

## DEVELOPING THE GRAMMAR OF MORAL LOGIC

*Abstract: In John Paul II's address before the General Assembly of the United Nations in 1995 he pointed to the critical importance of a universal 'moral logic' in human beings if our world is to move beyond the injustice and violence of the past to a more just and peaceful world. He also argued that the universal human rights movement confirms both a universal human nature and the cross-cultural reality of a universal moral logic in human beings. This essay focuses on four things: 1) The inadequacy of the narrow focus of modern secular cultures and education on the logic of scientific, technological and financial reasoning as the highest expressions of human rationality. This narrow view of human intelligence largely ignores the powerful cross-cultural presence and importance of a universal moral logic present in Catholic Social teaching, international law and the secular universal human rights movement. 2) The logical priority of universalizable moral reason over scientific and technological reason to the building of a more just and peaceful world. 3) The importance of moral reasoning research to the effective teaching of 'the grammar of moral logic' to individuals and communities around the world. This research was begun by Jean Piaget in France in the 1930s. It was then picked up and developed in dramatic new ways in the 1950s by Lawrence Kohlberg first at the University of Chicago and then with his colleagues at Harvard. This in turn leads to the work of J.R. Rest at the University of Minnesota and the important work of a number of other research psychologists, principally in the United States. 4) A presentation of the dramatic, measurable, and replicable gains in moral reasoning skills that can be achieved by constructing a pedagogy based on the insights of the moral development research.*

*Key words: Peace and justice, scientific & technological reason, moral reason, ethics, natural law, cognitive development, social learning theory, universal human rights, United Nations, the Social Doctrine of the Catholic Church, John Paul II, Jean Piaget, Lawrence Kohlberg, James R. Rest, Carol Gilligan.*

## HACIA UN DESARROLLO DE LA GRAMÁTICA DE LA LÓGICA MORAL

*Resumen: En su discurso pronunciado ante la Asamblea General de las Naciones Unidas en 1995, Juan Pablo II destacó la urgencia de una “lógica moral” universal con el fin de que nuestro mundo sustituya la injusticia y violencia del pasado por una realidad más justa y pacífica. También apuntó que el movimiento a favor de los derechos humanos universales confirma tanto la existencia de una naturaleza humana común como la realidad transcultural de una lógica moral universal en los seres humanos. Este artículo se centra en cuatro aspectos: 1) La insuficiencia de una concepción de la racionalidad humana, la propia de las culturas seculares modernas y de su modelo educativo, de acuerdo a la cual su expresión paradigmática es la lógica del razonamiento científico, tecnológico y mercantil. Esta estrechísima concepción de la inteligencia humana ignora ampliamente la importancia y presencia transcultural de una lógica moral universal que se manifiesta tanto en la enseñanza social católica como en el derecho internacional y el movimiento secular por los derechos humanos universales. 2) La prioridad lógica de una razón moral universalizable sobre la razón tecno-científica para la construcción de un mundo más justo y pacífico. 3) La importancia de la investigación sobre razonamiento moral para una enseñanza efectiva de la “gramática de la lógica moral” a individuos y comunidades de todo el mundo. Una investigación de esta índole fue iniciada por Jean Piaget en Francia durante los años treinta; retomada y desarrollada en direcciones radicalmente novedosas durante los años cincuenta por Lawrence Kohlberg, primero en la Universidad de Chicago y más tarde en Harvard; y proseguida por J. R. Rest en la Universidad de Minnesota y por otros prestigiosos psicólogos, principalmente en Estados Unidos. 4) Una presentación del incremento notable, medible y replicable de las habilidades en razonamiento moral adquiribles mediante el diseño de una pedagogía basada en los descubrimientos de la investigación en desarrollo moral.*

*Palabras clave: Carol Gilligan, derechos humanos universales, desarrollo cognitivo, Doctrina Social de la Iglesia, ética, James R. Rest, Jean Piaget, Juan Pablo II, Lawrence Kohlberg, ley natural, Naciones Unidas, paz y justicia, razón moral, razón tecno-científica, teoría del aprendizaje social.*

### I. INTRODUCTION

We live in a time of great promise and great peril. Our human ability to work together in cooperative ways and our scientific and technical genius has given us awesome power over our environment and destiny. We are able to communicate, travel, feed, shelter, heal, play and destroy on a scale which previous generations of human beings believed only the prerogative of the gods. Like the gods, we can create almost from nothing: The computer revolution —and the wealth and

power it has generated— is the product of a few ideas and some grains of sand. The cracking of the genetic code and the current revolution in genetics has now empowered human beings to intervene even at the most basic levels of biological development.

There is no question about the greatness of humankind in scientific and technical matters. There *is*, however, a serious question whether this “greatness” will result ultimately in our exaltation or our extinction as a species. As Harvard paleontologist Stephan Jay Gould noted in an interview in *Time*:

I think that... our prospects for survival are really not that great. People talk about human intelligence as the greatest adaptation in the history of the planet. It is an amazing and marvelous thing, but in evolutionary terms, it is as likely to do us in as to help us along.<sup>1</sup>

Gould’s comment focuses strictly upon the extraordinary adaptations of human intelligence characterized by developments in logic, mathematics, science, technology, commerce, and ends/means rationality. Each of these domains of human reason has its own unique sense of imperatives, but they are not the universal moral imperatives essential to human survival and well-being. The principal difficulty with modern scientific reasoning is that it is principally a descriptive enterprise. It continually advances its extraordinary knowledge of what is and what can be. But so long as the focus is strictly on the physical world it gives no insight into what should and should not be, into the universalizable principles, the moral imperatives, the moral wisdom necessary for a more just and peaceful world. Until this is sufficiently developed all our magnificent scientific discoveries may only result in the destruction of our species as well as many of the other life forms on our planet.

In this essay I shall argue that there is another dimension of the evolution of human intelligence that is far more important than scientific and technological knowledge. This is the development of human intelligence in the domain of universal moral reasoning. This rational capacity for moral reason is manifested in the universal human rights movement and the Universal Declaration of Human Rights by the U.N. in 1948.

Mary Ann Glendon gives us the historical context that makes the 1948 Universal Declaration of Human Rights such an unprecedented historical event.<sup>2</sup> She recalls an event from over 2 millennia ago recorded by the Greek Historian

1 May 14, 1990, p. 19.

2 Mary Ann Glendon, *A world made new: Eleanor Roosevelt and the universal declaration of human rights*, Random House, New York, 2001.

Thucydides. It encapsulates the narrow, egocentric concept of “justice” as solely a matter to be determined by the powerful, a way of thinking about “rights” that has been the direct cause of so much of the human misery and violence in our world.

In 416 B.C. as the Athenian navy prepared to invade the tiny island of Melos, its terrified inhabitants attempted to reason with the masters of the seas.

“The Athenians’ scornful rebuff has echoed down through the centuries. ‘You know as well as we do that right, as the world goes, is only in question between equals in power, while the strong do what they can and the weak suffer what they must.’”<sup>3</sup>

With the establishment of the United Nations, the Universal Declaration of Human Rights, developments in international law, and terror before the vast destructive capacities of modern weaponry, we have entered a new world where the rights of the weak are at last acquiring a voice across the globe, and occasionally even real protection. And it is highly significant that the areas of the world where human rights generally suffer the most violence are in nations with the least education and with the fewest opportunities for the development of the full range of human intelligence, both moral and scientific.<sup>4</sup>

Even in the modern, industrialized nations with an extensive educational infrastructure, the focus is severely deficient. One need only compare the vast commitments of time, energy, talent and money to educational and research programs focused on developing the human capacities for scientific, technical and commercial rationality and the miniscule commitment to educational and research programs focused on developing the natural human capacities of universalizable moral reason.

There are a multitude of reasons for this, not the least of them a deep skepticism about what education can really, measurably accomplish in the area of “moral reason”. John Paul II, in his encyclical *Fides et Ratio*, directly addresses the practical dangers of “this increasing distrust and lack of confidence in the existence of the great cognitive capacities of the human mind.”<sup>5</sup>

John Paul argues that the moral health of human civilization requires a restoration of faith in *right reason*, and a practical commitment to educating indi-

3 *Ibidem*, p. xv.

4 The horrific exception is the virtually unrestrained warfare waged in modern industrial societies on the most vulnerable and least powerful of all, unborn human beings, a terrible violence flowing from what the Jesuit moral theologian Richard McCormick has appropriately called “the racism of the adult”.

5 *Fides et Ratio*, 6.

viduals and communities into the culture of right reason that promotes universal justice and thus universal peace.

Glendon speaks of the clear awareness of the priority of culture over law in three of the principal authors of the Declaration: “Nobel Peace Prize laureate Rene Cassin, the legal genius of the Free French:” Lebanon’s Charles Malik, “existentialist philosopher turned master diplomat: Peng-chun Chang, “the Chinese philosopher, diplomat, and playwright who was adept at translating across cultural divides”.<sup>6</sup> Glendon notes that though the framers of the Declaration

“differed on many points, (they) were as one in their belief in the priority of culture. Rene Cassin, though a strong backer of international criminal law, wrote, ‘In the eyes of the Declaration’s authors, effective respect for human rights depends primarily and above all on the mentalities of individuals and social groups.’ Malik ... agreed. “Men, cultures and nations must mature inwardly,’ he wrote, ‘before there can be effective international machinery to adjudicate complaints about the violation of human rights.’ Chang, citing the Chinese proverb ‘Laws alone are not sufficient to bring about results by themselves,’ said the Declaration’s main goal was ‘to build up better human beings, and not merely to punish those who violate human rights.’”<sup>7</sup>

## II. HUMAN RATIONALITY

How we *rationaly* assess something depends upon our concept of reason. And the modern tendency is to understand “reason” simply in terms of logical consistency or of ends/means technical rationality. These are not sufficient measures of reasonableness.

Logical consistency is a matter of never straying from one’s premises, whether those premises are true or false, destructive or life giving. Technical (ends/means) rationality figures out the most effective way to achieve a given goal, without considering the worthiness of the goal.

Most of modern, secular education is built upon on this concept of “rationality.” Our education provides us tools for success in discovering new sources of energy, in business, or building computers, or winning in a court of law, or tracking and manipulating genes, and seldom on how to assess whether a given goal (end) or assumption (premise) is humanly worthwhile or morally appropriate.

6 Glendon (2001), p. xx.

7 *Ibidem*, p. 239.

The resources and energy dedicated to these educational goals are huge; those dedicated to the development of moral reason minimal.

This purely technical approach to rationality also fails to do justice to our deeper sense of what it means to be rational. History is filled with the bloody wreckage generated by a technical brilliance unregulated by the wisdom of universalizable moral reason.

If we look beyond the narrow conventions of our education and consult our own sense of ourselves, being rational has reference to:

“our capacity for foresight and the direction of our action by it. To be rational, instead of foolish or perverse, means to be capable of constraint by prevision of some future good or ill: to be amenable to the consideration, “You will be sorry if you don’t,” or “if you do.”<sup>8</sup>

This focus naturally emerges in ordinary personal experiences of the unreasonableness of a family member or close friend. We cry out: *How can he be so unreasonable!* This cry expresses a deeply human anguish and frustration with someone’s blindness to the terribly destructive effects of his choices both upon the good of self and others. This cry reflects a much broader and deeper human concern than mere logical consistency or technical competence.

