Criteria for Multidomain Research

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The proposed criteria for organization of empirical research and theory for multiple domain models of adult development include: 1. Identification of domains and sub-domains of types of problems posed by dilemmas, tasks or questionnaires. 2. Identification of the various developmental levels of the presented problems and tasks. 3. Specification of the meta-ethical categories of the several aspects of the moral person and the analysis of the data and categories of types of questions addressed in the questionnaires and interview protocols. 4. Empirical evidence, longitudinal and/or cross-sectional, to support the claimed findings. 5. Age-range of the research subjects. 6. Use of structural-developmental assessment scoring manuals and high levels of inter-judge rater-reliability. Multiple domain theories are distinguished from single domain ones. Rawlsian conceptions of individuals as free and equal moral persons (Rawls, 1999) are specified into four aspects. Rawlsian metaethical categories of moral development are contrasted with those used by Kohlberg which are based on the metaethical theory of Dewey and Tufts (1932). Kohlberg's, Perry's and Gilligan's theories are reviewed according to criteria for particular domains.

Keywords: multidomain developmental theory and research

Lawrence Kohlberg, one of the great pioneers in the field of moral development, had the intellectual courage to revise his theory when research evidence indicated that he was previously incorrect. Moral development, for which he was famous, is not what he actually studied, which was justice reasoning (Kohlberg, Levine, & Hewer, 1984).

Kohlberg was inspired in his initial studies by Piaget's findings that children universally progress through an invariant sequence of hierarchical structural-developmental stages that are in the domain of the development of factual reality. Piaget was not insistent about using the term "stages." Sometimes he referred to them as "eras" or "periods" or "levels." Piaget never conducted longitudinal studies. He based his claims on cross-sectional ones. He studied babies, infants, young children, and adolescents. Piaget presumed adolescents achieved "adulthood" by the ages of 12 or

15. Commons and Richards (2003; see Table 1) have revised and expanded Piaget's findings.

Piaget did not follow the same selected babies for extended years, which is what Kohlberg's genius led him to do as a research strategy. Kohlberg conducted a longitudinal study that followed the same subjects as they continued to age and develop (Kohlberg, 1969). Anyone claiming to do research on invariant sequential hierarchical stages must correlate their findings with Kohlberg's, if they are not doing longitudinal studies of their own, to make supportable claims that their stages are invariant sequential ones.

The criteria proposed in this article for organization of empirical research and theory for multiple domain models of adult development include

- 1. Identification of domains and subdomains of types of problems posed by dilemmas, tasks, or questionnaires.
- Identification of the various developmental levels of the presented problems and tasks.
- Specification of the metaethical categories of the several aspects of free and equal moral persons and the analysis of the data and categories of types of questions ad-

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Table 1
The Model of Hierarchical Complexity (Commons & Richards, 2003)

Commons and Richards (2003)		Erdynast and Chen (2014)		
Order number	Name	Conception of the real level/substage	Name	
0	Computational			
1	Automatic			
2	Sensory or motor			
3	Circular sensory motor			
4	Sensory-motor	1	Sensory-motor	
5	Nominal		•	
6	Sentential	2	Prelogical (intuitive)	
7	Preoperational			
8	Primary			
9	Concrete	3	Concrete operations	
10	Abstract		-	
11	Formal	4 Substage 1	Formal operations: Basic theoretical perspective	
12	Systematic		• •	
13	Metasystematic	4 Substage 2	Multiple theoretical perspectives	
14	Paradigmatic	4 Substage 3	Schools of thought	
15	Cross-paradigmatic	4 Substage 4	Evaluative schools of thought, e.g., Food and Drug Administration	
16	Meta-cross-paradigmatic	4 Substage 5	Original theory or findings, e.g. Nobel Prize research or advancement of theory in science or medicine	

dressed in the questionnaires and interview protocols.

- Empirical evidence, longitudinal and/or cross-sectional, to support the claimed findings.
- 5. Age range of the research subjects and size of research pool.
- Use of structural developmental assessment scoring manuals and levels of interjudge reliability.

