judgment, feelers come to decisions by weighing the relative values and merits of issues. He relies on an understanding of values. Thus, it is more subjective than thinking. In decision making, attention to what matters to others can lead to an understanding of people, to concern for the human as opposed to the technical aspects of a problem. It is associated with a need for affiliation, a capacity for warmth, a desire for harmony, and a time orientation that seeks to preserve the values of the past. Feeler

determines the decision's impact on people, then "fine tunes" the solution.<sup>200</sup> It is established empirically that people with opposite styles have difficulty communicating.

Furthermore, it is stated that people of opposite cognitive style don't get along well with each other or appreciate each other. Researchers have found that people with different cognitive styles prefer different types of organizations sensing types are attracted to work where the products can be seen and measured-for example, construction, hands-on patient care, civil engineering, or sales. Intuitive types are more attracted to work that requires the big picture, a future orientation, or use of symbols, such as strategic planning, science, communication, the arts, higher education; Thinking types are drawn to careers in engineering, science, finance, or production where logical analysis is a powerful tool. Feeling types are drawn to careers where skills in communicating, teaching, and helping are valuable tools.

Concepts related to Information processing styles can be summarized as dogmatism, rigidity, intolerance of ambiguity, cognitive complexity and integrative complexity. It is possible to say that above mentioned concepts are directly related to individual differences stemming from cognitive structure.

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#### ANALYTIC AND HOLISTIC THINKERS

A main difference between analytic and holistic thinkers is the inclusion of context. Holistic thinkers are more likely to include the context than analytic thinkers. Analytic thinkers view the world as composed of separate elements that can be understood

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<sup>200</sup> rightman1988a, p. 30

independently; they focus on objects and dispositions while holistic thinkers focus on the relationships among different elements and context.<sup>201</sup>

Attention defines the scope of information considered or needed: Analytic thinkers focus on central features in the field while holistic thinkers attend to the field as a whole. Attention helps define the scope of information available for consideration, and this may limit the information available for sensemaking in a complex environment. Holistic thinkers look towards the relationship between the object and the field.<sup>202</sup> This leads to attention to the whole picture and emphasizing relationships and interconnections, a more field interdependent view.

**Importance of context:** Several studies have measured the differences in attention using field dependence, a measure of the extent to which people differentiate objects from the context<sup>203</sup> Research in attention and cognition had shown that holistic thinkers were more field-dependent and analytic thinkers more field independent. Holistic thinkers had difficulty in separating objects from their context. <sup>204</sup>

Perception of Change describes beliefs about change, whether phenomena are viewed as **linear** by analytic thinkers or as **cyclical**, non-static patterns by holistic thinkers. These differences in cognition can influence sensemaking. When people vary in the range

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<sup>201</sup> (Nisbett, 2003; Nisbett, Choi, Peng, & Norenzayan, 2001). Choi, Koo, and Choi (2007)

<sup>202</sup> Fernald & Morikawa, 1993)

<sup>203</sup> (Masuda & Nisbett, 2001; Witkin, Lewis, Hertzman, Machover, Meissner, & Karp,

<sup>204</sup> 1954). (Nisbett, 2003)

of information they consider relevant, they will have available different examples and counter examples (concept or construct) for use in sensemaking.

Holistic thinkers appear to use information more intuitively because they have more information available to consider. Attention influences the scope of information pool for sensemaking. Analytic thinkers see each piece of information as relatively independent of its context. In contrast, holistic thinkers looked for contextual cues in each piece of information. Holistic people with a wider attention scope will select more information. Find this information to be more relevant, while analytic people, with a more focused attention, will select less information. This reductionism leads to pathology when a part is taken to be the whole and acted upon as such, as the true whole then becomes oppressed by the part.<sup>205</sup>

Causal Attribution describes how people assign cause, this has implications for the selection and the use of information. Dispositional attribution identifies internal causes such as competence, personality, and values as most explanatory. Situational attribution looks also to external causal factors such as task demands, environment barriers, and surrounding people. Analytic thinkers typically attribute behavior to the actor's disposition while overlooking situational causes. Holistic thinkers use both situational and dispositional factors to identify the driving forces for behavior and events. These differences shape their sense of the problem space and direct decision making.

Tolerance for Contradiction describes how people typically manage divergent information. The first approach, characteristic of analytic thinkers, uses differentiation and

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avoids contradictions whenever possible by polarizing goals and options.<sup>206</sup> Holistic thinkers deal with contradiction dialectically by searching for the “Middle Way” between opposing propositions, retaining basic elements of each by synthesizing them. Holistic thinkers tolerate contradiction because they see truth in opposing views. Tolerance for contradiction influences openness to opposing positions during sensemaking. Thinking dialectically, judged two statements as non-contradictory and as parts of a whole rather than as dichotomous descriptions. They accepted the seeming contradictions as multiple perspectives of a single truth.<sup>207</sup> In contrast, differentiating reasoning seek constancy. Contradictory propositions were unacceptable by formal logic. Hence, contradictory statements cannot both be true. Propositions were considered in a restricted context rather than embedded in a broader context.<sup>208</sup>

AT sees contradictory statements as opposing. They polarize contradictions, deciding which position is correct, and explaining away other positions. Differentiation thinkers to seek the best goal may reduce cognitive dissonance by avoiding or quickly dismissing divergent information and options but may favor information that supports the goal. This simplification may reduce information overload.<sup>209</sup> But may also exclude information needed as new information emerges and existing frames are reexamined or changed. HT seek to assimilate contradictory positions for an intermediate goal mean they are more comfortable with divergent information.<sup>210</sup>

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<sup>206</sup> (Peng & Nisbett, 1999).

<sup>207</sup> (Chu, Spire, & Sueyoshi, 1999; Nakamura, 1985)

<sup>208</sup> (Cromer, 1993).

<sup>209</sup> (O'Reilly, 1980; Weick, 1979)

<sup>210</sup> (Choi et al., 1999; Hiniker, 1969).



Seeing more information as related they seek to fit information to form a bigger picture of the complex situation. They may be more prone to information overload but may also be more prepared for changes and surprises. These differences between dialectical and differentiation reasoners provide conflicting paths in complex situations. People who avoid opposing information may err in not considering alternate positions. People who are comfortable with contradiction may remain open to new information longer.<sup>211</sup> They may track several frames simultaneously so that they can merge frames or modify them. Their readiness to change their sense of the situation and their decisions depending on the situation can prolong the sensemaking process. These differences can hinder collaboration when high tolerance people are more flexible in decision making and view the low tolerance people as rigid. Low tolerance people seek to complete work would view high tolerance people's flexibility as indecisive.

People differ in their propensities for processing information. Several personality variables are associated with information processing. People may handle the same information in different ways. They may prefer different forms of data and information, like different sources, and handle unreliable information in different ways.<sup>212</sup>

Analytic-Holistic (AH) mind-sets are positively correlated with initial situational problem identification (diagnosis) judgment. Because of the differences in attention scope, belief in causal structure, and different strategies dealing with information. A person's analytic-holistic tendency will affect the use of certain information to make sense of the

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<sup>211</sup> (Choi et al., 2003),

<sup>212</sup> (Anderson, 2002).

situation. Because holistic thinkers orient to the context, they are more inclusive in their information use.

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#### CONCEPTUAL COMPLEXITY

Gardiner has noted that an individual low in complexity "...uses little information in forming concepts, and has difficulty in developing alternative, concepts of events", while one high in complexity "...moves away from this simplistic and rigid type of functioning

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<sup>213</sup> (Chu, Spires, & Sueyoshi, 1999; Nakamura, 1985)

and not only learns to use more information in forming concepts but also develops the capacity to conceptualize events in alternative ways." <sup>214</sup>

Differentiation refers to "...the number of different categories or dimensions which an individual employs in evaluating or defining an object of judgment." In other words, as previously mentioned, an individual utilizes a small subset of the available dimensions in interpreting his environment. The number of these constructs contained in one's cognitive structure is the degree of cognitive differentiation particular to a specified domain of items. Thus some people are prone to employ few dimensions when they perceive and evaluate stimuli; i.e., they are inclined to make only very gross determinations. Conversely, others are more multidimensional in evaluating stimuli.<sup>215</sup>

Further clarification results from a consideration of comments made by Wyer. His remarks indicated that "the degree of differentiation should vary positively with (a) the number of dimensions used to analyze domain-relevant experiences and (b) the number of values into which each dimension is divided." In essence, Wyer's comments may be interpreted to mean that differentiation can be viewed as being between attributes and within attributes.

"Between" differentiation is where the focus is on the number of functional dimensions. In contrast, "within" differentiation pertains to the extent to which the individual utilizes a multi-level scale in assessing a stimulus along a particular attribute; i.e., the degree to which an attribute is divided into evaluative categories.

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<sup>214</sup> (p. 327)

<sup>215</sup> (p. 371)

Schroder et al. viewed the "within" attribute differentiation as a third component of cognitive structure and labeled it discrimination. Others have referred to this concept as attribute articulation or category width. In other words, discrimination within a dimension is not considered to be a structural component necessary in defining cognitive complexity but rather a cognitive style variable which is closely associated with differentiation.

Integration: second component in the formulation of cognitive complexity is that of hierarchical integration. Schroder et al. have defined integration as the complexity of the schemata that orders several dimensions. Those low on an integration index have fixed rules; i.e., they have fewer degrees of freedom in the organization of dimensions. Those high in integration are able to interrelate units of information in different ways in order to generate new perspectives about stimuli. In other words, the more ways the same attributes can be combined and interrelated, the higher the level of integrative complexity.

Frequently, integration is characterized in terms of conceptualization. For example, Gardiner and Schroder spoke of hierarchical integration as the number of concepts used in thinking, judging, and decision-making. Wyer noted that "the degree of integration of a cognitive domain is defined in terms of the degree to which concepts and attributes contained in it are interrelated." Similarly, Crockett indicated that cognitive integration refers "...to the complexity of the relationships among constructs, and to the degree to which clusters of constructs are related by superordinate, integrating constructs."

Zajonc noted that "the structural components of a whole may depend on each other to a greater or lesser extent. The more attributes depend on each other the more the cognitive structure is unified." A unified structure is one with a low degree of integration.

In other words, those who have a unified structure do not have the flexibility of response that is available to those who utilize a number of independent concepts.<sup>216</sup>

Relationship between the Components: The linkage between differentiation and integration is still an issue of controversy. Bieri has commented that "...it is unclear whether cognitive complexity is a differentiation concept exclusively, or whether it relates to organizational properties of the cognitive system as well." On the other hand, Gardiner and Schroder have noted that although some authors continue to define complexity solely in terms of cognitive differentiation, the integration component has become the primary focus of interest. In recent years, there seems to be greater interest, from a theoretical standpoint, in conceptual integration. However, this does not mean that there is a refutation of differentiation as a meaningful component of cognitive structure; rather the direction of focus has changed because integration is at a stage of lesser development. In other words, the concept and the instruments are better defined for differentiation than integration. In contrast, measures of hierarchical integration are more involved. Crockett commented; "It is a simple matter to determine the degree of differentiation of a subject's cognitive system....A measure of hierarchic integration, on the other hand, must yield a determination of the relationships among constructs from which inferences may be made as to the proportion of constructs in the system that are related, the groupings into which related constructs fall, which constructs are relatively central and superordinate, which peripheral and subordinate, and so on."

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<sup>216</sup> (p. 160)

Schroder commented that "the ability to form a variety of concepts on the basis of a given informational array appears to be the most adaptive facet of human intelligence." They noted that a person who differentiates multidimensionally can combine the dimensions in different ways or use them independently.<sup>217</sup>

The literature suggests that individuals low in complexity are more likely to reject new or discrepant information "out-of-hand," but if received, they are easily converted to a strong favorable position. Conversely, complex people are more open to new or discrepant information but are less likely to yield to the persuasive intent of a given message. The believed reason for the divergent behavior is that in contrast to the complex, cognitively simple individuals have attitudes that are contingent upon a small set of usable dimensions and lack the ability to integrate the dimensions in a versatile fashion. Thus, new information will tend to be rejected by the cognitively simple if it does not address what Schroder et al. called its "narrow range of salient attributes." On the other hand, the cognitively complex person have a much more sophisticated cognitive system to absorb varying kinds of information, but at the same time, can evaluate more fully the appropriateness of its content.

Cognitively simple individuals are prone to categorically change their attitudinal stance if the information is sufficiently salient. Consequently, an individual with limited flexibility in the organization of these dimensions would be characterized as an individual who is integratively simple regarding the designated class of products while one who has more freedom would be labeled integratively complex. Thus, they are better able to draw

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<sup>217</sup> Crano and Bettinghaus, 1970; Stiles, 1974).

on existing information to counterargue the persuasive message. At the same time, these individuals are more accepting of divergent views and consequently have less of a need to obtain cognitive balance.<sup>218</sup>. It is therefore not surprising that the research is inconclusive as to whether cognitively complex or cognitively simple individuals are more susceptible to attitude change.

Noting the theory posed by Schroder et al. that information saliency has a greater effect on the cognitively simple, he examined whether messages with high or low saliency were more effective across cognitive structures.

Focusing on similarities and differences in person perception and its implications of biased judgment and decision making qualities Bieri et al, concluded that complex individuals seem to be prepared for diversity in their environment, particularly for that which is conflictual or contradictory in nature. On the other hand, those low in complexity appear to be prone to perceive regularity. They prefer consistencies and recurring uniformity in stimuli. In other words, the cognitively complex have more dimensions to evaluate stimuli and therefore are more capable of noting relatively minor differences. On the other hand, conceptually simple people, with a more limited dimensional structure, are less able to evaluate others and therefore use themselves as referents.

Johnston and Centers hypothesized that like conceptual structures would attract and dissimilars would repel. The reported results generally supported this notion except for the fact that the cognitively complex subjects did not reject those who were simple. In a similar vein, communications espousing similarities should be better received by those favoring

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<sup>218</sup> (cf., Crano and Schroder, 1967; Scott, 1963)

similarities, and conversely, messages indicating differences should be more readily accepted by those most cognizant of differences. If the person is cognitively simple and the message offers subtleties along dimensions outside his cognitive realm, the recipient is likely to become frustrated, bored, or in some way uncomfortable. Similarly, a cognitively complex person would experience such negative feelings when confronted with similarities which from his perspective are "too pat."

Internal-External Anchoring and dependency on authority: Cognitively simple people have been characterized as anchoring their behavior to external conditions, while conversely, cognitively complex individuals anchor internally.

At low complexity levels, individuals utilize few attributes and have restrictive capabilities. Moreover, it has been noted that simple individuals tend to have a diminished consequently, alternative resolutions or interpretations are not readily apparent to these people, thereby necessitating greater reliance on external evaluations. Schroder et al. noted that this dependence on outside referents is manifested in their susceptibility to authority figures or to conformity patterns. On the other hand, complex people have more functional constructs and greater degrees of freedom in coping with the relationships between them. This gives those high in complexity a potential for greater independence in the sense that they have less need to depend on others for assistance in making evaluations.

Schroder et al. have said: "Concrete attitudes rest on a narrow range of highly salient information." In other words, conflicting information tends to be misperceived or excluded if it doesn't address one of the individual's schema. The manifestation of this is sometimes so apparent that these individuals are frequently referred to as being closed-



minded. In other words, for those low in conceptual complexity, the saliency of the message is central to the incidence of reception.

**Stimulus Complexity-Simplicity:** Stimuli portray varying degrees of complexity, In other words, complex individuals, by having a more complicated cognitive structure, tend to prefer stimuli with greater structure while simple people prefer less stimulus complexity. Bieri has defined stimulus structure as "...the number of events or alternatives present as well as the relation among these events."<sup>219</sup> Thus stimulus complexity increases with the quantity of information present. The quantity is a function of the dimensionality and the diversity of insight pertaining to each dimension. Complex individuals are more cognizant of alternative perspectives since they possess high degrees of differentiation and integration. This characteristic causes them to tend to perceive of a one-sided communication as being biased.

Various investigations indicate that the differential levels of cognitive complexity will process information at different rates. Schroder et al. found that, more complex subjects produced more integrations of the information and more carefully examined each possible solution. The less complex subjects tended to more quickly structure the "stimulus field," which reduced the amount of ambiguity concerning the problem.<sup>220</sup>

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#### NEED FOR CLOSURE

**Need for Closure:** Research in psychology demonstrates that individuals have a strong aversion to uncertainty, which is broadly defined as a recognized lack of knowledge

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<sup>219</sup> (1968) (p. 634).

<sup>220</sup> (1967)

The need for closure has been described as "the desire for a definite answer on some topic, any answer as opposed to confusion and ambiguity" <sup>221</sup>It thus represents a desire for a clear-cut opinion on a judgmental topic.

The need for closure has been assumed both to differ stably across individuals and to differ across situations. Generally, this need may be proportionate to the perceived benefits of possessing closure or to the costs of lacking closure. For instance, cognitive closure may afford predictability and guidance for action; when these seem desirable, the need for closure may be correspondingly heightened.

Similarly, under time pressure, an absence of closure may imply the cost of missing the deadline; this too may elevate the need for closure. When the need for closure is low people seek out more of the available information than when the need for closure is high. In a decision-making context, the "knowledge" required by the judges is the relative efficacy of the various choice alternatives. The basic question the judges are attempting to answer via the available evidence is: "Which of the alternatives is best?" Ultimately, the extent to which information is considered during the decision-making processes is expected to be a function of the need for closure. The process is activated when a judge requires some kind of knowledge. Once the case is activated, judges will seek out relevant information until some kind of plausible knowledge is attained. <sup>222</sup> The main goal is to have accurate knowledge about the dispute. Although the main goal of process is to have truth, the actual knowledge attained is not necessarily objectively accurate. Rather, the judges need to feel satisfied that he or she possesses accurate knowledge. If the need for closure

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<sup>221</sup> Kruglanski, 1989, p. 14

<sup>222</sup> *ibid*

is low, judges will experience less urgency to reach a decision and therefore can consider a wide array of information when forming knowledge on a given topic.<sup>223</sup> Conversely, when the need for closure is high, an individual will narrow his or her focus to relatively salient information. Moreover, once closure is attained that knowledge will be relatively resistant to change. Note that individuals seek out relevant information under conditions of both high and low need for closure. It must be underlined that the key difference is the breadth of the information search that occurs before knowledge is attained.

The intensity of the need for closure varies according to the costs and benefits of possessing closure. Broadly speaking, when the need for closure is low an individual is relatively open to processing a wider array of the information than when the need for closure is high. In addition, need for closure has been found to affect the extent to which individuals are open to persuasion attempts.<sup>224</sup>

When an opinion is reached, people high in the need for closure are more resistant to persuasion than those low in the need for closure. However, in the absence of prior decision, those high in the need for closure show more attitude change than those low in the need for closure. When the need for closure is high individuals pay more attention to cues that are readily available.

Additionally, accountability is likely postponing the closure. Individuals high in the need for closure are more likely to be very task-oriented, and to exert conformity pressures on others during group discussion. In general, individuals low in the need for closure

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<sup>223</sup> Kruglanski & Webster, 1996

<sup>224</sup> Kruglanski, Webster, & Klem, 1993

engage in a more extensive information search and are more open to considering a broader range of information than individuals high in the need for closure.

Additionally, in interpersonal contexts, individuals low in the need for closure are more willing to accept the information offered by others and are less likely to try to exert pressures for consensus within the group. In contrast, individuals high in the need for closure engage in a less extensive search for information than those high in the need for closure.

Moreover, in interpersonal contexts, individuals high in the need for closure tend to be more rigid in their thinking and are more likely to pressure others into reaching consensus. In interpersonal contexts, individuals low in the need for closure are more willing to accept the information offered by others and are less likely to try to exert pressures for consensus within the group.

In contrast, individuals high in the need for closure engage in a less extensive search for information than those high in the need for closure. Moreover, individuals high in the need for closure tend to be more rigid in their thinking and are more likely to pressure others into reaching consensus.

Need for closure has been conceptualized as a stable trait construct on which individuals can be chronically high or low. Although the need for closure should be relatively low at the outset of dispute, the costs and benefits of closure are expected to change such that the need for closure will increase over time. As the people sink more and more of their cognitive energy into different alternatives, they expect more and more of a return on their investment.<sup>225</sup>

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<sup>225</sup> Staw, 1976,1997

Information processing is laborious.<sup>226</sup> It requires cognitive energy. As information processing unfolds, judges are putting more and more time, attention and energy into the decision-making task. Consequently, they should feel increasingly motivated to reap the reward of their cognitive effort, that is, cognitive closure. Also time is limited. Fatigue is also related to increased need for closure.<sup>227</sup>

As decision making process is laborious, decision makers should grow increasingly weary during process, and consequently have an increasing desire to make a decision that would allow them to terminate process. In most cases, different desires clashes on whether the continuation or termination of process. There is no dispute that the need for closure increases over time for every individual with a changing degree. Those with a high need for closure wish to “close the book” on the case and often rely on simple cognitive shortcuts – called heuristics – to make relatively swift decisions.<sup>228</sup> These individuals tend to consider fewer competing hypotheses or limit information that is inconsistent with their beliefs or predictions.<sup>229</sup> They leap to judgment, are reluctant to consider multiple perspectives, and lack cognitive flexibility. Indeed, need for closure predicts a preference for simplified judgment and reduces the likelihood of systematic processing.<sup>230</sup>

The need for closure is considered a latent variable that manifests in different ways. NF Closure tends to rise under time pressure or in environments in which cognitive processing is difficult, such as a noisy room. These environmental factors increase the

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<sup>226</sup> Fiske & Taylor, 1991.

<sup>227</sup> Webster, Richter, & Kruglanski, 1996

<sup>228</sup> van Hiel & Mervielde, 2003

<sup>229</sup> Kruglanski & Webster, 1996.

<sup>230</sup> Leone, Wallace, & Modglin, 1999

desire to reach an end state, regardless of an individual's disposition. With high NF Closure largely rely on stereotypic information and preconceived notions .This tendency may lead to erroneous conclusions because the individual fails to give the matter much thought or scrutiny. Conversely, those with a low need for closure tend to expand their informational search and consider a wide range of facts before rendering a decision; thus, they may be likely to engage in systematic processing.

Previous research has uncovered various effects need for closure may exert on information processing and social interaction. Among others, such need may magnify (a) primacy effects in impression formation. (b) the reliance on theory-driven versus data-driven processing<sup>231</sup> (c) the tendency to seek out similarly minded others for social comparison and (d) the tendency to disfavor opinion deviates and favor the conformists.Studies indicate that when given prior information, such as stereotypes, those high on need for closure (vs. low) were more resistant to others' opinions.it is possible to say that the prior information helps the individual make up their mind ahead of time so that when exposed to a persuasive message, he or she already had a desired conclusion. It is alleged that when given information ahead of time, thus, allowing the subject to crystallize an opinion, subjects with a heightened need for closure were more resistant to persuasion. They were less likely to consider the oppositional views of their partner and more likely to advocate their original position. However, in the absence of prior information and before a belief was formed, those high in the need for closure were more likely to accept their partner's opinion.

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<sup>231</sup>; Kruglanski & Freund, 1983;Sanbonmatsu & Fazio, 1990

It was presumed that these individuals were ready to embrace any opinion, as long as it provided a definitive answer. Relations with related but distinct from several other psychological constructs: It is also related to dogmatism, rigidity, and intolerance of ambiguity. But it should be underlined that these construct are related to cognitive elements making any change difficult, NF is only related to wish to have clear answer.

### CHAPTER III

#### PRAGMATISM AS A META-THEORY OF KNOWLEDGE, MIND AND PERSONALITY

Pragmatic ontology does not accept the all kind of dichotomy or trichotomy of personality and intelligence, mind and body, object and subject, cognition and emotion-motivation, person, environment, thought and action, means and ends, fact and opinion, knowledge and belief, universal and particular, theory and practice, abstract and practical, perception and thinking-memory, process and entity. Therefore Pragmatic Theory uses term "habit" equated with—personality,"self," "experience" "mind" "reason" "attitude,""disposition," and "will."

Dewey, throughout his philosophy he constantly explores their inter-relationships and brings a harmony and wholeness to his organicist interpretation of experience. It is therefore, the whole human organism that is involved in experience. A total and therefore complete experience is stressed.

The en-total of a human being is equal to not only the sum total of its parts, but the degree of experiential intensity of those experiences that constitute that being. It becomes increasingly difficult to say that certain elements have a more a-priori place in human

development. Person as we understand it is composed of complex and intricate elements of experience, emotion, cognition, motivation giving rise to our total state of living, it forms an organic whole. Pragmatic ontology views person as a complex whole, not as a composite of many isolated parts. The sum total of that which makes up an organism is a compilation of all there is in that organism's world.

Pragmatic ontology rejects the assumption that a person is identifiable as, or thought of as, coterminous with some sort of a private consciousness, ego or mind. Instead persons are understood as continuous with physical, cultural and historical processes. Personhood is not completely understood or not understood at all, taken apart from its relational existence and the social priority of its nature. Identification of personhood with "something" single, private and inner, is fueled by the assumption concerning the metaphysical distinction between the "private" and the "outer" world.

According to pragmatic theory whole meaning of life is interwoven, nothing exists in an isolated state. Each part has significance to the whole, irregardless of the particularity of that part. Life itself becomes a whole consisting of all experiences, past, present and future. There is no isolated newness free of all that has transpired in one's past experience.

Organicism, stresses the internal relatedness or coherence of things. It is impressed with the manner in which observations at first apparently unconnected turn out to be closely related, and with the fact that as knowledge progresses it becomes more systematized. It



conceives the value of our knowledge as proportional to the degree of integration it has attained, and comes to identify value with integration in all spheres.<sup>232</sup>

Pragmatism is an attempt to integrate knowledge and values, unified in such a way that science becomes humanized and morality becomes subject to scientific analysis. Thayer contends that pragmatism has been "the most ambitious and important effort in our time to accomplish the objective described above as a critical synthesizing of knowledge and the methods of science with the moral heritage and aspirations that shape human conduct"

Lewin's suggests that the laws of perception, thinking, and memory may be fundamentally the same. In all Gestalt psychology, particularly by way of the theory of isomorphism discussed at an earlier point, we have the same kind of basic unity that is to be found in Dewey between the cognitive and motivational levels of the person.

In *Human Nature and Conduct*, Dewey unequivocally claims that habits "constitute the self," they are the means of knowledge and thought ... (they) ... do all the perceiving, recognizing, imagining, recalling, judging, conceiving and reasoning.

To say that an organism reasons correctly is to imply that the organism behaves correctly, and to say that it behaves correctly is to say that its mind-like habits are "good." They are "good" since they "functionally" contributed to overcoming a problematic situation, and they successfully assisted the organism to negotiate with the environment and to carry its goal to its desired end. To put it differently we may say reasoning is a type

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<sup>232</sup> (p. 74).

of behavior, functionally understood. Correct reasoning is a type of correct behavior in so far as it contributes to the organism's need to negotiate with the environment. But, correct behavior involves having good habits of mind-like functions. As such, correct reasoning is having a type of good mind-like habits. All behavior, on Dewey's account, is habitual behavior.

Contrary to the traditional understanding of the personality as a long lasting or very durable substance-like entity. Dewey views the person as a process of self-activity. For Dewey there is no long lasting subject underlying change. For Dewey, the self is no entity at all, much less a metaphysical entity. The finality suggested by the term 'habit' is contrasted here with a self or person that is, as it were, a 'field' of relations, a natural structure of forces, which continuously reconstructs itself.

There must be present in the experience, an integration of the emotional, feeling, and sensuous aspect, as well as the intellectual and practical. It is this kind of emphasis that gives a unified movement to an aesthetic quality of experience. As the fragments of one's life become integrated into a whole, they lose their fragmentariness. They transcend their original form to become an integral part of their new being. No experience is lost, all becomes one essence.