Only when humans care about their own integrity and ultimate well-being, and recognize the unbreakable link between this well-being and the well-being of others, is *reasonableness* in this deeper sense able to function.

The American Pragmatist C.I. Lewis speaks of such concerns as the ground of the final and universal imperative:

‘Be consistent, in valuation and in thought and action.’ ‘Be concerned about yourself in future and on the whole.’ (It is this imperative) which is categorical. It requires no reason; being itself the expression of that which is the root of all reason; that in the absence of which there could be no reason of any sort or for anything.<sup>9</sup>

It is because we have goals, and recognize that some actions are consistent with their achievement and some are not, that logic is relevant to how we live our lives. The abstract procedures of formal logic ultimately derive their human

8 C. I. Lewis, *An analysis of knowledge and valuation*, Open Court, Chicago, 1962, p. 480. The philosophical phenomena of *American Pragmatism* is more diverse than is generally recognized. Pragmatists such as C.S. Pierce, William James, and George Herbert Mead have a more ontological and traditional perspective than thinkers like John Dewey or Richard Rorty.

9 *Ibidem*.

significance from concrete and highly personal issues of *fidelity* to our basic commitments and goals in life, our sense of *what is ultimately worthwhile*. To someone who has no loyalty or commitment to anything, the formal constraints of logic or of any imperative are meaningless. *The great practical significance of logical consistency is fidelity to what is ultimately important and worthwhile in life*. And it is these sorts of concerns that are the driving force behind the logical development of moral reasoning.

### III. MORAL REASON

Moral reason is normative reason. It is reasoning not about what is, but about what ought to be. In its broadest, most developed and inclusive sense, it empowers human beings and communities to relate to one another and solve social conflict nonviolently in harmony with principles of ‘natural’ or ‘universal human’ rights. This concept of ‘natural’ or ‘universal’ human rights is affirmed in three distinct but interrelated normative traditions:

- 1) The natural law tradition in Catholic Theology and Social Doctrine. In its classic form this position is represented by figures such as Aristotle and Aquinas. The modern expression of this tradition began with Leo XIII’s encyclical *Rerum Novarum* in 1892 on the rights of labor and continued its development in other papal encyclicals and in the pastoral letters on social issues of various Bishops Conferences around the world.<sup>10</sup>
- 2) The Anglo-American tradition of human rights. The United States Declaration of Independence and Bill of Rights are expressions of this tradition. It

“implicitly confers its highest priority on individual freedom and typically formulates rights without explicit mention of their limits or their relation to other rights or to responsibilities. The predominate image of the rights bearer, heavily influenced by Hobbes, Locke, and John Stuart Mill, is that of a self determining, self sufficient individual.”<sup>11</sup>

10 Pontifical Council for Justice and Peace, *Compendium of the social doctrine of the Church*, United States Conference of Catholic Bishops, Washington, D.C., 2004.

11 Glendon (2001), p. 227.

- 3) Dignitarian human rights tradition of Continental Europe and Latin America. The Universal Declaration of Human Rights affirmed by the United Nations in 1948 is an expression of this tradition.

“In these documents, rights bearers tend to be envisioned within families and communities; rights are formulated so as to make clear their limits and their relation to one another as well as to the responsibilities that belong to citizens and the state. As comparative political theorist Donald Kommers puts it: ‘One vision is partial to the city perceived as a private realm in which the individual is alone, isolated, and in competition with his fellows, while the other vision is partial to the city perceived as a public realm where individual and community are bound together in reciprocity.’”<sup>12</sup>

Each of these traditions of universal human rights is committed to a reasoned approach to morality. All apply the criteria of logical consistency, universalizability and impartiality as tests of the rational soundness of moral claims and the operative principles of social institutions. They all are founded upon the fundamental principle of the intrinsic dignity of the human person. This dignity accords to every individual, regardless of race, religion or national identity, certain natural or basic rights. These include the rights to life, liberty, and security of person, equality before the law, and inviolability of individual conscience.

Although the extended list of rights and duties varies within the classical tradition of natural law and modern statements of human rights, each list constitutes

“a way of sketching the outlines of the common good, the various aspects of individual well-being in community. What the reference to rights contributes is simply a pointed expression of what is implicit in the term ‘common good’, namely that each and everyone’s well being, in each of its basic aspects, must be considered and favored at all times by those responsible for co-coordinating the common life.”<sup>13</sup>

This emphasis on the central importance of the well being of the individual in community— and the individual rights and duties necessary to protect and foster that well being in its many different aspects— constitutes a defining characteristic of a universalizable morality. This is the case both within the classical natural law tradition and within the modern manifestos of human rights such as the Declaration of Independence and the 1948 Universal Declaration of Human Rights.

12 *Ibidem*.

13 J. Finis, *Natural law and natural rights*, Oxford University Press, Oxford, 1986, p. 214.



On October 4, 1995, at the 50<sup>th</sup> anniversary of the United Nations, Pope John Paul II addressed the General Assembly in New York. His theme was the universality of human rights and two important affirmations stand out: first that “the global character of the human rights movement... empirically confirmed that there is a universal human nature and a universal moral law” and second that there is a grammar of ‘moral logic’ in human beings. This ‘logic’ is the basis for genuine moral dialogue between individuals and peoples.<sup>14</sup> He argued, “If the world wants ‘a *century of violent coercion* to be succeeded by a *century of persuasion*,’ dialogue was imperative. And the ‘universal moral law written on the human heart is precisely (the) kind of *grammar* which is needed if the world is to engage this discussion of its future.’”<sup>15</sup>

John Paul’s affirmation of a universal moral logic at work both in the Church’s Social Doctrine and modern secular universal human rights movements identifies the important common ground critical to a fruitful dialogue between the Church and these largely secular movements. A strong case can be made that the moral differences between the Church and secular human rights movements are due to different metaphysical and ontological assumptions, not to differences in the moral grammar each uses rationally to validate normative positions.

#### IV. JEAN PIAGET AND THE BEGINNINGS OF COGNITIVE DEVELOPMENT RESEARCH

The Swiss Biologist/Psychologist Jean Piaget in the 1930s initiated the research uncovering the developmental pathways by which human beings acquire the grammar both of a universal scientific and a universal moral logic. To understand the orientation of the research it is critical to understand the strong connection drawn between the work of reason (whether scientific or moral) and the extraordinary capacity of human beings to interact and adapt to their environment (both physical and social) in life promoting ways.

Shortly after receiving his doctorate in biology from the University of Neuchatel, Piaget was employed at the Binet Laboratory in Paris to develop a standardized French version of certain reasoning tests.

“Although it is easy to think of Piaget’s work in psychology as beginning in Paris, in fact, his decision to go there matured over a period of some years. He had studied some psychology with the philosopher, Reymond, at the University

14 G. Weigel, *Witness to hope*, HarperCollins, New York, 1999, p. 774.

15 *Ibidem*.

of Neuchatel. After receiving his doctorate in science in 1918, with a dissertation on the mollusks of certain Swiss mountain valleys, he spent several months in the spring of 1919 in Zurich, where he studied some experimental psychology and some psychopathology. Nevertheless, up to this point his main exposure to the field had probably been his own reading and writing of an abstract system exploring the forms of equilibrium in the relation between the part and the whole... In the fall of 1919 he went to Paris, determined to combine psychological research with philosophical studies.

“Piaget, in his autobiographical sketch, has always emphasized the importance of the time he spent in the school for boys in the rue Grange-aux-Belles. It was there, in the laboratory left empty by the death of Alfred Binet... that he had the leisure to initiate himself in his future vocation as a psychologist, working almost alone under conditions of great freedom. One can imagine his days. He spent his mornings at the celebrated National Library of Paris, reading works of logic by Couturat and Boblot, just at the time that Bertrand Russell and Alfred North Whitehead were putting the finishing touches on the intellectual nonviolent explosion, *Principia Mathematica*. In the afternoons, the young Piaget began by devoting himself to carrying out Dr. Simon’s suggestion that he standardize the French version of certain tests of reasoning. Piaget could not restrain his intellectual curiosity from leading him where he really wanted to go.

“Instead of administering the tests in a standardized way, he interviewed the children at length. The children did not complain. They found this ‘M’sieu’ amusing. With him, one was not bored at all. Instead of simply noting the responses given by the children to the test items, the young Swiss biologist was interested in the how and the why of the answers. What had been at the outset nothing but a boring and annoying test situation became a real dialogue with suggestions and counter suggestions, an argument developed, a deepening of the child’s thought, a new method of interrogating children was born. It leads the child to show how he formulates and solves a problem, how he thinks.”<sup>16</sup>

Piaget’s training in biology strongly influenced all his work in psychology. His research on mollusks reflected his interest in the processes of adaptation required for organisms to survive environmental change. In his own work he examined the processes of adaptation, which occurred when fresh water currents carried mollusks from shallow regions in a mountain lake to regions of great depth. He also carried out studies on the reverse process, how mollusks dredged up from the bottom of deep mountain lakes adapted to conditions in a shallow aquarium. This

16 *The Essential Piaget*, H. E. Gruber, J. J. Voneche, Eds., Basic Books, New York, 1977, p. 53.

focus on how the organism successfully adapts to changes in the environment (both physical and social) is the dominant concern in his studies on the development of human intelligence.

The study of biology reveals *the complex systems* by means of which organisms adapt effectively to their environment. The human body, for example, is not simply a collection of parts, but a system. Thus there is not simply a stomach, nerve endings, brain, heart and lungs, but a digestive system, a nervous system, a cardio-vascular system, etc., whose integration constitute *the life system* of a human being.

Piaget believed that this process of developing complex systems to sustain and promote life in complex environments reaches its highest expression in the development of intelligence. *Here the focus is on the transformation of consciousness rather than on changes in an identifiable organic structure.*

“In Piaget’s theory, (cognitive) development is clearly related to ... the human mind’s tendency to systematize its processes into coherent systems and adapt those systems to changing environmental stimuli. The mind does not simply absorb discrete data that it happens to encounter as the human organism interacts with its environment. Rather the mind ‘seeks’ to organize itself. It seeks from the environment specifically relevant information that it can ‘use’ to ‘construct’ a system of order that makes sense of, and thereby enhances interaction with the world.”<sup>17</sup>

The empirical research on the development of human intelligence both in the descriptive and normative domains is extensive and complicated. As usual, there are often strong disagreements among different researchers. But there is general agreement as to the isomorphic character of the developmental progression both in scientific and moral thinking.

The defining features of the development of intelligence are increasing abstractness/inclusion, differentiation, and logical integration. This development empowers the mind with methodologies and concepts that generate unified/inclusive understandings of an ever-increasing range of concrete phenomena. Abstractness in this sense is not cutting things away. It is more inclusive reasoning, reason increasingly able to bring more and more things together. This is one of the most powerful drives of reason, to find ways to connect things that had previously been thought disconnected. And it is one of the remarkable achievements of cognitive development research to have documented the striking formal

17 J. Reimer, D.P. Paolitto, R.H. Hersh, *Promoting moral growth*, Longman, New York, 1979, pp. 23-24.

analogies between the development of human intelligence in descriptive scientific thinking and in moral reason.