Differences Between What the Research Claims to Have Studied and What Was Actually Studied in Three Illustrative Prominent Theories

Prominent illustrative developmental theories, such as those of Kohlberg (1969), Perry (1968), and Gilligan (1982), for example, are discussed as ones that compete with one another in characterizing developmental levels of moral or ethical development. Some disputes emanate from the absence of a comprehensive framework for organizing the disparate findings into distinct areas or "domains"

of problems. Some disputes emanate from inconsistencies between labeling used to identify the theory or findings and what has actually been empirically studied.

Some developmental theories are singledomain theories, such as Kohlberg's et al. (1984) theory of justice-reasoning. Other theories are multiple-domain theories, such as Perry's (1968) theory of intellectual and ethical development; Erdynast, Armon, and Nelson's (1978) theory of the true, the good, and the beautiful; and Erdynast and Chen's (2014) theory of multiple moral domains: the real, the good, the just and right, and the beautiful. There are also hybrid conceptions of findings integrated into a single theory, for example, conceptions of the good, conceptions of justice, and conceptions of ideals of moral character (Armon, 1984), and Fowler's (1981) stages of faith, which are a hybrid of conceptions of the real, the good, and the right. Kegan's (1979) hybrid theory of stages of the evolving self is a theory that incorporates the real, the good, and the right.

Kohlberg's theory, first launched during his doctoral dissertation in 1958 (Kohlberg, 1958), was initially a claim about the study and findings of stages of "moral development" (Kohlberg, 1969). Kohlberg has since retracted the claim to have studied moral development and restated the claim to having a theory and findings about the development of more limited justice-reasoning (Kohlberg et al., 1984). Kohlberg (1984) views Rawls's theory of social justice as the philosophical framework within which his own theory of justice-reasoning development finds justification. Rawls's (1971) social contract philosophy of moral development has a conception of the good as well as a conception of justice and right.

In a Rawlsian framework (Rawls, 1971), there are three subdomains of moral development: (a) conceptions of the good (judgments of value), (b) judgments of justice (obligations and duties), and (c) supererogatory acts, which a person does for the sake of another's good at considerable cost or risk to the self (Figure 1). Illustrative supererogatory virtues are compassion, magnanimity, benevolence, and forgiveness.

Perry's study of Harvard college students' progressions is labeled "intellectual and ethical development," but neither intellectual nor ethical functioning is actually studied in the research. Perry's study examines reflective conceptions about the sources of knowledge, truth, and reality, rather than functional operations in solving intellectual or ethical problems (Perry, 1968). Thus, his findings can be better understood partly as "epistemological" rather than intellectual development. Perry's study researches college students' thoughts about

sources of morality, which is a topic of metaethical reasoning. Perry's study does not result in findings within the area of ethical development, because ethical development involves normative conceptions of the just and right (Rawls, 1971). Students do continue to develop after their years at Harvard College; the highest position identifiable during typical college years is not an ultimate position or stage.

Gilligan's theory of "women's moral development" (Gilligan, 1982) claims that Kohlberg's theory of moral development does not correctly represent women, and that the concepts of justice and rights are male-biased conceptions of moral development. Gilligan does not invoke any metaethical theory advanced by a female philosopher upon which to justify women's later stages of development as higher than the chronologically earlier stages, and thus commits the "naturalistic fallacy" of going from is to ought without justifying why later higher stages are more adequate than earlier, lower ones on a philosophical basis (Kohlberg, 1981b). Her theory does not incorporate the thinking of female Supreme Court justices who are required to use constitutional principles of justice and rights in rendering their decisions, and who are constitutionally required to subordinate decision making based on conceptions of care and responsibility to decisions based on justice. Gilligan's representation of women's decisions about abortion decisions should have been claimed to be a developmental sequence within women's conceptions of their good (that is, conceptions of their final ends, aims, interests, and their attachments to persons and associations) in the context of women having a moral right to an abortion, wherein their rights

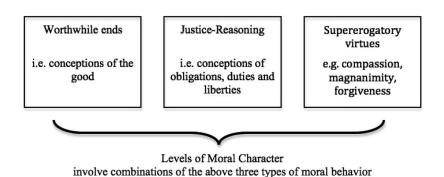


Figure 1. Domains and subdomains of moral development.

and liberties to do so are affirmed by rights and liberties emanating from the 1983 Supreme Court decision in *Roe v. Wade* (1973; Belenky, 1978; Kohlberg, 1981a).