The fragment, once integrated as a specific component in the cumulative whole, it becomes a pivotal point for further growth. It seems to be composed of the moment, it comes in a flash as insight or intuition. As it integrates, it brings meaning to itself and establishes bonds with that which came before it— it solidifies the level of its particular stage, only when it loses its fragmentary identity. Its isolated quality is lost, and it becomes

part of a related whole; it achieves integration, and through that quality emerges as an organized segment. "An organic whole is such a system that every element within it implies every other . . . it is a system that an alteration or removal of any element would alter every other element or even destroy the whole system." <sup>233</sup>

When the aesthetic experience becomes an organic whole, it encompasses all there is of the event. As we look upon the wholeness of the experience, we no longer see isolated fragments, but a total integration where everything belongs carries on what went before, each gains distinctness in itself." <sup>234</sup>

As experience in its ordinary form acquires depth of meaning and integration, coupled with harmonious blends of those qualities necessary for it to become 'an experience', the foundation for **aesthetic experience** is being poured.

The **aesthetic experience** functions within a codified system whose necessary ingredient is the immediate sensuous. The aesthetic is always charged with fragments of emotions; it is that quality which draws us into the event and sustains us in an atmosphere of continual immediacy. Continuity keeps the sensations of the moment in a unified form, giving continual direction and meaning to the event. An ordering of perceptions and applications produces a growth pattern leading toward objectification of a singular quality, hence rhythm is established.

Without the ability to perceive, all things are mere recognitions and offer only a surface encounter. When one totally immerses oneself in that thing, it takes on a clarity, a

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<sup>233</sup> Pepper, 1957, p. 300

<sup>234</sup> Dewey, 1958a, p. 36

newness, a fresh and exciting dimension termed the **aesthetic**. Technical virtuosity devoid of the sensuous and sensitive relationships to the whole renders merely a dull, lifeless, mechanical exactitude. "If the artist does not perfect a new vision in his process of doing, he acts mechanically and repeats some old model fixed like a blue print in his mind.". If the fragments, through its nexus, do not find a whole which is free from contradictions, a higher level is not reached.<sup>235</sup>

Consequently, what would have been this higher level could not then become a fragment to bring to completion, and each even a higher level. For each integrated whole represents a greater degree of truth. The goal of the organicist is to reach the absolute. This can only be accomplished by further integration.

**Experience**, Dewey holds, is an active, ongoing affair in which experiencing subject and experience object constitute a relational situation or event. Experience is not merely "visual" or "sensory" as it is traditionally taken to be. On the contrary it is primarily tactile, in the sense in which we push and shove each other, in our "touching and being touched." For Dewey the human organism is not a "roving transparent eyeball," as Emerson put it, but a natural worker in a proletarian sense.

**Experience**, as given, is already emotionally related. What allows Hume to describe emotions as an addition to an already same object? In immediate experience, which is what ordinary experience is, such a schema is not even hinted at. In Dewey's case

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<sup>235</sup> Dewey, 1958a, p. 50

there are many "reals of experience" all interacting with the same object-not as an object "in-itself"

As far as terms Hunc and Intiution are concerned, different terms like "aesthetic experience" are used interchangenable. Dewey stresses that in order "to perceive, a beholder must create his own experience," comparable to those which the artist underwent, not in the literal sense, but in an ordering of the elements of the whole. When experience combines emotional, practical, and intellectual parts into a single whole an aesthetic experience occurs.<sup>236</sup> Thus, the **aesthetic experience**, in all its unity of perception is felt rather than known. If the total organism is not implicated in the constitution of the object, then there will be insufficient resistance or tension between the constituting and the constituted, with the result that there will be no "gatherings together of details and particulars physically scattered into an experienced whole"<sup>237</sup>

In addition to the non-reflective quality of habits, Dewey also points to their immediate quality. Here Dewey stresses the immediate, emotional, and pervasive quality of a lived experience, which at the same time is being shaped by habits. Dewey (argues that: "as organizations, as established, effectively controlling arrangements of objects in experience, their mark is that they are not thoughts, but habits, customs of action"<sup>238</sup>

Self stimulation through the senses is the gift possessed by the individual; "The senses are the organs through which the live creature participates directly in the ongoing

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<sup>236</sup> Aesthetic experience(Dewey, 1934, p. 55)

<sup>237</sup> (Dewey, 1934, p. 54).

<sup>238</sup> 1910b) (pp. 209-210).

of the world about him." <sup>239</sup>According to Dewey: "Sense" covers a wide range of contents; the sensory, the sensational, the sensitive, the sensible, and the sentimental, along with the sensuous. It includes almost everything from bare physical and emotional shock to sense itself— that is the meaning of things present in immediate experience. <sup>240</sup>

The act of "an experience" encompasses all there is of an event, and in so doing, fully embraces the participant totally. All things are drawn into the sensate arena of the immediate sensuous. Immediacy as it relates to experience, is the factor that renders it aesthetic. Immediacy as such, is not the isolated ingredient giving experience an aesthetic quality.

According to Dewey, "**what is not immediate is not esthetic**" Therefore, to be aesthetic, the experience must be in a state of the immediate sensuous. When one experiences a phenomenon, a calling forth of sense data is perceived and cognitive associations are made. Sensory data is immediate, inundated with all the tensions of the moment, while cognition or the intellect requires a more sequential process. The sensuous experience is aesthetic. With the use of the intellect, meaning and value is given to the event and categorical evaluations are chronologically ordered for future interactions. To have an aesthetic experience, one must utilize both his sensory perception and his intellect to grasp the totality of the event. <sup>241</sup>

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<sup>239</sup> Dewey, 1958a, p. 22

<sup>240</sup> p. 22

<sup>241</sup> 1958a p. 119

The aesthetic framework of the event is exposed "when the factors that determine anything which can be called an experience are lifted high above the threshold of perception and are made manifest for their own sake."<sup>242</sup>

Immediate experiences are complex and contain many potentialities: "For in any object of primary experience there are always potentialities which are not explicit; any object that is overt is charged with consequences that are hidden; the most overt act has factors which are not explicit" Thus, most of what we experience is unnamed and unknowable.<sup>243</sup> Here, even though these perceptions have lost their original experimental basis, they would fall under Dewey's definition of knowledge because they were verified in the past by experimental inquiry. Dicker makes a similar point: This is not to deny, however, that there is such a thing as knowing by seeing, or seeing cognitively construed. Rather, the point is that such seeing, however it is to be analyzed, consists in something more than "bare witnessing" or "the irreducible act of awareness"<sup>244</sup>

A "situation, states Dewey, is a whole in virtue of its **"immediately pervasive quality."** When described from the psychological side, we have to say that the situation as a whole is sensed or felt. The awareness of the total is more emotive and intuitive than it is "reasoned" and as such, as something felt or sensed, a situation is not an object in discourse. Such a "universe of experience" surrounds and regulates the "universe of discourse" but does not appear as such within the latter. <sup>245</sup>

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<sup>242</sup> Dewey, 1958a, p. 57

<sup>243</sup> (p. 21).

<sup>244</sup> Dicker (1976) (p. 28)

<sup>245</sup> (3, p. 68)

The "pervasively qualitative" binds all constituents into a unity, states Dewey. But this background is also unique in that "it constitutes in each situation an individual situation, indivisible and unduplicable." There are distinctions and relations that develop out of a situation which may be recurrent and repeatable in different situations, out the pervasive quality out of which each act of inquiry emerges is different to some degree from that found in all situations which precede and follow it .In an earlier essay which was specifically devoted to this topic, that is, to "qualitative thought," Dewey stated that "the gist of the matter is that the immediate **existence of quality**, and of dominant and pervasive quality, is the background, the point of departure, and the regulative principal of all thinking."

The essence of his view is that association is a cognitive process that it takes place as a result of the operations of thought wherein the pervasive quality becomes differentiated and at the same time these differentiations become associated or integrated.<sup>246</sup> "Unanalyzed totality" or esthetic experience shows itself as intuition, abduction.

If the word "**intuition**" is taken to mean "the single qualitateness underlying all the details of explicit reasoning," then Dewey is willing to use this term to indicate the early feeling or "insight" into the situation as a whole. He states: "To my mind, berg son's contention that intuition precedes conception and goes deeper is correct. Reflection and rational elaboration spring from and make explicit a prior intuition." all thinking«in art in science, in da affairs, begins in such awarenest of pervasive quality and ends in more

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<sup>246</sup> (\*+, pp. 115-116)



differentiated or determinate relations. Intuition, states Dewey, signifies the realization of a pervasive quality such that it regulates the determination of relevant distinctions or of whatever becomes the accepted object of thought.<sup>247</sup>

Peirce introduced two concepts close to generative intuition: abduction and musement. Abduction is a third type of inference that complements the classical Aristotelian division to deduction and induction. In deduction, particulars are drawn from the law. In induction, laws are drawn from the particulars. In science what we begin with is neither a law nor a sample—but a hypothesis.

Such hypotheses are arrived at by something that is more than guesswork. Peirce writes in one of his manuscripts: “It is evident [...] that unless man had had some inward light tending to make his guesses [...] much more often true than they would be by mere chance, the human race would long ago have been extirpated for its utter incapacity in the struggles for existence.

The formation of a hypothesis for Peirce is an act of insight that comes to us “like a Flash”<sup>248</sup> Thus, in abduction, we arrive at something similar to the more modern psychological notion of intuition as generation of new insight and ideas.

Peirce’s other relevant conception, musement, means in turn a play of thought without purpose, where associations freely come to mind.<sup>249</sup> Both musement and abduction involve tapping into cognitive resources that we cannot control at will but that function

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<sup>247</sup> C1\*, pp. 100-101)

<sup>248</sup> (Peirce 1934, 5.181).

<sup>249</sup> (Peirce 1909, p. 93.)

better than pure chance or guesswork. The concept of habit can be used to explain this ability to discovery and generative insight.

Herbert Simon adds “The situation has provided a cue; this cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is nothing more and nothing less than recognition.”<sup>250</sup>

### **Unconsciousness experience**

For the organism, experience is of two kinds, the epistemological and the pre-epistemological. The former sense of consciousness is that of self-consciousness, of the awareness of meanings which are introduced into experience to direct it and maintain stability. The latter sense is a conscious experience but not with the awareness of meaning. It might be better described as a sensing type conscious experience.

Dewey, views experience as the interaction itself, as the organism/environment "situation" that is prior to the emergence of a "cognizer" or knower in the subjectivistic and private sense. Things are had before they are known. The interaction precedes the reflective function in experience. The conscious organism emerges out of its interaction with the environment with a function of awareness, of knowing in different senses. Consciousness, as a function in experience, is only an aspect that reveals itself as a tool in negotiating with the environment, it is not the total interaction we have with the situation.

More specifically, Dewey holds that what is really "in" experience extends much further than that which at any time is known...Things are objects to be treated, used, acted

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<sup>250</sup> (Simon 1992, p. 155.)

upon and with, enjoyed and endured, even more than things to be known. They are things had before they are things cognized.

Habitual experience can be pre-reflective and operated on levels that although are directive of experience, are not known. But an experience occurs nonetheless even on the pre-reflective level. Arguing that there is, as such, a distinction between experience and conscious experience. All experience is conscious experience in the sense that there is awareness (sensing), but not all conscious experience is that of knowing. We can maintain the distinction, however, if we interpret it to mean that experience is the total interaction between organism and environment while conscious experience is that of knowing in the sense of self-consciousness.

In other words, by grasping or discriminating the meaning of the interaction. Such a distinction, then, can view prereflective habits as operative "**unconsciously**" while we are still undergoing an experience in which we are "self-conscious" of other things.

We interact with the environment in different ways than through direct awareness of the mind or consciousness start with the organism's interaction with an environment. Here natural forces still interact with each other and, as such, constitute an experience, i.e., nature. Conscious awareness of meaning emerges out of these processes and contributes, as a function, to the already existing interactions that are going on in nature.

Dewey, in this context, rejects 'knowledge' and 'awareness'. As he and James argued, there is no evidence for the existence of an act "of being aware." In other words, it is not true to suggest that there is a mental act of awareness every time we are aware of

something. Terms such as 'awareness' and 'consciousness' continue to carry with them deep rationalistic deposits and are inconsistent with a radical empirical account

Habits, the **nonreflective** side of subject, combines with reflection to create the situation at hand. Habits occur at an unconscious level but still show how human beings construct how situations are perceived. It is under the more reflective conditions found in deliberate inquiry that Dewey locates his concept of knowledge.

### **Consciousness start with problems**

Knowing only occurs as the person faces problems which interrupt habits and force a reconstruction of meaning based on combining a number of habits with new conditions. Dewey restricts the term knowledge to its use in inquiry, with its deliberate prospective nature, an intelligent search for the unknown based on the problem at hand. Thus, while Dewey seeks an understanding of habits as constituting self in an immediate, pre-reflective condition, he also envisions habits in a creative, dramatic role when tension arises between constituting and the constituted.

The inquiry into knowledge starts at the moment a human organism faces a problematic situation which it cannot solve simply by relying on its current beliefs. Knowledge, when viewed radically, can be achieved only within and as a function of the process of inquiry. Knowledge achieved can be used later either to make the experience more informed or to help act on warranted beliefs. In short, we come to have knowledge as a result of the need to resolve problematic situations, or confirm hypotheses. All knowledge is acquired as a result of inquiry and not by constructing theoretical maps that are believed to be a mirror-copy of reality.

Now, Dewey's criticism is directed against the theory of mind in that it views the latter completely separated from the objects of its inquiry. In such a framework the mind is capable of constructing a "mirror" of Reality without engaging in the inquiry itself. The inquiry, we need to remember, involves the "**intentionality**" of the organism as well as real objects. As argued earlier, the duality between *theoria* and *praxis* does not exist in Dewey's understanding of inquiry as they are in the thought of Galileo, Descartes and Newton, as well as all contemporary philosophers who still hold that a human observer can discover laws about the universe without affecting the object of their inquiry.

For Dewey, all knowledge is a result of inquiry, rejects the view that inquiry can maintain the dualism between *theoria* and *praxis* which requires a "**spectator**" view of the mind.

The goal of a theory, or thought in general, is to transform the existing situation by constructing and testing claims that enable us to predict and explain present and future environments. In short, it is a tool with which we control change for the purpose of achieving an intended end.

Dewey's point is that the real significance of the conception of a theoretical entity can only be fully understood when we understand the function that this kind of concept has in the process of inquiry. In other words, what kind of specific problems do the functions of this type of concept assist in successfully overcoming?

### **Radical Emprism**

Pragmatic ontology holds that sense-data exist as a part of experience in the same way emotions, feelings, etc., exist. In a relational universe they cannot be identified in

themselves. They do not ontologically stand "between" us and things in-themselves, they are functions in experience and they should not be taken as having prior or antecedent existence. The alleged primacy of sensory meanings is mythical. They are eventful functions in the stream of experience. Any attempt to isolate them from the interaction and stipulate their unaffected reality (in-itself) is inconsistent with "genuine empiricism."

Sense-data" do not exist as psychologically basic. They exist as a discriminating function in experience. The datum of a child, as James held, is a large but confused one in which various sensible qualities represent the result of discrimination. These "elementary data" are not primitive in any sense but are rather "the limits" of the natural process of discrimination. How the confused "datum" of infancy develops into a clear one is indeed the study of physiological psychology, but never during this development should the existence of the external world be called into question.

James' radical empiricism implies that **relations** are real. Since, according to James, not only relations among the constituents of the physical world but those among states of consciousness are part of our experience.

James introduces his reader to the notion of pure experience with the following statements:...My thesis is that if we start with the supposition that there is only one primal stuff or material in the world, a stuff of which everything is composed, and if we call that stuff 'pure experience'; then knowing can easily be explained as a particular sort of relation towards one another into which portions of pure experience may enter. The relation itself is a part of pure experience; one of its 'terms' becomes the subject or bearer of the knowledge, the knower, the other becomes the object known.

James states it in this way: Common sense and popular philosophy are as dualistic as it is possible to be. Thoughts, we all naturally think, are made of one kind of substance, and things of another. . . . In opposition to this dualistic philosophy, I tried, in [the first essay] to show that thoughts and things are absolutely homogeneous as to their material. . . . There is no thought-stuff different from thingstuff,

According to Dewey, the entire debate between realism and idealism is merely "verbal" and there is "no terminus to such discussion" since "both sides are saying the same thing in different words." Both realism and idealism are misleading since they both start from the wrong assumption, i.e., that knowledge is necessarily a comprehensive relation between an "**extra-experiential**" mind or agent and a "**real**" world "out there." For Dewey, the correct picture of the knowledge relationship does not include a relation between a "**spectating**" mind and "**unaffected**" real objects, and where "knowledge" is viewed as a "go between " a matching-between the two separate aspects of the world.

Pragmatic ontology rejects idealist- realist philosophy which is grounded in logical construction with an unchanging, rigid, exact world of 'being' and then move to the external world of existence. It is misleading since it is from just this external world, despite its lack of permanence and stability that we derive all that we know of existence, and all that we can know.

Analitic tradition assumes that if nature is rational it will ultimately **correspond to** the laws of mathematics. The underlying presupposition is of a world of facts and a world of word cast in the form of mathematical logic which somehow correspond to each other as mirror images do. Atomic facts are "mirrored" in atomic propositions.

Analytical realism holds that a structural identity could be accomplished by a correspondence theory of truth and the ideal language of mathematical logic. Thus, there is a correspondence between mathematical logic and the structure of the world. The error in such a view, I suggest, is continuous with the already rejected "spectatorial" view of reality and the dualism between *thoria* and *praxis*. What is rejected here is the ideal of a human observer who can discover the laws governing the world without him/herself being involved in the determination of those laws.

Analytical realism, in contrast to pragmatism, continues to maintain the Humean dualistic distinction between ideas and impressions as ontologically and epistemologically distinct, as well as the reality of sense-data. As a result, it also retains the ontological distinction between the conceptual and the empirical and is thus committed to the "**mirror**" picture of reality." Reality is non-interactive epistemologically, and is completely independent of "intentions"

Inquiry does not begin or end with a perfect picture of the given or with direct knowledge of the facts. Every starting point is conditioned upon other assumptions, even the "normal" paradigm itself is always incomplete. Since inquiry necessarily involves the "intentionality" of the organism, it never encounters **things-in-themselves** since the organism can never be an "objective onlooker". Since inquiry is dynamic, interactive and instructive it can never produce things-in-themselves, In other words, it is impossible to directly compare theory with facts without experiments and with the full "**intentionality**" of the organism.



Such a notion of Reality in itself is simply contrary to the holistic understanding. There are many realities that are real but not one that is independent of all interactions. The traditional distinction between Realism (object separated from mind) and Idealism (objects as mind dependent) is simply not accepted as meaningful under Practical ontology.

In experience these objects involve an interaction with the organism which includes some "intentionality" on the part of the organism. Each experience is different by virtue of its particular "intentionality", but they are all real and they all interact with real objects. While the properties of our "intentionality" like emotions, sensitivity, pleasure or pain, etc., are "secondary", not directly descriptive of the object in-itself. The facts which are revealed in a radical reading of experience is that this intentionality is inseparable from the object itself.

For Pragmatists the "given" is a **relational affair**, not a construction in our minds. The given of science is relational to the methods and the intentionality of the observer. The object of observation may still be a real object yet, via the scientific observation, it is a product of a relation between organism and environment. What we need to give up is the idea that there is a "thing-in-itself," completely separated from the interactive nature of the organism.

An experience, we hold, is a **relational** event between an organisms and environments. It is not a "construction" of sensations and impressions within the mind of the organism. It merely means that this real object interacts in different ways with the organism so as to create different "reals of experience".

The traditional-spectator theory of knowledge holds that the object to be known exists apart from the act of knowing. This fact, it holds, is required for a realist view of knowledge since it provides a Reality which can guarantee the truthfulness or falsity of propositions made about this Reality. Object to be known exists apart from the act of knowing. However, the discovery of the fact that the act of observation, necessary in existential knowing, modifies that preexisting something, is proof that the act of knowing gets in its own way, frustrating its own intent. The human organism, if viewed from the standpoint of immediate empiricism, is always part of the situation.

The heart of ... Dewey's pragmatism ... was the insistence on the supremacy of the agent point of view. Dewey is a realist in so far as he rejects the idealist's conclusion argued for from the well known facts about the relativity of perception. But, Dewey is an idealist in so far as he agrees that there is no such thing as a "copy theory" of truth and perception that is testable scientifically.

The behaviors of the organism are teleological. They are "determined" by the conditions which constitute "problematic situations", and the need of the organism to overcome them. A "situation" describes organism/ environment interactions, which are complex interactions, involving bio-physical, socio-cultural and psychological forces.

An incomplete reading of experience divides mundane reality into dualities such as, ideas and impressions, the conceptual and the empirical, existence and being, Experience as Nature, read radically, is the inclusive situation which includes the thought-activity as one of its modes.

Thought or personhood, is not an ontologically separated quality of being. Rather, it is a function, an activity or "doing" in experience. Experience is much wider than awareness or self-consciousness there is no other elementary causal law of association then the law of neural habits.

We do interact with objects, but they are not given to us as unaffected or separated from our own processes and purposeful behavior. They are not independent of the habits of our perceptions and inquiry. The relation between organism and environment is "holistic" and not dualistic. The parts that constitute the interaction do not, experientially, exist in separation. They are interconnected by circuits of coordination and dependency. Perception, is a complex interaction that involves many pre-reflective habits of perception.

What has been completely divided in philosophical discourse into man and world, inner and outer, self and not-self, subject and object, individual and social, private and public, etc., are in actuality parties in life transactions. The philosophical 'problem' of trying to get them together is artificial. On the basis of fact, it needs to be replaced by consideration of the conditions under which they occur as distinctions, and of the special uses served by the distinctions.

The contextualist perspective states that different strands and textures in the event merge together without regard to consecutiveness in time and space. The strands and textures so tightly fuse that they cannot be individually extracted from the total context. What is remembered is not the individual items but the quality of the subjects' interaction with the stimulus material."

Remembering is a function of the total set of experiences to which an input belongs".<sup>251</sup> It is suggested that what is remembered is not entities or isolated word items but events.<sup>252</sup> Memory cannot be severed from perception; it functions within the total cognitive system. The event and its quality determine what the possibilities are for analyses.<sup>253</sup> Experience "is not itself merely physical nor merely mental, no matter how much one factor or the other predominates"<sup>254</sup> Meanings lie neither in the organism nor in the environment: "That to which both mind and matter belong is the complex of events which constitute nature".<sup>255</sup>

In the lived event, the organism and environment contribute meaning, but "both inner and outer factors are so incorporated that each loses its special character"<sup>256</sup> Thus, memory, as a part of the organism's cognitive system, functions in an environmental context, a situation, which is always, to some degree, dynamic and novel.

The **meaning** from the past "suffuses, interpenetrates, and colors what is now and here uppermost." Not only do the present actions fulfill "the meanings constituted by past events," but they also anticipate future actions because the present actions progress indeterminately.

Awareness and perception involve "a continuum of **meaning** in process of formation" meanings do not result from discrete acts of recollection. Past experiences

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<sup>251</sup> (Bransford, M cC arrell, Franks, & N itsch, 1977, p. 455)

<sup>252</sup> (e .g ., Barclay, 1973; Bransford, Barclay, & Franks, 1972; Bransford & Johnson, 1972, 1973; Bransford & M cC arrell, 1974; Johnson, D o ll, Bransford, & Lapinski, 1974).

<sup>253</sup> (Jenkins, 1974b, p. 794).

<sup>254</sup> (Dewey, 1934, p. 246).

<sup>255</sup> (Dewey, 1925/1929, p. 75)

<sup>256</sup> (Dewey, 1934, p. 246).

"fund" experience or contribute to it. Dewey describes mind as "contextual and persistent . . . structural, substantial; a constant background and foreground"

The **meanings** from past experience, through a process similar to that of sedimentation, build up a whole system, a deposit of meanings. As Merleau-Ponty states, "We find, as a basic layer of experience, a whole already pregnant with an irreducible meaning"<sup>257</sup>

According to Kestenbaum the **funded** and retained meanings can be best described as a "field of habitual meanings" The organism's field of meanings enters into lived experience. In "lived" experience, such as the watching of a play, the contextualist claims that recognition precedes recollection; the past is "in " the present situation."

To perceive is not to experience a host of impressions accompanied by memories capable of clinching them. . . . To remember is not to bring in to the focus of consciousness a self-subsistent picture of the past" The problem with this view, he writes , is as follows : Before any contribution by memory, what is seen must at the present moment so organize itself as to present a picture to me in which I can recognize my former experiences.

"The **past operates as an organized** mass rather than as a group of elements each of which retains its specified character" The contextualist conceptualization of memory stresses the organism's activity in an event and the re constructive nature of remembering. As Pepper describes it: "A texture, through its strands, is constantly involved in its context, and the two together are so complex and so constantly changing that the nature of a total texture could hardly be expected ever to be duplicated".

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<sup>257</sup> pp. 20-21). (1962)

Wechsler states, In short, for the experiencing individual, memories do not exist before they are revived or recalled. Memories are not like filed letters stored in cabinets or unhung paintings in the basement of a museum. Rather, they are like melodies realized by striking the keys on a piano. Ideas are not more stored in the brain than melodies in the keys of a piano,<sup>258</sup> He advocates a problem solving approach to memory and stresses "that what is stored is a by-product of problem -solving activity " which becomes "assimilated with information already stored that is related to the general problem-solving activity " In the contextualist view, similarity in experience is not based on intrinsic or permanent properties of natural objects but on convergent references which emerge in the contextually bound situation.

As C. S. Peirce puts. Reasoning is good if it be such. A true conclusion from true premises, and not otherwise. Furthermore that which determines us, from given premises, to draw one inference rather than another, is some habit of mind, whether it be constitutional or acquired.

The particular **habit of mind** which governs this or that inference may be formulated in a proposition whose truth depends on the validity of the inferences which the habit determines; and such a formula is called a guiding principle of inference. In other words, what is doing the correct reasoning is a habit of mind-like behavior, not necessarily a mind with a habit. Peirce, in other words, is drawing a "correction" between reasoning and habits of inference, and he does not assign a "doer" to the function of reasoning. We

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<sup>258</sup> (p. 151)

cannot however, assert that the habits are "owned" by a non-empirical agent only to influence his/her empirical behavior.

Dewey characterizes persons in terms of the organism's behavior and the habits which constitute the underlining mechanism that directs the behavior. That habits are the "means of knowledge and thought" is a claim confirmed by the experimental method. In our view, the organism in its total relations with the environment, with its reflective and pre-reflective habits is the person.

Dewey illustrates this **relational nature of habits** by pointing out the similarity that they bear to other natural functions. Functions are to be understood as activities which are inescapably relational. Just as breathing requires the existence and cooperation of the organism's lungs as well as air, the habit of honesty is an affair necessarily involving both the organism and its social and non social environments. The social environment is composed of people with organized and established habits which determine and shape, i.e., give meaning to the native impulses of the child. The term becomes meaningful only when it is expressed by an act and is judged by an environment, i.e., is normative in a social sense.

Dewey prefers the word habit since it expresses a more **active** participation in the ongoing interaction with the environment. **Dispositions** or attitudes, on the other hand, "suggest something latent, potential, something which requires a positive stimulus outside themselves to become active. Since all activity is subject to interaction, all activity is also subject to habituation. Dispositions, as lines of activity, are simply habits. Any nonexperiential distinction between them is unwarranted. Being relational in origin, habits

can never be said to have been created ex nihilo but always through an interaction with the environment. He notes that when a physical object or event becomes embodied in meaning, the quality found in existence "is then subordinate to a representative office." Once the object or event has been captured in symbolic form that object or event can be reproduced practically at will and it is not necessary to wait for the original occurrence in order to have the experience.