At the highest levels of cognitive development the human being develops capacities for what Piaget has called formal operations. Formal operations achieve understanding first through conceptual analysis independent of hands on manipulations, and then tests conclusions through physical manipulations.

“Formal operations, then, mark the ability to reason in terms of formal abstractions, to perform ‘operations on operations’. Once a child understands that objects can be classified by logically formal criteria—that nations can be understood in terms of their form of government and molecules by their chemical formulas—the child can begin systematically to compare and contrast various objects by these criteria. In addition, the given can be seen in relation to other hypothetical possibilities. Thus the author’s ending a short story in a certain way can be seen against the possibility of his having chosen other plausible endings.”<sup>18</sup>

## V. COGNITIVE STAGES

This process of development occurs through a sequence of cognitive stages. A cognitive stage is a psychological structure that gives meaning and structure to experience and functions in a generalized way to select and organize information. Human learning about the world is dependent upon the mind’s construction of these mediating cognitive structures. An individual using these structures usually is not aware of them; they work in the background. But these psychological structures make meaningful human experience possible. And as these psychological structures change, the meaning of human experience changes. Apart from them what comes pouring in through the senses is neither intelligible nor useable. To put it in Kantian terms, sensory input without a cognitive stage is meaningless, and a cognitive stage without sensory input is empty.

The process is not determined from outside. Each person mentally constructs these stages for himself. “And it is what the child brings to the world that makes this growth possible, but the child himself must accomplish it through his own activity.”<sup>19</sup>

18 Reimer (1983), p. 8.

19 Piaget (1977), p. xxxv.

Using remarkable ingenuity Piaget dialogued with the children and set up various experimental situations with physical things to reveal how they organize their thinking, how they interpreted what they were seeing, and what they used as criteria of relevance in their thinking.

Though there is debate on the exact nature of cognitive stages,<sup>20</sup> how they function in the development of human intelligence, and exactly how movement occurs from a lower to a higher stage, there is considerable agreement, based on the huge quantities of empirical data generated over the past 80 years, that

“the acquisition of cognitive structures is gradual rather than abrupt: acquisition is not an all-or-nothing matter but is better depicted as a gradual increase in the probability of occurrence.”<sup>21</sup>

The epistemology reminds a philosopher of Kant. But Kant believed that the mental structures or schema giving intelligibility and meaning to experience were *a priori*, fixed, and the same for every human being. Piaget’s empirical research revealed that they are not fixed, but that they develop over time in identifiable and predictable ways.

What is truly remarkable is the isomorphism between the slow stage-by-stage sequential development of these functional cognitive systems in the mind and the sequential development of functional biological systems of the body. Both proceed from the simple to the complex, both enlarge the capacity of the individual to adapt to and interact with the diverse features of its environment in life assimilating and life-giving ways.

The developmental direction of these cognitive structures is just as predictable and universal for human beings as are the stages of anatomical development of the individual members of a species. Just as the human body universally develops biological systems in a predictable and orderly sequence, so the human mind develops its cognitive schema for understanding both the physical and social worlds in a predictable and orderly sequence.

Aristotle speaks of knowing the universal in a clearly known particular. A particular example of cognitive development that powerfully illustrates this developmental process is the stage construct of *the permanence of objects* in the mind of an infant. It is quite an astonishing and marvelous thing when one observes carefully and thinks about everything that the mind of an infant must accomplish for this to happen.

20 J. Rest, D. Narváez, M.J. Bebeau, S. J. Thoma, *Postconventional moral thinking: A Neo-Kohlbergian Approach*, Psychology Press, New York, 1999, p. 17.

21 Rest (1983), p. 586.

The process is complicated, takes much time, and involves many mediating stages. Piaget describes it all in remarkable precision and detail. It is not usually achieved until the age of 9 or 10 months.<sup>22</sup> The process illustrates the basic pattern of cognitive development from solipsistic or egocentric perception of images to increasingly differentiated and logically integrated systems of thought for understanding the external world both as separate from the self and yet inextricably connected with it.

The initial focus of an infant's consciousness is restricted to immediate sensory experience. An infant reaches only for what is tangibly present. If the object is placed "out of sight," for example, behind a parent's back, then it is literally "out of mind" and the infant no longer makes any effort to interact with it. It is as though it had ceased to exist.

A dramatic expansion of the infant's cognitive outreach occurs when he continues to seek for an object that has been hidden. When this occurs the mind of the infant has achieved the cognitive stage that mediates awareness of "the permanence of objects". This allows interaction with a much wider and more diverse world. *The infant now interacts not only with what is immediately perceived but also with realities not directly perceivable.*

The universal sequence of internal logical development eventually transforms the child's thinking into adult thinking. At its highest developmental level of thinking about the physical world this process results in the logico-mathematical stages. This is the cognitive schema of the research scientist. In the development of thinking about the social world, the highest levels are manifested in the moral categories and logically systematic thinking manifested in philosophical ethics and universal human rights documents.

The cognitive stages are hierarchical integrations. They do not "throw away" the elements of an earlier stage. They integrate the earlier stage into a more complex, differentiated and logically integrated whole. This is also what determines the predictability of the sequence. The simpler elements come first and subsequent more complex and abstract/inclusive structures gradually build out from them.

Cognitive development in relation to the physical world precedes cognitive development in relation to the social world. The highest levels of mathematical and scientific reasoning can be achieved at a much earlier age than sophistication in moral thinking. This is why the cult of youth and scientific development

22 Piaget (1977), pp. 250-272.

impatient with and disengaged from the intellectual disciplines that foster moral wisdom can be so utterly destructive.

While most of Piaget's work focused on the development of human intelligence in relation to the physical world, he also did important work on an analogous developmental process of human intelligence in relation to the social world. Just as the highest levels of thinking about the physical world culminate in the logico-mathematical thinking of the research scientist, the cognitive developmental process of human intelligence in relation to the social world culminates in the concepts of justice characteristic of the highest levels of ethical thought.

In 1932 Piaget published his still seminal work, *The Moral Judgment of the Child*.

"Piaget did not propose to provide a detailed description of moral judgment but rather intended to outline an alternative to Durkheim's impressive and important view. Durkheim had emphasized the influence of society in shaping the behavior of individuals to conform to social norms and viewed moral development as essentially instilling respect for the social group in each individual so that each member of the group would accept its discipline and abide by its rules. It is useful to regard Piaget's book as a counterargument to Durkheim: Piaget cites Durkheim on the first page, makes more references to Durkheim than to any other person, and repeatedly comes back to make further arguments against him. Piaget does not dispute that morality *begins* in the child as learning social norms, and he agrees with Durkheim with regard to the young child. Society in general and socialization agents in particular command the child to act in certain ways; morality at this stage is essentially conformity to social prescriptions and proscriptions. Piaget's main thrust, however, is to depict the limitations of this kind of morality and to contend that as the child develops, a general understanding of the social world develops (in particular, an understanding of the possibilities and conditions of cooperation) and the fundamental nature of morality changes. There is not one morality, but two. There is the morality of constraint and, later, as cognitive development proceeds, the morality of cooperation. The dynamics and organizing principles of these two moralities are different. For the purposes of arguing with Durkheim it was not necessary for Piaget to give a detailed description of the course of development nor to define tightly unified stages; it was only necessary that he build a case that all morality is not 'imposed by the group upon the individual and by the adult upon the child'."<sup>23</sup>

23 J.R. Rest, in *Handbook of Child Psychology, P.H. Mussen, Ed., 4<sup>th</sup> Ed., Vol. III, Cognitive Development*, J.H. Flavell, E.M. Markman, Eds., John Wiley & Sons, New York, 1983, p. 571.

## VI. LAWRENCE KOHLBERG &amp; THE HARVARD GROUP

Piaget's work was largely ignored in the United States until the 1950s. The dominant approaches in psychology were behaviorist theories of socialization. Durkheim's claim that moral development was simply learning behaviorally to adapt to the norms of one's culture was accepted as a self-evident social principle. The dominant behaviorist assumptions made the study of all cognition suspect, especially moral cognition.

Kohlberg brought the results of Piaget's research to the attention of American research psychologists.<sup>24</sup> Gradually the primary focus shifted to the more balanced perspective of internal processes of cognitive development as it assimilates or makes accommodations to concrete experience.<sup>25</sup> For Kohlberg as for Piaget,

“science or cognition as well as morality develop through a reflective equilibrium between ‘principles’ and concrete experience. Stages represent ‘theories’ or principles within which facts or concrete experiences are interpreted or to which they are assimilated. Experience can only be stretched so far so that a theory may assimilate it; eventually an inadequate theory or stage will be caught in contradiction, and the individual will then generate a new principle or theory to accommodate the experience. *Stages, then, represent equilibrium points in the successive revision of principles and concrete experiences in relation to one another.*”<sup>26</sup>

Fundamental to Kohlberg's methodology is the integration of “philosophical principles with empirical psychological findings.”<sup>27</sup> His critical philosophical perspective laid bare the flawed epistemology of *logical positivism* or *behaviorism* in American psychology.

“The critical defect of this epistemology for child psychology was that it did not allow the psychologist to think about cognitive processes as involving knowledge. The critical category of the stimulus-response (S-R) approach was

24 J. R. Rest & D. Narvaez, eds., *Moral development in the professions*, Lawrence Erlbaum, Hillsdale, 1994, p. 2.

25 *Ibidem*, pp. 2-4.

26 L. Kohlberg, *Essays on moral development, Vol I., The philosophy of moral development* Harper & Row, San Francisco, 1981, p. 193, emphasis mine. Kohlberg's other two principle works on moral development are: *Vol. II, The psychology of moral development*, Harper & Row, San Francisco, 1984, and C. Power, A. Higgins, and L. Kohlberg, *Lawrence Kohlberg's approach to moral education*, Columbia University Press, New York, 1989. All of these important works are now out of print. An important and early critical review of Kohlberg's work is S. Modgil, and C. Modgil, Eds, *Lawrence Kohlberg: Consensus and controversy*, Philadelphia, Parmer Press, 1986.

27 *Ibidem*, p. 97.



“learning” not “knowing,” where the concept of “learning” did not imply “knowing”. Accordingly, S-R theory assumes that the process of learning truths is the same as the process of learning lies or illusions. It explains the learning of logical operations or “truths” in terms of the same processes as those involved in learning a social dance step (which is cognitively neutral) or in “learning” a psychosis or a pattern of maze errors (which are cognitively erroneous).

“To study cognition, one must have some concept of knowledge in terms of which children’s development is observed. Piaget’s fundamental contribution to developmental psychology has been to observe children’s development in terms of the categories (space, time causality, and so on) that philosophers have deemed central to knowing. The fact that the cognitive categories of the philosopher are central for understanding the behavior development of the child is so apparent, once pointed out, that one recognizes that it is only the peculiar epistemology of the positivistic behaviorist that could have obscured it.