Kohlberg has substantive research findings, but his "theory" is indeed three theories. First, it is a theory of findings of moral development that specifies an invariant sequence of structural-developmental stages through which any individual progresses, in which the higher stages are morally more adequate than the previous lower ones. Second, it is a theory of analysis of interview data—how responses to structured interviews are scored and can identify an individual's highest level of capabilities. Third, it is theory of education—once a theory of findings is established identifying what representative responses at each stage are like, Socratic moral dialogue can be used to stimulate individuals' development.

Kohlberg takes the position that there are only two hard sets of stages and that there are only two domains—the Piaget domain of factual reality and the Kohlberg domain of moral development (Kohlberg & Armon, 1984). But, theoretically, there have to be at least four domains (Table 2; Erdynast et al., 1978): the domain of the real (Domain I), the domain of the good (final ends, aims, interests, and their attachments to persons and associations; Domain II), the domain of the just and right (conceptions of obligations, duties and liberties; Domain III), and the domain of the beautiful (Domain IV). Gardner, Winner, and Kircher (1975) take the position that there are seven types of intelligences. Perhaps there are seven domains. But there are differences between a typology, a type, and a domain with an invariant sequence of transformational stages. Gardner et al. do not claim that there are seven levels—they move aside from pure structural-developmental theory into typology. One of their types of intelligence, for example, is kinesthetic intelligence that athletes have a particular type of athletic intelligence. Erdynast et al. (1978) use a fourdomain model in their study of relations between conceptions of the beautiful and moral development. Erdynast and Chen (2014) studied relations between three domains—the good, the just and right, and the beautiful, and found significant results:

The adulthood conceptions of the beautiful seem to be homomorphic parallel to adulthood developmental conceptions of the good, and conceptions of the just and the right. The developmental conceptions of the beautiful are distinct and separate from the moral structures, but hierarchically rise in parallel fashion to the moral structures. In 49% of instances, the level of conceptions of the beautiful was the same as the level of conceptions of justice. In 91% of instances, there was plus or minus a half level correspondence between the level of conceptions of the beautiful and the level of conceptions of justice. In 33% of instances, the levels of conceptions of the beautiful are identical to levels of conception of the good. In 83% of instances, the levels of conceptions of the good are within a half level, plus or minus, to levels of conceptions of the beautiful. And, in 98% of the cases, the levels of conceptions of the good and the levels of conceptions of the beautiful are within one level, plus or minus, to one another. There seem to be five levels of conceptions of the good, and five levels of conceptions of the just, along with five levels of conceptions of the beautiful, and uniformity of general development across the domains, though not completely at just one level. Data on Level 6 justice structures and Level 6 conceptions of the beautiful are too sparse to make generalizations about their relationships.

Domain I is the domain of factual reality. The highest level principles involve scientific or mathematical principles of inquiry. For example, when Pierre and Marie Curie claimed that their scientific discovery of radium was the finding of a new element, they were required to provide incontrovertible proof of its existence. After they did so, they were awarded a Nobel Prize for their original discovery.

Domain II, the domain of conceptions of the good (worthwhile interests, final ends, aims, attachments to associations and individuals) addresses questions such as what is worthwhile work for an individual, and what is a worthwhile friendship. Conceptions of the good apply to pursuits of an individual's conceptions of the good or consensual pursuits of conceptions of the good with others.

The principle of responsibility to self resembles a principle of right: the claims of the self at different times are to be so adjusted that the self at each time can affirm the plan that has been and is being followed. The person at one time, so to speak, must not be able to complain about the actions of the person at another time (Rawls, 1971, p. 423). Within a Rawlsian framework, a rational life plan is pursued applying the concept of goodness as rationality and principles of rational choice.