Dewey indicates further that we may think of habits as means which are waiting, like tools in a box, to be used by conscious resolve." But they are something more than that. They are **active** means, means that project themselves, energetic and dominating ways of acting.<sup>259</sup> " He adds . . . . If the facts are recognized we may also use the words attitude and disposition. But. . These words are more likely to be misleading than is the word habit. For the latter conveys the sense of operativeness, actuality. Attitude and, as ordinarily used, disposition suggest something latent, potential, something which requires a positive stimulus outside themselves to become active. If we perceive that they denote positive forms of action which are released merely through removal of some counteracting "inhibitory" tendency, and then become overt, we may employ them instead of the word habit to denote subdued, non-patent forms of the latter.

Dewey holds that habits are "opposed to conscious reflection" and operate **pre-reflectively** in order "to leave the conscious activity of mind free to control new and variable factors." Once the non-established habits of mind control the problematic situation (in and as experience) and establish control, they are "absorbed or lost" and become

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<sup>259</sup> (9, p. 25)



"silent". The person is said to be conscious of his/her activities only when encountering something novel. In other words, consciousness (as reflective activity) is an activity that operates only in moments of "tension." In most other experiential situations habits, which do not involve experiential challenge, behave "pre-reflectively." A situation is no longer "novel" or "tense" when it is "mastered" and the habits governing the situation are again established, or pass into "unconsciousness."

**Consciousness**, on the other hand, is the awareness and reflection which results from the moment of habitual conflict; it is the reaction to a novelty in experience. In short, consciousness is the outcome of the conflict enduring only as it moves from one problematic situation to another.

Habits constitute both the unconscious and conscious life of the organism. Conscious habits spring forth when the organism needs to overcome an experiential conflict and are what Dewey calls, "intellectual habits."

The **pre-reflective** nature of habits can be seen as constituting naturalistic categories through which both thoughts are formed and experience manifests itself to us in its particular manner.

The categories are the pre-reflective habits that direct and are responsible for objects of experience having their particular meaning. Since the meaning of experience is conditioned upon interaction with the environment, different sets of habitual meanings can be introduced.

According to Dewey, the **pre-reflective formation of habits** is equivalent to Kant's categories in importance insofar as they both determine present understanding and

experience. However, unlike Kant's categories, which are fixed and extraphenomenological, Dewey's understanding of "habitual categories" are natural, phenomenologically given, and empirically accessible.

Here we have "categories" of connection and unification as important as those of Kant, but empirical not mythological. Habits, Dewey also holds, are the means of knowledge and they "do all the reasoning, judging,"

This claim leads to the observation that the best way to understand such workings of habits is from its pre-reflective level of intentionality Dewey claims, "designates a character in operation, not an entity." Since habits "constitute the self," in general, a person's character is to be understood as a particular observed set of habitual behaviors.

Dewey states that, in the example of reading a book, we are capable of getting ideas from what is read because of an organized system of meanings of which we are not at any one time completely aware. There is a continuum or spectrum between this containing system and the meanings which, being focal and urgent, are the ideas of the moment. A contextual field lies between these immediate ideas and those meanings which determine the habitual direction of our conscious thought and supply the organs for their formation.

Then habits states Dewey, supply content, filling, and subject matter; gradually the confused situation takes on form and it is "cleared up" -- the essential function of intelligence.<sup>260</sup>

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<sup>260</sup> (9, P« 180)

Dewey states that **impulse** is primary and **intelligence** is secondary and in some sense derivative. But recognition of this fact exalts Intelligence writes Dewey, because thought is not the slave of impulse to do its bidding. "Impulse does not know what it is after . . . . It rushes blindly into any opening it chances to find. Anything that expends it, satisfies it. One outlet is like another . . . . It is indiscriminate." What intelligence does in the service of impulse is to act as its clarifier and liberator. And this is accomplished by a consideration of conditions and consequences which can be achieved by a variety of desires and their combinations. "Intelligence converts desire into plans . . . ." <sup>261</sup>

William James shows that stimulus and response are not discrete orders of events which can be separated one from the other. The so-called response is not merely to the stimulus; "it is, so to speak, into it." "The burn is the original seeing, the original optical-ocular experience, enlarged and transformed in its value. It is no longer mere seeing; it is seeing-of-a-light-that-means-pain when- contact-occurs." <sup>262</sup>

The function of reflective thought is therefore, to transform a situation in which there is experienced obscurity, doubt conflict disturbance of some sort into a. situation that is clear coherent, settled harmonious. <sup>263</sup>

Thus we find in Dewey's view that cognitive processes have definite direction. It would seem that a vague, unanalyzed whole becomes more differentiated or "articulated." In short, as the Gestaltists say, a "figure" emerges upon a "ground."

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<sup>261</sup> (9, pp. 25^-255)

<sup>262</sup> (1, pp. 231+-235)

<sup>263</sup> (2, pp. 100-101)

This life situation is pervasively qualitative and is unique both for the individual and in the sense that it is constantly developing or evolving. The "momentary situation" is a figure or pattern which becomes established on the broader qualitative background. In other terms, the immediate circumstances become differentiated out of the total quality by way of acts of perception and thought.

Development of the person is characterized by increasing differentiation of previously undifferentiated "regions" of the life situation. By "regions" is meant not only areas of the physical environment but also ideational and social spheres.

We find it impossible to talk about the "motivational" without talking about the "cognitive" and we cannot consider the thinking processes apart from the volitional or goal-seeking processes in which the organism is found to engage.

Therefore, continues Lewin, "All intellectual processes are deeply affected by the goals of the individual." These intellectual processes, one type of productive activity of the individual, are dependent upon the total emotional state — upon the tension, the degree of differentiation, the size and fluidity of the life space at a given time.

Kohler writes that "every system to which the second law of thermodynamics can be applied sooner or later reaches an equilibrium either of rest or of a steady state under the given conditions." He states in somewhat technical terms how the equilibrium state is achieved in terms of adjustments of regions of a system that are in functional communication. Speaking with regard to the nervous system, but more specifically with regard to processes that have been observed in physics, Kohler notes that "the final state is reached when, through continual displacements at each point, the resulting inner forces and

states eventually stand in such relation to each other throughout that they no longer bring about any change in the state or (now) stationary process. There are systems in which this occurs very rapidly, others where it requires years to happen." underlying the theory of physical Gestalten is that "the state of any region of the system is at any instant also determined by the state in every other region."

Dewey himself finds all inquiry [reasoning] to begin, with a characterization of the situation as a whole, that is, with an appraisal or interpretation of the position [framing] in its macroscopic traits, with an overview of the man and the frame of reference from which he viewed his subject matter. From these considerations, the discussion shall then move to more detailed or particular concern with specific components of the position.

He seems to take a "neutralist" position in which reality consists of natural events that are neither completely physical nor completely mental. He is critical of those who would reduce the mental to the physical and of those who would turn the physical into something entirely mental.

The structural link between the observer and the observed. Dewey's view of experience is radically empirical: experience is an activity in which subject and object are unified and constituted as partial features and relations within this ongoing, unanalyzable unity

Dewey's view of personhood starts with the rejection of the Cartesian preoccupation with private "consciousness" and replaces it with "man", understood as a relational "event," "field," or a "situation." different levels of orders of abstractions

Pragmatic ontology replaces the notion of truth with "**warranted assertability**" since in a genuine empirical framework a matching activity is impossible the notion of truth is redefined in terms of the adequacy of actions and "doing" in experience or as "warranted assertability."

Dewey completely rejects the word 'belief, and prefers the term "warranted assertibility" to describe the end of the process of doubt the term "warranted assertion", then, is preferred to the term belief or knowledge.

Instead of viewing knowledge from the standpoint of "truth conditional," which clearly ignores the ordinary human organism and the realm of "intentionality," knowledge should be viewed from the standpoint of "assertibility condition". Although it grants that objects are real and concretely interact with organisms, it denies that the objects are ever known in-themselves. Knowledge about these objects involves the participation of the organism by means of a language, theory, method, habits, emotions, interests and needs, otherwise the position ignores contemporary empirical knowledge and is no longer an empirical-realist position.

The thinking process does not go on endlessly in terms of itself, but seeks outlet through reference to particular experiences. It is tested by this reference; not, however, as if a theory could be tested by directly comparing it with facts--an obvious impossibility--but through use in facilitating commerce with facts. It is tested as glasses are tested, things

are looked at through the medium of specific meanings to see if thereby they assume a more orderly and clear aspect, if they are blurred and obscure.

The theory is tested or confirmed in the same way we test and confirm the adequacy of a new pair of glasses. We look at the world through a theoretical construction of meanings and evaluate the theory if it succeeded in directing uncontrolled change, i.e., when things "assume a more orderly and clear aspect." A theory, as a set of judgments, beliefs, thought, etc., is not confirmed as true or false under the framework of Interactive Realism.

Since all judgments, beliefs and thought are activities and "doings" of a sort by the organism, they are judged as adequate or inadequate, successful or unsuccessful, but not as true or false. Only propositions can be true or false and they can be so only in a correspondence theory of truth. Actions and "doings" can only be adequate or successful in practice. hypothesis adequate or inadequate not true or false

The traditional notion of truth as correspondence is rejected here together with the "mirror" type approach to philosophy. This "pragmatic" notion of truth does not attempt to merely reconstruct the traditional notion of truth, but rather to reject the concept of correspondence altogether and to discuss the issue of confirmation as "warranted assertability."

Beliefs, claims and judgments are confirmed by their adequacy in controlling experience. They are warranted, in other words, by evidence generated through inquiry and is subject to the experimental method of confirmation. Propositions, as activities and

doings, then, are confirmed not by how "successfully" they mirror Reality, but by the continuous support generated by an ongoing inquiry.

Sensemaking never stops or starts. Past events are reviewed in light of current events, and old memories are applied to the interpretation of present situations.<sup>264</sup> Dilthey applied the concept of the hermeneutic circle to describe how people interpret events: i.e., people are always in the “middle of complex situations” which they try to resolve,<sup>265</sup> “By making then revising provisional assumptions”. Plausible rather Than Accurate Individuals make sense based on what fits, what seems plausible.

All reasoning is based on incomplete information.<sup>266</sup> The temporal nature of most action further reinforces the need to go with the best information available at the time to make a decision. Thus, people act in light of the information available to them in a given timeframe. They create plausible scenarios to explain what the noticed cues mean and how certain responses may benefit or harm them, and they make decisions accordingly. Plausible explanations provide “a good story” that explains a situation and guides action.<sup>267</sup> They are coherent, reasonable, credible, and socially acceptable. They fit with past experience, are believable to others, and can be supported based on memory. Plausible explanations also reproduced allow for revisions that accommodate inconsistencies that arise from incomplete information or flawed memory.<sup>268</sup>

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<sup>264</sup> (Weick, 1995).

<sup>265</sup> (Dilthey, n.d., as cited by Rickman, 1976, p. 11),

<sup>266</sup> (Isenberg, 1986).

<sup>267</sup> (Weick, 1995, p. 61)

<sup>268</sup> (Weick, 1995)



It is an utterly superficial view, therefore, that the truth is to be found by "studying the facts." It is superficial because no inquiry can even get under way until and unless some difficulty is felt in a practical or theoretical situation. It is the difficulty, or problem, which guides our search for some order among the facts, in terms of which the difficulty removed.<sup>269</sup>

C. S. Peirce claims that, as human organisms, we constitute a movement from experiential states of doubt to those of belief which is guided by "some rules by which all minds are alike bound." Peirce claims that at least one rule, by which all minds are bound, is the need to escape the struggle of doubt, since it leads to an experiential "irritation". The escape from the struggle caused by the irritation of doubt is finally achieved when the person attains "a state of belief."

Functionality emphasizes that knowledge is prospective, not retrospective. An active agent seeks ways to act further and wants to know what to do in order to reach the situation as an outcome of this action. Thus knowledge is always relative to the activity of the knowing subject.

Knowledge is prospective in the sense that the adequacy of knowledge depends on the course of events during the treatment. The knowledge is, of course, based on earlier experience and theories involved, but if the treatment is not successful, then the knowledge turns out to be inadequate and, thus, after all not true knowledge about this problematic situation and its transformation into the desired situation. An acting agent wants to know what to do and orientates to the future on the ground of past experience, but the proper

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justification of knowledge takes place in the future. Knowledge is adequate enough if the action performed turns out to be successful.

Reconstruct a pragmatic theory of knowledge by focusing on a transactional perspective, where knower and known are viewed on the same plane, actively influencing and forming each other. It rejects modern epistemology's quest for certainty; its search for a comprehensive and unified system of knowledge; and its commitment to an absolute, detached objectivity. In sharp contrast to Cartesian epistemology, a pragmatic theory of knowledge builds upon notions of uncertainty, concerns for practice and the particular, and a redefinition of subjectivity and objectivity, as its key elements.

Dewey insists upon its transactional nature, self is always identified with concrete and specific activities. The object of knowledge, within Dewey's theory of knowledge, is not coming to perceive the object as it exists in reality, but rather to understand its meaning in relationship to the context of inquiry. The object of knowledge emerges out of and is simultaneously constructed by the process of inquiry.<sup>270</sup> Based on the transactional nature of subjectivity, a redefinition of objectivity occurs.

Dewey claims that the debate in philosophy had rested on too passive a view of the human mind, and on inappropriate demands for geometrical certainty. Dewey rejects the quest for certainty and the notion of absolute objectivity and stresses instead the human agency and subjectivity involved in constructing knowledge claims. The inclusion of

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<sup>270</sup> Dewey 1922

subjectivity and human agency in the construction of knowledge are key concepts in transforming how knowledge is viewed.

Pragmatism replaces two key constructs of modern epistemology-certainty and separate subjectivity-with uncertainty and a transactional view that emphasizes the relational quality of subject and object. It is this combination of uncertainty and the constitutive, transactional relationship between subject and object that radically changes the view of what constitutes knowledge.

Pragmatic reasoning shares some characteristics with both realism and idealism, but escapes their respective flaws. Dewey believes that both idealism and realism misrepresent conceptions of experience and thus develop a flawed theory of knowledge. Like the realism, Pragmatism does not give intellect the power of actually constituting reality. Instead thinking is important as an instrument for coping with the world. Dewey continues to hold that human beings are not simply passive observers of the world, but rather that objects of knowledge are determined by intelligence in a relationship more like an agent and patient combined into one there is both an active and passive element to knowing which tap into some aspects of realism and idealism.<sup>271</sup> Pragmatic ontology builds a case for instrumentalism using realism and idealism as "foils to his own constructive analysis.

Certainty Dewey explains: the original perception furnishes the problem for knowing; it is something to be known, not the object of knowing. And in knowing, the first

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<sup>271</sup> (p. 176).

thing to be done is to select from the mass of present qualities those which, in distinction from other qualities, throw light upon the nature of the trouble.

It is argued correctly that the concept of transaction radically transforms notions of subjectivity and objectivity by assuming a generative, organic, dynamic relationship between subject and object.

It is also claimed that a dualistic view separating subject and object denies the relationship between subject and object contained in the process of coming-to-know the object. Dewey finds this understanding of perception, defined first by British empiricist and later by various realists, too passive and too literal in that knowledge is the object as seen, without modification by the process of coming-to-know. While Dewey agrees with realists that experience is central to gaining knowledge, he refutes both their definition of experience and their reliance on "perception" or "consciousness" as means of converting experiences into knowledge. Pragmatic ontology does not deny the importance of perceptions to knowledge, but objects to the realist view that perceptions are knowledge.<sup>272</sup>

For Pragmatists, mind is mindful behavior and all the functions that are attributed to the mind are to be understood in the same way, i.e., as behavior. Since this unity reveals a complex network of relations, we are justified in assuming that ends and means are parts of this network. The identification of one event as a mean and the other as an end is primarily an instrumental tool we use to provide a perspective from which to make sense of experience. It is not a fixed and unchangeable relationship. Simply put, neither 'means' nor do 'ends stand for the same things in different situations. The determination is made

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<sup>272</sup> (Westbrook, 1991, p. 126).

instrumentally and functionally insofar as the different situations demand different events to be used as either means or ends. Dewey's view, then, is that "many questions about ends are in reality questions about means."

Peirce provides the first detailed critical examination of the modern Cartesian quest for certainty and search for foundations. "By highlighting the centrality of contingent and revisable social practices in acquiring knowledge, Peirce undermines the pillars of modern philosophy"<sup>273</sup> West elaborates further: This grand breakthrough is to be understood as not only Peirce's seminal effort to come to terms with modern philosophy, but also a distinctly The major impact of pragmatism is that it shifts talk about truth to talk about knowledge, human practices, and human powers.<sup>274</sup> Dewey believes, as did Peirce, that humans make inferences based on experience: "Experience carries principles of connection and organizations within itself....they are vital and practical rather than epistemological.... intelligence as an organizing factor within experience" <sup>275</sup>

Beliefs are always subject to change, based on new information or a change in conditions. Therefore, reassessment is an integral part of pragmatism. We must give up the quest for certainty and seek instead wisdom in the form of the best possible judgment.

### **Fallibilism**

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<sup>273</sup> (West, 1989, p. 45).

<sup>274</sup> (West, 1989, p. 67).

<sup>275</sup> (p. 91).

A pragmatist's commitment to this kind of fallibilism does not lead to skepticism or complete relativism, but instead reinforces that all ideas and beliefs are subject to reassessment.

Pragmatists reject the notion of absolute Truth, nothing will be true in all situations, no absolute will be discovered that will remain unchanged in the future. On a practical level, pragmatists accept the reality of prejudgment, that inquiry is built on previously held facts, or else doubt would make inquiry possible. But the absolute authority of any belief is denied. Fallibilism also makes ongoing inquiry a necessity. If this is so, how do the pragmatists define truth?

Pragmatism's criticism of idealism turns on two related assumptions. First, ideas constitute reality, and second, beings of the world are the products of an Absolute Reason that guarantees their structural integrity and their intelligibility. Idealism assumes a certain formlessness in external entities and argues that the mind constructs or constitutes reality in a certain way. This view ignores any connection with the physical world and leads to development of universal principles which transcend specific circumstances <sup>276</sup> "This non-temporal, non-relative, but absolutist interpretation of consciousness may safeguard the absolute certainty and security of thought, but it does so at the expense of severing its connection with the subject matter...." <sup>277</sup>

Pragmatism rejects these aspects of idealism because they result in too radical a separation between subject and object, for it minimizes the role in experience played by

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<sup>276</sup> (Boisvert, 1988, pp. 76-78).

<sup>277</sup> (Boisvert, 1988, p. 78)

the physical world, and turns to Absolute Reason as the sole mechanism for thought. Beliefs are always subject to change, based on new information or a change in conditions. Therefore, reassessment is an integral part of pragmatism. We must give up the quest for certainty and seek instead wisdom in the form of the best possible judgment. A pragmatist's commitment to this kind of fallibilism does not lead to skepticism or complete relativism, but instead reinforces that all ideas and beliefs are subject to reassessment.

Pragmatists reject the notion of absolute Truth, nothing will be true in all situations, and no absolute will be discovered that will remain unchanged in the future. On a practical level, pragmatists accept the reality of prejudgment, that inquiry is built on previously held facts, or else doubt would make inquiry possible. But the absolute authority of any belief is denied.

Dewey believes that it is more productive to be concerned about a theory of meaning than a theory of truth. He rejects the notion that truth is a fixed, never changing entity. Dewey also rejects philosophical efforts to make truth correspond to a single reality, or attempts to make truth transcend reality. Instead, truth is an instalment used to judge action, just like other concepts of judgment. Rorty argues that truth for the pragmatists is simply the name of a property which all true statements share.<sup>278</sup>

Dewey objects to reality as fixed and complete in itself, and in isolation from an act of inquiry which in contrast contains an element of production of change. Reason for the superiority of Pragmatist's account of knowledge over the spectator theory is that it avoids the spectator theory's tendency to confuse knowing as a process with knowing as a

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<sup>278</sup> (1982) (p. xiiii)

product.<sup>279</sup> Bernstein characterizes pragmatism as anti-foundational: there are no absolute beginnings or endings in philosophy; no quest for certainty; no spectator theory of knowledge; and, no privileged status of subjectivity. All beliefs, no matter how critical they may seem, are open to further determination.<sup>280</sup>

Dewey challenges the idea of truth by arguing that: It is no longer enough for a principle to be elevated, noble, universal and hallowed by time. It must present its birth certificate, it must show under just what conditions of human experience it was generated, and it must justify itself by its works, present and potential. Such inner meaning of the modern appeal to experience as an ultimate criterion of value and validity.<sup>281</sup>

Dewey recognizes the importance of perceptions to knowledge but rejects any notion that perceptions are knowledge. The role of primary or direct experiences as setting the problems and furnishing the first data of reflection which leads to the construction of secondary objects or the objects of knowledge. There is an overt relationship between the subject and the object, but it cannot be characterized by perception of direct experience.

Pragmatism finds no difference between the nature of truth and the test of truth, that there is no significance to the question, "Does it work because it is true or is it true because it works?" It is rather the instrumental value of a belief, its use in practice that is important. Confirmation and verification lie in the works or consequences of a belief, so that which guides us truly is true, and thus the demonstrated capacity for such guidance is

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<sup>279</sup> (Dicker, 1976, p. 22).

<sup>280</sup> (Bernstein, 1989, pp. 7-8)

<sup>281</sup> Dewey (1920) (p. 48)



precisely what is meant by truth. Its active, dynamic function is the critical element. Truth never loses its hypothetical quality. While this view may appear to make truth relative, Dewey makes the instrumental value of a true statement objective by the involvement of the community in verifying it, The pragmatic spirit cannot be defined in terms of these past systems, but rather is a revolt against that habit of the mind which disposes of anything whatever. Pragmatism as part of a great movement in intellectual reconstruction.<sup>282</sup>

One of the attractions of pragmatic epistemology is that it provides a "conceptual lens" which magnifies and highlights features about the nature of knowing that other philosophical traditions neglect. A pragmatic description of knowledge undermines the modern idea of knowledge as a stable, timeless set of facts.

Pragmatists also emphasize the instrumental value of knowledge, its value lies in its use in solving problems. Knowledge is not just something we are now conscious of, but consists of dispositions we consciously use in understanding what now happens. Knowledge as an act is bringing some of our dispositions to consciousness with a view to straightening out a perplexity, by conceiving the connection between ourselves and the world in which we live. Activity and use remind us that knowledge as inquiry is both process and product, and to fully understand what is meant by knowledge in a pragmatic sense, maintaining awareness of the process/product links is crucial.<sup>283</sup>

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<sup>282</sup> Dewey, 1910b, p. iv

<sup>283</sup> Dewey (1916a) p. 344

It is claimed that these perceptions were previously experienced, confirmed by us sufficiently in past experimentation and unchanged in circumstances so as not to need new assessment.

We are constantly referring to what is already known to get our bearings in any new situation. Unless there is some reason to doubt whether presumptive knowledge is really knowledge, we take it as a net product. It would be a waste of time and energy to repeat the operations in virtue of which the object is a known object unless there were grounds for suspecting its validity.

Dewey argues that "Experience as trying involves change, but change is false meaningless transition unless it is consciously connected with the return wave of consequences which flow from it".<sup>284</sup> To learn from experience means to "make a backward and forward connection between what we do to things and what we enjoy or suffer things in consequences".<sup>285</sup>

The measure of value of an experience lies in the perception of relationships or continuities of its consequences. Activity and thought are inextricably intertwined. We infer meaning from our experiences and gain further meaning by reconstructing our experiences, particularly through experimentation aimed at testing our hypothesis. This helps to explain his commitment to science as the model for inquiry. Thinking is an

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<sup>284</sup> Dewey 1916a p. 139

<sup>285</sup> Dewey, 1916a, p. 140

intentional endeavor to discover specific conditions between something that we do and consequences which result so that the two parts become continuous.<sup>286</sup>

Self is not viewed as an isolated being but its relational character is emphasized. The world we have experienced becomes an integral part of the self that acts and is acted upon in further experience. In their physical occurrence, things and events experienced pass and are gone. But something of their meaning and value is retained as an integral part of self. Through habits formed in intercourse with the world, we also in-habit the world.<sup>287</sup> Object and subject transaction creates meaning and meaning retained as an integral of self, Dewey adopts a view of self as collected-meanings or what he calls "**funded**" meanings. For Dewey funded meanings are situated within a complex set of habits. These habits or predispositions shape who we are: All habits are demands for certain kinds of activity; and they constitute the self. In any intelligible sense of the word will, they are will. They form our effective desires and they furnish us with our working capacities. They rule our thought, determining which shall appear and be strong and which shall pass from light into obscurity.

We may think of habits as means, waiting, like tools in a box, to be used by conscious resolve. But they are something more than that. They are active means, means that project themselves, energetic and dominating ways of acting.<sup>288</sup> Later, he argues that "whenever anything is undergone in consequence of a doing, the self is modified....these

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<sup>286</sup> Dewey, 1916a, p. 145

<sup>287</sup> Dewey, 1934, p. 104

<sup>288</sup> Dewey, 1922, p. 25

funded and retained meanings become part of the self".<sup>289</sup> Dewey prefers to use the word "habit," rather than attitude, will, or disposition, because he believes habits provide an explicit sense of operativeness that the latter terms lack. Habit denotes the kind of mechanical function and immediacy that distinguish it from.

The point Dewey stresses here is that habits are not simply waiting to be used by conscious resolve, but that habits are actively operating prior to reflection to form the situation. The aim is to discredit the myth that "a mind or consciousness or soul in general" performs these operations.<sup>290</sup>

Dewey argues that "funded meaning" constitutes self. Based on the relation between meaning and self, subjectivity and objectivity takes on new meaning. There is not a self, separate from the world, but a self shaped by history and by experiences. For Dewey, self is contained in a perception rather than perception being presented to a self.

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"The qualities which we apprehend are the resultants, endings, or emergents of natural Habits become negative limits because they are first positive agencies. The more numerous our habits the wider the field of possible observation and foretelling. The more

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<sup>289</sup> (p. 264)

<sup>290</sup> (Dewey, 1922, p. 176).

<sup>291</sup> (Dewey, 1922, p. 176).

flexible they are, the more refined perception in its discrimination and the more delicate the presentation evoked by imagination.<sup>292</sup>

In *Knowing and the Known* Knowledge, according to Dewey cannot be divorced from the context of inquiry: "It is the convergent and cumulative effect of continued inquiry that defines knowledge in its general meaning" By viewing self or mind as a complex mix of habits interacting with a changing environment, Dewey accounts for complexity and diversity of experience in contrast to what might become a more conservative view of habits as organizing mechanisms.

By emphasizing the process of inquiry, Dewey refutes the idea generated by the spectator views of knowledge that knowledge is a static occurrence. Rather, his focus on inquiry as a process brings in elements of space and time, inquiry always occurring in some context with passage of time-from the point where the problem situation experience to the point where it is resolved.

The outcome of inquiry is enhancement of meaning, we construct our understanding of a system of relations between the object of knowledge and ourselves, and we use it to resolve a problematic situation. When a problematic situation arises, we seek to reconstruct meaning and resolve the problem in some way. We infer meaning from our experiences and gain further meaning by reconstructing our experiences, particularly through experimentation aimed at testing our hypotheses.

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<sup>292</sup> (Dewey, 1922, p. 176)

For Dewey knowing is an intentional endeavor to discover specific conditions between something that we do and its consequences, where these two parts become continuous "Knowledge is a perception of those connections of an object which determine its applicability in a given situation" <sup>293</sup>

While it may not be possible to test all inferences, Dewey places more trust in tested inferences: What is important is that every inference be a tested inference; or (since often this is not possible) that we discriminate between beliefs that rest upon tested evidence and those that do not, and be accordingly on our guard as to the kind and degree of assent or belief that is justified.