“In my own area, moral development, the epistemological blinders psychologists have worn have hidden from them the fact that the concept of morality is itself a philosophical (ethical) rather than a behavioral concept... One can be pluralist as to philosophic concepts and arrive at the same research conclusions: Piaget need not have an ultimately correct concept of causality, as a philosophic category, to conduct valid research on the empirical development of causal concepts. Similarly, whether one starts from Kant, Mill, Hare, Ross, or Rawls in defining morality, one gets similar research results. Although philosophic concepts of morality differ from one another, their differences are minor compared with the differences between almost any philosophic concept of morality and such psychological concepts as ‘Conscience is a conditioned avoidance reaction to certain classes of acts or situations’ (Eysenck, 1961) or ‘Moral values are evaluations of actions believed by members of a given society to be right.’ (Berkowitz, 1964).”<sup>28</sup>

Like Piaget, Kohlberg relied on an interview technique to probe beneath specific answers to reach the fundamental assumptions and logical structures behind those answers. Like Piaget he sought the deep cognitive structures enabling individuals to construct a representation of reality and meaning. Kohlberg became convinced, after decades of careful theoretical and empirical work built on Piagetean foundations

28 *Ibidem*, pp. 101-103.

“that the stages are like steps on a staircase and that people advance developmentally by going up the staircase one step at a time, without skipping any steps, and always in the same order.”<sup>29</sup>

He developed a standardized technique called The Moral Judgment Interview (MJJI). The interviews involved several hypothetical moral dilemmas and used stories such as the Heinz dilemma to probe for the logical structure generating a subject’s specific answer to a question.

“The basic story about Heinz ... is that Heinz’s wife is dying of cancer and needs a drug that an enterprising druggist has invented. The druggist demands such a high price that Heinz cannot raise the money. Heinz’s dilemma, then, is whether or not to steal the drug to save his dying wife.”<sup>30</sup>

Kohlberg carried out a 20-year longitudinal study that began in 1955 at the University of Chicago with 75 Chicago working-class and middle-class males ranging in ages from 10 to 16. The subjects were re-interviewed every three years with the MJJI. Each interview asked subjects to resolve the same nine hypothetical dilemmas including the Heinz dilemma.<sup>31</sup>

## VII. THE THREE COMPONENTS OF MORAL JUDGMENT

There are three basic elements, which determine the stage of an individual’s moral reasoning: 1) the logical stage, 2) the stage of socio-moral perspective taking, and 3) the stage of justice operations.

“Moral judgment, however, is not simply logical reasoning applied to moral problems. In the first place, moral judgment involves role-taking, taking the point of view of others conceived as *subjects* and coordinating those points of view, whereas logic involves only coordinating points of view with respect to *objects*. Secondly, moral judgment, unlike logical reasoning, rests upon principles of justice or fairness. Moral development consists in the gradual equilibration of role-taking structures and principles of justice. Following Kant and other formalists, we have argued at length elsewhere that rational moral judgments must be universalizable, consistent, and reversible. Each higher moral stage meets these formal conditions better than its predecessor by virtue of being

29 J.R. Rest, *Moral development in the professions*, J.R. Rest & Darcia Narvaez, Eds., Lawrence Erlbaum, Hillsdale, 1994, p. 3.

30 <sup>23</sup>*Ibidem*, p. 4.

31 A. Colby, L. Kohlberg, J. Gibss, & M. Liebermann, A longitudinal study of moral judgment. *Monographs of the Society for Research in Child Development*, 48 (1-2, Serial N°. 200), 1983.

a more equilibrated role-taking structure and a more equilibrated principle of justice.”<sup>32</sup>

## VIII. THE TASK OF INSTRUMENTATION: THE MORAL JUDGMENT INTERVIEW (MJI) AND THE SCORING MANUAL

Critical to the empirical validation of Kohlberg’s theory was the process of instrumentation, developing a reliable methodology for measuring the constructs, in this case, the construct of 5 qualitatively distinct universal moral stages present in all human cultures and claimed to develop in an invariant sequence.

As Rest notes, “The hallmark of social science is not only to propose ideas, but also to have ways for systematically putting those ideas to empirical test.”<sup>33</sup>

“If people are said to have some characteristic, then how are we to know which people have which characteristic and to what extent? The psychologist needs to specify some method of systematic collection of information, of converting that information into data categories used for analysis, of drawing inferences from that data, and of claiming that the procedure thus employed is reliable and valid.”<sup>34</sup>

It took decades of labor on the part of the Kohlberg group at Harvard to complete the task of instrumentation. Developing the definitions and analytical methods necessary for different trained scorers reliably to reach the same conclusion on the specific stage level of the free flowing interview material generated by the MJI was a herculean task. The scorer on an MJI must take the subjects comments and match what they say on the scoring manual. The complexity of the task is reflected in the fact that when a rater scores a complete interview “typically about 50 matches are found between the subject’s responses and the manual’s examples.”<sup>35</sup>

When the final version of the 800 page two Volume MJI scoring manual was finally published in 1987 it achieved the highest levels of psychological test validity and inter-scorer reliability.<sup>36</sup>

32 Kohlberg (1981), p. 201.

33 Rest (1994), p. 10.

34 Rest (1994), p. 11.

35 *Ibidem*, p. 11.

36 A. Colby, L. Kohlberg et al., *The measurement of moral judgment* (Vols. 1-2), Cambridge University Press, New York, 1987.

“The goal was to develop a method of logical analysis of people’s moral thinking that captured its grammar, analogous to Chomsky’s (1957) grammar of language. The hope was that the fundamental categories and logical operations of people’s moral thinking could be described and these descriptions would be valid for all dilemmas and for all kinds of spoken or written material, not just for responses to the Heinz story and company.”<sup>37</sup>

The data generated by the 20-year longitudinal study and published in 1983 all came in consistent with Kohlberg’s theory. Moral reasoning in all the subjects developed in an invariant 5 stage sequence. The most important evidence of the invariant sequence was “that after every three year interval the subjects were either at the same stage or the next higher stage.”<sup>38</sup> There was no evidence of any one skipping one of the 5 steps in the ascending staircase. The research also confirmed that the moral stages are generalized structured wholes “in the sense that individuals reason at the same stage or, at most, one stage higher or lower, regardless of the verbal dilemma they confront.”<sup>39</sup>

The manual achieved remarkable standards in interrater reliability in the scoring of specific moral stages and impressive internal consistency of scores. Between “67% and 72% of the scores were at one stage and only 1% to 3% of the scores were spread further than two adjacent stages.”<sup>40</sup>

The research also demonstrated the slow pace at which moral development proceeds. It is not easy to change a cognitive stage. Over the 20 year study the average movement of individuals was only 2 stages.

Kohlberg’s theory of moral development moved far beyond Piaget’s preliminary investigations. Piaget focused only on two stages of moral judgment, constraint and moral cooperation. Kohlberg theory initially proposed three different levels of moral judgment and two stages in each level (a total of six stages). Stage 1 embodies the morality of constraint. All the successive stages move into increasingly broad and inclusive moralities of cooperation.

In his original statement of the theory Kohlberg names 6 stages of moral development. Since he found no traces of Stage 6 in his 20-year longitudinal study, and has only found evidence of it in individuals with high levels of philosophical education, Stage 6 is not included in the scoring manual.

37 J.R. Rest (1983), p. 581.

38 *Ibidem*, p. 257.

39 *Ibidem*.

40 Rest (1986), p. 583.

IX. TWO LEVELS AND SIX MORAL STAGES<sup>41</sup>

## Level I: Preconventional

This is the level of egocentric thinking before group ways and social conventions are understood and accepted.

*Stage 1: Egoistic Punishment & Obedience Orientation.*

“The physical consequences of action determine its goodness or badness regardless of the human meaning or value of these consequences.”

*Stage 2: Egoistic Instrumental Relativist Orientation.*

“Elements of fairness, reciprocity, and equal sharing are present, but they are always interpreted in a physical, pragmatic way. Reciprocity is a matter of ‘You scratch my back and I’ll scratch yours.’”

## Level II: Conventional

“At this level, maintaining the expectations of the individual’s family, group, or nation is perceived as valuable in its own right, regardless of immediate and obvious consequences. The attitude is not only one of conformity to personal expectations and social order, but of loyalty to it, of actively maintaining, supporting and justifying the order and of identifying with the people or group involved in it.”

*Stage 3: The Interpersonal Concordance or ‘Good Boy-Nice Girl’ Orientation.*

“Good behavior is that which pleases or helps others and is approved by them. There is much conformity to stereotypical images of what is majority or ‘natural’ behavior.”

*Stage 4: Social System Maintaining Orientation.*

There is an orientation towards laws, “authority, fixed rules ... and maintaining the social order for its own sake.”

41 Kohlberg (1981), pp. 17-18. For a more recent critique of Kohlberg, see J.C. Gibbs, *Moral development & reality: Beyond the theories of Kohlberg and Hoffman*, Sage Publications, Thousand Oaks, CA, 2003.

### Level III: Postconventional, Autonomous, or Principled Level.

“At this level, there is a clear effort to define moral values and principles that have validity apart from the authority of the groups or people holding these principles and apart from the individual’s own identification with these groups.”

#### Stage 5: The Social Contract Orientation.

“Right action tends to be defined in terms of standards that have been critically examined and agreed to by the whole society. There is a clear awareness of the relativism of personal values and opinions and a corresponding emphasis on procedural rules for reaching consensus. Aside from what is constitutionally and democratically agreed on, the right is a matter of personal ‘values’ and ‘opinion’. The result is an emphasis on the ‘legal point of view,’ but with an emphasis on the possibility of changing law in terms of rational considerations of social utility (rather than freezing it in terms of Stage 4 ‘law and order’).”

#### Stage 6: The Universal Ethical Principle Orientation.

“Right is defined by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality, and consistency. These principles are abstract and ethical (the Golden Rule, Kant’s Categorical Imperative); they are not concrete moral rules such as the Ten Commandments. At heart these are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individuals.”

As one ascends these steps in the staircase of developmental stages each new stage is more abstract/inclusive, differentiated, and logically integrated than the previous stage.

“Kohlberg accepted the same rationale as Piaget for claiming that stages are sequenced as they are: namely, that simple stages precede complex ones in a logical sequence. According to this, at first the most salient aspect of a situation and the most easily understood concepts —those that are simplest— become problem-solving strategies. Then as new considerations are seen as relevant and as new complexities and subtleties are appreciated, people change their moral problem-solving strategies. Each new stage is an elaboration of the previous one —which is what fixes the sequence of the stages.”<sup>42</sup>

42 Rest (1994), pp. 4-5.

The progression to more abstract/inclusive structures of thought in moral development is clearly manifested in the movement through the three Levels of moral reason. The development moves in ever expanding and more inclusive circles, beginning with the egocentrism of Level I, moving to the group perspectives of Level II, and finally ascending to the universal rational-moral perspective of Level III.

The increasing differentiation is manifested in the development of clear distinctions between persons and things, facts and values, personal or group preferences and universal obligations, normative and descriptive claims, valid and invalid moral arguments, the legal and the moral, procedural and substantive justice, and the host of distinctions employed in moral reasoning at the post-conventional level.