Table 2

I	II	III	IV
The Real Conceptions of the real The pursuit of knowledge, the understanding of factual reality Level 4 Substage 5 Original theory or findings e.g., Nobel Prize research or advancement of theory in science or medicine Substage 4 Evaluative schools of thought, e.g., Food and Drug Administration Substage 3 Schools of thought Substage 2 Multiple theoretical perspectives Substage 1 Formal operations: Basic theoretical perspective Level 3 Concrete operations	The Rational Conceptions of the good Conceptions of the worthwhile final ends, aims, interests, attachments to persons and associations Level 6 Rational intuitionism Perfectionism, e.g., Leibnitz Pluralistic intuitionism, e.g., Sidgwick, Ross Psychological naturalism, e.g., Hume, Bentham Teleological perfectionism, e.g., Aristotle Level 5 Principle of responsibility to self Level 4 Heightened acuity in intellectual judgments and finer moral discrimination	The Reasonable Conceptions of justice & right The reasonable terms of social cooperation Level 7 Social contract constructivism, e.g., Kant, Rawls Principles of social justice and principle of fairness for individuals Level 6 Rational intuitionism Utilitarianism; classical utilitarianism; ideal utilitarianism; ideal utilitarianism, e.g., Moore; hedonistic utilitarianism, e.g., Bentham Level 5 Political liberalism Appellate and Supreme Courts Social contract basic rights, e.g., Locke, Rousseau Level 4 The national community The morality of complex policies and regulations	The Beautiful Conceptions of the beautiful Contemplation and fashioning of beautiful objects Level 6 Content-dependent principled conceptions of the beautiful, e.g., cubisn Level 5 Principled art analysis Level 4 Formal art analysis Level 3 Cultural views of the beautiful Level 2 Egoistic tastes Level 1 Preaesthetic
Level 2 Prelogical (Intuitive) Level 1 Sensory-motor	Level 3 Concrete values of Primary social groups Level 2 General egoism: Everyone is permitted to advance his interests as he pleases Exclusive egoism: Everyone's interests come after mine Level 1 Subsistence, support	Level 3 The morality of primary associations involving role responsibilities formed by the approval and disapproval of those in the group Level 2 First-person dictatorship: Everyone is to serve my interests Free-rider: Everyone is to act justly except for myself, if I choose not to Morality of the con man	

paternalism, or B. Coercive power

Domain III is the domain of conceptions of justice and right. Conceptions of the just and right specify the terms for resolving competing claims between individuals and between the individual and society. Kohlberg's standardized dilemma addresses the just resolution of competing claims based on obligations and positive and negative natural duties. Within Domain III, the fundamental question is, is the individual acting justly or unjustly? The normative end point in this domain within a Rawlsian social contract conception is a set of principles of social justice and also a principle of interpersonal justice. Rawls's (1971) two principles of social justice are (a) each person has an equal right to a fully adequate scheme of equal basic liberties, which is compatible with a similar scheme of liberties for all, and (b) social and economic inequalities are to satisfy two conditions first, they must be attached to offices and positions open to all under conditions of fair equality of opportunity; and second, they must be the greatest benefit of the least advantageous members of society. Rawls's principle for solving problems of interpersonal conflicts is that a person is required to do his part as defined by the rules of an institution when two conditions are met: first, the institution is just (or fair), that is, it satisfies the two principles of justice; and second, one has voluntarily accepted the benefits of the arrangement or taken advantage of the opportunities it offers to further one's interests (Rawls, 1971).

Domain IV applies to conceptions of the beautiful. The Museum of Modern Art considers the painting known as Les Demoiselles d' Avignon to be the most important painting in the last 100 years. Research subjects' responses to "Is it beautiful?" and "Why or why not?" in responses to that painting can be organized according various hierarchical levels. The question "Is it beautiful?" cannot be answered from Domain I with the question, "Is it real?"; not from Domain II, with its fundamental question, "Is it good?"; nor from Domain III, with its fundamental question, "Is it just and right?" The painting cannot be adequately analyzed through the use of lower level structures of conceptions of the beautiful (Erdynast & Chen, 2014). The highest level of principles in Domain IV, conceptiondependent principles of the beautiful, is a necessary condition for an adequate analysis about whether the painting is beautiful.