Life is seen as "continual rhythm of disequilibrations and recoveries of equilibrium....The state of disturbed equilibrium constitute need. The movement towards its restoration is search and exploration. The recovery is fulfillment or satisfaction" The structure common to inquiry in these later works is controlled transformation of an indeterminate situation into a unified whole.<sup>294</sup>

Pragmatic ontology rejects the concepts of detachment, neutrality, and autonomy of self. It stresses the constructed, constitutive nature of our subjectivity, and the influence this situation bears on perception and ultimately on our beliefs. It is the problematic situation that creates tension between this transactional subject, and the social and natural environment, and leads to inquiry that provides the opportunity for reconstruction of habits, and thus by implication, the reconstruction of self.

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<sup>293</sup> (Dewey, 1916a, p. 145, emphasis added).

<sup>294</sup> (Dewey, 1938b, pp. 104- 105).

Pragmatic theory of knowledge is not about the logic or sufficiency of a certain knowledge claim, but rather the value of knowledge is found in its use of helping us to cope with everyday problems. If meaning is gained through reconstruction of experiences during inquiry then the quality of experience and the ability to "reconstruct" become key issues.

For Pragmatists knowledge always involves two closely related activities: mediation of some sort and synthesis Dewey believes that to learn from experience means to "make a backward and forward connection between what we do to things and what we enjoy or suffer things in consequences".<sup>295</sup>

Methods of inquiry will have virtues of intelligence: be open-minded; possess the will to learn and change; and have the courage to readjust their thinking when inquiry reveals better ways to act.<sup>296</sup> Thus, inquiry is not simply properly conducted scientific procedures, but relies upon the "intelligent" disposition or attitudes of inquirers, which includes an open-mindedness and courage to readjust.<sup>297</sup>

Pre-reflective habits are active, creative, and constitutive of conscious subjectivity, but this subjectivity is transactional, modified in its continuous transactional relationship with the world. The subject side of the inquiry equation begins with habits, which are pre-reflective and make up all lived experiences. Habits are composed of a combination of "reason," body functions, and emotions, which together serve to construct the situation by

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<sup>295</sup> (p. 140).

<sup>296</sup> (Dewey, 1920, p. 97)

<sup>297</sup> (Dewey, 1920, p. 98)

actively influencing perception. These three constructs, reason, body functions, and emotions, are interrelated and historically formed.

A pragmatic definition of reason highlights the ongoing process of inquiry that includes bodily and emotional influences. Hence, there is no isolated faculty of reason. Habits also provide the basis for selectivity of purpose a second factor of human agency or construction during inquiry. While certainly shaped by habits, selection of purpose, discussed in detail below, represents a more reflective level that guides the direction of inquiry.

The more reflective conditions are found in deliberate inquiry. The need for choice and judgment during the process of inquiry reminds us of the crucial part played by human beings as agents in selecting what part of the problem to address and how to pursue a possible solution. Even an identification of a problematic situation varies based on past experiences.

The history of knowledge would have been quite different if the word "taken" were used instead of "data" or "givens"<sup>298</sup> Here Dewey distinguishes between the total subject-matter which is had in non-cognitive experiences, and data selected from this total which gives impetus to knowing. An example provided by Dewey concerns a patient and the inquiries of a physician: It is evident that the presence of a man who is ill is the "given," and that this given is complex, marked by all kinds of diverse qualities....In reality the original perception furnishes the problem for knowing; it is something to be known, not an

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<sup>298</sup> Dewey, 1929, p. 178).



object of knowing. <sup>299</sup>Even our experiences are mediated by reflection, "experience, taken free of restrictions imposed by the old concept, is full of inference. There is apparently, no conscious experience without inference; reflection is active and constant".<sup>300</sup> Inference is an active response, controlled by thought and knowledge of the habits and tendencies of things known in the past.

A transactional relationship between subject and object implies continuity between humans and their social and natural world, shaped by the complexities attached to processes, situations, events, and contexts. This transactional reciprocity means that both subject and object are modified during the process of inquiry. Subjects are modified as new meanings replace old ones, and objects of knowledge gain new meanings during the course of inquiry.

When a transactional relationship is posited during inquiry, inquirers seek meaning about the object of knowledge, not a representation of the object itself as it exists prior to inquiry. For Dewey, the object of knowledge is not coming to perceive the object as it exists in reality, but rather to understand its meaning-its characteristics and its relationships. The pre-reflective organizing function of habits in transaction with external conditions serves to frame or construct the situation for the reflective experiences that follow. It is under the more reflective conditions found in deliberate inquiry that a pragmatic theory of knowledge locates what it regards as "knowledge." <sup>301</sup>

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<sup>299</sup> (pp. 178-179)

<sup>300</sup> (Dewey, 1960, p. 23)

<sup>301</sup> (1938b)

Subjectivity influences choices in inquiry. The need for choice and judgment during the process of inquiry reminds us of the crucial part played by the human being in selecting what part of the problem to address and how to pursue a possible solution.

### Anti-representationalism

What does it mean for an idea to “represent” reality or for a belief to “correspond” to reality? The variety of ways an object can be represented. What is important to note is that in each case the ability to make sense of the notion of representation or correspondence involved, or to evaluate the adequacy of the representation depends on one having knowledge of both objects — the object represented and the represent. Whatever else judging the adequacy of a representation requires, it depends on familiarity with both the representation and the object represented.

In order to determine how or whether her ideas represent or correspond to reality, the subject of philosophical inquiry would have to reach an Archimedean point from which she could experience both reality and her representations of it, and compare the two.

H.S. Thayer puts it well when he argues that adopting this perspective would require us to “perform a feat of self-transcendence by which we could become observers of two objects, our idea and some alleged object as its cause, and scrutinize the degree of correspondence between them” This feat of self-transcendence is an attempt on the part of the subject to adopt what Putnam calls a **“God’s-eye” view of the universe**.

Peirce, for example, argues that we cannot make sense of a gulf between what is real and what is known or knowable. According to which the meaning of a concept is tied to, and exhausted by the observable experimental phenomena associated with it.

The fundamental hypothesis of science he argues is that there “are Real things, whose characters are entirely independent of our opinions of them; those Reals affect our senses according to regular laws, and, though our sensations are different as are our relations to the objects, yet by taking advantage of the laws of perception, we can ascertain by reasoning how things really and truly are”

Peirce’s claim that reality is in some sense relative to the mind is not meant to imply that reality is subjective. To Peirce it is objective in that it is intersubjective or communal. “The real, then, is that which, sooner or later, information and reasoning would finally result in, and which is therefore independent of the vagaries of me and you” Pragmatists argue that we should abandon this understanding of the subject of philosophical inquiry, replacing it with a description of the knowing subject as an agent who stands in, rather than outside the world, and who interacts with the world, rather than passively observing it. The contrast between the spectator and agent conceptions of the knowing subject is captured nicely by James. I, for my part, cannot escape the consideration, forced upon me at every turn that the knower is not simply a mirror floating with no foot-hold anywhere, and passively reflecting an order that he comes upon and finds simply existing. The knower is an actor, and co-efficient of the truth on one side whilst on the other he registers the truth which he helps to create.<sup>302</sup>

When James writes that the knower is not a “mirror floating with no footfold anywhere” he is claiming that the knowing subject is always grounded, located, or situated

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<sup>302</sup> (“Remarks on Spencer’s Definition” 67).

in its environment. Thus, the subject always seeks knowledge from a particular, limited or finite perspective.

This is the conclusion Putnam draws from his study of quantum mechanics. The knower does not operate with a view from nowhere, from a God's-eye view of the universe, but rather with a view from somewhere. A tenet of pragmatic anti-representationalism is that the subject is unable to completely transcend this social and historical perspective.

Second, while the exact characteristics of this perspective will vary according to the characteristics of the agent and his or her social and historical setting, we need not think of agent-based knowledge as completely subjective or arbitrary. It is not completely subjective because perspectives are, to a significant extent, shared. To the extent that humans share sensory and cognitive capabilities, cultures, histories, and languages their perspectives overlap.

It does not mean that people can create any kind of world they wish. To claim that we cannot achieve or adopt a God's-eye view of the world is not to claim that the world does not exist independent of human perspective. The world constrains our, particularly when we must act in and cope with the world.

A similar argument is made by James in "The Sentiment of Rationality." He argues that the theory of evolution presents a view of cognition that is entirely dependent on practical interests. "The germinal question concerning things brought the first time before consciousness is not theoretic 'What is that?' but the practical 'Who goes there?' Or rather, as Horwicz has admirably put it 'What is to be done?'" While the conception of knowing

as contemplation separates knowledge from action and theory from practice, the experimental method links knowing and doing.

“In a more constructivist epistemological orientation knowledge is not a substance that can be transferred from locale to locale but is constructed in a complex process in a larger socio-cultural context inseparable from the minds of individuals operating therein. Understanding knowledge as a social construction, a critical complex epistemology realizes that much more attention must be granted to the study of the complexity of the subject-object relationship.

Coming to terms with the notion that knowledge is a social construction is part of the existential dilemma of being human, of being thrown into a world that is so complex and confusing.<sup>303</sup> The world that we occupy and the mindsets that we bring to it are both products of a particular time and place and derive their character and meaning in these domains.

“Knower and known are inseparable dimensions indelibly connected to anything we call knowledge. In this context we gain a profound appreciation of the fact that all knowledge is inscribed with temporal, spatial, ethical, and ideological factors that shape the consciousness and vision of the knower, the knowledge producer.

Over the last several decades the notion of objectivity [objective knowledge] has been debated over and over again in the domains of science and philosophy. The classic concept of seeking objectivity (defined as being detached from and disinterested in a

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<sup>303</sup> (Capra,1996, 2007; Geeland, 1996)

phenomenon being studied—a state viewed as facilitating neutrality and thus helping bring about accuracy in the production of knowledge and avoiding subjectivity. Any position that fails to discern the co-construction of knower and known misses a central dimension required of rigorous, thick knowledge production. In this effort to signify the connection between knower and known some scholars.<sup>304</sup> The nature of the interconnection between knower and known in these larger contexts makes knowledge, indeed, creates the world.

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#### HOLISTIC NATURE OF JUSTIFICATION

Aristotle's practical philosophy starts with the proposition that one can determine what is right in specific cases, even without a universal theory of what is right.

When solving a problem, we tend to test different solutions, evaluating each against a range of values and beliefs we hold as important. The pragmatistic idea that captures this concept is the "web of beliefs" metaphor. We all accept a number of different propositions that constitute a web of intertwined beliefs. We consider the consistency of the evidence for each value before reaching a final decision. Given this web of beliefs and the spiral form of decisionmaking, an individual's reasoning will depend very much on the context of the case at hand, and specifically on the relative strength of each consideration.

The integration of evidence in complex decision tasks lies at the core of the body of research on the coherence effect. This psychological phenomenon can be encapsulated by the Gestaltian notion that what goes together, must fit together. Complex tasks can be solved effectively and comfortably when they are derived from coherent mental models of

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<sup>304</sup> (Talbot, 1993)

the Case at hand, that is, when the conclusion is strongly supported by the bulk of the evidence.

This coherence effect is driven by a bidirectional process of reasoning: just as the facts guide the choice of the preferred conclusion, the emergence of that conclusion radiates backward and reshapes the facts to become more coherent with it. This process occurs primarily beneath the level of conscious awareness. In itself, the coherence effect is probably adaptive, in that it enables people to reach conclusions and make decisions even when the task is most complicated and difficult.

Disputed cases contain at least two different type of story, theory, in connection to this, First, coherence is achieved by spreading the evidence apart into two (or more) clusters, each corresponding to a different conclusion. The evidence supporting the emerging conclusion becomes stronger, while the evidence supporting the rejected conclusion wanes. Thus, the cognitive process transforms the evidence from an initial state of conflict into a lopsided evidence set that clearly supports the decision. In other words, the evidence comes to cohere with the emerging decision. This spreading apart results in the dominance of one conclusion over the other, thus enabling confident action.

People tend strongly to evaluate the evidence in a coherent block, all pointing toward either inculcation or exculpation. The spreading apart enables people to reach concrete conclusions even when they originally perceived the evidence as ambiguous and conflicting. It must be appreciated that to some degree, the apparent strength of the evidence that enables confident action is an artifact of the cognitive process rather than an objective assessment of the case at hand. Thus, investigators will tend to perceive the

evidence that supports their conclusion as stronger as and more corroborative than it really is.

A second feature of the coherence effect is that information items are not evaluated independently, but rather according to how they fit into the mental model of the task. As a result of the interconnectivity of the Gestaltian process, any evidence item can impact all other items, and ultimately the entire case. One important facet of feature is that an evidence item that is strongly in favor of one theory can make the entire evidence set appear more strong, or vice versa. This interdependence naturally adds a directional dimension to coherence shifts, driving the entire set of evidence toward the corresponding conclusion.

Pragmatism proposes that fact and theory should be given equal weight in seeking a mutual equilibrium, rather than positing one as controlling over another. Pragmatism is an attempt to avoid the extremism of empirical correspondence theories and rational coherence theories which respectively view fact and belief as controlling our belief systems. Pragmatic theories of justification view justification as the union of fact and belief rationalism.

A holistic coherence view of justification recognizes that facts are only recognizable relevant to some framework, such as a scientific paradigm, or an interpretive community. Implicit in this view of justification is that justification must proceed relevant to paradigmatic norms, or interpretive standards which make possible our understanding of facts, and without which facts would be meaningless.



The other focus of this section is the naturalistic fallacy, a cornerstone of philosophy and social science. The proposition that there is no logical way to derive facts from value or vice versa has often been used as a point of departure for the view that facts are objective, corresponding to an empirical world, while values are illogical, subjective, and mere personal preferences over which we cannot agree.

The naturalistic fallacy has often, been mistakenly understood as establishing a disjunction between "hard" fact and "soft" values. I argue against this reading of the naturalistic fallacy since it relies on the correspondence theory of truth, which posits an external empirical reality which is immediately accessible to us. Rather, facts and values, or norms, are mutually dependent. Indeed, facts could not be recognizable or intelligible save for normative frameworks which afford facts interpretation and meaning. Science, both natural and social, as well as literature, relies on interpretive, or paradigmatic norms in coming to grips with what are legitimate facts or readings of texts.

That is, there is no foundational principle of induction which justifies the interpretation of facts; facts are interpreted in the context of some accepted belief system. Similarly, values or norms are not irrational constructs or mere personal preferences but are central to science and law since without paradigmatic values or norms facts would not be intelligible.

### **Foundationalism**

One type of foundationalism is empiricist foundational theories. These theories assert that our knowledge of, or cognitive access to, the world is initiated by sensory

experience which corroborates belief, with such experience needing no corroboration itself.<sup>305</sup>

Foundational theories propose a scheme of justification in which our knowledge of the world is empirically based, beginning with "basic beliefs" which are self-justifying and the foundations of the rest of our beliefs.<sup>306</sup> Foundational theories of empirical knowledge reject that sensory information becomes cognitive knowledge via pre-existing rational principles which structure sensory input making it intelligible. Instead, foundational theories propose that knowledge begins with the external, empirical world, in the form of basic beliefs. These basic beliefs are both sensate perception, and cognition, and therefore autonomously justified. That is, basic beliefs are seen to be self-justifying because they are a union of sensate data and cognitive structure, which makes the data intelligible. Empiricist foundational theories propose that basic beliefs contain their own cognition and are immediately intelligible. Because basic beliefs are autonomously justified they demand no further justification. Given that they are justified in themselves, basic beliefs are the foundations of the rest of our beliefs conferring justification on other beliefs.

According to Jonathan Dancy, "classical foundationalism thus gives expression to the central tenet of empiricism, the view that all our knowledge is derived from our experience"<sup>307</sup> However, this central tenet of empiricist foundational theories has been

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<sup>305</sup> Conee, 1988)

<sup>306</sup> (Pollock, 1986,p. 20).

<sup>307</sup> (Dancy, 1985, p. 53).

criticized by many as implausible. A central problem for foundationalism is whether basic beliefs form an adequate foundation for the rest of our beliefs.

Laurence Bonjour argues that foundationalism fails because basic beliefs are not autonomously or self-justifying but rather must only be likely, or highly probably true, meaning that basic beliefs rely on an outside empirical premise regarding probability and hence are not self-justifying<sup>308</sup> Jonathan Dancy argues that foundationalism's major fault is its assumption of infallibility<sup>309</sup>

Foundationalism, according to Don Herzog, goes awry since it supposes that first principles may be identified in the abstract, by reason or logic alone, rather than contextually and in consideration of their consequences.<sup>310</sup> The foundationalist must demonstrate that these foundations do not vary based on context or circumstances but obtain despite cultural and historical differences.

Recent developments in science and philosophy which worked to discredit this notion and propose that truth is interpretive and dependent on the particular paradigm or framework of analysis<sup>311</sup>

A blow to foundationalism was delivered by Wittgenstein's *Philosophical Investigations*.<sup>312</sup> Wittgenstein exchanged his earlier pictorial view of reality, where justification ends in bedrock, with a contextual view of meaning where justification is

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<sup>308</sup> (Bonjour, 1985, pp. 87-110).

<sup>309</sup> (Dancy, 1985, pp. 53-65).

<sup>310</sup> (Herzog, 1985, pp. 218-243)

<sup>311</sup> (Anderson, Hughes & Sharrock, 1986; Bernstein, 1983; Conway, 1989; Fish, 1980, 1982, 1989; Herzog, 1985; Rorty, 1979, 1982, 1991; Tushnet, 1983; Williams, 1987).

<sup>312</sup> (Wittgenstein, 1968, 1969)

malleable and fluid, ending in a river bed rather than in bedrock.<sup>313</sup> He argued against attributing or attempting to discover an objective meaning for words.<sup>314</sup> Wittgenstein demonstrated that language drew its meaning from contextual use or language games, in which words could have plural meanings but also common dimensions. Linguistic meaning is analogous to family resemblances sharing both divergences and similarities. Logics are instrumental, the servants and not the masters of inquiry

According to Kuhn, there is no neutral, rational standard that adjudicates scientific controversies. Rather, Kuhn characterized science as an interpretive enterprise which proceeds via paradigmatic norms. Kuhn does not argue, as some have indicated, that science is irrational but rather that it relies on scientific norms, or values, through which it interprets facts and, therefore, does not fulfill traditional notions of objectivity. Where winch argued that objective methods of science cannot be applied to social sciences because they are inappropriate to study such phenomenon, Kuhn reworked the traditional notion of scientific objectivity to allow for an interpretive dimension.<sup>315</sup>

Searle argues that we cannot identify what is fact as opposed to what is a value because what is considered a fact is determined by a normative distinction which we ourselves make.<sup>316</sup> "[T]o call an argument valid is already to evaluate it and yet the statement that it is valid follows from certain 'descriptive' statements about it".<sup>317</sup> That is, the naturalistic fallacy, by dividing fact and value, partakes of the normative controversy

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<sup>313</sup> (Ayer, 1985; Conway, 1989 ; Danford, 1978; Pears, 1969).

<sup>314</sup> (Stroup, 1984)

<sup>315</sup> (Bernstein, 1983, 1 pp. 25-30).

<sup>316</sup> Searle, 1970, pp. 175-198).

<sup>317</sup> (Searle, 1970, p. 175).

regarding the categorization of fact and value and hence violates the ostensible division between fact and value. Searle notes that ironically a prime transgressor of is/ought dichotomy is is/ought dichotomy itself, since it is an epistemic norm and as such is a normative statement about what constitutes a fact.

The is-Ought dichotomy does not specify in any objective way what is fact and value but is an interpretive line of demarcation, or an epistemic norm, which we draw which defines these two categories. This is not to say that there is no difference between fact and value, but only that the difference is of the making of different interpretive communities, paradigms and belief systems. We do not find facts, but rather make them by relying on interpretive, or paradigmatic norms. A central objective in the work of Richard Rorty, a leading proponent of pragmatism, is the blurring of lines between fact and value.<sup>318</sup>

Science, according to Rorty, does not proceed via some transcendent neutral language but rather by scientific criteria or norms. That facts allow plural interpretations means that there is no single method or transcendent algorithm for knowing the truth or finding justification. "We have not got a language which will serve as a permanent and neutral matrix for formulating all good explanatory hypotheses, and we have not the foggiest notion of how to get one"<sup>319</sup> Such criticisms of the notion of objective truth assert that it is relevant to some framework that accounts of reality and justified beliefs are constructed. Criteria of rationality are embedded within frameworks or belief systems, so that justification remains internal.

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<sup>318</sup> Rorty, 1979, 1982, 1991

<sup>319</sup>Rorty, 1979, pp. 348-9.

Rationality is based on paradigmatic consensus rather than external or transcendent criteria of rationality or reference to some immutable foundations. Reality is defined by a community of individuals and their participatory debate.<sup>320</sup>

Quine argues against the first dogma of empiricism which holds that fact and value are separate categories, that fact and value are systemically related as interpretive extensions of one another forming a web of beliefs.<sup>321</sup> According to him, factual or synthetic statements form the periphery of the web and are most accessible to revision. These synthetic statements protect the theoretical propositions which form the center of the web. In the face of recalcitrant experience, or incoherence, adjustment or revision of the web of belief often occurs at the peripheral part of the theory comprised of observational statements. Even analytic statements or paradigmatic norms may be falsified, or overturned despite their central position in the web of belief. Analytic and synthetic, or fact and value statements are different only in degree rather than in kind. Quine's blurs the dichotomy of analytic and synthetic statements by demonstrating that the analytic, or definitional statements, which form the foundations of our beliefs are accessible to falsification and revision.<sup>322</sup> Justification proceeds holistically within a body or web of beliefs. Data are not detachable from theory, for what count as data are determined in the light of some

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<sup>320</sup> Rorty, 1991, pp. 35-45

<sup>321</sup> (Quine, 1964).

<sup>322</sup> Dancy, 1985, pp. 92-109, 22-35; Quine, 1964;1965)

theoretical interpretation, and the facts themselves have to be reconstructed in the light of the interpretation.<sup>323</sup>

Bernstein notes: a rule is amended if it yields an inference we are unwilling to accept and an inference is rejected if it violates a rule we are unwilling to amend.<sup>324</sup> Goodman proposes a pragmatic holistic response to the problem of inference— when we have adjusted our rules and their outcomes to each other so that they are mutually accommodating or in equilibrium, then our rules and inferences are valid.

According to Wittgenstein, there are no foundations which uniquely justify inductive reasoning. Rather, there are plural justified uses of inductive reasoning, given that what constitutes valid generalizations about facts will be diverse based on different interpretive frameworks or world views.<sup>325</sup>

We cannot make out an objective, external reality since our investigations are grounded in accepted premises, or conceptual frameworks or paradigms. Since we are unable to "see around the edges of our own understanding," objectivity eludes us.<sup>326</sup> "We could never know whether any of our beliefs were truth, since we have no perspective outside our system of beliefs from which to see that they do or do not correspond"<sup>327</sup>

The inability of ascertaining that we have touched an objective or external reality is represented by an inability to resolve a central tension between empiricist and rational

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<sup>323</sup> (1983, p. 33)

<sup>324</sup> (Goodman, 1965, pp. 65-68).

<sup>325</sup> (Cogan, 1980, pp. 218-9)

<sup>326</sup> (Davis, 1988, p. 757)

<sup>327</sup> (BonJour, 1978, pp. 1-

theories— how to tie our internal beliefs or rational constructions to the empirical or external world in order to corroborate that our beliefs are not only a product of our minds.

Sense data which are indefinable are non-propositional and represent an empirical world unrestrained by our beliefs. Such unstructured data contains no meaning and so needs no justification but can offer none either. The empirically indefinable according to Williams is the analogue of neutral data; it does not lend justification to any one theory since it has no structured content but rather can be fit to various or plural theories or frameworks.<sup>328</sup> Yet if sensate data are effable or propositional, then it will be able to justify certain rather than other theories but then it loses its native status of non-structure, passivity or ineffability— of being found unstructured or in a non-cognitive state thereby linking us to the external world which is not a product of our beliefs.<sup>329</sup>

Kant's account that we may only be conscious of objects of our own synthesizing activity means that there is no way to be aware of the building blocks of consciousness previous to consciousness.<sup>330</sup> This is to say that if we know the given, as the given, then it already has the stamp of the mind on it and does not serve to link us to the native empirical world. There is no way to leave our vision and ascertain what is the real or external world, unstructured by our minds and ineffable, since any perceptions of the ineffable, to be meaningful would have to be creatures of our own cognition.

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<sup>328</sup> (Williams, 1977, pp. 119- 20)

<sup>329</sup> Williams, 1977, pp. 25-59).

<sup>330</sup> (Rorty, 1979, p. 154; Rorty, 1982, pp. 3-17).



These views of justification, which are the focus of the next section, identify justification as being internal to a belief system/ and grounded in accepted premises or beliefs, rather than in foundations.

According to Hume, inductive reasoning was the product not of logic but of custom or habit which aids us in interpreting our evidence. Hume explained the use of inductive reasoning as a product of custom or tradition. Inductive reasoning which structures data or facts results only in conditional generalizations.<sup>331</sup> Causality is a term banned from science; rather, since data may change, by increasing or decreasing the evidence our inductive conclusions are only associations or co-variations which are always in need of re-appraisal.<sup>332</sup>

Gil Harman offered as a justification of inductive reasoning his well known criterion of the inference to the best explanation.<sup>333</sup> If certain evidence is best explained by a certain theory, then according to Harman's criterion, our inference from fact to theory is justified given it is the best explanation.

In general, there will be several theories which might explain the evidence, so one must be able to reject all such alternative theories before one is warranted in making the inference. Thus, one infers from the "premise that a given would provide a 'better'

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<sup>331</sup> (Flew, 1988).

<sup>332</sup> (Beitzinger, 1975; Flew, 1988 ; Hume, 1965, pp. 275-280)

<sup>333</sup> (Dancy, 1985, pp. 195-211; Harman, 1965, pp. 88-95).

explanation for the evidence than would any other, to the conclusion that the given hypothesis is true".<sup>334</sup>

The observer cannot step outside his/her own observation, or subjectivity, to see an objective world, thus challenging the correspondence theory of an objective reality.<sup>335</sup>

One of the major flaws of correspondence theories of justification or truth is their claim that we know facts immediately, in a way which does not involve theories, or beliefs regarding facts. Brand Blanshard, argued against the correspondence theory of truth since facts are not immediately accessible because the recognition of what constitutes a fact relies on other beliefs.

Rorty underlines the internal nature of justification and the necessity of accepted premises. "Nothing counts as justification unless by reference to what we already accept and there is no way to get outside our beliefs and our language so as to find some test other than coherence"<sup>336</sup> Knowing, justifying or presenting the truth of a statement is relational, grounded to our accepted premises which are not true or false but accepted as given.

There is no certainty as to what "is" because the ground beneath our feet is not objective or immutable foundations but our premises and, therefore, epistemologically our Achilles' heel of justification. Our grounds are not fixed foundations, or bedrock but rather a fluid and changeable riverbed"according to the later views of Wittgenstein".

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<sup>334</sup> (Harman, 1965, p. 89)

<sup>335</sup> (Black, 1989, pp. 201-204; Bonjour, 1985, p. 68; Dancy, 1985, p. 115)

<sup>336</sup> Rorty, 1979, p. 178)

A holistic view of justification accepts that assumed premises, or what is taken to be the case, may change and shift over time and culture. Wittgenstein elucidates the relativity of justification since this what is warranted relies on assumed concepts, standard or rules, and it is against these that our practices are assessed. Yet, as Wittgenstein notes, we cannot measure and test the ruler at the same time. "

[I]t is obvious that the possibility of our conveniently using our present methods of measuring length depends on our constancy of results".<sup>337</sup> Given that we stand on our premises and by these we are oriented to go on, justification for our beliefs must be found internally, based upon our premises. And these premises, instead of being understood as epistemically privileged, permanent foundations— are justified in terms of the system in which they find themselves. On a holistic view of justification then, beliefs and evidence are mutual sources of justification, with the circle of justification being internal, rather than justification terminating in foundations.