The integrations are hierarchical in that the basic elements of the lower stages are not abandoned but included in the higher stages. Thus the Postconventional Level does not leave behind concern for the individual or the group, but integrates both in a logically coherent understanding of the important relation between the individual and the community in a doctrine of universal human rights. Another illustration of hierarchical integration is the logical priority given persons over things.

The recognition of the necessary logical connection between rights and duties in any coherent system of universal rights is but one of many logical integrations in Postconventional moral systems. Another is the necessary interrelation of political and economic rights in any coherent doctrine of universal human rights.

The Universal Declaration of Human Rights powerfully illustrates all of the above features of Postconventional or "Principled Moral Reason."

## X. STRENGTHS & LIMITATIONS OF THE MJJ

The achievement of the Kohlberg Group at Harvard is remarkable. But the complexity of the interface between the Moral Judgment Interview and the 800 page 2 volume scoring manual makes using it with large studies impractical.

Although the data Kohlberg generated from his small sample of Chicago males was impressive, it scarcely provided evidence for the cross-cultural validity of his theory of moral development. And while his methodology generated remarkable fine-drawn descriptions of the moral stage development of these Chicago males, it was not a methodology well suited to generating large-scale studies around the world.

Was it really possible to reduce the basic strategies for moral problem solving in every culture, everywhere in the world, to only five?<sup>43</sup> And would these five cognitive schemas always proceed in the invariant sequence demonstrated by the small group of Chicago males in Kohlberg's 20-year longitudinal study?

On the face of it, Kohlberg's thesis seems most improbable, until one recalls the roots of his theory in the work of the Swiss Biologist/Psychologist Jean Piaget. What if this isomorphism between stages of cognitive development in science and morality is grounded not just in logical form but also in biology, and the remarkable capacities of living creatures to develop complex and interdependent systems between conception and organic maturity?

A biologist can study the stages of biological development in a very few individuals within a given species, and from that very limited data draw conclusions that prove true of virtually every individual member of the species. Could the isomorphic relation of biological and moral development also run that deep?

Kohlberg's theory and data were suggestive but the complexity of the MJJ and the limited empirical data it generated restricted its usefulness. These limitations were largely overcome by James Rest's Defining Issues Test (DIT).

## XI. JAMES R. REST AND THE DEFINING ISSUES TEST (DIT)

In 1979, 8 years prior to the publication of the Scoring Manual for the MJJ in 1987, James Rest at the University of Minnesota published the Defining Issues Test (DIT). Though based on Kohlberg's stages of moral development, it is a different kind of moral reasoning test than the MJJ. There is now a new version of the DIT.<sup>44</sup>

The DIT is a standardized multiple choice test that can be administered to large groups by a single person in about 15 minutes. It can also be machine scored. It has achieved very high levels of reliability and validity as a measure of moral judgment.<sup>45</sup>

43 Kohlberg dropped Stage 6 from the scoring manual (but not from his theory) because it was found only among trained philosophers.

44 Rest (1999), p. 16.

45 J.R. Rest, *Moral Development: Advances in research and theory*, New York, Praeger, 1986. More information on the DIT is available from the Center for the Study of Ethical Development, University of Minnesota, 178 Pillsbury Drive, Minneapolis, MN, USA, 55455.



“In the DIT, a subject is first presented with a moral dilemma (some of the same moral dilemmas in the MJI are used in the DIT, such as the Heinz dilemma). However, the subject’s task is not to produce reasons for a particular line of action (e.g., to argue why Heinz should steal or not steal the drug). The task is to evaluate (among 12 items given to the subject) those items that raise the most important considerations for deciding the case. The subject is asked to rate the relative importance of each item on a five point scale (from *great importance* to *no importance*), and then to rank which of the 12 items is the most important, the second most important, and so on. The assumption is that people define the most important issue of a dilemma in different ways, and that the selection of items indicates a person’s developmental level.”<sup>46</sup>

“The most frequently used score from the DIT is the P-score (i.e. the Principled Score), based on the relative importance that a subject gives to items representing Stages 5 and 6, principled moral thinking. The P score is a number that ranges from 0 to 95. A high number represents high moral judgment development.”<sup>47</sup>

There are now over 1,000 studies of moral development using the DIT from over 40 countries.<sup>48</sup> The subjects in these studies include thousands of women. This constitutes the largest and most diverse database on moral development that exists.

In his important essay on “Morality” in the Mussen *Handbook of Child Psychology*<sup>49</sup>, Rest contextualizes the important but limited significance of moral judgment as only one of four factors in the broad domain of moral behavior. Rest views morality as referring “to a particular type of social value, that having to do with how humans cooperate and coordinate their activities in the service of furthering human welfare, and how they adjudicate conflicts among individual interests.”

He has broken down this task into an ensemble of processes, each of which powerfully affects thought, emotion and behavior. In order to present an integrated view of morality and a more accurate picture of the diverse kinds of cognition involved in morality, Rest has proposed a four-part framework for analyzing moral behavior.

46 Rest (1994), pp. 11-12

47 *Ibidem*, p. 13.

48 *Ibidem*, p. 19.

49 Mussen (1983), pp. 556-630.

*The Four Component Model of Moral Behavior:*

- 1) Moral sensitivity, interpreting and empathizing with the social situation and context,
- 2) Moral judgment, judging which action is morally right/wrong,
- 3) Moral motivation, prioritizing moral values relative to nonmoral values,
- 4) Moral character, having courage, persisting, overcoming distractions, implementing skills.<sup>50</sup>

Moral judgment tests provide information on Component 2 processes, not on Components 1, 3, and 4. But this does not make the information moral judgment tests provide unimportant. While high-level moral reasoning is not sufficient to generate high-level moral behavior, it is necessary.

## XII. THE MEANING OF P SCORES

We can focus in on precisely what kind of moral judgment is reflected in a given P score on the DIT by looking at precisely how a given score is determined.

Rest takes Kohlberg's more detailed philosophical elaborations of each stage, and separates out a greatly simplified and critical piece that effectively taps into the specific stage (conceptual schema) that a given subject uses to solve moral dilemmas. These "fragments" of Kohlberg's more elaborate stage descriptions are called 'items' or 'considerations' on the DIT.

Below, beginning with a Stage 2 item and concluding with examples of principled (stage 5 or 6) items, are examples of the types of considerations that subjects are asked to rank from most to least important in deciding whether or not Heinz should steal the drug to save his dying wife. In the DIT these items are placed in a random order. The letter "P" symbolizes a principled or stage 5 or 6 consideration.

50 Rest (1994), pp. 22-25.

Table I  
DIT STAGE SEQUENCE OF ITEMS FOR THE HEINZ DILEMMA

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**Stage 2:** Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?

**Stage 3:** Isn't it only natural for a loving husband to care so much for his wife that he'd steal?

Whether Heinz is stealing for himself or doing this solely to help someone else?

Whether the druggist deserves to be robbed for being so greedy or cruel.

**Stage 4:** Whether a community's laws are going to be upheld?

Whether a druggist's rights to his invention have to be respected.

**P:** Would stealing in such a case bring about more total good for the whole society or not?

Whether the law in this case is getting in the way of the most basic claim of any member of society?

What values are going to be the basis for governing how people act toward each other?

---

The most basic assumption undergirding this procedure is that "people define the most important issue of a dilemma in different ways, and that the selection of items indicates a person's developmental level."<sup>51</sup>

"If students understand a particular stage of thinking, then we assume that they will recognize the DIT items written at that stage—otherwise the item appears to subjects as a meaningless jumble of words. We further assume that just because subjects understand an item, they will not necessarily rate the item highly, or rank the item as "Most important." Subjects will find some items simplistic, childish, and immature. Such items may be understood, but the subject will not like them or select them as important."<sup>52</sup>

Rest's early research with the DIT demonstrated a decisive preference among students ages 14-16 for the stage 2 item ("Is Heinz willing to risk getting shot as a burglar?") while students in senior high (16-18) and in college liked it less, and students who successfully completed college and were doing post-graduate work, do not like it at all. On the other hand, graduate students were drawn to the principled item ("What values are going to be the basis for governing how people act toward each other?") To the students ages 14-16 this just seemed a jumble of nonsensical words.<sup>53</sup>

51 *Ibidem*, p. 12.

52 *Ibidem*, p. 12.

53 *Ibidem*.

The P score on the DIT is not a pure stage identification. Rather it represents a given point on a continuum moving increasingly towards principled moral reasoning. Though a P score does not represent a precise stage, the following range of scores represents the transition from a lower to the next higher stage.

Each of the following range of P scores illustrates the increasing preference for the next higher stage item or consideration:

10-20: A transition from the dominance of Stage 1 to Stage 2 considerations.

20-30: A transition from the dominance of Stage 2 to Stage 3 considerations.

30-40: A transition from the dominance of Stage 3 to Stage 4 considerations.

50 and above: The increasing predominance of principled considerations.

The consistent age/education trends in DIT scores for both men and women in the United States are represented in the following data.

Table 2.  
AVERAGE DIT P SCORE GROUPED BY AGE/EDUCATION & SEX

<i>Grade</i>	<i>Age</i>	Males	Females
Junior High	13-15	19.1	19.8
Senior High	15-18	28.7	30.4
College	18-22	44.1	45.9
Post Grad		61	63
N = 2,886			

The sample consists of 2,886 subjects. The average scores of both men and women is given to correct a belief of those who have uncritically accepted Carol Gilligan's claim that Kohlbergian tests of moral development are prejudiced against women and misrepresents their thinking about moral issues. This is not the case. Women consistently score higher on these instruments (both the MJI and the DIT) than men. And women show exactly the same sequence of stage development as men in their thinking about "justice issues". This is not to deny that future research on other components of moral cognition may not eventually demonstrate significant differences between men and women. But with regard to justice issues, women choose exactly the same progression of items on the DIT as men.

### XIII. CROSS-CULTURAL DIT STUDIES

In Rest's discussion of DIT cross-cultural studies he raises and responds to the following critical question:

“How generally does Kohlberg think this stage theory applies to all people the world over? It is almost axiomatic that different people have different moral values. So why isn't the claim of universality so obviously wrong that it is laughable?”

Once again Kohlberg follows Piaget's lead. Piaget, focusing on the physical world, admits that the physical world looks very different to an Eskimo child, to a child in New York City, and to a child in the Amazon rain forest. Yet each child comes to organize a picture of the physical world in terms of basic conceptions of length, density, causality, directionality, and so on. Such conceptions are so fundamental that they are the basic categories for everyone, regardless of whether one lives in the frozen north, or New York City, or in the Amazon rain forest...

Likewise, Kohlberg argues that certain conceptions are so fundamental to human interaction in groups that they are relevant regardless of one's particular culture. Given that humans all live in groups and have to find ways to get along with each other, certain considerations are always relevant (such as the power of others, the possibility of exchanging favors, the fact that bonds of affection and enduring relationships exist among people, the fact that there are social norms and established practices in groups, etc.) Kohlberg agreed that the specific morals of cultures are ever changing but that beneath these surface differences are deep, structural conceptions that are always relevant. Kohlberg would argue that his six stages depict these deep, structural explanations.”<sup>54</sup>

Kohlberg provides a clear and humorous illustration of this fundamental distinction between cultural content and deep structure from his first exploration of moral development in other cultures. The humor lies in the striking and unexpected contrast his cultural guide discovered between a child's reasoning about a moral dilemma and an adult's. The focus in this case is on the deep structure of Stage 2, Instrumental Relativist Orientation. This is the pattern of thinking reflected in the Stage 2 choice of questions on the Heinz dilemma in the DIT” Stage 2: *Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?* The thinking of the child at Preconventional Level focuses on immediate physical consequences, not on the larger human meanings of a specific choice of action.