Commons, Trudeau, Stein, Richards, and Krause's (1998) model of hierarchical complexity, understood as a content-independent measure of tasks, is a levels-of-perspective instrument, similar to Selman's (1980) levels

of perspectives. The model of hierarchical complexity is usable to identify the level of perspective used by a subject, but because it does not have a normative component to a decision-making point of view, it conflates what is an unjust solution with what is a just solution to a justice problem, and what is not beautiful with what is a beautiful work of art. Commons et al.'s stages of hierarchical complexity and Selman's stages of perspective taking are each necessary but insufficient conditions for moral development and conceptions of the beautiful stages of normative decision making.

Domains and Subdomains

The domain, and subdomains, of the types of problems presented to the subject specify the types of problem-solving thinking and choices between alternatives required to resolve the dilemmas. Domains involve fundamental questions involving a general human good, about which there is a normative end set of principles for resolving the questions. In order for something to qualify as a domain, three components are involved: a general human good, a fundamental question, and an ultimate principled end point in answering it. In order for something to qualify as a distinct domain, there should be an end point, because without one, it is not possible to make a distinction between an invariantly ordered sequence of stages versus soft stages or a typology in which there can be different types of alternatives and decision-making structures such as Type A or Type B or Type C (Kohlberg & Armon, 1984). In each of the four domains, there is a fundamental question, and at the higher levels, there are fundamental principles that resolve problems or regulate choice of responses within those domains. In Domain I, the fundamental question is, interchangeably, what is factually valid, or what is factually true, or what is factually real? In Domain II, the question is what is good? In Domain III, the fundamental question is, what is just and right? In Domain IV, the question is, what is beautiful?

Problems within the domain of factual reality, thus, require one of Piaget's levels of cognitive functioning to resolve them. Other prominent theories within this domain are

Sternberg's (1977) theory of intelligence, Jaques's (1978) theory of strata, Fischer's (1980) theory of a hierarchy of skills. Problems within the domain of the good (such as what is worthwhile work and what are worthwhile friendships) are solved by structures of conception of the good (Armon, 1984; Erdynast et al., 1978), Selman's stages of children's friendship development (Selman, 1971), and Cook-Greuter and Miller's (2000) developmental theory of relationships, values, world view, and sense of self. Similarly, problems within the subdomain of justice reasoning require use and application of one of Kohlberg's justicereasoning structural stages of thought (Kohlberg, 1969). Problems of aesthetic appreciation and judgments of the beautiful are resolved by levels of aesthetic judgments (Erdynast et al., 1978; Parsons, 1987). Giri, Commons, and Harrigan (2014) claim there is only a single-stage domain. Their study is devoid of competing justice-reasoning claims, as are present in Colby and Kohlberg's (1987a) nine standardized justice-reasoning protocols; it is devoid of supererogatory research questions; it is devoid of conceptions of the good interviews; and it is devoid of analysis of responses to works of art. A research study that is devoid of dilemmas and tasks and questionnaires in two domains of moral development, and structural-developmental conceptions of the beautiful domain, has questionable validity to its claim that there is only a single-stage domain.

Various Levels of Problems: Developmental Levels of Presented Problems and Tasks

In Kohlberg's theoretical view, the construction of new stages replaces the lower stages, which then disappear (Commons, Richards, & Armon, 1984). Kohlberg and Armon, (1984) state that lower level structures get displaced and disappear as higher ones are constructed. Because the previous stages have disappeared during the transformation of a stage into a new, higher one, the subject's new highest stage is presumed to be the presented response to a task or moral dilemma.