That all beliefs are justified by their coherence. "[T]he decision-making process will have a gestalt-like quality, in which each category is considered with all of the others in mind".<sup>338</sup> Concern[s] the goodness of "fit" among beliefs, and it is plausible to think that the degree of this fit may well measure the degree to which we are justified in believing what we do, and ultimately, may determine what we can be said to know.<sup>339</sup>

Coherence theory views justification as a property of a related group of consistent propositions or beliefs. A particular belief is, on a coherence view of justification, said to

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<sup>337</sup> (Oilman, 1973, pp. 58-65)

<sup>338</sup> (Fallon, 1987, p. 1240)

<sup>339</sup> (Bender, 1989, p. 1)

be justified, if it is coherent to other statements or propositions already established as justified.

Coherence has been referred to as mutual entailment, the increased antecedent probability of a belief based on other beliefs, as determined by the number and strength of inferential connections and the absence of anomalies and atomism or separate subsystems.<sup>340</sup>

Facts are a function of a body of beliefs which form a web, or circle of beliefs, within which justification [understanding] takes place, and similarly, theories are a function of facts. A pragmatic view of justification, argues that our analytic truths, or standard norms are extensions of our synthetic or empirical beliefs.

The central thesis of pragmatism is the rejection of notions of fixed, a priori or apodictic truth and the acceptance of the view that reality is man-made, consequential and contextual.

Pragmatism's first principles are the non-existence of ahistorical absolute first principles. Pragmatism views the justification or truth of beliefs in a historical context in which beliefs have a functional utility. Pragmatism proposes that communities make justified beliefs in relation to existing social ideologies and needs. Rather, pragmatism allows that truths, norms and beliefs are made and hence can be revised. For the pragmatist there are no foundational principles from which we can deduce our beliefs, nor is which justify our inductive practices, of moving from to ought. The "truth," according to a

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<sup>340</sup> (BonJour, 1985, pp. 93-101).

pragmatist, is that which results in desired consequences, effectiveness or utility.<sup>341</sup> The pragmatist devises his/her first principles, guided by what is the best thing to do given the circumstance, context or consequences.<sup>342</sup>

Utility is a condition of truth for if truth were not useful or relevant in an important way, then it would not have the status of being true. Truth is "man-made" because what is important to the human community is anthropomorphic. The anthropomorphic character of pragmatism is demonstrated by Richard Rorty's proposal that objectivity should be understood as community agreement.

Theories are justified by how well they cohere with one another and with other relevant background beliefs and theories. None of our theories is privileged; none serves as an absolute foundation for the others, and each is open to revision. We may change a specific judgment so that it is more consistent with a general principle, or we may decide that a principle must be modified to better account for the range of specific judgments that we hold firmly. First, it is important to note that the notion of coherence is a complex notion that involves much more than just logical consistency.

Daniels, for instance, claims that coherence also involves inference to the best explanation, plausibility. So, while logical consistency is an important element of coherence, it alone, does not suffice to make a system coherent.

Second, wide reflective equilibrium is an agent-centered model of justification. The model does not describe what it would be for a system of beliefs to be justified from a

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<sup>341</sup> (Ewing, 1965, pp. 124-133).

<sup>342</sup> (Fish, 1989, p. 356).

God's-eye point of view, but from the point of view of an agent or community of agents with practical as well as theoretical interests and values. More importantly, coherence from an agent-centered perspective must account for what we do as well as the propositions we believe to be true.

Finally, because the notion of coherence involves a complex constellation of practical and theoretical values or considerations, wide reflective equilibrium is not an algorithmic or systematic process that results in a single determinate state of belief. Wide reflective equilibrium can be conceived as a broader model of justification that we want to consider wide reflective equilibrium as a more general model of justification that is particularly suitable to the version of pragmatic practical philosophy.

For instance, Peirce's description of inquiry as a struggle to move from the irritation of doubt to the calm state of belief is not unlike a conception of inquiry as a process that moves us from a state of disequilibrium to equilibrium. James's description of rationality as a psychological state in which we experience a fluency or freedom of thought and irrationality as a state in which that fluency is disturbed expresses a similar view. James also describes the process of developing new beliefs as one in which the individual, confronted with new opinions that conflict with his or her existing set of beliefs, experiences inward trouble and seeks to resolve the trouble by changing beliefs or adding beliefs until the new can be reconciled with the old. At some points he even uses the term "equilibrium" to describe the process of reconciling old beliefs with new experiences, of expanding our knowledge.<sup>343</sup>

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<sup>343</sup> (Pragmatism 78-79).

While every belief is fallible, we cannot, as agents, doubt everything at once Otto Neurath's useful metaphor of rebuilding a ship at sea is apt here. We can completely rebuild a ship at sea if we carefully replace one or two planks at a time, though we cannot entirely dismantle the ship all at once in order to rebuild from scratch. Some significant portion of the ship must always remain intact if it is not to sink, and if we are to have a steady platform to work from as we rebuild. So too it is with our system of beliefs. We can replace one or a few beliefs at a time, but we must always retain some relatively secure beliefs, provisional fixed points from which we reason. A more complex system of justification is required, a system in which beliefs and practices gain support not only from more basic beliefs, but from a network of beliefs and practices, and from how well they fit in a system of beliefs that coheres as a whole.

Pragmatists appeal to a variety of metaphors to describe such a system of justification. Peirce argued that philosophical reasoning "should not form a chain which is no stronger than its weakest link, but a cable whose fibres may be ever so slender, provided they are sufficiently numerous and intimately connected" such as Rorty, appeal to Quine's notion of a web of belief as forming the basis for justification. Rorty urges us to view philosophy as "an attempt to see how things, in the broadest possible sense of the term, hang together, in the broadest possible sense of the term"<sup>344</sup>

Theories are justified, in part, by their ability to systematize and account for our particular considered judgments and practices. Likewise, particular considered judgments and practices are justified, in part, by how well they conform to more general theories.

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<sup>344</sup> ("Introduction: Pragmatism and Philosophy" xiv).

Neither abstract general theories nor particular, concrete practices can be justified apart from one another; both are indispensable elements of a unified view of justification.

James suggests that we are quite conservative when it comes to accepting new beliefs and modifying existing ones. In fact, he argues, we try to assimilate new experience with as little change to our existing beliefs as possible. He writes, for instance, that when a new idea is adopted, it “preserves the older stock of truths with a minimum of modification, stretching them just enough to make them admit the novelty, but conceiving that in ways as familiar as the case leaves possible.” As a result, even the “most violent revolutions in an individual’s beliefs leave most of his old order standing” Change in belief is possible, in fact required as we work to assimilate new experiences, but it comes in small increments. To use a mercantile metaphor, it comes retail, not wholesale.

Rorty argues that all claims to knowledge and truth are ethnocentric, that is, the justification of any claim is dependent on our social, historical, and linguistic context. There is no view from nowhere; we cannot step outside of ourselves to any point from which we can objectively evaluate ourselves, our norms, or our social practices. Socialization, as Rorty puts it, “goes all the way down”<sup>345</sup>

Furthermore, systems of belief confer identity on agents. For agents to maintain continuity of identity their system of belief must remain relatively stable, though it need not be completely unchanging, over time. This assumption, in turn, suggests that coherence is not sufficiently critical to work as a criteria of justification. There must be standards of moral or epistemic evaluation external to, or in addition to coherence

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<sup>345</sup> (Contingency, Irony, and Solidarity xiii).



Human Reasoning's Gestalt perspective can also be seen in different coherence theories. These theories are; "cognitive consistency", "congruity theory", "and balance theory". The basic background of the theory consists of the notion that, the human organism tries to establish internal harmony, consistency, or congruity among his belief, attitudes, knowledge, and values. The theory also defines and underscores the relationship between cognition, emotion, and motivation.<sup>346</sup> That is, there is a drive toward consonance among constituent elements.<sup>347</sup>

Cognitive dissonance has historically been framed as the cognitive, emotional and motivational tension that occurs when information from the external environment is incongruent with a person's attitudes, values and beliefs.

Any bit of knowledge that an individual might have about himself or the world around him is referred to as a cognitive element.<sup>348</sup> Opinions, feelings, values and attitudes are included as well all knowledge concerning material objects.

It does not matter whether these bits of information are objectively accurate, or even whether their accuracy can be objectively determined; neither does it matter how the individual came to know them or whether they are idiosyncratic or shared.<sup>349</sup>

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<sup>346</sup> Harmon-Jones et al., 2009.

<sup>347</sup> 1957:260

<sup>348</sup> Cognitive dissonance temel tez

<sup>349</sup> Higgins

It is found that “the way the individual relates to the elements in a relationship, the meaning they have for him, and the place they occupy in his concept of self -system is bound to influence the extent to which they will be dissonant for him”.

Between any two cognitive elements, one of three relationships may obtain at any given time; irrelevance, consonance, or dissonance. An irrelevant relationship is one in which neither of the elements in question implies anything about the other. "Their relevance is often situational; it is always possible that some turn of events will bring two previously irrelevant elements into consonance or dissonance. Consonance exists between two elements when they fit together, when one implies or entails the other in some way.

According to Festinger, the natural relationship between elements which are relevant to each other is consonance. The presence of a dissonant relationship is said to be disturbing and the person so disturbed is motivated to resolve, or at least reduce, the amount of dissonance present. The magnitude of the consonance and dissonance will be a function of the importance of the elements”<sup>350</sup> Taking beliefs, attitudes, information and opinions as “elements” or “items of knowledge,” First, as the existence of dissonance is asserted as being psychologically uncomfortable, individuals experiencing dissonance should be motivated to reduce the dissonance and achieve consonance. Within this proposition is the one way of reducing cognitive dissonance is the strategy of selecting information that supports the decision. Reduction of dissonance can be accomplished by changing one of the cognitive elements, for example,<sup>351</sup> While he recognizes that the content of a given

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<sup>350</sup> Festinger, L. A theory of cognitive dissonance. Stanford: Stanford University Press, 1957.

<sup>351</sup> (cf. 1957:20-28).

dissonant relationship and the means changing an opinion, re-evaluating a chosen or rejected alternative, or enhancing the importance of a task.

Certain kinds of elements are resistant to change as they are very well integrated into the individual's cognitive structure resist change. Festinger asserts that the motivation to reduce dissonance is universal.

Quite often a person's actions are not based upon the facts of the "real world," but upon his [meaning] perception and structuring of the world. What a person is actually aware of in his perceptions of the world is not the world itself, but some representation of that world inside his own skin. To understand his behavior, we must first understand how he perceives and structures the world. To understand him, we must see the world through his eyes.

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#### FACT –VALUE DISTICTION

"An indication of the difficulty in separating a "fact" from a hypothesis is stated by Goethe when he says that "the highest achievement would be to grasp that whatever we call a 'fact' is already theory."<sup>352</sup> Philipp Frank in *Relativity: A Richer Truth* states that "we must consider the following points: The special sciences actually collect not 'facts,' but 'descriptions of fact'" He goes on to say that "the jobs of finding and of interpreting facts are indivisible."<sup>353</sup>

The fact that attitudes play an important role in choosing, selecting or arriving at "facts" is emphasized by Angus Sinclair whose main epistemological consideration is

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<sup>352</sup> Argumentation

<sup>353</sup> Philipp Frank, *Relativity: A Richer Truth* (Boston: The Beacon Press, 1950) \_p". 69 »

toward the attitudes and assumptions and therefore consequent abstractions of the philosopher.

As the title of his book indicates, Sinclair is concerned with "the conditions of knowing." To understand this is to understand the beginning of the philosophical or epistemological problem. Facts exist only in the situations which each man experiences as the outcome of holding his attitudes or theories or following his ways of selecting and grouping in attention. In that from which he makes his selection there are neither facts nor no facts. In most cases of this kind we mostly follow much the same ways of selecting and grouping and we therefore fall into the illusion that we are all dealing with one fact or set of facts which is independent and common to us all. That is to say, it is the theories or attitudes or ways of selecting and grouping -in attention that are basic, and the facts that are derivative.<sup>354</sup>

According to the prevailing popular theory, facts are "out there" in nature and absolutely rigid, while theories are somewhere "in the mind" under our scalps and changeable at will. According to this view theories are made to fit preexisting facts somewhat as clothes are made to fit people. A single inconsistent fact, and the whole theory is abandoned. Actually, however, what we call facts are not so rigid and theories not so flexible; and when the two do not fit, the process of adaptation is a bilateral one. When new facts come up inconsistent with previous theories, we do not give up the latter, but

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<sup>354</sup> Angus Binclair, *The Conditions of Knowing* (London: Routledge & Kegan Paul Ltd 1951 p. 93.

modify both the theory and our view of the facts by the introduction of new distinctions or hypothetical elements.<sup>355</sup>

Observation is always selective. It needs a chosen object, a definite task, an interest, a point of view, a problem. "Kant saw with perfect clarity that the history of science had refuted the Baconian myth that we must begin with observations in order to derive our theories from them."<sup>356</sup>

Thus, these philosophers of science are responding to the Bacon-Hume-Mill line of induction, with positivism as a direct outgrowth, with very much the same answer Kant utilized in responding to Hume: we impose our theories/structures of reality upon the world, the world does not reveal them to us.

"Facts" simply don't exist without interpretation, and even if such a phenomenon were possible such data would be nothing more than a conglomeration of random and meaningless fragments until brought together by human consciousness.<sup>357</sup>

In attributing causes for events, we rely upon theories constructed both individually and societally. Our theories enable us to conceive of those factors which could account for the effect in question and thus guide our search for appropriate causal attributions. Through a type of matching procedure we attribute the cause of a particular event to the factor for which the "data" best matches the theory<sup>358</sup>.

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<sup>355</sup> Argumentation page 131. Morris R. Cohen, "Place of Logic in the Law," Readings in Philosophy of Science, edited by Philip P. Wiener (New York: Charles Scribner's Sons, 1953). p. 293\*

<sup>356</sup> (p. 189)

<sup>357</sup> Capra, 1996; Hatab, 1997; Parker, 1997; Thayer-Bacon, 2000; Dougiamas, 2002; Thayer-Bacon, 2003).

<sup>358</sup> (cf. Campbell, 1966),

Any word [concept] may be used and its necessary multiordinality. This is especially true of the word "fact" and this recognition has far-reaching implications. Their order of abstraction is. Terms of such a character I call multiordinal terms. The main characteristic of these terms consists of the fact that on different levels of orders of abstractions they may have different meanings, with the result that they have no general meaning; for their meanings are determined solely by the given context, which establishes the different orders of abstractions. Thus, any of the terms may have an indefinite number of meanings, depending on the context to which it is applied.

There is always the epistemological question of how can one know when his ideas correspond with reality and by what criteria shall one discover their truth or validity? We are not always in agreement on these questions. Aquinas goes further than Aristotle when he distinguishes between the sense in which truth and falsity are primarily in the intellect and secondarily in things.

F. C. S. Schiller believes that in the interest of clear thought and honest discussion it is imperative to separate the two senses of "truth" which he calls "absolute truth" and "progressive truth."

Schiller says, in *Our Human Truths*, that the very derivation of "truth" suggests that it is a matter of opinion and that opinions need to be tested. Every truth claim, from the very mode of its genesis, must remain relative to the amount of verification it has received. It must remain liable to be modified, extended, refuted or improved by further relevant experience. Truth cannot be in principle immutable any more than it can be absolute.

Likewise, truth can only be understood with context it cannot be eternal or independent of the time-context which generates it. It is always relative to the state of knowledge at the time when it is enunciated, and it always looks to further confirmation. So, to Schiller, truth always implies a forward-looking attitude of mind and reference to a future in which it may receive further verification and which may enhance its value.

Truth cannot be one, it must be relative to times and places and persons and purposes. To ask what is the truth is just as absurd, says Schiller, as asking what is the time.

For Dewey it is meaningless to speak of an absolute, since knowledge or truth is confined to the solutions of specific problems. Truth is relative to specific situations and there are as many truths as there are solutions to problems.<sup>359</sup>

Lecomte Du Nouy in *The Road to Reason* says that it is evident that the meaning of "scientific truth" can only be taken in a very restricted sense, and not literally as the public so often does. There is not "scientific truth" in the absolute sense. There are only certain groups of sensations that, in our experience, have always succeeded each other in the same order and that we believe should identically succeed each other in a limited future. This is, he says, the essence of our scientific truth.

There are two kinds of "truth" that are recognized in operational philosophy, each characterized by the verification procedure associated with it.(1) If verification involves

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<sup>359</sup> pMarcus Long, *The Spirit of Philosophy* (Hew York: Norton Co., 1953), p« .

looking at things other than the assertion itself on other assertions, we are dealing with truth proper.

(2) If verification involves looking at assertions only, we are dealing with validity. Thus, says Rapoport, to verify the truth of "Snow is white," we look at snow, not at the assertion. But to verify the validity of the assertion "If John is the husband of Mary, Mary is the wife of John," we do not look at John and Mary; we look at what the assertion says

Here Russell is making a distinction between at least two different kinds of "truths." On the one hand we have what is often referred<sup>360</sup> to as "material truth," where a fact makes a sentence true or false. Truth is an external relation and no semantic or syntactical analysis will determine whether or not the statement is "true." Russell also indicates the second kind of "truth," "logical truth," such as in deductive logic and mathematics. Russell was one of the first to point out the relationship between deductive logic and mathematics as being entirely analytic and therefore leading toward logical truth only.<sup>361</sup>

Over and over again there has been talk that the doctrine of the "relativity of truth" implies the denial of an "objective truth." This denial would imply the denial of the "objectivity" of human values and eventually would imperil the foundations upon which decent human conduct is built. From my previous remarks it seems obvious that the doctrine of the "relativity of truth," as applied in contemporary science, does not imperil the objectivity of truth.

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<sup>360</sup> 4Bertrand Russell, *Human Knowledge: Its Scope and Limits* (New York: Simon and Schuster Co. 1948) • PP• 111-12•

<sup>361</sup> 3Bertrand Russell, *An Inquiry into Meaning and Truth* (New York: W. W. Norton & Co., 1940) »



This so-called doctrine of the "relativity of truth," frank says, is nothing more nor less than the admission that a complex state of affairs cannot be described in oversimplified language. "Truth can be stated only in complicated, qualified, relativized language."<sup>362</sup>

The "concern with truth" is important for establishing a basis for agreement. By the "concern with truth" he means not the readiness to spring to the defense of one's convictions but a readiness to re-examine one's convictions, to put them to a test in the light of new evidence, to revise one's map when it appears inadequate. "Our concern with truth will express itself not in a persistence of our own notions but in our willingness to compare our map with other maps."

We must define truth operationally. Truth is not static or absolute. The world is a dynamic state of affairs, and our knowledge about it is always changing. This means not merely that new "facts" are discovered, but also that new ways of talking about what we experience are discovered.

The truth value of an assertion is measured by how much you are able to predict on the basis of it. Notion of truth is referred to as the "criterion of predictability." The theories you make about the world are your map of the world. The question "How do you know that what you are saying is true?" becomes more meaningful if asked this way: "How good is your map?" This question is easy to answer: a map is the better the more you can predict about the territory by means of it. To speak the truth means to predict well.

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<sup>362</sup> Anatol hapoport, Science and the Goals of Man, p. 16

In agreement with Reichenbach, Philipp Frank has stated that a single word or even a single proposition cannot have factual meaning. Only if we have a system of propositions or a coherent group of statements, can we investigate whether we can deduce from this system individual statements that tell us what experiences we should have if the original system of principles were true. 'We can then test whether we really have these experiences. If we have them, says Frank, we can say that the principles from which we started are confirmed. We can then say, if the principles are either verified or refuted by experience, that they have a factual meaning. But if we are faced by a system of theories from which no statements about our future experiences can be derived, then the system has no factual meaning and cannot serve as a basis for human behavior.'<sup>363</sup>

He points out that "meaningfulness" is a property of a system of statements or principles. We might also say that "meaningfulness" is a property of a doctrine. While we might say that an isolated word or even an isolated statement has meaning only indirectly, we call it "meaningful" if it is fit to be a part of a meaningful system or doctrine.

Aristotle has said that there is a relationship between a true statement and the fact it states. Here Rapoport indicates that the non-Aristotelian defines his terms in such a way as to connect them ultimately to the levels of experience, the sensory or object levels. Definitions on this level are made by pointing, therefore the gap between language and experience is closed.

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#### ANALITIC-FUZZY LOGIC

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<sup>363</sup> Hans Reichenbach, *The Rise of Scientific Philosophy* (Berkeley: University of California Press, 1951), pp• 256-57«

All of the traditional systems of logic are two-valued logics. Formal logic is not concerned with the properties of men's minds, much less with the properties of material objects, but simply with the possibility of combining propositions by means of logical particles into analytic propositions.

Like Hume, Ayer divides all genuine propositions into two classes: those which concern "relations of ideas," and those which concern "matters of fact." The former class comprises the propositions of logic and pure mathematics, and these are necessary and certain only because they are analytic. Ayer maintains that the reason why these propositions cannot be confuted in experience is because they do not make any assertion about the empirical world, but simply record our desire to use symbols in a certain fashion.

This point of view is similar to that of Einstein in terms of probability and certainty. Also, on the analytic nature of logic when Einstein says: Pure logical thinking can give us no knowledge whatsoever of the world of experience; all knowledge about reality begins with experience and terminates with it. Conclusions obtained by purely logical processes are, so far as Reality is concerned, entirely empty.<sup>364</sup>

"There must be both the postulationally designated, deductively formulated theoretic component and the inductively given, denotative, empirical component in knowledge."

All formal Logic needs are facts and logic. Rationality consists merely in inferring one statement from another in accordance with logical rules. The rules say nothing about

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<sup>364</sup> 22Albert Einstein, "On the Method of Theoretical Physics," *Philosophy of Science*, I, No. 2 (April 1934)\* 164\*

the facts, and so cannot conflict with them. No true statements about the world can be obtained by logic without observation. Logical and mathematical statements are themselves tautologies and, apart from these, all statements that cannot be verified are meaningless.

One of the best presentations of the point of view of the logical positivist was by 'Wittgenstein. In his *Tractatus Logico-Philosophicus* he shows that the theorems of pure mathematics or of logic say absolutely nothing about reality, but are, in a specific sense of the word, It is the conception according to which all meaningful statements— or, as we prefer to say, all connectible statements— have to be divided into two groups: those expressing a state of fact which can be tested by experience, and those which, independently of all experience, tautologies.

Tautological sentences form the content of logic, of pure mathematics and of a critique of traditional logic is the propositionall actual knowing is in fact knowing by individual beings for personal human purposes. Other axiomatically formulated scientific theories. This fact is ignored by traditional logic, which abstracts from the material content and context of a statement and attempts to extract truth from forms as such. Logic takes no account of the way in which the human mind functions; that logic abstracts from individuality, from context, from purpose, and from motive. In other words, logic is divorced from psychology and from the empirical sciences.

Characteristic of this divorce, Schiller shows, is the fact that formal logic is nowhere concerned with the problem of meaning. In fact, "The abstraction from meaning was the essential trick of Formal Logic." Real meaning is to be found in a particular

personal context, and is not identical with dictionary meaning, which is solely verbal. It is by the substitution of the latter for the former that logic parts company with psychology and dispenses with the actual uses of words and thoughts in the sciences. "Equipped with a knowledge of 'the meaning of words, the logician can, unchallenged, and substitute 'propositions' for judgments, 'validity' for truth, and 'fallacy' for error, logical 'necessity' for intelligent purpose . . . "

Meanings can only be acquired by words in use. Since the meaning of words must in some way be both new and old, meanings must be plastic; their fixity is a fiction. All words may be used in different situations with different meanings, and therefore they are potentially ambiguous and actually dynamic. Meaning is thus unavoidably personal, since context and intention are psychological facts. Meaning is "not merely a happening in the mind, but rather a reaction of the mind upon the course of events, and an attitude taken up towards potential objects of thought, which are transfigured when meaning is attributed to them."<sup>365</sup> Usually, the meaning experience is not identical with, and is greater than, its expression.

In drawing a map-territory analogy, Rapoport says that reasoning by strict logic is something like an accurate reading of a map. It will help us arrive at correct conclusions about the territory, if the map correctly represents the territory, but not otherwise.

The focal point of attack on the Aristotelian system is against "identity."The- most fundamental of the three traditional "laws of thought,"which is implicitly assumed in Aristotelian logic, is that a thing is what it is, or is identical with itself in all respects. On

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<sup>365</sup> Fer d i n a n d Canning Scott Schiller, *Logic for Use* (New York: Harcourt, Brace & Co., 1930), p. 50.

the basis of this "law," says Reiser, traditional logic has argued that the human mind, observing these "identities" in nature, can generalize the observed uniformities and make statements about classes of objects, and these constitute the "laws of nature."

Human beings, by virtue of their power of abstraction, can isolate "things" from their environments and label these supposedly self-identical objects with names; but we must not let language mislead us into believing that because we use the "same" name for an object, it is therefore the same" object. Every object is unique, and should have a unique symbol. We live in an indefinitely many-valued or infinite-valued world, the possibilities of which follow in principle the laws of combinations of higher orders.

We see that the two-, or three-valued, elementalistic Aristotelian "logic," "psychology," and, in" general, the Aristotelian system, being structurally different from the empirical world.

Thought, taken in its broadest meaning, is a process. If logic is analytic, it is empty. That is, it does not express properties of physical objects.

Aristotelian logic, according to which the world is a static collection of objects with properties and "natures.it regards logic as a science descriptive of some general properties of the world, a science of being, or ontology. It is also believed that "everything in the world is identical with itself" inform us about properties of things." According to holism the world consists of events and processes, rather than "things."

Aristotelian logic forces us to conclude that one of these propositions is false, since "contradictory" propositions cannot both be true. But we have already pointed out that there is no such thing as the "same" in different contexts.

As Reiser points out, the science of the adjustment of man to his environment is a psycho-logic, and this is based on a holistic system rather than a logic. He also points out the fallaciousness of certain elementalistic conceptions as well as the contradictory nature of Aristotelian logic. They represent some kind of implicit structural assumptions. In the methodology of context-dependent system, we deliberately state our undefined terms.

Our daily speech and in very large measure our scientific language is one enormous system of such assumptions. The moment assumptions are introduced, and it is impossible to avoid them, logical destiny begins its work; and if we do not go back all the time, uncover and discover our conscious or unconscious fundamental assumptions and revise them, mental impasses permanently obstruct the way.

Harry Weinberg presents an analysis of the relationship between Aristotelian logic and holistic reasoning from several different points of view. Holistic reasoning introduces the concept of order and when we have order based on the natural order of abstracting as dictated and in a structure, relationships can be perceived. But the introduction of order is also accompanied by value. Certain levels of abstraction are more important from the standpoint of map-territory correspondence, and, therefore, proper evaluation and adjustment, than others; they have more value in that they are more basic.

Thus the non-verbal level is of more importance than the verbal level in the sense that it is the level on which we actually live our lives; it is the level of our sensations, feelings, and desires. The verbal level—symbolic activity—is a means of implementing and achieving what we desire and need.

The non-verbal level is the territory to which we must fit our map, our word. If we reverse it and try to make the territory fit the map, then our predictability drops, our means of reliable verification disappears and maladjustment enters. So the idea of value [real meaning] is crucial and when the higher-orders of abstraction are valued more than the lower, a whole series of misevaluations occur.

Holistic and schematic reasoning goes one step further than the traditional logic, not only is it interested in whether or not there is logical consistency in an argument, whether or not he speaks the truth.