54 *Ibidem*, p. 19.

Kohlberg's first effort at cross-cultural studies of moral development was in two villages— "one Atayal (Malaysian aboriginal), one Taiwanese."

"When my guide, a young Chinese ethnographer, started to translate the children's responses he would start to laugh. There are cultural differences, but they are not what made him laugh. To illustrate let me quote for you a dilemma, similar to the Heinz dilemma on stealing, adapted for the villages investigated: A man and wife had just migrated from the high mountains. They started to farm, but there was no rain, and no crops grew. No one had enough food. The wife got sick, and finally she was close to dying from having no food. There was only one grocery store in the village, and the storekeeper charged a very high price for the food. The husband asked the storekeeper for some food for his wife, and said he would pay for it later. The storekeeper said, 'No, I won't give you any food unless you pay first.' The husband went to all the people in the village to ask for food, but no one had food to spare. So he got desperate, and broke into the store to steal food for his wife. Should the husband have done that? Why?"

Our Stage 2 types in the Taiwanese village would reply to this story as follows. 'He should steal the food for his wife, because if she dies he'll have to pay for her funeral and that costs a lot.' In the Atayal village, funerals were not such a big thing, and the Stage 2 boys would say, 'He should steal the food because he needs his wife to cook for him.' In other words, we have to consult our ethnographer to know what content a Stage 2 child will include in his instrumental exchange calculations, but what made the Anthropologist laugh was the difference in form between the child's thought and his own, a difference definable independently of the particular culture."<sup>55</sup>

Reviewing the form/content distinction in light of the list of considerations on the DIT that each individual prefers at each of the Stages, Table 1 helps to illuminate how these five problem solving strategies can be universal across cultural differences.<sup>56</sup>

But as Rest notes, one could argue about universality for a long time.

"Even if one accepts the distinction between surface appearances and deep structures, there is still the question of whether the deep structures as portrayed in the six stages, are the only set of deep structures organizing morality."<sup>57</sup>

55 Kohlberg (1981), pp. 115-116.

56 *Supra*, p. 307.

57 *Ibidem*, p. 19.

Let us move beyond conceptual possibilities and look at the DIT data gathered from seven different countries, both Western and non-Western. P (principled reasoning) scores are given on the vertical axis, age and education on the horizontal axis (See Table 3, page 313).

“The different countries are represented by different lines connecting lines connecting boxes, circles, triangles, circles and so on... in every country, DIT scores increase with age/education. The similarities are more striking than the differences among the countries.”<sup>58</sup>

The progression of stages consistently ascends in a rigorous sequence from an egocentric perspective, to an informal group perspective, to a formal social system perspective, to a universal or principled moral perspective. Just as Kohlberg predicts, the stages function

“like steps on a staircase and that people advance developmentally by going up the staircase one step at a time, without skipping any steps, and always in the same order.”<sup>59</sup>

What the DIT is measuring as the P score rises is the growing moral inclusiveness of an individual’s reasoning,<sup>60</sup> the increasing importance assigned to social structures designed to protect basic human rights and to nonviolent consensus producing procedures. Or, to use the language both of natural law and the analytic tradition in Philosophy, it is the work of Postconventional reason *logically to unpack* “what is implicit in the term ‘common good’, namely that each and everyone’s well being, in each of its basic aspects, must be considered and favored at all times by those responsible for co-coordinating the common life.”<sup>61</sup>

As we have argued repeatedly throughout this essay, as individuals ascend the staircase of moral development described by Kohlberg, they become increasingly capable of dealing with moral controversy in ways consistent with the universalizable normative principles embedded in the Universal Declaration of Human Rights.

58 *Ibidem*, p. 20.

59 Rest (1994), p. 3.

60 Contrary to Gilligan, as Rest argues and the research repeatedly demonstrates, higher stages of moral reasoning do not separate human beings from each other, they facilitate ways of thinking that empower respectful cooperation with ever larger and more inclusive groups. This is quite different from the assertion that Kohlbergian advances in “justice operations” increasingly separate individuals from one another. (Gilligan, 1982).

61 J. Finis (1986), p. 214.

Empirical DIT research directly confronts us with the reality of how few adults think in principled ways and the extent to which the egocentric or privileged group concerns expressed by the stage concepts 2 through 4 predominate in most people's thinking.

The average score on the DIT in the United States is 40. What this means practically is that approximately 60% of the considerations the majority of adults in the U.S. believe to be important in dealing with moral issues are found within the priorities of the lower stages 2-4. Once one confronts this fact it is not at all surprising that the principle of universal health care affirmed in the 1948 Universal Declaration of Human Rights has had such a long and difficult path achieving legal status in the United States.

#### XIV. MORAL KNOWING

1) Human knowing is not a matter of simply "seeing" and taking in what is there, whether in our perceptions and understanding of the physical world or our perceptions and understanding of the social world. Knowing requires a constructive activity in the mind of the knower. This constructive activity takes place through a sequence of identifiable cognitive "stages" (deep cognitive structures) that increasingly make sense of and thus enhance an individual's capacity to interact with the world. Current research also makes it clear that moral cognition is not limited to Kohlberg's stages of "justice reasoning". His "stages of justice" focus principally on what Rest has termed macromorality, the morality of justice in political institutions, formal institutional roles, and in contexts where ideals of justice come into conflict with friendship and intimate personal relationships. At the postconventional level it is a perspective that facilitates changing laws and social systems when they violate agreed to standards of justice. But there is also moral cognition on the micromoral level of intimate personal relationships. This also involves moral sensitivities but in ways that are distinct from the larger macro-issues of social justice.<sup>62</sup> Justice reasoning is especially important in those contexts where the universal demands of "justice" have moral priority over personal relationships with family, friends, cultural groups, and national identity. Nonetheless, justice is only one part of the much broader domain of "moral knowing". There is also moral knowing at the level of personal relationships that

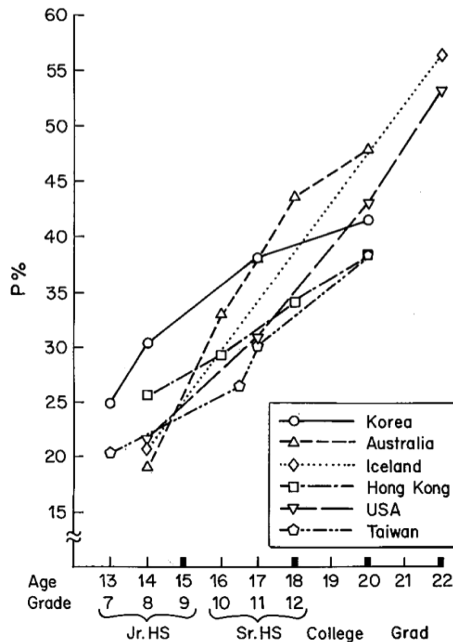
62 Rest (1999), pp. 13-15.



involves considerations, both cognitive and affective, distinct from those central to justice.<sup>63</sup>

2) There is a *parallelism* or *isomorphism* between the development of the logical forms in reasoning both about the physical and social worlds.<sup>64</sup> Empirically based psychological research clearly reveals the forms of cognitive-logical capacity in moral judgment. This is a strong refutation of the emotivist claim that moral judgments are merely the expressions of sentiment.<sup>65</sup>

Table 3<sup>66</sup>  
CROSS-CULTURAL STUDIES OF AGE-EDUCATION  
TRENDS IN MORAL JUDGMENT



63 See Gibbs (2003) summary of the interrelation both of affect and cognition in reasoning about justice, pp. 237-238.

64 Kohlberg, 1981, p. 136.

65 *Ibidem*, p. 134. When Kohlberg presented this claim in his work *The Philosophy of Moral Development* in 1981, he expressed it hypothetically. Now there is empirical data to verify it.

66 Rest (1994), p. 19.

3) Empirically based psychological research demonstrates the error of Durkheim's assertion that all morality is imposed by the group on the individual and on the child by the adult. This research also demonstrates the error of social learning theories and of Freudian psychoanalytic theories that regard the individual as pretty much powerless to change society or social institutions because of the power of the conditioning process (the law of Effect). There are numerous phenomena associated with the domain of morality that contradict these theories. This includes the presence of a moral point of view among children quite different from their parents or authority figures, the fact that as an individual matures there is an increasing ability to challenge established moral norms in terms of abstract conceptions of justice or fairness, the fact that some individuals continue to challenge the *status quo* in spite of extensive punishment and the absence of rewards, the emergence of novel points of view on what is or is not moral in the course of human history, and, not least importantly, "the role which (rational) self-direction or self-directed prescribing plays in authentically moral conduct and, for that matter, in the whole process of socialization."<sup>67</sup>

4) There are several hundred DIT studies on the relation between moral judgment and behavior. A review of these studies show, in general, there is a statistically persistent, but modest, link of moral judgment with behavior. Different studies show links with the different ways educators teach and relate to their classes, links with the behaviors of athletes, medical doctors, nurses, and accountants.<sup>68</sup> This modest link is consistent with the Four Component Model of Moral Behavior that regards cognition as only one dimension of moral behavior.<sup>69</sup> And if "only one determinant is measured, then it should be *consistently* linked to behavior, but be only *modestly* correlated, since the other determinants are allowed to vary randomly."<sup>70</sup>

5) Stage change in reasoning about justice is very slow and resistant to change. On "the average, one third of a stage is the equivalent of 4-year's natural movement in Kohlberg's longitudinal study."<sup>71</sup> This is consistent with Rest's observation that moral judgment test scores "were designed to depict rather broadly gauged changes in thinking over the life span, and are intended to represent fundamental, underlying structures of social thought rather than fine descriptions of specific concepts and ideas."<sup>72</sup>

67 Thomas Wren, *Ethics*, Vol. 92, n°. 3, April 1982, p. 410.

68 Rest, 1994, p. 222-224.

69 *Ibidem.*, pp. 22-25, 217.

70 *Ibidem.*, p. 22.

71 Rest, 1983, p. 587.

72 Rest, 1986, p. 60.

6) “A 10 —year longitudinal study of the DIT was reported in Rest (1986). There were the usual findings of gains in moral judgment with age, but it was also found that education is a far more powerful predictor of moral judgment development than merely chronological age, *per se*. The general trend is that as long as subjects continue in formal education, their DIT scores tend to gain; when subjects stop their formal education, then their DIT scores cease rising. Consequently, if you want to predict the DIT scores of adults, you would do best by knowing their education level, not age or gender.”<sup>73</sup> The popular wisdom is that “morality” is something principally learned in childhood and is not likely to change after an individual reaches adulthood. What the moral reasoning research documents is that “morality” (understood as the adjudication of individual conflict and ways of cooperating and coordinating human activities to promote human welfare), is profoundly affected by formal education after individuals reach adulthood.