A distinctly different theoretical view with supportive findings is that the level of the problems posed to the subjects influences the levels of judgment that the subjects manifest (Erdynast, 1974). People are not stages or levels;

stages are forms of thought they use to resolve particular developmental dilemmas. "Lower level" dilemmas tend to elicit lower justice reasoning (Erdynast, 1974). Although a subject may have higher available stage structures, these structures may not be evoked if they are unnecessary to "solve" the problem in an equilibrated way. To use such higher level available structures would result in a form of moral "overkill." Kohlberg's fishing dilemma, for example, tends to elicit a full stage lower reasoning from a subject than the Heinz dilemma, which also tends to elicit lower justice reasoning than a yet "higher" modified version of Kohlberg's Korean Dilemma (Erdynast, & Rapgay, 2009). Another finding is that only the highest level dilemmas elicit people's highest level conceptions of compassion (Erdynast & Rapgay, 2009). Such findings imply both a hierarchical and layer-cake characteristic to developmental structures, while preserving the premise of transformational construction of levels of moral development. Subjects do not necessarily use their higher level structures for solving lower level problems when these higher level structures are unnecessary to justly solve a moral problem.

Types and Categories of Questions That Are Addressed to the Subject

Kohlberg's standardized research protocols have many questions that are outside of the justice-reasoning subdomain. These questions are addressed to (a) punitive or commutative justice (nonideal partial compliance theory), (b) moral worth and character—aretaic questions, (c) filial morality, and (d) metaethical questions.

Questionnaires about the domain of the good are usually semistructured interviews with open-ended reasoning questions, such as "What is good work?" or "What is a good psychosexual relationship?" These questions are judgments of value, conceptions of the good to an individual or joint good for several individuals, within the domain of the good. Questions of value organize themselves developmentally according to Piaget's and Kohlberg's criteria for invariant, sequential structures, which have increasing higher competence and adequacy (Erdynast et al., 1978; Erdynast & Chen, 2014).

Specification of the Metaethical Categories of the Several Aspects of the Moral Person and the Analysis of the Data and Categories of Types of Questions Addressed in the Questionnaires and Interview Protocols

Moral domain and moral subdomain in any multiple-domain research requires the specification of metaethical categories for several aspects of moral persons. Rawls (1985) presents a theory of political conception of persons as individuals who are free and equal moral persons. Aspects of persons as free and equal moral persons constitute an operational formulation of Rawls's conception of moral persons in terms of four aspects of free and equal moral persons. The first aspect is Aspect A: independence, a determinate scheme of ends that one wants to realize for one's own sake. Aspect B is selfauthenticating source of moral claims. Aspect C is responsibility for ends. Aspect D is requirements of justice, the choice of regulative principles of justice that determine the reasonable terms to resolve competing moral claims. Aspects A and C apply to conceptions of the good. Aspect D applies to conceptions of justice. This Rawlsian conception of individuals as free and equal moral persons is only one possible conceptualization of aspects of persons within many possible ones, but without using any moral aspects of persons developing through moral stages, only a sparse conception of persons as "knowers" of higher levels would be obtained.

On the left branch of Figure 2 is what Kohlberg studied (Rawls, 1971, p. 109), and to which he should have constrained the claims of his findings: the requirements of justice, obligations, and natural duties. Natural duties branch into two categories: positive and negative. Natural duties do not require a contractual obligation to be upheld. Positive natural duties are to uphold justice, the duty of mutual aid, and the duty of mutual respect. The negative natural duties are to not injure, and to not harm the innocent. The metaethical aspects that do apply to justice reasoning, obligations and the positive and negative natural duties, appear in the schematic of metaethical categories.

The morality of supererogation involves the morality of self-command, which is the morality of the hero, or the morality of the love of humankind, which includes the morality of compassion and magnanimity. Kohlberg's metaethical categories only apply to the domain of justice reasoning (Dewey & Tufts, 1932).

On the right branch of the schematic are supererogatory virtues that go beyond Kohlberg's theory. Kohlberg did not study compassion. Compassion is not on the left branch of requirements. (Colby & Kohlberg, 1987a) do not ask questions about compassion, so there are no data on the basis of which to make claims about compassion. In the study on the relations between moral and aesthetic development, dilemmas were generated to ask what a person should do in a dilemma situation if the individual is acting from a duty, and what the individual should do if motivated by compassion (Erdynast & Chen, 2014).