It is stated that holistic system a psycho-logic of adjustment, is an experimental science— a study of word-fact relations rather than word-word relations characteristic of logic. Logic is a set of rules governing consistency in the use of language. It is language about language, not language about things. If logic is analytic, it is empty.

If an interpretive problem, it can in no way be impeded or facilitated or directed by the adduction of, or reference to, "facts." If a "fact" is intruded into discussion, argument terminates at that point, and must be taken up elsewhere. To dispute a "fact" implies either a misunderstanding of what the facts are, or a difference of opinion as to what are the meanings of the facts in question. If the former is the case, argument is irrelevant.

Narrow sense facts cannot be discovered in interpretive situations. They are found out by investigation, observed, pointed to, agreed about, or assumed. If the latter is the case, it is proper for discursive thinking to take place, for it is the business of such thinking to undertake the clarification and establishment of meanings. Interpretation is concerned not with what is, but with what is to be understood. Rapoport's concern with truth expresses



itself not in a persistence of ones own notions but in a willingness to reexamine one's convictions in the light of new evidence

Absolute truth is meaningless, because no definition of it can be agreed upon. To Rapoport, we must define truth operationally. The truth value of an assertion is measured by how much you are able to predict on the basis of it.

Cassius Keyser has pointed out the fact that most thinking is not syllogistic, but holistic in form and therefore the classical logic is not adequate to all concerns of rigorous thought. He points out that the discovery of relations, as well as classes, demands a logic of their own. The relations of "class inclusion," "identity," and "class membership" are regarded in symbolic logic as distinct in nature but in Aristotelian logic they are lumped together under the common form "A" is "B".

What Aristotle basically discovered was that there is such a thing as the form of an inference, to be distinguished from its content. Korzybski's feels that the "is" of identity forces one into wrong evaluations, such as establishing the identity of the unspeakable objective level with words. If used in definitions or classifications, such as in Aristotelian logic, it always establishes an identity false-to-facts. He feels that such uses of the "is" of identity expresses the identity of a proper name (say) with a class name which leads toward a confusion of classes (higher order abstractions) with individuals (lower order abstractions). It was Korzybski's further belief that thought, taken in its broadest meaning, is a process and that man "thinks" with his whole being. Any divisions that we make in this process called thinking are arbitrary and often misleading. Hence, the necessity for his non-

elementalistic conception of "psycho-logics." It is a study of word-fact relations rather than word-word relations characteristic of logic.

Abstract logic not indicate a recognition of the difference between the "is" of identity and the "is" of predication. The relations of "class inclusion," "identity," and "class membership" are lumped together under the form, "A is B." Accordingly, it is not recognized that most thinking is not syllogistic in form, but do not allow for holistic or contextual thinking in their treatment of reasoning. Abstract logic did not emphasize the unconscious assumptions and undefined terms which underly the premises or words used.

Rapoport has pointed out that the facility with which we substitute words for experiences gives us the impression that we are relating experiences when we are only relating words. The grammatical form of the "because clause" is so often associated with the explanation of causes that it tends to be an explanation regardless of whether or not it refers to experiences. This substitution of grammar for meaning leads toward a pseudo-explanation which points to a causal relation between two expressions rather than two conditions, experiences or non-verbal events. In a limited sense we can look upon causation in terms of a two-valued "cause and effect" linear way.

However, most situations are extremely complex, non-linear or nonadditive and necessitate a multi-valued analysis to indicate the complex relationships. Use of contextual and holistic logic we can think in terms of a functional formula where an event, happening or "effect" is a function of the variables involved, giving us a non-linear, non-additive, multi-valued theory of causality.

It must be recognized, then, that thought in progress, the laws of formal validity often become shackles which hinder the progress of thought, and that the concepts functioning in such thinking should not be reduced to unchanging, discrete elements, even if it were within the realm of linguistic possibility. This position of necessity denies the traditional laws of thought to a degree, at least in the realm which we have been referring to as thought in process.

Lewin also points out the importance of context-dependent reasoning. He says "Instead of picking of one or another isolated element within a situation, the importance of which cannot be judged without consideration of the situation as a whole, field theory finds it advantageous, as a rule, to start with a characterization of the situation as a whole. After this first approximation, the various aspects and parts of the situation undergo a more and more specific and detailed analysis. It is obvious that such a method is the best safeguard against being misled by one or another element of the situation.

This method presupposes the existence of properties of a finite field as a whole. A distinction, and a radical one, must be made between analytic procedures of this kind where the larger whole is always kept in mind in studying "parts" and, on the other hand, the reductionistic analyses which are carried out by the materialistic atomists wherein the "whole" is lost, its reality is denied, and the remainder is "nothing but" mechanical particles in motion. Without further elaboration, it will be seen that the two kinds of procedures stand in almost violent opposition.

The whole Gestalt case rests on the proposition that while sub-systems and "parts" can be identified and studied, there are stubborn, irreducible entities in nature that exist as

such, as whole phenomena which cannot be reduced to smaller and smaller units, destroying each more macroscopic unit along the way.

Gestalt analytic procedures are thus more "denotative" than are the mechanistic-atomistic schemes; it is possible, for example, to point to specific objects in the environment without denying the existence of the larger "field," without dividing nature into discrete parts in a steadily descending order. This is, then, the major difference between what could be called organismic or denotative analysts as opposed to atomistic or reductionistic analysis.

Further points of contrast are brought out by Lewin in his comparison of "Aristotelian" and "Galilean" methods. In the former scheme, which can be called a method of "classificatory abstraction," one begins by taking into account the "frequencies" of similar events, disregarding individual variations, and abstracting laws - usually by taking statistical averages. Individual cases are not lawful and lawfulness exists only where there is a regularity of occurrences.

On the other hand, according to "field theory" or the "Galilean" scheme, all events are lawful including those which occur only once. There is no abstraction from individual peculiarities; "pure cases" are investigated and compared, the validity of a proof depending upon the purity of the case and not upon the frequency of its occurrence. These two approaches are, it seems safe to say, logical-methodological opposites.<sup>366</sup>

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<sup>366</sup> (10, pp. 5-13) (C f . 8)

The clearest point that Lewin makes in this connection is that, employing the Aristotelian method, when one abstracts from individual differences there is no way back from these generalities to the individual case.

Lewin asks: "what is the value of general concepts if they do not permit predictions for the individual case? Certainly, such a procedure is of little avail for the teacher or the psychotherapist." <sup>367</sup>

In contrast, intuitive the Galilean or "constructive" method begins with the situation as a whole and defines its fundamental structure. One aspect of this procedure is that, in the case of biological organisms, the "life space" or the "organism-environment field" is characterized as the totality of "possibilities." This can only be done, states Lewin, if one proceeds from the life space as a whole.

After the situation has been characterized at a sufficient level of generality, then it is possible to proceed by way of the method of "gradual approximation" to a closer and closer determination of the specific components and the dynamic properties of the situation. The more successful the investigator is in determining these details, the more the actual "possibilities" are limited. A complete determination of the life space would show which of the possibilities will be realized at the given moment. <sup>368</sup>

The further specification of the situation does not destroy the first general approximation nor does it attempt to add disconnected items; the aim is to make the original representation more specific and differentiated. The method therefore proceeds by steps

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<sup>367</sup> (9, P- 6C)

<sup>368</sup> (10, pp. 15-16)

from the general to the particular and thus avoids the danger of a "wrong simplification" by abstraction. In this method it is possible to focus more and more on the concrete particulars of the individual case whereas in the Aristotelian method, the individual is entirely lost in the "class" as the result of the process of abstraction.

The kind of logical or theoretical structure which such a conception of the process of inquiry implies is a hypothetico-deductive system in which the progression is from more inclusive to less inclusive propositions. But while such a logic may characterize the general theoretical structure, it has been proposed that the investigator who works on the basis of such a system is not committed in advance to the use of any particular methodological logics in his projects of research.

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#### PERSPECTIVAL NATURE OF MIND AND REALITY

The human being encounters the world rhetorically.

A rhetoricity refers to salient aspect of something being, revealed in context and interpretation, perspectival matter, is that the matter of concern is changeable in shared time and thus could be otherwise.

The Dissoi Logoi, for example, illustrates the problem of rhetorical ontology: the matters that we call good and bad, just and unjust, or true and false are not different, but the same, and are distinguished from one another only according to the differing perspectives and temporal situations from and in which these matters are articulated, brought forth for judgment.

All speaking expresses time, or more specifically, temporality. Temporality refers to the way in which one encounters and expresses that which has come before, that which is, and that which will be, the three basic possibilities of movement of temporal being.

“Rhetoric is nothing other than the interpretation of concrete being-there [Dasein], the hermeneutic of being there itself” Aristotle’s Rhetoric, shows “how being-there itself speaks”.

He argues that only if all human beings are thinkers. All human beings are philosophers, and should use philosophical thinking as a way to enrich concerned everydayness.

The phenomenologist does not isolate a particular characteristic or aspect of a given being but approaches it within its situation. Understanding that it is the situation which lays out the concrete possibilities of action and being—and calls this presence the phenomenon, appearance.

In other words, the rhetoric, interpretation or hermeneutic loosens up the spoken and unspoken assumptions about our world, and demands that those assumptions be explained. Thus, the hermeneutic provides us with a way to speak to the conditions of possibility for a phenomenon.

First, world and word are difficult to untie from one another, but are not reducible to one another. The concern for interpretation is precisely the interrelation— and ultimately the irreconcilable distance—between the words in its world. We cannot understand appearance in its full phenomenon if we immediately break the phenomenon into only

artificially-isolatable components. Gathering together what has come before and what lies ahead, interpretation establishes what is here, now.

The matter can be presented in such a way that it changes what we understand the matter to be, and what it is for. The stuff of the world is thus organized in a sort of rhetorical matrix. Here, understanding and its handmaiden speaking are presented as mediatory between the twin poles of word and world. The material world is reconstructed internally by acts of conscious understanding, and the reconstruction is then judged in its proper accordance with "reality."

Perelman says, "This distinction of Kant's blazed the trail for Bergson's analysis. Bergson showed that psychological phenomena are qualitatively different from each other and that we cannot apply calculation or measure to them."

In effect, for him rhetoric becomes the methodology of the sociology of knowledge. He writes: To determine the field of application of the sociology of knowledge, it would be necessary to ' study most closely this strange logic and the reasons which make it undergo the influence of social and cultural factors.

One would see upon analysis that the proofs which govern it are neither the evidence of calculus nor experimental evidence, but those which Aristotle called "dialectical proofs," and which he studied in his Topics and his Rhetoric.

In recent years he has shown that a weakness in classical rationalism was its belief that self-evidence founded on the identity of subject and object can lay claim to the truth. "Every assertion," he says, "before it can be judged true or false, must first be meaningful. "Perelman states his own view flatly: The choice of a linguistic form is neither purely



arbitrary nor simply a carbon copy of reality. The reasons that induce us to prefer one conception of experience, one analogy, to another, are a function of our vision of the world. The form is not separable from the content; language is not a veil which one need only discard or render transparent in order to perceive the real as such; it is inextricably bound up with a point of view, with the taking of a position. It is noteworthy that Perelman's thoughts about knowledge are similar to Pragmatism

The Cartesian view of science as a collection of facts that have been established and the rationalistic and empiricist ideas "generated misconceptions about the role of language and the methodology of the sciences," but by conceiving knowledge as "a structure at the base of which is an indubitable experience of sense given data," they have led to an altogether "misleading contrast between knowledge and opinion."

C. I. Lewis. In his book, *An Analysis of Knowledge and Valuation*, Lewis states: Knowledge is not a descriptive but a normative category: He writes: For centuries logicians have been able to neglect the problem of the justification of one's choice of axioms, by considering the latter either as self-evident or as arbitrary. In the first case, since we must bow to the evidence, we have no choice and therefore no need to justify our acceptance. In the second case, since all choices are considered equally arbitrary, it is impossible to justify any one by showing it to be preferable to any other.

When we admit that a choice of axioms is possible and that it is not entirely arbitrary, then the justification of choice ceases to be a negligible problem by rejecting the idea of a self-evident intuition and its opposite extreme, Perelman thus conceives of an epistemology that is not only the antithesis of the Cartesian view, but one that also blurs the dubious distinction between knowledge and opinion. He states plainly: "I shall grant

the status of knowledge to a tested opinion, to an opinion, that is, which has survived all objections and criticisms and with regard to which we have a certain confidence, though no certainty, that it will resist all such future attacks."

Perelman's work: "to produce an instrument capable of achieving in the realm of values results exactly analogous to those pursued by analytical reasoning in the domain of the exact sciences." A logic of value judgments

In addition to being committed to reductionism, theorists who belong to the positivist/empiricist tradition are also typically committed to foundationalism, the correspondence theory of truth, and verificationism. This is also a perspective which is typically committed to the unity of science thesis, which includes accepting the nineteenth century model of natural science as a paradigm for all knowledge as well as accepting the claim that the methodology of the natural sciences is appropriate for all domains of knowledge.

Analitic tradition believe that scientific knowledge is the only valid knowledge. Furthermore, they argue that reality consists solely of those things which are knowable via the methodology of science. Consequently, these positivist/empiricist theorists oppose any procedure of investigation which is not verificationist, for example, the interpretive method. Most importantly, this school of thought maintained that scientific knowledge, i.e., knowledge acquired by the methodology of the natural sciences, would be objective and value-neutral.

In setting forth his vision of an enlarged reason, Perelman hopes to counteract the pernicious influence of two groups: the Cartesian rationalists and the modern mathematical

logicians. Both groups share the responsibility for the narrow concept of reason that exists today.

Perelman says: The logician, inspired by the Cartesian ideal, feels at home only in the study of the proofs that Aristotle qualified as analytic. No other means presents the same character of necessity. And this tendency is all the more strongly marked after a period in which, under the influence of the mathematical logicians, logic was reduced to formal logic, to a study of the means of proof used in the mathematical sciences.

As a result, reasoning which is foreign to the purely formal domain escapes logic, and consequently escapes reason too.

Elsewhere Perelman expresses his disappointment over the reduction of logic to the study of formal reasoning: "We feel that this narrowing of the field of logic is disastrous for the methodology of the human sciences, for law and for all branches of philosophy."

Again, Toulmin's thought runs in a similar direction. Toulmin writes: In logic as in morals, the real problem of rational assessment—telling sound arguments from untrustworthy ones, rather than consistent from inconsistent ones—requires experience, insight and judgment, and mathematical calculations in the form of statistics and the Both Perelman and Toulmin believe, therefore, that formal logic has unduly restricted the concept of reason.

A student of Perelman's philosophy must be aware of the philosopher's distinction between two types of reason—the logical and the rhetorical. A logical system, for Perelman is a set of propositions and rules that manages to re-like) can never be more than one tool among others of use in this task. This broadening of our concept of reason, which no longer

limits the rational to the analytical, opens a new field of study to the investigations of the logicians; it is the field of those reasons which, according to Pascal and according to contemporary logicians, reason doesnot know.

When the full implications of this broadened idea of reason are felt, the traditional distinction between the will and the understanding, reminiscent of faculty psychology, will disappear. Along with it will go the conviction-persuasion dichotomy which has plagued rhetorical theory for so long.

Perelman believes that since one's fundamental axioms are neither self-evident nor necessary, a philosopher must resort to rational argumentation in order to supply such justification.

Finally, Perelman's view of rationality greatly enlarges the concept of reason inherited from Descartes and his successors. This "rhetorical reason" operates in the realm of the probable, the contingent, and the plausible; in brief, it seems especially adaptable to the behavioral sciences, to law, and to philosophy.

Argumentation is also restricted in its domain: it operates only in the area of "the likely, the plausible, the probable, to the extent that the latter escapes mathematical certitude." In this respect, it differs from demonstration, which permits one to infer certainly from the truth of certain propositions, the truth of others, or in the field of formal logic, to pass, with the help of defined rules of transformation, from certain theses within a system to other theses within the same system.

In this conception of argumentation, an argument is neither correct and compulsory nor incorrect and totally without worth, but is strong or weak, relevant or irrelevant,

depending upon the reasons that justify its usage under the circumstances. "In argumentation," declares Perelman, "there exist no contradictions. There are only incompatibilities, the obligation of choosing "there is never an argument, in the true sense of the term, about facts. When facts are disputed, the argument must be suspended until the facts are settled." lacks scientific certainty, and opinions

Reductionists argue that the entity or concept in question can be expressed in other terms without loss or diminution of explanatory power. All elements of human social reality can be fully and adequately explained, understood, or accounted for in terms of brute physical facts and causal laws.

This is the claim that to the extent that the social sciences are sciences at all, they are not different in kind from the natural sciences. That is, this tradition held that all knowledge is scientific knowledge and that whatever is not knowable through the methodology of the natural sciences is not knowledge at all, but rather is merely belief or subjective opinion. They claim that the methodology which is appropriate for the natural sciences is also appropriate for the social sciences. Thus, it was common to think of the "soft" sciences as being poor relatives of the "hard" physical sciences. Furthermore, it was widely accepted that these soft sciences could gain status and respectability only by adopting the methodology of the natural sciences. That is, all claims about meaning or intentionality must be reducible to and verified in terms of observable causal interactions.

Thus, reductionism, is essentially the view that all of reality can be explained in the basic terminology of physics. It is a perspective which claims that there are only "facts" and that all facts can be explained on the basis of and exclusively in terms of brute physical descriptions of material objects and the causal relations which hold between those

empirical objects. Every other kind of entity or concept, which has from time to time been thought to exist, must be construed as being either fictions, myths or completely reducible to, or explainable by, brute facts.

According to Hesse, there are a set of five contrasts which at one time formed the basis for the distinction between the natural and human sciences. They are:

1-In natural science experience is taken to be objective, testable, and independent of theoretical explanation. In human science data are not detachable from theory, for what count as data are determined in the light of some theoretical interpretation, and the facts themselves have to be reconstructed in the light of interpretation.

2-In natural science theories are artificial constructions or models, yielding explanation in the sense of a logic of hypothetico-deduction: if external nature were of such a kind, then data and experience would be as we find them. In human science theories are mimetic reconstructions of the facts themselves, and the criterion of a good theory is understanding of meanings and intentions rather than deductive explanation.

3-In natural science the law like relations asserted of experience are external, both to the objects connected and to the investigator, since they are merely correlational. In human science the relations asserted are internal, both because the objects studied are essentially constituted by their interrelations with one another.

4-The language of natural science is exact, formalizable, and literal; therefore meanings are univocal, and a problem of meaning arises only in the application of universal categories to particulars. The language of human science is irreducibly equivocal and continually adapts itself to particulars.

5-Meanings in natural science are separate from facts. Meanings in human science are what constitute facts, for data consists of documents, inscriptions, intentional behavior, social rules, human artifacts, and the like, and these are inseparable from their meanings for agents.<sup>369</sup>

Heidegger identifies a double level in the phenomenology of understanding: the deep interpretive level, which structures the comprehension, and the apophatic level, which is logical in nature and merely explanatory or ornamental.

The interpretive theorists argued for the claim that the analysis of social action comes in two poles: "the humanist/interpretive position and the positivist/empiricist position"<sup>370</sup> They argued that social sciences should be viewed as having more in common with the interpretive domains like history, literature, or the arts than with the natural sciences.

One of the important differences between natural science and human studies was a distinction, first made by Droysen, between "explanation"(Erklaren) and "understanding"(Verstehen).

According to this distinction, the aim of the natural sciences "is to explain; the aim of history is to understand the phenomena which fall within its domain"<sup>371</sup> The essential insight which led theorists to accept the notion of verstehen in the first place was a recognition of the constitutive role which the social actors' own concepts play in social

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<sup>369</sup> ([102], p.170)

<sup>370</sup> ([101], p.334).

<sup>371</sup> ([2Q4],

reality. "Since the actors' meanings are constitutive of the category of social action the analysis of social action must begin with the actors' concepts".<sup>372</sup>

The essential thought which motivates interpretive approaches to social theory is the recognition that there are social complexes which are human artifacts and thus are phenomena which differ in an important way from the physical phenomena. Unlike physical objects, artifacts have significance or meaning both in themselves and for the participants of the practice or social order which generates them. These meanings are embodied in the cultural artifacts of a society including its language, its writings, and its social organization and institutions.

These meanings are not self-evident and explicit. Thus, like literature, social phenomena are subject to interpretation. Hermeneutics is the theory or philosophy of such interpretations. Unlike natural science, hermeneutic theories maintain that there are features of social reality which cannot be reduced to or adequately explained solely in terms of the facts or in terms of causal laws. Essentially, both groups of non-reductionists agree that it is intentionality, i.e., beliefs, attitudes, meanings, valuations, etc., which is the feature of human and social reality which is not reducible to basic terms of physics.

The issue which divides the social theorists is the question of whether it is possible to produce an objective and value-free theory of object-level intentionality. That is, theorists who accept the possibility of a strict separation of facts from [theory] values also accept the idea that theorizing about the non-reducible intentional feature of human reality does not preclude objectivity. It is possible for theorist to identify the "facts" which are

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<sup>372</sup> ([112], p.335).



constitutive of a complex human social institution or situation, including the internal perspective, in a way-and in terms of concepts— which is both objective and value-free. All versions of hermeneutic theory are united by the fact that they reject reductionism. That is, unlike reductionism, which claims that "understanding" can be reduced to "explanation" hermeneutic theories maintain that "understanding cannot be reduced to mathematical explanation which is a characteristic of the physical sciences"<sup>373</sup> Essentially, hermeneutic theorists are arguing for the claim that human artifacts have a meaning which goes beyond what is empirically observable, knowable exclusively through the methodology of natural science, and explainable in terms of factual data. This classificatory schema is based on different stances with respect to the issue of whether it is in principle possible to provide an account of understanding which is objective and theory-free.

According to this view, irrespective of the normative commitments which occur in object-level discourse, it is in principle possible for there to be an objective and value-free explanation of such discourse at the theory level.

Objectivistic hermeneutics differs from reductionism in that it maintains that object-level normative practices contain elements which are not reducible to the language of physics nor explainable solely in terms of causal laws.

Nevertheless, objectivistic hermeneutic theorists maintain that this non-reducible element is something which can be fully and completely captured by an objective and valuefree theory. The upshot of this is that the theorist qua theorist does not have to make

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<sup>373</sup> ([110], p.650).2

any normative commitments whatsoever in order to give a fully adequate theoretical account of object-level normative commitments.

The perspective described here is one which relies on the possibility of maintaining a strict separation of facts from values at the theoretical level. The first skeptical claim is based essentially on the claim that it is not possible to establish that the particular conceptual schema or theoretical framework which a theorist chooses to adopt is objective, value-free, and ideologically neutral. If data underdetermines theory choice and if it is not possible to establish that a particular theoretical framework is the one framework which all rational investigators must adopt, then it is to some degree misleading to claim objectivity.

For theory-level discourse. Furthermore, philosophic hermeneutic theorists reject the object-level/theory level dichotomy in part because they deny that there can be a sharp division between the objective and the subjective points of view. From the philosophical hermeneutic point of view the denial of the objective/subjective distinction has the consequence that any attempt to objectify the subject matter at hand or any attempt to deny one's personal contribution to one's understanding of the normative discourse of others is destined to fail in its quest to understand them.

According to this view one's subjective and conceptual context is a necessary constituent in one's understanding of any subject matter. This is essentially the claim that it is not in principle possible for a theorist to achieve a-historical, objective, Archimedean point of view because, from the perspective of philosophical hermeneutics, there cannot even in principle be such a position.

Dilthey adopted this distinction and it formed the basis for his defense of the separation of the natural and the human sciences. According to this distinction, the goal of natural science is explanation whereas the goal of human science is understanding. Dilthey believed that autonomy for the human sciences could be accomplished by liberating "the methodology of the human studies from the explanative and constructionist ideals of the natural sciences"<sup>374</sup>

Dilthey maintained that an adequate account of human action required an interpretation of the meaning or significance of human action which could not be provided by the natural science model with its emphasis on empirical observation and causal laws. He argued that causal explanations were inappropriate for the interpretations which are required for human sciences.

Winch argues that "action can be said to be meaningful only in that it falls under socially defined rules of conduct"<sup>375</sup> Thus, according to Winch, placing action under a rule is the basis for distinguishing between meaningless behavior and meaningful action.

Our language and our social relations are just two different sides of the same coin. To give an account of the meaning of a word is to describe how it is used; and to describe how it is used is to describe the social intercourse into which it enters.<sup>376</sup> That is, although the objectivistic version of hermeneutics denies reductionism and rejects the unity of science thesis, it nevertheless retains the belief that it is possible to have objective access to value-free "facts" which can form the foundation for a true account of reality. They

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<sup>374</sup> ([142], p.247).14

<sup>375</sup> ([100], p.92).22

<sup>376</sup> [1958:123]

claimed that objective truth is achievable even in the domain of human sciences so long as one follows a particular method.

Furthermore, this perspective assumes the strength of what has come to be called an "Archimedean point". That is, it retains the belief that the social scientist can be external to his or her own context, both temporally and conceptually, and that he or she can ground his or her account of social reality on the objective and value-free concepts which are operative there.

Objectivism is closely related to foundationalism and the search for an Archimedean point. The objectivist maintains that unless we can ground philosophy, knowledge, or language in a rigorous manner we cannot avoid radical skepticism.<sup>377</sup> An objectivist claims that there is (or must be) such a matrix and that the primary task of the philosopher is to discover what it is and to support his or her claims to have discovered such a matrix with the strongest possible reasons.

In the final analysis all such concepts must be understood as relative to a specific conceptual scheme, theoretical framework, and paradigm, form of life, society, or culture. Since the relativist believes that there is a nonreducible plurality of such conceptual schemes, he or she challenges the claim that these concepts can have a determinate and univocal significance.

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<sup>377</sup> ([16], p.8)

For the relativist, there is no substantive overarching framework or single metalanguage by which we can rationally adjudicate or univocally evaluate competing claims of alternative paradigms.<sup>378</sup>

Gadamer's defense of the middle ground between these two extremes involves an analysis of hermeneutic understanding which relies on the notion of the fusion of horizons. Unlike natural science, which claims that reliable knowledge can be achieved only by eliminating the subjective or perspectival input of the theorists, Gadamer insists that hermeneutic understanding and truth requires that the theorist's own horizon or perspective be included in any adequate account of reality. As Hekman points out, contrary to the objectivist's perspective which seeks to eliminate the perspective or understanding of the observer,

"Gadamer's approach legitimizes the imposition of the observer's conceptual scheme without denying the constitutive role of the social actors' concepts"<sup>379</sup>By rejecting the correspondence theory of truth and, with it, the search for objectivity, he offers an approach that focuses on interpretation and understanding rather than truth and objectivity. He thus abandons the central issues that define the positivist-interpretive debate. <sup>380</sup>

Gadamer's point is that truth ultimately results from a dialectic relationship which obtains between the interpreter and that which is being interpreted. This idea is frequently found in hermeneutic theories and it is usually associated with the claim that there is a hermeneutical circle which is established between the interpreter and the text.

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<sup>378</sup> ([16], p . 8

<sup>379</sup> ([112], p.333).

<sup>380</sup> ([112], p.337)

“The term “hermeneutic circle” refers to a process which is analogous to a dialogue in which no single perspective is granted initial semantic priority.

Claim that “no description [is] free from ‘interpretation’ in the light of presuppositions”<sup>381</sup> Gadamer describes this dialectical process of interpretation as being analogous to a dialogue. The main point is that every interpreter brings to a work some preconceptions or “prejudices” regarding the meaning of a work. Once the entire work is understood, those initial preconceptions will require modification as Makkreel points out, “The very idea of a hermeneutic circle refutes the Cartesian faith in a fixed, self-evident starting point. It is impossible to determine where the circle begins or ends”<sup>382</sup> Because humans are always in the midst of a context, they can never achieve a transcendental vantage point outside of it. There can be no presuppositionless knowledge, no point of absolute origin. Knowledge can be gained only experientially, through what Aristotle called *Phronesis*, or practical wisdom.