7) Different types of education have differential effects on moral development. Educational programs with a narrowly technical focus or religious schools whose focus is principally indoctrination show little or no gain in principled reasoning scores over a 4-year educational program. In contrast, religious educational institutions that are not fideistic, that affirm the important role of reason in religious faith and encourage free discussion of social issues, show significant gains in DIT scores over a 4 year period.<sup>74</sup>

## XV. THE CAROL GILLIGAN PHENOMENA

In 1982 Carol Gilligan, who had been one of Kohlberg’s students at Harvard, launched a feminist critique of his theory of moral development and the typology of the six stages.<sup>75</sup> She correctly noted that all of Kohlberg’s original subjects were male and claimed his theory of the six stages was sexist and biased against women.

Her extremely popular and well-written book “has been translated into sixteen languages, with more than three-quarters of a million copies sold around the world.”<sup>76</sup> Gilligan writes compellingly of a different moral voice in women, the voice of “Care” that brings people together. She contrasts this with the dominant

73 Rest, 1994, p. 15.

74 Steven P. McNeel, “College teaching and student moral development” in Rest (1994), pp. 27-50.

75 C. Gilligan, *In a different voice*, Harvard University Press, Cambridge, MA, 1982.

76 Harvard University Press.

masculine voice of “justice”, an abstract, “principled voice” that tends to isolate and separate.

Her work has had a devastating impact on the public and academic credibility of Kohlberg’s theory and research.

The positive response of women around the world to her work is strong evidence that she has identified a feminine perspective that women themselves firmly believe makes aspects of their moral sensibilities and the course of their psychological growth quite different than men’s.

But none of this constitutes empirical evidence that Kohlberg’s theory and empirical research on the cognitive stages of “justice operations” is not also valid for women. Gilligan’s original claim in her 1982 book that moral reasoning tests based on Kohlberg’s stage typology are biased against women is demonstrably false.

Although Kohlberg’s original research was based on a small all male sample, there are now over a thousand moral judgment studies involving thousands of female subjects. The data trends are absolutely unambiguous. *Women consistently score higher than men on Kohlbergian assessments of moral judgment.* This pattern shows up consistently both on MJI and DIT studies.<sup>77</sup>

*On all the reviews of this research literature, women on average score higher, not lower than men, on both of instruments.* On both instruments women demonstrate exactly the same developmental sequence and patterns of reasoning about justice as men.

This is in not to deny that there is more to moral judgment and moral behavior than what is measured by these two instruments. Perhaps eventually Gilligan will meet the challenge of instrumentation and empirically verify her claims about a unique feminine voice of “Care” and a developmental pathway unique to women. But even if she were successful in this, it would not invalidate the success story of the MJI and DIT documenting the shared cognitive pathways of women and men in reasoning about justice.

J.R. Rest’s observations on what he has termed “the Gilligan phenomena” and the waxing and waning of the popularity of psychological theories independent of empirical evidence are sadly enlightening. The thesis, even among

77 Rest (1994), Table 1.5, p. 14. This was also the trend of my own research using both the MJI and the DIT. See P. Werhane, K. D’Andrade, Eds., *Profit and responsibility: Issues in business and professional ethics*, Edwin Mellon Press, New York, 1985, “Kohlberg and Business Ethics”, 65-93, and the *Journal of Moral Education*, Vol. 19, N°. 2, May 1990, pp. 124-138.

professional academics “that Gilligan completely disproved Kohlberg,”<sup>78</sup> still has strong acceptance.

This waxing and waning of popularity independently of the empirical evidence also applies to Kohlberg’s theory. In the 1970s Kohlberg’s theory of moral development was very popular. But as Rest correctly notes,

“Empirical evidence does not seem to have much to do with the popularity of psychological theories of morality. Indications of popularity —citations in journals, coverage in introductory texts, number of presentations at conventions, availability of funds for grants— seem to be governed mostly by external social/political/ideological enthusiasms. The popularity of Lawrence Kohlberg’s ideas about morality began to rise with the student protests of the late 1960s, with opposition to the Vietnam War, and with the Civil Rights Movement. In Kohlberg, many people saw a kindred spirit and scientific defense of their own views on morality at the time... In 1974, a scathing review of Kohlberg’s theory appeared that seriously challenged the robustness of its evidence. (Kurtines & Grief, 1974) The critique was well taken. Like it or not, one had to admit that theorizing had greatly outstripped the evidence. But this discussion of evidence did not much affect Kohlberg’s popularity. Instead, the crucial factor was that public’s attention shifted from justice controversies to other concerns ... Ironically, as the evidence for the Kohlbergian approach accumulated and strengthened, the popularity of the approach waned. In the 1980s, the rise of a peculiar brand of feminist ideology— denying similarities of men and women and extolling differences —coincided with Gilligan’s (1982) challenge of Kohlberg. Nowadays it is common to hear the pronouncement that Gilligan completely disproved Kohlberg. But after 10 years there is pitifully little empirical evidence for Gilligan’s theory. The Gilligan phenomena underscores the view that popularity has little to do with evidence.”<sup>79</sup>

78 Rest (1994), p. 2.

79 *Ibidem*, p. 11. In the footnote attached to Rest’s description of *instrumentation*, he notes that Gilligan has made no systematic effort meet this responsibility. “In recent years, Gilligan (1982) has challenged Kohlberg’s theory as being sexist and invalid for women the world over. Although in subsequent publications and talks, Gilligan has changed her position several times, the 1982 book remains one of the most cited and has become the rallying point for the anti-Kohlberg view. In the 1982 book she said that women have their own, distinct path of moral development, the Care orientation. Gilligan said the stages of Care are not inferior to men’s moral development but different. As evidence, Gilligan cited a handful of selected excerpts from women’s interviews. From such data it is not known how representative these are of women in general, or even of the entire interviews of just these women. Because she did not interview men on the same issues as she did the women, statements about differences between women and men are gratuitous.” Since Gilligan made her charge about the sexist nature of Kohlberg’s research, there have been over a thousand studies showing that women do not

## XVI. COLLEGE & DIT SCORES

There is general agreement among the principal researchers that formal education is the best predictor of someone's level of moral development. But there is also a consensus that cognitive development moves slowly and is highly resistant to change. The general trend shown both by longitudinal studies that follow the P score of an individual over 4 years, and cross sectional studies that focusing on comparing general scores of freshman and seniors is that it generally takes four years of education for an individual's moral development to move just 1 stage.

This is also consistent with Steven P. McNeel's review of the effects of college on moral judgment.<sup>80</sup> Longitudinal studies at 9 different colleges/universities that obtain DIT scores on entering Freshman and the DIT scores of these same individuals as graduating seniors, on the average show a gain of around 10 on their P score over 4 years of academic study.

The only one of these 9 institutions that showed no significant gain on P scores was a fundamentalist Protestant Bible College with no emphasis on the liberal arts. Schools with a conservative Christian environment and a strong emphasis on the liberal arts also produced strong gains in P scores.

## XVII. EXTENDING THE CAPACITY FOR OUTREACH IN MORAL JUDGMENT

Over 25 years of teaching ethics at the high school, college, and post graduate levels, and constantly working on improving the pedagogy I use in my classes, has made me a believer in the value of the cognitive development research. A critical task is to empower students to extend their moral judgment beyond the egocentric perspectives of Level I thinking, and the privileged group or social system perspectives of Level II thinking, to the universalizable rational-moral perspectives of Level III (Postconventional) thinking. Based on the research a pedagogy was constructed that strengthens the cognitive muscles, nourishes the affectivity, and directly teaches the moral grammar and lexicon that enables students to move remarkably quickly up the staircase of the moral stages towards principled moral reasoning.

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score lower than men on the instruments developed from Kohlberg's research. They usually score higher. See Rest (1994), p. 14.

<sup>80</sup> *Ibidem*, Table 2.1, p. 32.

In Rest's review of my methodology he notes that "Penn showed some of the highest gains in students' DIT scores of any moral intervention."<sup>81</sup>

In McNeel's review of "College Teaching and Student Moral Development,"<sup>82</sup> he shares the results of his application of these materials and pedagogy to a general education course he taught at Bethel College.

"To test the generality of Penn's approach, I designed a general education course for senior students based centrally on his materials... I have taught the course two separate semesters, each time administering the DIT on the first and last days of class. The results from 28 students showed that there was a strong growth in principled reasoning (from 41.7-50.6;  $d = 0.65$ ). This modest effect size is very impressive since it is about 80% of the average effect size associated with 4 years of liberal arts college and because it took place in just 3 1/2 months."<sup>83</sup>

In the moral development literature the impact of a course is usually assessed statistically in terms of the effect size ( $d$ ).

"Bowen (1977) has proposed the following rules of thumb for interpreting effect sizes: small = 0.10 - 0.39, moderate = 0.40 - 0.69, large = 0.70 - 0.99, and very large = 1.00 and above."<sup>84</sup>

However, it is often difficult to document significant change on moral judgment tests as a result of a single course. *Only about half the intervention studies report a significant change in P scores.*

In constructing a pedagogy for teaching ethics I took very seriously both Piaget's biological model and his constructivist/Socratic epistemology. I did not assume that one could pour ethical understanding into students from outside. Each student must construct the series of cognitive stages ascending to principled moral reasoning for himself. As Piaget notes, "it is what the (student) brings to the world that makes this growth possible, but the (student) himself must accomplish it through his own activity."<sup>85</sup>

The course was designed to exercise to the greatest extent possible the three components of moral cognition that Kohlberg had so clearly identified: logic, role-

81 Rest (1994), p. 218.

82 *Ibidem*, PP. 27-49. I have written two unpublished texts for use in my Ethics classes: *A logic primer: Skills for critical reasoning.* and *Seeds of justice: A study of principled moral reasoning.* 1992.

83 *Ibidem*, p. 41.

84 *Ibidem*, p. 31.

85 Piaget (1977), xxxv.

taking, and justice operations. By role-taking is meant the cognitive ability to see things from the perspective of other individuals, groups, and from institutional or formalized role perspectives. The justice operations are the six stages of moral judgment.

Exercises requiring students to think systematically through each of the six stages of moral development in ascending order and to apply these distinct conceptual schema to social issues strengthened both role-taking skills and distinct understandings of justice. Rigorously applying the normative/descriptive distinction required them to think through the logical interdependence of these distinct types of claims in moral controversy and the distinct verification procedures required by normative and descriptive claims. Students find these exercises extremely difficult, but the more of them they do the more they find intelligible the higher stage structure of human rights documents. *The increasing intelligibility of higher stage structure material made possible by these sorts of conceptual exercises shows up as the measurably increased preference by students for higher stage justice material on the DIT.*<sup>86</sup>

Both the Logic and the Ethics text I wrote for these courses were filled with exercises and had the solutions to all of them in the back of the book. The answers and the patterning they provided helped students avoid the cognitive paralysis that results when they no idea how to proceed to solve a problem. All the exercises required focused, hard analytical work and students couldn't just memorize the answers. It was always something they had to work through and achieve for themselves.

Almost all the exams came directly from the exercises. As a result I found that the grades in my classes were often bimodal, lots of students doing very well and some doing rather poorly. The students who really worked on the exercises did well, those who did not did poorly. Those who worked hard on the analytical tasks in logic, role-taking, and ethical reasoning began to build the cognitive muscles required to extend their moral judgment outreach.