Also on the right branch of the schematic is the morality of self-command, which is the morality of the hero. On the left branch of the right side of the schematic is the love of humankind. That is where compassion fits. The Dalai Lama, when he is compassionate, is compassionate even to strangers, and even to his enemies, the Chinese, who have taken his country Tibet from him. He is required, not by the morality of justice but by the morality of the love of humankind, to be compassionate to members of the Chinese government.

Kohlberg (1984) once thought one of his longitudinal subjects who had been a high school president had reached principled levels of development then regressed to Level 2 when he stole some of his roommate's money just to teach him a moral lesson that the world was not filled with exclusively good people. But the theory of moral development through an invariant sequence of transformational stages involves the premise that, except for forms of organic disorder such as Alzheimer's disease, there should be no regression. Except for organic brain damage such as Alzheimer's, higher level capacities cannot be lost. Individuals can always revert and get back to their higher level capacities.

One of the important implications of the multiple domains theory is that if individuals do not exhibit different levels of development in different domains, those other domains may not exist. If one domain measures everything presented by multiple tasks, other domains are not necessary and do not exist. Piaget understood

Meta-ethical Conception of Justice and Right

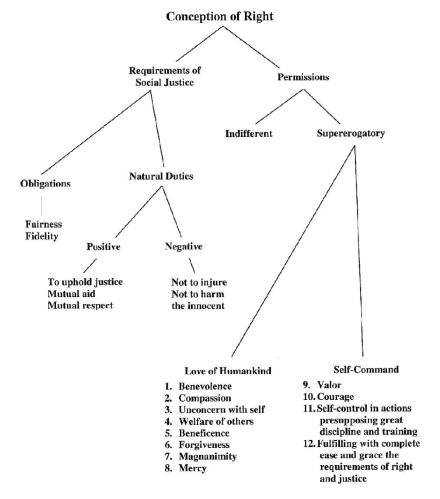


Figure 2. Metaethical conception of justice and right.

there can be uneven development—if you can solve a task within one subdomain, you can learn to do so in another subdomain. Piaget called that horizontal décalage. Very few individuals are evenly developed, contrary to Robert Kegan's (1979) theory, wherein there is no empirical study to support the claim that individuals are at Level 1, then they are at Level 2, 3, 4, and 5 across different dimensions. The claim that they are evenly developed is without empirically based findings.

In studies of conceptions of the real, the good, the just and right, and the beautiful, individuals do exhibit different levels of capabilities

in different domains, and their highest level capacity in different domains cannot be assessed by a single domain properly (Erdynast et al., 1978; Erdynast & Chen, 2014). In the domain of the real, individuals' conception of physical reality and mathematics is what is assessed—how to get a spacecraft to the moon and back, how to get a shuttle into orbit and back, how to cure or treat various types of cancers—are within the domain of factual reality. Scientific evidence is required to support proposed answers to each of these types of questions. Problems or tasks need to be presented for subjects to solve.

The issue of what is a good sexual relationship as represented by marriage, divorce, and remarrying is addressed in a different domain through the following type of illustrative scenario in which Lady Antonia Fraser remembers her husband, Harold Pinter, and its related questionnaire (Erdynast, Armon and Nelson, 1978):

701. Is fidelity a duty or obligation in a marriage? YES____NO____

701a. Why or why not?

702. What do you mean by fidelity?

703. Is there a duty to reveal adultery to the other spouse? YES____NO___

703b. Why or why not?

704. Should a spouse who has engaged in adultery be forgiven? YES____NO____

704b. Why or why not?

705. Can engaging in adultery ever come from a duty to self? YES____NO____

705b. Why would an individual have such a duty?

706. What is a worthwhile sexual relationship? Why?

707. What is worthwhile work for you? Why?

Within the domain of the good, Level 5 may be the highest level. Rawls's principle at Level 5 in the domain of the good is the principle of responsibility for self. At the time Lady Antonia Fraser started her romance with Harold Pinter, she and her husband Hugh had six relatively young children. Hugh was a member of the British Parliament. Antonia Fraser and Harold Pinter each divorced their spouse and remarried one another and lived together for 36 years. Harold Pinter went on to win the Nobel Prize for Literature. In his acceptance speech, he delivered a scathing critique of imperialism by the United States and the numerous wars it has launched. Lady Antonia was the author of 14 acclaimed biographies, including ones of Mary, Queen of Scots, Cromwell, and Marie Antoinette.