Gadamer claims that all interpretations emerge from a situated point of view. The situatedness of an interpreter within his own language and tradition serves as the precondition from which a text is approached.<sup>383</sup> There is no “objectivity” on Gadamer’s account because any adequate or accurate account of the meaning depends as much on the perspective, context, background, or horizon of the observer as it does on the text or action in question. Gadamer deny that there can be a sharp separation of facts and values.

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<sup>381</sup> [80], p.52)30.

<sup>382</sup> ([142], p.269).

<sup>383</sup> ([206], p.81).

Human action does not consist of two externally related separable parts—an element of mental belief and an element of physical movement. Human action is internally related to the interpretations that are intrinsically constitutive of it. The description and identification of human action are "shot through with evaluation".<sup>384</sup>

This view reflects Kuhn's point that there is no sharp distinction between theory and observation, i.e., the claim that all observation is theory-laden. These non-objectivists are essentially arguing for the claim that intentionality (or *Verstehen*) is necessary for any adequate and complete account of social reality, that it is irreducible, and that there is no fact of the matter with respect to it.

Gadamer denies that his rejection of objectivism entails a commitment to extreme subjectivism or relativism. Gadamer debunks the idea that a rigorous scientific "method" of inquiry will better lead us to discovery of the "truth" in the human sciences. For Gadamer, the hermeneutic phenomenon is basically not a problem of method nor is it "concerned with a method of understanding by means of which texts are subjected to scientific investigation like all other objects of experience."

One central theme in Gadamer's work is the notion of prejudices. For many scholars of hermeneutics, understanding involves the employment of methodological principles for the discovery of a text's meaning within its own context, free from the prejudices of the interpreter. In this fashion the interpreter seeks the text's "objective" meaning, then moves to apply that meaning to the contemporary context. "The fundamental prejudice of the Enlightenment is the prejudice against prejudice itself, which denies tradition its power."

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<sup>384</sup> ([15], p.61-2)

Gadamer presents a radical critique of Cartesianism and the Enlightenment conception of knowledge, which held sharp dichotomies between reason and prejudice and knowledge and prejudice. For Gadamer there is no knowledge without preconceptions and prejudices. Thus one task of Gadamerian hermeneutics, argues Bernstein, "is not to remove all such preconceptions, but to test them critically in the course of inquiry."<sup>385</sup> But how do we distinguish "legitimate" prejudices from "the countless others?"

For Gadamer, one does not distinguish among prejudices through the practice of pure self-reflection, where all prejudices are bracketed out of play. On the contrary, Gadamer rejects Descartes' monological notion of purely rational self-reflection by which we achieve transparent self-knowledge and, instead, argues that "it is only through the dialogical encounter with what is at once alien to us, makes a claim upon us, and has an affinity with what we are that we can open ourselves to risking and testing our prejudices."<sup>386</sup>

#### CHAPTER IV CONCLUSIONS –LEGAL REASONING META THEORY

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##### LEGAL REASONING AS A NARRATIVE REASONING

First of all, as we can see the former sections that human reasoning is associative, coherentist, holistic, schematic, pragmatic, functional and perspectival.

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<sup>385</sup> 80

<sup>386</sup> 81



Secodly, judicial decision making is likened to expert decision making process. Accordingly, with the influence of legal education, training; legal practice and judicial job experience, judges internalise legal rules and rules are represented in judge's knowledge structure as schemata. Therefore it is possible to say that combination with expert decision making, schematic, habitual, practical narrative reasoning is understood as a meta-category of reasoning, one that cuts across traditional boundaries.

Narratives are embedded in the structure of law itself. In a very literal sense, no one can make laws or practice law without telling narratives.<sup>387</sup> The use of precedent to argue and decide about cases currently before the courts "formalizes, proceduralizes, and enforces our modes of narrative interpretation"<sup>388</sup> Over time, the use of precedent in order to form judgments coalesces around patterns that are thought of as governing in certain areas of law - legal doctrines, which themselves are sometimes described as "master narratives"<sup>389</sup> These doctrinal narratives in turn shape what can be narrated and recognized in law.<sup>390</sup> Thus, narratives are thought to play a key role in reasoning and argument regarding the uses of precedent and the formulation of legal doctrine. Law itself is conceived of as a kind of narrative among narratives, but the law's reasoning and argument as narrative.

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<sup>387</sup> Law Is Made of Stories: Erasing the False Dichotomy between Stories and Legal Rules, The [article] Legal Communications and Rhetoric: JALWD, Vol. 11, pp. 51-82

Paskey, Stephen (Cited 3 times)

11 Legal Comm. & Rhetoric: JAWLD 51 (2014)

<sup>388</sup> (Bruner "Psychology"102)

<sup>389</sup> (Papke Narrative 1) or

"stories" (Baron and Epstein "Narrative?" 142).23

<sup>390</sup> ("Narrative?" 142).

Why a separate legal system is impossible.

The judge as an individual cannot block off these different parts of him or herself from influencing each other. As long as there is no such thing as a purely legal person, there will be no such thing as purely legal reason. Semiotics for Jackson is not purely language in the abstract but language as used.

Jackson finds problematic - that there is a separate and autonomous form of reasoning. Words, therefore, do not exist on their own and do not simply relate to individual pre-existing concepts. They relate primarily to other words and their value comes from this relationship. Associative or paradigmatic relationships look at what other concepts are associated with that concept in memory - what words are brought to mind by that word.

Jackson rightly rejects the positivist stance that law is totally separate, he can accept that there could be a distinctive form of legal discourse. In discussing the possibilities of a separate legal discourse, which suggests specialisation of meaning rather than separation of meaning. Jackson argues that it shows that law can never isolate itself from other forms of reasoning.

As Jackson argues that law can never isolate itself from other forms of reasoning: Legal rules are linguistic expressions of narrative models, the latter loaded with tacit social evaluations. The translation of these narrative models into conceptual language may conceal their origins, but interpretation based upon the language of the propositions is

likely to prove unstable to the extent that it runs counter to the social evaluations of the narrative models underlying the text.<sup>391</sup>

A governing rule created by this process does not simply provide evidence of its narrative origin: it is, in fact, still a narrative. The essential traits of a governing rule directly correspond to the essential traits of a stock story. Each consists of elements, including entities, things, events, or circumstances. The elements are expressed in general terms and have a logical relationship. And in each case, there is a plot: for governing rules, a legal result; for stock stories, a significant consequence. Once one has learned to look for the stock story in a governing rule, the story embedded in some rules seems obvious. For example, consider this sentence: A person was convicted of burglary after he broke into and entered the dwelling of another in the nighttime with the intent to commit a crime therein. The same points are true when a governing rule is codified as a statute. The logical relationships are encoded in the rule's language and grammatical structure. A person knowingly enters or remains in a building unlawfully with the intent to commit a crime therein.

Central point is that schematic reasoning and rule-based reasoning are not in conflict. Narrative reasoning encompasses several different analytical moves, depending on one or all of these factors: whether a story is compared to and contrasted with the stock story embedded in a governing rule (a type of rule-based reasoning), the story in a previously decided case (a type of analogical reasoning), a story about the social impact of a rule (a type of reasoning based on policy or custom), or the social and moral values

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embedded in a cultural narrative. The facts of a case are compared to and contrasted with a story embedded in a governing rule. Instead, they restrain each other and "must remain in constructive relationship. "

In a similar vein, Levi rightly saw the basic pattern of legal reasoning as reasoning by example from case to case: It is a three-step process described by the doctrine of precedent in which a proposition descriptive of the first case is made into a rule of law and then applied to a next similar situation. The steps are these: similarity is seen between cases; next the rule of law inherent in the first case is announced; then the rule of law is made applicable to the second case." However, Levi insisted that the formulation of the rule to be applied could not be made until after the similarity was seen.' Although law is a system of rules, those rules are discovered only through the process of determining similarity or difference, pattern matching. Accordingly, Levi viewed analogical reasoning as a creative process, which is a hallmark of Abductive reasoning, but not of the sterile inductive classic formulation of analogy. To Levi, the most important step was the first, the finding of similarity or difference between cases.'

Jerome Bruner suggests that there are two distinct modes of cognitive function, each of which orders experience in different ways. The "paradigmatic or logico-scientific" mode, he explains, "attempts to fulfill the ideal of a formal, mathematical system of description and explanation. It employs categorization. .. and the operations by which categories are established, idealized, and related one to the other to form a system." The "narrative mode,' on the other hand, "deals in human or human-like intention and action and the vicissitudes and consequences that mark their course." In Bruner's view, the two

are complimentary, but "[e]fforts to reduce one mode to the other or to ignore one at the expense of the other inevitably fail to capture the rich diversity of thought."

Narrative reasoning is better understood to be a process of systematically comparing and contrasting narratives for the purpose of reaching a conclusion, either about what the law is (or should be) or how the law applies to a given set of facts.

As Howard Gillman has pointed out, many of these researchers do not see the law as a mechanical "external constraint," but rather as a "state of mind within a practice,"<sup>392</sup> On Dworkin's account, the primary way in which the law affects judging is through its constitution of this particular judicial mind-set.

Embeddedness springs from the lack of a dichotomy between facts and legal concepts. It is misleading to think of a case as a set of purely factual circumstances. Rather, the inferences that lead to our understanding of what we consider to be "the facts" are guided by the legal concepts formed by previous cases. <sup>393</sup>Thus, in the process of considering the case, what we believe to be the starting point is actually several steps along the inferential way. Alternative methods of viewing the case that would have been available earlier along the inferential path are thereby preempted.

The judge's view of the facts will be implicitly influenced by the judge's existing factual and normative judgments. In turn, the judge's view of the facts cannot be separated from his application of the law to the facts. Because the judge has already implicitly

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<sup>392</sup> (Gillman 2001: 486 and 1999: 78-86).

<sup>393</sup> 85

accepted some theoretical views, the adoption of certain other theoretical views is foreclosed. What we take to be "facts" in other aspects of life already embody theory.

The individual case owes its shape to the judge's preexisting theory of legal analysis, but that analysis has, in turn, been formed by the individual cases the judge has confronted in the past. Thus legal explanations run both ways—from the case to the principle and from the principle to the case.

As discussed earlier, even a perceptual judgment involves a synthesizing hypothesis that unifies several sensations. Thus, naked facts do not exist within our cognition from which we can construct theories, just as the embeddedness of legal concepts makes impossible legal reasoning with elementary facts.

Jackson attacks on the concept of a unified legal claiming that law exists somewhere out there. The idea that there is something "external" or "out there" which the theorist can objectively view has been one of the first casualties of philosophy's own concern with how meaning is created—and Jackson's own critique of positivism is grounded in his acceptance of a "non-referential" theory of language which makes any claim to either an autonomous form of legal reasoning or to a unified legal system impossible.

Jackson expands his critique by arguing that the failure of legal theorists to recognize the narrative nature of law this confusion is caused by the fact that they have not been considering it does not tell us why these problems are generated in the first place.<sup>394</sup> Jackson sees the legal system as complex, legal reasoning as an aspect of general reasoning.

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<sup>394</sup> (1988, 146)]

Jackson is aware that this view of truth has led to him being criticized as a nihilist. He seeks to counteract this argument by bringing into this structure the notion of integrity: "integrity" ... may now be viewed as an alternative to the truth. The focus here is in trust in people not in the relationship between what they say and eternal reality.<sup>395</sup>

Jackson feels that this view of interpretation excludes the place of the person who has to make a decision: Interpretation, at least as it is conceived in the positivist tradition, depends exclusively upon the relationship between propositions (their semantic and syntactic relations); decision-making contains a necessary pragmatic element: what to do with people.

Narratives, more than isolated bits of information, transport the listeners mentally, temporarily altering their normal emotional and cognitive reactions to the information presented. Judges naturally fit trial information into story like formats. People make sense of complicated evidence sets by constructing narratives that are formed around intuitive and familiar schemas or scripts of human action. Thus, information that lends itself to the story format is more likely to be convincing to a judge. There is also reason to believe that in reality, truthful evidence is more likely than untruthful evidence to produce a good narrative.

Narrative reasoning and coherence highlights two characteristics of stories that are essential to understanding how meaning is produced at trial. First, the elements of the story interact in ways that alter their individual significance: each merges with what came before and flows into what comes after. Holistic understanding and every perspective is covered

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<sup>395</sup> (1988, 193)]

by constituent elements and every elements back up each other. This idea that no one piece of information can be assessed in isolation.<sup>396</sup>

Judicial information processing has been likened to a hypothesis testing process. Hypothesis are theories and allegations made by parties to dispute.<sup>397</sup> According to this view, one or more tentative hypotheses are formed on the basis of the initially available information concerning a case. Such hypotheses include assumptions about likely perpetrators, modes of conduct, and motives behind the offense. In subsequent stages, the tenability of the hypotheses is tried against new evidence gathered through various investigative methods. Optimally, this hypothesis-testing sequence should result in the verification of a hypothesis that represents the truth, and the rejection of all false hypotheses.

Judges construct an internal representation of what is likely to have happened by structuring evidence in a narrative format. That is, known facts regarding a case are combined so that they tell a coherent theory or story. In order to create a coherent whole, however, inferences must sometimes be made to fill gaps where there is no substantive evidence. In addition, some aspects of a case need to be excluded from the story if they do not fit into the investigators' view of what has happened.

From this conception it follows that the search for "truth" is a reconstructive process with certain latitude for subjective interpretations and inferences. A similar view was

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<sup>396</sup> 101 Geo. L.J. 281 2012-2013

<sup>397</sup> . [Wagenaar, van Koppen, & Crombag, 1993].



offered by Wagenaar et al.<sup>398</sup> they argued that the entire judicial process is characterized by story construction elements. A narrative representation of the likely course of events is often created early in the investigation of a crime. The purpose of subsequent investigative actions is to corroborate the story by showing that critical passages are supported by substantive evidence. Roughly speaking, the success of a case in court depends on whether the story or theories proposed by the parties has received enough corroboration so that judges are convinced of its veracity.

No set of legal institutions or prescriptions exists apart from the narratives that locate it and give it meaning.<sup>399</sup> Once understood in the context of the narratives that give it meaning, law becomes not merely a system of rules to be observed, but a world in which we live. In this normative world, law and narrative are inseparably related. Every narrative is insistent in its demand for its prescriptive point, its moral.

Narrative reasoning is key to understanding how the law evolves and is applied in real cases, a definition of "narrative reasoning" is needed. Cognitive psychologists have recently concluded that human beings are hard-wired to respond to stories.<sup>400</sup> We experience the world in story form. Therefore, our fascination with the stories of others is natural because it helps us understand other people. They are the mechanism through which we make sense of the world and understand other human beings.

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<sup>398</sup> (1993).

<sup>399</sup> Chestek, Kenneth D. (Cited 63 times)

1 Savannah L. Rev. 21 (2014)

<sup>400</sup> KENDALL HAVEN, STORY PROOF: THE SCIENCE BEHIND  
THE STARTLING POWER OF STORY 4 (2007)

What is the jurisprudential relationship between narratives on the one hand and rules, precedents, norms and policies on the other?

Law is created by evaluating the litigant's story against something outside itself - perhaps a rule, a line of authorities, and a set of norms or policies. In other words, the stories of litigants must be judged by external criteria that offer some assurance of a result that is reasoned, fair, functional, and consistent with moral values and meanings.

While the forms of reasoning we associate with rules, analogy, policy, consensual norms, and narrative play a role in law-creation, seldom does a particular form of reasoning operate alone. Rather, the criteria generated by these forms usually function together as different strands of the net against which the litigant's facts are measured.

Judges use the tools of rule-based reasoning, analogical reasoning, policy-based reasoning, normative reasoning, and narrative reasoning to generate appropriate criteria for law-creation. Using a set of criteria generated from the combined functioning of these forms of reasoning creates a stronger and more reliable external measuring net for law-creation than does reliance on criteria generated from any single form of reasoning alone.

Narrative and analitic reasoning are not in competition. Rather each needs the other. Legal reasoning is incomplete without the soil of narrative from which the reasoning grows and to which it will return. On the other hand, narrative must operate within the constraints of a governing legal rule that provides a reasonable degree of stability, rationality, and predictability. And that governing rule must be supported also by the other pillars of legal reasoning - analogical, policy-based, and consensual normative reasoning – to provide

some assurance that the governing rule will function well in a number of varying narrative contexts.

Schematic reasoning can also be called as the “framing” “As we can easily understand from its meaning, the term “frame” and the term “schema” must be understood interchangeable.

A case before court is akin to a framing game. It is possible to say that judicial actors deliberately use different words to emphasize different aspects of an issue. Central issue revolves around how that case is presented and perceived. Frames affect result because how a case and its legal issues are perceived structures expectations about the proper outcome with respect to the law. In this sense, framing means classification. It is an answer to the question “what it is”.

In sum, frames enable the parties to describe legal issues in a manner that clearly favors one option over another.

How the issue is viewed or classified will likely shape the outcome.<sup>401</sup> Different words can be substituted into the same sentence to achieve a different effect. Second, a single word can easily signal, or distinguish the direction of your argument and bring important meaning to an issue. Merely describing something as fragmented is to call for integration as an improvement, without ever saying so.

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<sup>401</sup> Elite frame

Judges receive facts from other actors in a biased nature.<sup>402</sup> The parties to the case strategically decide how to frame the issue according to the favorable dimension. Framing can influence opinion by shaping how people connect their abstract values to controversial issues. Exposure to a frame will encourage people to rely on the interpretation of the value provided by that frame. Exposure to a value frame may also encourage people to consider interpretations of the value that are not contained within the frame. "

A frame or narrative is a central organizing idea for making sense of relevant events and suggesting what is at issue"<sup>403</sup>; while Entman writes that "To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described"<sup>404</sup>

Framing is also putting an issue in a context. It connects the problem at hand with a context or relevant paradigms. Frames tell people how to weight the often conflicting considerations that enter into everyday deliberations. It is a classification system that connects the case to broader systems. Framing enables critical interpretive processing and organization of the evidence such that evidence can be meaningfully evaluated against multiple judgment dimensions. The elements of the frame, story, schema or narratives interact in ways that alter their individual significance: each merges with what came before and flows into what comes after. No one piece of evidence can be assessed in isolation.

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<sup>402</sup> (Johnson 2004, 13)

<sup>403</sup> (1989, p. 57, emphasis added)

<sup>404</sup> (1993, p. 52,

Legal arguments are often constructed as chains, but they tend to be more successful when they are cable-like.<sup>405</sup> As underlined by Pierce “A chain is no stronger than its weakest link, because if any of the singly connected links should break, so too will the chain. In contrast, a cable's strength relies not on that of individual threads, but upon their cumulative strength as they are woven together”.

Narratives or Frames can “shape individual understanding and opinion concerning an issue by stressing specific elements or features of a broader controversy, reducing a usually complex issue down to one or two central aspects”

Specifically, narratives help to resolve individual legal cases by making sense and hanging together and being true to what legal decision makers know.<sup>406</sup> As stated by Bruner, narratives are “how our system of case law manages to stay in working touch with our traditionalized way of dealing with ethical issues”<sup>407</sup>

Narratives in the narrow sense at minimum relate a set of events over some period of time and are argumentative in that they construct or select for a particular version of how things occurred.<sup>408</sup> They are shaped by lawyers or parties to dispute into narrative arguments accommodating the requirements and purposes of law. Introduced at trial and supplemented by witness testimony, such narratives often present competing arguments as

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<sup>405</sup> C.S. PEIRCE, 5 COLLECTED PAPERS, *supra* note 6, para. 264.

<sup>406</sup> (Scheppelle 2080)

<sup>407</sup> (“Psychology” 102).

<sup>408</sup> (Bruner “Psychology” 106; Bruner “Legal and Literary” 46; Klinck 292; Ewick and Silbey 200).

to what happened.<sup>409</sup> And judges and juries must determine which of these narratives is most credible.<sup>410</sup>

The narrative decided on by the legal decision maker often gets written into a judicial opinion as part of a "statement of fact."<sup>411</sup> They give as very important idea how the facts are tailored and defined according to the theory.

From a client's initial narrative as told to her attorney, to a court's narrative of the facts of a case, legal narratives narrowly understood are argumentative. Legal narratives are not only argumentative, however, but deliberatively so in that they are inclusive of values, emotions, and contextual particularities.

Narratives reconstruct experience in a way that is "information-rich," particularized, and contextual with "concrete sensory details" linked in "natural associational clusters" rather than with abstract propositions. These qualities of narrative make narratives subject to judgment based not on abstract norms but a "situated norm that is rooted in the audience's own knowledge of life".<sup>412</sup>

Judicial opinions have been described as "narrative constructions"<sup>413</sup> and, as such, are "one form of reasoning about experience and society".<sup>414</sup> In particular, the opinion's decision or holding has been explained to be narrative, in describing the kind of reasoning

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<sup>410</sup> (Bruner "Psychology" 102).

<sup>411</sup> (Baron and Epstein "Narrative?" 142)

<sup>412</sup> (450).

<sup>413</sup> (Amsterdam and Bruner 144)

<sup>414</sup> (Papke "Discharge" 207).

that connects an abstract rule with a specific set of circumstances and also as the "point" of the case - "an essential or abstract story, which is the same abstract story that can be distilled from other 'like' cases"<sup>415</sup>

Daniel Farber and Suzanna Sherry describe this aspect of legal reasoning as combining the intellectual traditions of pragmatism and practical reason, moving between a general senses of what the law provides as a whole and the concrete circumstances at hand by using "stories" as a mode of informal thinking.

Furthermore, the processes of legal reasoning and argument involve interpreting the degree of similarity among these narratives, what Jackson labels "narrative coherence."

A narrative approach also highlights that arguments are often situated in particular contexts. In large part arguments about what should be are informed by representations of what already is.

Both legal facts and legal rules can be understood as narrative. Legal facts often manifest as narratives that display a narrative structure and that can be compared with other, similar narratives concerning typical behavioral patterns (i.e., narrative schema).

According to Jackson, legal factual narratives are most likely to be accepted as true when they are "coherent" as far as conforming to certain structural conventions and highly similar to the other circulating narratives that are most deeply internalized.

According to Jackson, legal reasoning is based on "coherence" or pattern-matching between legal facts and legal rules as narratives. Moral argument is a matter of coherence

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<sup>415</sup> (Papke and McManus 460) (Klinck 298).

or pattern matching between ethical facts and ethical norms as narratives, and is likely to be most persuasive when most coherent, or closely matched.

In legal arguments, Legal decision makers use narrative schemas to organize the disparate and sometimes contradictory details with which they are presented - from evidence regarding the facts of a case to cues concerning things like witness credibility. These narrative schemas are informed by widely circulating ideas about how the world works. Such narrative schemas also typically have a normative component that dictates what should happen in any particular situation, an appropriate response to the circumstances presented. Because of this normative quality, their recital implies a decision already in the making.

In the legal context, Jackson calls this "external narrative coherence" and describes it as "comparing a narrative constructed from the facts of the case with the underlying narrative pattern either explicit in or underlying the conceptualised legal rule"<sup>416</sup> The similarities among narratives schemas are still key. A narrative perceived as too far afield from already existing narrative schemas has little chance of altering those schemas, or possibly as even being perceived as a credible narrative in the first place.

According to Perelman Law is neither a wholly rational nor a wholly reasonable structure. Instead "it is both and legal systems have to find a balance between the formal rule application that insures equality and impartiality which are important legal values and a specific, reasonable response to the concrete situation before them".

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<sup>416</sup> (Jackson Narrative Coherence 101)



Perelman sees the relationship between these two forms of reasoning as both complex and reciprocal. This means that the demonstration of legal reasoning is never as scientific as that of the sciences, and its persuasive reasoning can appeal to a judge other than the audience - legal rules. This mixed form of reasoning is not distinct to law. The rational and the reasonable appear in other aspects of human thought. Law, as a form of reasoning about values, sits alongside philosophy and morality and like these two it is a form of practical reasoning. Practical reasoning for Perelman is reasoning in situations where the answers are not necessary, the reasoning is not conclusive but persuasive or convincing and the reasoning has to do with action.

According to Rieke, the dialectical interplay between the rational (anchor points) and the reasonable (reach tests) results in a judicial decision making process that is evolutionary. The dialectical aspect, argues Rieke, is a form of inquiry that incorporates a communication process oriented toward posing questions and negotiating meanings, concepts, constructs, definitions, taxonomies, and hierarchies.

It is argued that both legal and rhetorical critics employ two tests for assessing the strength and relevance of judicial warrants and claims.<sup>417</sup> The first test is the criterion of justice and the second evaluative tool used in the assessment of judicial arguments is structural integrity, which includes the application of generally accepted rules of logic.

The criterion of justice lends credence to the idea that judicial reasoning cannot limit itself to a consideration of the "is"; it must also come to grips with the "ought." Legal reasoning, which incorporates concrete notions of justice, must address both questions of

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what is the law and what the law should be. Put another way, legal reasoning is a process that involves both questions of fact and theory.

According to Zarefsky, an inference is reasonable if it would be made by people exercising critical judgment—a standard more stringent than logical possibility but less stringent than formal validity.

Cardozo was aware of this when he observed: My analysis of the judicial process comes then to this, and little more: logic, and history, and custom, and utility, and the accepted standards of right conduct, are the forces which singly or in combination shape the progress of the law. Which of these forces shall dominate in any case, must depend largely upon the comparative importance or value of the social interests that will be thereby promoted or impaired.<sup>418</sup>

Perelman views the rational and the reasonable as mutually supportive within law. Each concept plays a crucial role in judicial decision making as Perelman describes: The rational in law corresponds to the spirit of the system, to logic and coherence, to conformity with precedents, to purposefulness; whereas the reasonable, on the other hand, characterizes the decision itself, the fact that it is acceptable or not by public opinion, that its consequences are socially useful or harmful, that it is felt to be equitable or biased.<sup>419</sup>

According to Perelman jurists are not forced to choose between the letter of the law (the rational) and the spirit of the law (the reasonable).<sup>420</sup> On the contrary, for Perelman,

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<sup>418</sup> Cardozo, *The Nature of the Judicial Process*, p. 112.

<sup>419</sup> Perelman, *Humanities* 121.

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the task of the jurist is "to reconcile the spirit with the letter of the law, in conformity to the values that the legal system tries to promote."<sup>421</sup> To put it another way "letter of the law" as a codified system of interrelated statutes and laws abstracted from the social world. The "spirit of the law," on the other hand, refers to values in the social world and the human actors who embrace those values. Accordingly, the judges employs rhetorical argumentation in the form of a judicial opinion to show that his or her decision was not only legal but acceptable because it is reasonable.

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#### LEGAL REASONING AS AN ARGUMENTATION

At the heart of Perelman's theory of argumentation is his contrast between the "rational" and the "reasonable." Perelman characterizes the "rational" in the following manner: The rational corresponds to mathematical reason, for some a reflection of divine reason, which grasps necessary relations, which knows a priori certain self-evident and immutable truths, which is at the same time individual and universal; because by being revealed within a single mind, it imposes its themes on all beings of reason, because it owes nothing to experience or to dialogue, and depends neither on education nor on the culture of a milieu or an epoch.<sup>422</sup> "

Perelman rejects the Cartesian ideal of universally applicable self-evident knowledge that leaves no room for dialectic or rhetoric<sup>423</sup> In place of an absolutist, rationalist system that privileges self-evident truths, Perelman advocates a form of

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<sup>421</sup> Perelman, Tustice 130.

<sup>422</sup> Chaim Perelman and L. Olbrechts-Tyteca, *The New Rhetoric*, trans. John Wilkinson and Purcell Weaver (Notre Dame: University of Notre Dame Press, 1969).