It was the same model a good coach uses in a successful athletic program. He knows exactly what muscles need to be developed and what exercises develop them. With this kind of effective targeting of the specific muscles required to

86 The critical data summarizing the significance of a gain in P scores, the correlation between P scores and levels of education, the cross-cultural data trends, and the importance of pedagogy to achieving measurable changes, is presented in Tables I-IV: Table I, p. 307 (the 5 distinct and generalizable types of 'justice considerations' that students must prioritize on the DIT), Table 2, p. 308 (P scores grouped by age and education), Table 3, p. 313 (cross-cultural data) Table 4, p. 323 (impact of pedagogy on P scores). It is also useful to view this data in light of Kohlberg's more detailed description of the two levels and six stages, *supra*, pp. 16-18.



accomplish a particular task, it is remarkable how quickly things begin to happen. The development of role-taking skills and empathy (seeking to place oneself both cognitively and affectively in another person's shoes) are a key part of this process. When teaching ethics it is not difficult to find case studies, or historical or contemporary events, that well-presented powerfully affect students' natural capacities for role-taking and empathy.<sup>87</sup>

Between 1983-1988 at St. Edward's University in Austin, Texas, I conducted a 5 year DIT study of the impact of three variations of a basic design for teaching one semester ethics courses. The basic pedagogy in all these ethics courses directly taught in tandem the cognitive skills of logic, role-taking, and justice operations. A fourth and fifth group of classes were also studied for comparison purposes. Group 4 involved substantial exposures to moral development theory and the typology of the six stages but no systematic teaching of philosophical ethics. The fifth group included a variety of one-semester academic courses that studied controversial social issues but provided no education in philosophical ethics, logic or in Kohlbergian theory and the moral stages. The total sample consisted of 318 students.

All of the ethics courses using my pedagogy showed powerful gains in P scores over the one semester course. Group 1 showed an effect size of 1, Group 2 showed 0.94 and Group 3 0.84. These are results nearly double those of the most successful moral education projects previously reported in the literature.<sup>88</sup> The numerical data in Table 4, p. 35, gives the mean score (M), standard deviation (SD), and the mean change in P scores for each of the groups at the end of the course.

The five-year study was designed to test for differences in impact on DIT scores of courses that included different elements in the basic pedagogy. The elements were: 1) the study of formal and informal logic (including induction and the informal fallacies), 2) the study of moral development theory and the 6 stage moral development typology of Kohlberg, 3) philosophical methods in ethical analysis (this included Socratic dialogues, Kantian and utilitarian ethics, and John Rawls), and 4) the application of the different elements included in the course

87 John Gibbs at The Ohio State University, illustrates the critical importance of role-taking and empathy also from the religious and spiritual perspectives of the life to come as revealed in medically documented near death experiences. Gibbs was a student of Kohlberg at Harvard and developed remarkably effective intervention programs for anti-social youth. See Gibbs (2003), especially chapters 4-9. Gibb's work also stresses, in the tradition of Piaget, the important relation between logical and ethical ideals, p. 235.

88 William Y. Penn, Jr., Teaching Ethics, A Direct Approach, *The Journal of Moral Education*, Vol. 19, N°. 2, May 1990, pp. 124-138.

design to the analysis of controversial social issues, both historical and contemporary. All of these courses rigorously focused on developing students' cognitive muscles in all three of these areas —though only the Group I collection of courses included the direct teaching of formal logic.

The principal difference between Group 1 undergraduate ethics courses and the courses taught in Groups 2 & 3 was the study of logic in Group 1. Other than that the pedagogy in these three groups of courses was very similar. Group 2 was a graduate level course in ethics for adult students in St. Edward's Masters of Business Administration (MBA) program. The average age was around 35. Some of the content was different because the ethical analyses focused on issues in business. Students did not read the Socratic Dialogues, but they were introduced to Kantian and utilitarian theories and principles, John Rawls, and cases studies in business ethics. In all of the groups the emphasis on formal analysis provided considerable exercise in logical thinking.

Group 4 included only one class. It was taught by a Philosopher not familiar with the pedagogy used in the other ethics classes. The class made for an interesting comparison with Groups I-III because its entire focus was on Kohlbergian theory and stage typology and its theory. This even included significant amounts of Kohlbergian material (including materials from the scoring manuals for the Moral Judgment Interview (MJI), None of this had any measurable effect on the students' DIT scores. At the end of the one semester course the students' P scores showed no statistically significant change. This result is something of an anomaly in the research. Usually courses involving peer discussion of social controversies and exposure to the Kohlbergian stages generate a statistically significant gain in P scores. What it did demonstrate is that a substantial one-semester exposure to Kohlberg's theory and the memorization of the 6 stages of moral development are not sufficient to generate a statistically significant gain in a students P score.

Group 5 consisted of 7 different classes in St. Edward's undergraduate curriculum: two political science courses, a course in the Theology of Peace and Justice, three Social Work courses, and a major research course on a controversial social topic that was a general university requirement for graduation. None of these courses included a systematic exposure to elements 1-4 in the ethics curricular design. There was a modest but statistically significant increase in P scores in this group of courses.

The outcome was basically what my experience teaching ethics led me to expect. As the 4 elements in the full pedagogy were progressively peeled off, first the logic, then the formal ethical analysis, then moral development theory and stage typology, the effect size and the mean gain in P scores consistently dropped.

Table 4  
ST. EDWARD'S UNIVERSITY 1983-88 STUDY OF MORAL REASONING  
IMPACT OF DIFFERENT PEDAGOGIES ON DIT SCORES

Group (N)	1 (57)	2 (31)	3 (114)	4 (19)	5 (97)
	Undergrad Ethics	MBA Ethics	Undergrad Ethics	Undergrad Ethics	Social Controversies
<i>Elements</i>					
1	Logic				
2	Moral development theory and stage typology	Moral development theory and stage typology	Moral development theory and stage typology	Moral development theory and stage typology	
3	Philosophical Methods of Ethical Analysis	Philosophical Methods of Ethical Analysis	Philosophical Methods of Ethical Analysis		
4	Application of methods to social issues	Application of methods to social issues	Application of methods to social issues	Application of methods to social issues	Discussion of Social Issues
<i>P Score</i>					
<i>Pre-Test M</i>	35.25	39.78	36.61	37.41	35.93
<i>SD</i>	15.2	13.45	14.42	13.06	15.58
<i>Post Test M</i>	50.41	52.42	48.52	41.29	39.95
<i>SD</i>	17.01	17.72	15.84	19.89	17.21
<b><i>Change M</i></b>	<b>15.6</b>	<b>12.64</b>	<b>11.91</b>	<b>3.98</b>	<b>3.02</b>
<i>SD</i>	11.87	13.63	13.72	15.09	13.21
<b><i>Effect Size</i></b>	<b>1</b>	<b>0.94</b>	<b>0.84</b>	<b>0.3</b>	<b>0.19</b>

In *Fides et Ratio* John Paul II argues for the importance of a restoration of faith in “the great cognitive capacities of the human mind,” capacities that truly empower humanity to move forward in hope and confidence in the construction of a less violent and more just world. He argues that the universal human rights movement demonstrates a universal human nature, a universal moral law, and a universal human capacity to learn the grammar of the moral logic that empowers

genuine moral dialogue between individuals and peoples. He concludes that this dialogue is essential if we are to learn to live in peace rather than at war. And the empirical data generated in DIT research clearly shows that learning to think philosophically plays an important role in the development of these cognitive abilities.

The careful empirical and philosophical research of cognitive developmentalists have opened our eyes to many of the developmental pathways universally open to individuals and peoples of all races and cultures, pathways that lead to a more just world. But this cannot be determined from outside. As Piaget reminds us, *it is the gifts that each of us brings to the world that empower us to ascend on this path, but it cannot happen without our own interior activity.* Though laws are important, it cannot happen just by means of law or by any coercive externality. As the Drafters of the Universal Declaration remind us, “effective respect for human rights depends primarily and above all on the mentalities of individuals and social groups,” “human beings, cultures, and nations must mature inwardly before there can be effective international machinery to adjudicate complaints about the violation of human rights.”<sup>89</sup>

This inward maturation requires not only individual commitment<sup>90</sup>, it needs the support of communities and global institutional commitments to education that measurably fosters this growth. The cognitive developmentalists have uncovered specific types of growth in intelligence, understanding, and affect necessary to the achievement of a more peaceful and just world. Though we also know interior growth and maturation in the cognitive stages of moral development are not sufficient,<sup>90</sup> it is clear that they are necessary to the construction of a less violent and more just world, a world respectful and protective of the intrinsic dignity of all human beings.

Justice and peace in and among modern democratic societies requires a citizenry capable of thinking about and resolving justice issues in principled ways, in terms of the common good. This in turn requires the development of the extraordinary capacities clearly possessed by all human beings, irrespective of race, gender, religion, or culture, to think in ways that demonstrate respect and care for “each and everyone’s well-being, in each of its basic aspects.”<sup>91</sup> The Principled Reasoning Score (P Score) on the DIT is a valid and reliable measure of the development of an individual’s capacity to think in this way.

89 *Supra*, p. 6.

90 See Rest’s Four Component Model of Moral Behavior, *Supra*, pp. 305-306.

91 Finis (1986), p. 214.

Early in this essay I argued that the deepest roots of human rationality lie not in narrow concepts of logical consistency or technical proficiency. They lie in the final and universal imperative of care for self, for others, and for the health and beauty of the physical world upon which all human health and flourishing depends. It is only in the development of our demonstrated capacities for sound normative/moral reasoning that these necessary conditions of our human flourishing can be achieved.

In *Fides et Ratio* John Paul II prophetically pointed to the high practical costs of a loss of faith “in the existence of the great cognitive capacities of the human mind.”<sup>92</sup> The continuing failure of modern educational systems to commit to the effective and measurable development of these rational capacities (including the capacity for critical philosophical reason) is a continuing manifestation of modernity’s loss of faith in reason. But Divine Providence also at times allows the spiritualities of faith to be restored by what can be seen and touched.<sup>93</sup> There are hopeful and tangible signs in modern developments in the church’s social doctrine, in the international human rights movements and international law, in the environmental movements, in an unprecedented peace among the major nations of the world, all these give witness to these higher powers of the human mind and heart. And the empirically based research of cognitive developmentalists around the world clearly reveal key elements in the developmental pathways leading to the inward maturation of these powers, and direct us to specific educational strategies that work powerfully to develop these cognitive and affective capacities critical to human survival and flourishing.

WILLIAM Y. PENN, JR. PH. D.

92 *Fides et Ratio*, 6.

93 Gibbs (2003) also argues that the remarkable medical research into Near Death Experiences (NDEs) and the life review and commonalities of mystical experience that often accompany them also provide “rich empirical soil” for spiritual and moral growth. pp. 241-42. Anne Colby (principal author of the scoring manual for the MJJ) and William Damon also illustrate the importance of spiritual commitments to moral growth in *Some do care: Contemporary lives of moral commitment*, The Free Press, New York, 1992.