<sup>423</sup> Perelman, *Humanities* 117.

pluralism, where fields such as philosophy, ethics, and law "draw their rationality only from the argumentative apparatus, from good reasons which can be offered for or against each presented thesis." <sup>424</sup> Perelman proposes an alternative to traditional analytic philosophy in which the difference between truth and opinion is no longer a question of kind, but of degree.

For Perelman, philosophy and law are equally situated historically. This implies putting classical epistemology and metaphysics into question. Instead of searching for necessary and self-evident first truths from which all knowledge would be suspended (foundationalism), he seeks to recast philosophy in terms of a vision in which "people and human societies are in interaction and are solely responsible for their cultures, their institutions, and their future—a vision in which people try hard to elaborate reasonable systems, imperfect but perfectible." <sup>425</sup>

To understand Perelman's views on rhetoric, law and reasoning, it is necessary to grasp the philosophical pluralism that undergirds his theory of argumentation. Perelman opposes axiological monism—the idea that in any conflict of opinion there is a way of reconciling all differences of opinion by reducing all interpretations with their infinite diversity to one single value, designed in terms of perfection, usefulness and truth—and advances a philosophy of pluralism, which entails a methodological pluralism as well.

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<sup>424</sup> Chaim Perelman, *The Realm of Rhetoric* (Notre Dame: University of Notre Dame Press, 1982) 160. Hereafter, "Realm."

<sup>425</sup> Chaim Perelman, *The Realm of Rhetoric* (Notre Dame: University of Notre Dame Press, 1982) 160. Hereafter, "Realm."

Here, Perelman follows Aristotle's injunction found in Book I of the *Nicomachean Ethics*: Our discussion will be adequate if it achieves clarity within the limits of the subject matter. For precision cannot be expected in the treatment of all subjects alike, any more than it can be expected in all manufactured articles. ... For a well-schooled man is one who searches for that degree of precision in each kind of study which the nature of the subject at hand admits: it is obviously just as foolish to accept arguments of probability from a mathematician as to demand strict demonstrations from an orator.<sup>426</sup>

For Perelman, law falls into a realm of irreducible pluralism, which requires both dialectical and rhetorical reasoning and argumentation. To reduce the plurality of interpretation found in the realm of law and society to a single system would require a theory that provides a fixed Archimedean point upon which thought and action could be secured.

For Perelman, this monistic approach neglects the practical nature of law and justice, which, in his view, contains a plurality of interpretation demanding dialectical and rhetorical reasoning. Perelman characterizes his view in the following: Philosophical pluralism demands a search for moderate, and thus well-balanced, solutions to all conflicts, which it considers nevertheless as unavoidable and recurring. Under the sign of reasonableness, pluralism does not claim to provide the perfect, unique and final solution, but simply human solutions— acceptable but capable of being changed and improved—to the ever-recurring problems created by the coexistence of men and groups, who prefer a

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<sup>426</sup> Aristotle, *Nicomachean Ethics*, Book 1, 1094b 12-23.

fair compromise to the coercion imposed in the name of a unique value, irrespective of how important or even pre-eminent that value may be.<sup>427</sup>

According to Perelman, It is in the realm of the reasonable that justification through rhetorical argumentation occurs—a practical realm where we must "justify an action, a kind of behavior, a disposition to act, a claim, a choice, a decision."<sup>428</sup>

Perelman emphasizes the importance of practical reason, that is, of finding good reasons arguments acceptable to the relevant audience—to justify interpretations, decisions, or action. Accordingly, every rational justification assumes that to reason is not only to demonstrate and calculate, it is also "to deliberate, to criticize, and to justify, to give reasons for and against—in a word, to argue."<sup>429</sup>

Perelman views questions of legal interpretation as not about the relation between judges and texts but between interpreters and their audiences. Applying the more embodied reasoner's standards in this rhetorical theory of law, the critic analyzes judicial opinions and legal reasoning not by measuring interpretations against texts or a set of formal rules, but by examining how interpreters justify meaning through nonformal argumentation within a given cultural setting.

The term "practical" is used to distinguish the mode of reasoning and the nature of judicial decision making. Unlike abstract or theoretical reasoning, judicial decision making

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<sup>427</sup> 185 Perelman, *Humanities* 71

<sup>428</sup> Perelman, *Tustice* 58.

<sup>429</sup> Chaim Perelman, "The New Rhetoric and the Rhetoricians: Remembrances and Comments," *Quarterly Tournal of Speech* 70 (1984): 193. Hereafter, "Remembrances." The quality of the audience is an important idea

involves action, that is, a response to a real life situation that is presented as an exigency before the Court. On this view, the reasoning and decision process is concrete and situational, which is most consonant with the view of embodied reason outlined.<sup>430</sup>

The freedom to decide a case is neither determined nor arbitrary. Instead, the jurist's freedom, as discussed previously, is situated, that is, it resides in a context involving not only the present but also the past and the future. Stewart and Mickunas state that, in situated freedom, one "does not become aware of his freedom through abstract thought or speculative argument; rather, he is aware of his freedom in the choices he makes and the actions he performs, for which he is totally responsible."<sup>431</sup>

Rejecting formalist and positivist approaches to law, Perelman emphasizes the importance of practical reason, that is, of finding good reasons-arguments to justify interpretations, decisions, or action. Accordingly, every rational justification assumes that to reason is not only to demonstrate and calculate, it is also "to deliberate, to criticize and refute; it is to give reasons for and against, in a word, to argue."

As Nussbaum points out, <sup>432</sup>"excellent choice cannot be captured in general rules, because it is a matter of fitting one's choice to the complex requirements of a concrete situation, taking all of its contextual features into account. This is precisely Merleau-Ponty's view, where concrete rationality must account for the particularities of a situation. First, concrete, practical reason takes the position that judicial decision making is timely

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<sup>430</sup> I find Aristotle's account of practical reasoning consonant with the view of rationality offered by Merleau-Ponty; the view I refer to as "embodied Reason." The central theme occurring in both perspectives is the emphasis on Concrete, situational judgment.

<sup>431</sup> Stewart and Mickunas 66.

<sup>432</sup> Toulmin, *Cosmopolis* 33

not timeless. The doctrine of legal precedent, however, assumes that rules made yesterday are appropriate for cases today. Philosopher Stephen Toulmin, addressing the characteristics of practical reasoning, contends that all problems in the practice of law and medicine are timely.<sup>433</sup>

Unlike mathematical rationality, which grasps necessary relations and which knows a priori certain self-evident and immutable truths, judicial decision making, conceived as embodied reason, situates it within the concrete realm of temporal and worldly affairs. On this view, the "case" is not abstracted from the social realm because to do so would strip it of its meaningfulness objects are meaningful only in relation to their context. Thus, the structure of relevance changes significantly when we shift from abstract reasoning to concrete, embodied reasoning. Embodied reason seeks to recover what abstract reasoning leaves out, namely, the realm of the opinion, interpretation, context and perspectives.

The claim that jurists vote according to their own subjective preferences neglects the contributions of inter subjectivity and history in shaping the jurist's perspective. From the perspective of embodied, situated reasoning, decisions are co-determined by the human subject and the world freedom is not the capacity for unlimited or unconstrained choice; rather, freedom is situated. On this view, decisions are constituted through the interplay of inner motives, preferences and desires, and outer institutional structures, conventions and norms. The Judges judge, but the judges themselves are judged. The people appeal to the judges for judgment, but they evaluate the judges according to the rightness or fitness of the decision to the circumstances. Justice must be enacted in the contingent situation of a legal proceeding, and laws are part of the common knowledge that can be drawn upon to

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<sup>433</sup> Nussbaum, *Love's Knowledge* 71.



achieve a just decision. Natural law are represented in the positive law as a general principles, doctrines, standards in this sense it is not totally possible the draw a strict line between positive and natural law, in connection with this it is also possible to say that division between legal extra-legal, and moral is very problematic.

Different jurists have underlined the mixed form of legal reasoning somewhat mixed way. For instance, according to Posner most of what judges do can be summarized as “practical reasoning.” He uses this term to describe “not a single analytic method or even a family of related methods,” but a “grab bag that includes anecdote, introspection, imagination, common sense, empathy, imputation of motives, speaker’s authority, metaphor, analogy, precedent, custom, memory, ‘experience,’ intuition, and induction . . .”<sup>434</sup> Once judges have used these methods to reach the result they think is most reasonable, he argues, they use things like logic and morality to justify the result. The overall result might be a decision that has great conceptual, logical, or moral power, but what makes it “law” is that it serves the needs of society or the parties. The rules that result from this process are justified not on the basis of community tradition or moral obligation, but on the basis of social and political utility.<sup>435</sup>

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#### LEGAL REASONING AS AN ANALOGY AND PATTERN RECOGNITION

Perhaps the best- known domain where analogy operates is legal reasoning. Attorneys shape legal argument by citing precedent, or prior judicial decisions, as law for the outcomes they seek. Norms of judicial decision making dictate that judges must use

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<sup>434</sup> (1990, 73).

<sup>435</sup> (1999, 273-80), 123-24)

prior judicial opinions to guide their reasoning in current disputes. The Latin phrase expressing the authoritative force of previous case law is *stare decisis*, literally “let the decision stand.” previous case law involves similar facts, litigants, and / or legal issues, judges adjudicating current disputes are bound to follow the rules and logic set forth in prior judicial pronouncements.

Analogy is not only a way that judges structure their decision making; it is also important to how they legitimize it. Deciding disputes in this manner ensures equal treatment of similarly situated litigants; and it helps to create expectations about the consequences of future behavior. Finally, analogy is important because it allows for the gradual evolution of doctrine based on the reasoned application of legal principles to new situations.

Case- based reasoning involves a complex form of analogical thinking where individuals reason between situations that share some features, but differ in respect to others. Judicial decision makers may disagree about which aspects of a situation are most important when choosing among analogical alternatives. Moreover, even if decision makers agree about which aspects of a situation are important, they may disagree about whether or not case features are actually similar across situations. Therefore, the decision to accept a proffered analogy when reasoning from case to case is largely interpretive.

In the domain of legal reasoning, the primary factor limiting motivated cognition is objective case similarity: the degree to which two cases share an identity of facts, parties, and legal issues. The role of preferences should be evident in a “middle range” of cases where there is ambiguity in deciding whether to accept a precedent as authoritative.

Attorneys routinely “argue in the alternative,” or emphasize different aspects of a case at different points in their argument, even if doing so seems inconsistent. The goal is to provide judges with as many legal grounds as possible to make a decision favorable to their client’s interests.

As Anthony Amsterdam and Jerome Bruner write, "where there be law, so too must there be categories. For law defines categorically the limits of the permissible or, more often, of the impermissible. Since human imagination cannot conceive of the full variety of possible transgressions, law requires a system of categories to reduce that variety." the ability to spot the factual and legal similarities and differences between the case under study and previous cases that may be relevant. This entails defining the universe of relevant cases, and deciding which ones match the current case most closely and which, although apparently similar, do not apply. In that way, the "analogical" reasoning so central to legal reasoning is really just "prototype search" by another name” "

It is possible to say that the laws themselves are schemas that influence us-they give us categories and schemas and create realities. Indeed, many of the most significant legal battles are related to disputes about whether a person or action or object falls into one or another category or whether the categories themselves are appropriate. These categories are the building blocks of the legal system and the categorical disputes are its life blood. The legal system is itself comprised of a set of schemas and scripts that build on and operationalize these categories.

According to the system of precedent, judges are not bound by all aspects of previous decisions. What is generally considered to be binding in any decision is the ratio

decidendi. This is the "statement of law applied to the legal problems raised by the facts as found upon which the decision is based."<sup>436</sup> is distinguished from obiter dicta, other judicial pronouncements on principles of law which, although potentially interesting and useful for later cases, are not ratio because they are not linked to the material facts and do not found the decision. The aspect of the decision which precedent defines as most persuasive is the part that relates law to the specific details of the problem placed before the judges. This encourages the judges to stay close to the details of the case.

The ratio decidendi of a case, and the role and place of that case in the system, is decided not by the judges in that case but by later judges who decide to use that decision: It is for the court which is later called on to consider the precedent to decide whether the precedent is "in point" or "distinguishable" and whether binding or persuasive, and what the ratio decidendi of the precedent is.<sup>437</sup> Distinguishing techniques allow judges to avoid some of the rigors of precedent while at the same time reinforcing its role as a dominant legal practice by focusing the attention of the judges on certain aspects of the decision. There are no rules that limit what techniques can be used but judges need to persuade others that their decision to distinguish is correct, otherwise their decision will be vulnerable to appeal. They can concentrate on either the facts or the law of the previous case. It should be noted that what is important is not the specific facts but the ways they are legally understand and the way they have been categorized and classified.

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<sup>436</sup> (Walker and Ward 1998, 61)

<sup>437</sup> (Marshall 1995, 117)

This is a temporal process where "past and present are constantly mediated"<sup>438</sup>. The analytical dogma that there is "a pure fact" of law - that jurisprudence has to do only with this pure fact, the law that is, and is not to go further and see why it is and how it is and what it does. It is possible to say that "pure fact" of law is an illusion - that we have always seen what is in the image of what ought to be, whether "the ought to" be was logical or political or ethical.<sup>439</sup>

This case is just one of many that placed great emphasis on the element of certainty in the law and the importance of adhering to precedents. It is undeniable the importance of adherence to precedents or stare decisis as being the everyday working rule of law, but mere adherence to precedents was not enough.

Another dimension that law like the other social sciences, should test the soundness of its conclusions: by the logic of probabilities rather than the logic of certainty...The victory is not for the partisan of an inflexible logic nor...all... precedent, but victory is for those who...fuse these two...together...to an end as yet imperfectly discerned.<sup>440</sup>

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<sup>438</sup> (1994, 290)

<sup>439</sup> Theory of Judicial Decision [article]

Harvard Law Review, Vol. 36, Issue 7 , pp. 802-825

Pound, Roscoe (Cited 8598 times)

36 Harv. L. Rev. 802 (1922-1923)

<sup>440</sup> Benjamin Cardozo, *The Growth of Law*, (New Haven: Yale University Press, 1924), pp. 33, 143, see also M. R. Cohen, "The Place of Logic in The Law," *Harvard Law Review*,

Volume 20 (1906-7) p. 629; Max Radin, *Law As Logic and*

*Experience*, (New Haven: Yale University Press, 1940) , p.

37, 163. Radin has observed:

"The law as experience is desperately aware of its logical insufficiencies.... "The law is not right reason, nor the means of a good life, nor the framework of society, nor the foundation of the world, nor the harmony of the spheres. It is a technique of administering a complicated social mechanism, so complicated that it reaches at some point almost any sphere of human conduct, but often only rarely reaches it. The technique can dispense with neither logic nor experience."

Those who believe law to be not an isolated island in vacuums but a province of the life we call civilization, occupying similar soil and subject to the same change of intellectual season as the other provinces.<sup>441</sup>

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#### LEGAL REASONING AS A HUNCH, INTUITION, ABDUCTION

Legal realists are usually characterized as "rule skeptics" and argue that legal interpretation is not a science.' theory has several confusing aspects that need clarification. One of the biggest element of confusion is the Legal Realists' use of terms. Terms such as hunch, feeling, values, personality, intuition, faculty, imagination and experience are used interchangeably. Therefore it is important to couch these terms in the proper place by referencing different disciplines. First, hunching and feeling appear to refer to the whole process of decision making which can be contrasted with rational decision making.

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<sup>441</sup> Place of Logic in the Law, The [article]

Harvard Law Review, Vol. 29, Issue 6 (April 1916), pp. 622-639

Cohen, Morris R. (Cited 1204 times)

The hunch suggests that it is a sign or indication that the decision makes sense even though the justification of the decision cannot be fully articulated or understood. It is a sudden experience of how the whole fits together or what decision makes sense. The post-hunch justification is a rationalization of this process that cannot fully capture the fullness of this experience. It is frequently criticized by legal realists and rule skeptics that the judge works backward from the hunch or 'from a desirable conclusion back to one or another of a stock of logical premises.' It can be also easily confused with motivated reasoning. As hunch can be considered with motivation or personal preference like ideological inclination or, deductive reasoning. Thus, the judicial hunch has a dual function of leading to and confirming the proper judicial decision.

The terms hunch, feeling, intuition, faculty, and imagination, however, imply many possible epistemological justifications of the hunch theory of judicial decision making. This section will explore three possible epistemological justifications of the hunch theory: intuitionism, moral sense theory, and pragmatism. William James's theory of pragmatism provides the best epistemological justification for the hunch theory. The Judgment Intuitive, he even describes and explicitly rejects the deductive prototype of judicial decision making suggested by this type of intuitionism.

The second type of intuitionism has some similarities to a moral sense theory of ethics. In both of these theories, an ethical decision maker becomes directly aware of the rightness or goodness of a particular action. Intuitionists claim that goodness is an unanalyzable or indefinable quality which must simply be apprehended.

In both of these cases, goodness or rightness refer to objective goodness and rightness. This quality is apprehended or perceived in the particular action to be taken and

not just a subjective feeling about that course of action itself. In other words, the right or correct decision is found not made. "Just judgment," "the just solution," "the hidden truth," and "justice. Consequently, in hard cases, judges would be required to scientifically test the consequences of alternative legal norms to resolve the doubt by determining the "one true conclusion" to the dispute.

James's cosmological theory of experience claims that our direct particular experience includes the conjunctive and disjunctive relations between things as well as the things themselves. The "parts of experience" are held together "by relations that are themselves part of experience." In other words, no "trans empirical connective support" holds the universe together."

James refers to this inclusive view of experience as the vast wholeness of experience or the fullness of experience. Also, pragmatism includes abstractions or theories in this wholeness of experience. Her only test of probable truth," according to James, "is what works best in the way of leading us, what fits every part of life best and combines with the collectivity of experience's demands, nothing being omitted."

Pragmatism, then, takes both logic and the external senses as valid experiences. James's pragmatic empiricism, includes all experience-physical and mental. James gave his pragmatic empiricism the name "radical empiricism" With the complexity of experience in radical empiricism, how does one make a practical decision about what the future will become? James says that we will recognize answers to practical problems as we do everything else, "by certain subjective marks." These subjective marks include "a strong feeling of ease, peace, and rest" and a transition from a puzzled or perplexed state to a state of rational comprehension. James calls these subjective marks the "Sentiment of



Rationality.'" He argues that we experience the justification of the decision and feel a lack of the need to justify or explain it, which he alternatively calls a feeling of the lack of irrationality.

The Sentiment of Rationality means that the decision agrees with our mind or fits with our past beliefs and anticipation of the future consequences. As with hunch, this agreement with the mind performs a leading and confirming function. Agreement, in its broadest sense, means to guide you to the point where the relations between things (ideas and external sense experience can be felt. Since it produces this easy feeling of rationality, however, agreement also means a confirmation or that there is agreement with that person's mind. Thus, the Sentiment of Rationality, like the hunch, is a sign that the decision fits with the past (facts of the case, precedents, statutes) and the future.] Ideas, including legal concepts and decisions, become true if they help make a satisfactory relationship to other parts of our experience. <sup>442</sup>

For an idea to be "true" means that it performs a marriage process-the new belief melds with our existing true (melded) beliefs-and that it produces the sentiment of rationality. Truth, according to James, happens to an idea. It is made true by its agreement with your mind. Consequently, for new theories or ideas to work, they "must mediate between all previous truths and certain new experiences" and produce the subjective marks of ease, peace, and rest<sup>443</sup>. Likewise, Hutcheson says that jural relations are created and constantly changed by the power of the brooding mind. The active, subjective process of brooding and hunching creates bridges for the judicial mind. Hutcheson goes so far as to

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<sup>442</sup> 91. JAMES, *Pragmatism*, supra note 82, at 145.

<sup>443</sup> 93. *Id.* at 167.

argue that the best chance for justice comes from the hunch. Truth, in James's sense, could be inserted for justice in the preceding sentence. The best chance for justice or truth comes from the hunch or sentiment of rationality because this method makes a decision based on the wholeness of experience.

Ratiocination reduces experience to try to fit it into predetermined categories. The fullness of the felt relationships in and between the facts of the case and the legal precedent are lost. This seems to be the "hidden truth" that is felt by the judge. Thus, Hutcheson seems to agree with James that true decisions are most likely to result when the fullness of experience, espoused by the doctrine of radical empiricism, is taken into account by the method of pragmatism.

Also, Hutcheson argues, and James would agree, that judicial opinions are just a rationalization of the experiential basis of the judge's decision." Thus, for both James and Hutcheson, the practical person (judge) takes life in its concrete fullness to feel a course of action, without necessarily being able to explain its relation to the whole of experience. What is its cash-value for an account of when judges are warranted in trusting their hunches? Without saying more, it might seem as if Hutcheson and James are proposing that a decision is justified merely by a feeling that it is rational.

For example, Chief Justice Rehnquist describes what happens after he has consulted all the available legal materials: Some of my best insights came not during my enforced thinking periods in my chambers, but while I was shaving in the morning, driving to work, or just walking from one place to another . . . allowing some time for the case to 'percolate' in my mind. . . . [Good thoughts about a case] might come in a chance conversation with a colleague; they might come some night while I was lying awake in bed; they might come

during oral argument. But once I had made myself sufficiently familiar with the case, come they inevitably did.<sup>444</sup>

Justice Schaeffer refers to Cardozo's notion of "mental peace" to describe this same phenomenon: So far as I am aware, decision with me has not turned upon the state of my digestion. And if I have reached my decision by means of a hunch, it has been a hunch with a long-delayed fuse, for I have often started confidently toward one conclusion, only to be checked and turned about by further study. . . .Cardozo has described an experience which I think is familiar to every I have gone through periods of uncertainty so great that I have sometimes said to myself, "I shall never be able to vote in this case one way or the other." Then, suddenly the fog has lifted. I have reached a stage of mental peace . . . [T]he judgment reached with so much pain has become the only possible conclusion, the antecedent doubts merged, and finally extinguished, in the calmness of conviction<sup>445</sup>.

Earlier, Justice Cardozo had described the same phenomena as "a semi intuitive apprehension of the pervading spirit of our law," which "must come to the rescue of the anxious judge, and tell him where to go".<sup>446</sup> He also referred to the judge's inevitable "dependence upon intuition or flashes of insight transcending and transforming the contributions of mere experience".<sup>447</sup>

The result of all this, Cardozo concludes, is a creative sensibility similar to that of scientists or artists, who go through periods of "incubation and illumination" when [w]e

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<sup>444</sup> (2001, 241).

<sup>445</sup> (2001, 115, quoting Cardozo 1928, 80-81)

<sup>446</sup> (1921, 43)

<sup>447</sup> (1924, 89-90; see also *ibid.*, 93 and 1921, 161-62).

gather together our principles and precedents and analogies, even at times our fictions, and summon them to yield the energy that will best attain the jural end. If our wand has the divining touch, it will seldom know in vain. So it is that the conclusion, however deliberate and labored, has often the aspect in the end of nothing but a lucky find. In the end, despite – or perhaps because of – the judge’s lifetime of education, training, and overall knowledge of the law, he is able “gather his wits, pluck up his courage, go forward one way or the other, and pray that he may be walking, not into ambush, morass, and darkness, but into safety, the open spaces, and the light”<sup>448</sup>

Abduction generates hypotheses and selects those worth considering. Deduction predicts the necessary consequences of the hypotheses selected. The facts themselves prompt us to seek a theory to explain them, which theory we can test inductively to determine if the facts are consistent with it. Abduction is also the form of inference that benefits most from other relevant or background knowledge. Because deductive reasoning is truth-preserving and analytical, any knowledge other than the premises is irrelevant.

In addition to explaining the role of abduction in logic, Pierce described its psychological aspects: "The abductive suggestion comes to us like a flash. It is an act of insight, although of extremely fallible insight." Holmes, Jr. held a view of legal reasoning similar to Peirce's view of abduction. Holmes viewed legal generalizations as heuristics that explained law by unifying diverse legal conceptions. A legal concept does not exist before its application to the facts of any given case. Rather, a legal concept begins as a

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<sup>448</sup> (1924, 59).

theory to explain the results of particular cases and is subject to modification in light of the facts of other cases.

Coherence-based reasoning follows on the heels of cognitive consistency theories. At the core of these approaches is the notion of structural dynamics, which captures the relationships between and within the cognitive structure and its constitutive parts.

A cognitive set is said to be coherent when all of its constituent elements share the same dynamic values and the elements of opposite characters have opposite values. Dynamic forces of coherence hold cognitive structures in position, whereas incoherence generates pressure for change. Complex tasks are, by nature, incoherent sets, which is what accounts for their initial difficulty. Although, as the decision maker works through the process, her mental representation of the task evolves naturally towards a state of coherence. The cognitive system imposes coherence on the attributes so that the subset of attributes that supports the emerging decision becomes stronger (even those attributes that at first seemed incorrect) and the opposite subset.

The effect of structural forces on the constitutive attributes means that a conclusion emerges from the integration of the attributes, but also that the emerging conclusion influences the individual attributes in return. Hence, the bi-directional nature of the process. In any investigative task, the process of inspecting the field of possible hypotheses to the single substantiated conclusion entails a conceptual problem. To determine the validity of a hypothesis, one needs to obtain evidence that supports or refutes it. Conversely, because it is impossible to seek and test the infinite amount of evidence that might have any bearing on the case, one needs a hypothesis in order to decide which evidence to test. Hence the circular nature of investigative reasoning: bi directional

evidence facts is necessary to test hypotheses, while hypotheses are necessary to decide which evidence to pursue. This dialectical tension makes the investigators task a most delicate cognitive endeavor. A form of bootstrapping, known as abductive reasoning, is probably the only feasible method suited for judicial reasoning.

Abductive reasoning is a recursive process of generating and testing hypotheses, geared toward eliminating invalid hypotheses and substantiating the correct one. While the evaluation of the information entails logical inference, the generation of hypotheses and decisions about which information to pursue require intuitive and conjectural thinking. Hence, investigative work is described not only as a science, but also as a craft, even an art. Performing this bootstrapping task correctly requires fine balancing. A lack of imagination like different hypotheses or possibly scenarios will generate too few hypotheses and thus stands to miss useful information.

Using situation sense to put the particular facts of the case into context. "Situation sense" refers to the ability to take a complex set of facts, identify the key relevant attributes, and understand their societal significance."<sup>449</sup> Having done this, the judge could approach the case as an example of a broader situation giving the peculiar facts of the case some weight but assessing them in regard to the broader implications of the case. As lelevant advised to judges, then, was simple: As you size up the facts, try to look first for a significant life-problem-situation into which they comfortably fit, and only then let the particular equities begin to register; so that when the particular equities do begin to bite, their bite is already tempered by the quest for and feel for an appropriate rule that flows

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<sup>449</sup> Karl N. Llewellyn, *The Common Law Tradition: Deciding Appeals*,

from and fits into the significant situation-type. After typifying the case appropriately, the judge could then decide the case, not by deductive logic, but by a less structured problem-solving process involving common sense, respect for precedent,' and an appreciation of society's needs.'" This process of decision, while not an exercise in formal logic, involved the use of reason. "Reason" in law work always implies more than reasoning; it implies also the use of Reason in choosing premises, which have a reason, and it implies in addition the use of Reason in judging the reasonableness of any outcome or any goal. "Reason" is thus the main guide and measure by which "experience" works its way into legal results, whereas "logic," in legal work, tends powerfully to take authoritative premises as given and to reason simply thence."<sup>450</sup> For some, this might seem an invitation to judicial subjectivity, but Llewellyn had confidence in the power of craft and tradition to guide the judge's decision.<sup>451</sup>

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<sup>450</sup> Llewellyn, *Jurisprudence* at 180 (cited in note 13).

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