Harold Pinter's wife Vivien's vulnerability elicited paternalism from him and made for a hierarchical relationship wherein he reduced himself so as to not overwhelm her. Her Level 2 egoism exhibited by her self-interest in wanting to talk about how well she did after a play did not elicit his highest level capabilities, which were at Level 5 before and during their

marriage. Paternalistic relationships between adults expire when the needs are met, if they are ever met, or when a person becomes resentful for being reduced from attending to his own interests so as to attend to her needs. Antonia Frasier had Level 4 capabilities, but her husband's highest level capabilities were also Level 4. Once Harold Pinter and Antonia Fraser began their relationship with her capabilities at Level 4 and his at Level 5 in the domains of the good and the right, their life together involved the continuous affirmation of both of their highest level capabilities, with both progressing to yet higher ones. Harold was inspired to continue his development and win the Nobel Prize in literature.

The relationship between Harold Pinter and Antonia Frasier involved sexual intimacy that began while they were each married to their spouses. They began their intimate relationship with conversations about their writing that went on 6 or more hours at a time. Each was able to think well about his or her own work while explaining it to the other and to discuss the work intelligently with the other. They began intimate sexual relations before informing their respective spouses that they were having a relationship and that each wanted a divorce so they could go on to marry one another. Their decisions were based on duties to oneself. Kant was unable to make distinctions and integrations of sexual intimacy between consenting adults based on principles. He thought sex was only instrumental and a means to an end that violated the principle of treating persons as ends in themselves. Kant and Infield, (1963) developed a convoluted notion that married couples each "owned" each other and could thus have permissible sexual relations. Kant believed that marriage "is an agreement between two persons by which they grant each other equal reciprocal rights, each of them undertaking to surrender the whole of their person to the other with a complete right of disposal over it" (p. 167).

Assisted suicide is another high-level moral problem to present to research subjects. Kant's writing on suicide negates its permissibility. Kant argues that because persons do not create themselves, they do not have the autonomy to end their lives, making this type of argument heteronomous. Kant (p. 165) said that because

man cannot dispose over himself because he is not a thing; he is not his own property; to say that he is would be self-contradictory; for in so far as he is a person he is a Subject in whom the ownership of things can be vested, and if he were his own property, he would be a thing over which he could have ownership. But a person cannot be a property and so cannot be a thing which can be owned, for it is impossible to be a person and a thing, the proprietor and the property. (p. 165)

The Supreme Court, in a 5-4 decision with Anthony Kennedy writing the majority opinion, uses Level 5 principles. The opinion asserts that same-sex couples have conceptions of the good: They have affection for each other, want to marry one another, and they sometimes want to raise children together. They want equal dignity for who they are and what they choose to want to do, Kennedy says. That is the conception of the good. But even if they did not have those, they have an equal right to marry under the 2nd clause of the 14th Amendment of the U.S. Constitution. Under the Constitution, Level 5 principles forbid denying citizens of an equal right to the liberty to marry, unless there is cause for why they should be denied equality of liberties and rights. It matters not what states legislate against same-sex marriages at Level 4. States do not have the liberty or the right to undermine the affirmation of that Level 5 U.S. Constitutional right.

Piaget expresses a theory of moral development (Piaget, 1965). But Piaget only uses games of marbles as the problem-solving task, and he only identified two levels. There are several important reasons why Piaget's theory of moral development is inadequate. First of all, the term moral development is used without philosophical definition. Second, the rules for a game of marbles are arbitrary. Children set up rules and then these rules have to be followed. Piaget identified two levels of moral development: heteronomous morality and autonomous morality. The difference between today's Supreme Court decision concerning whether same-sex couples should have a right to marry is not based on arbitrary rules, and it is not the mentality of 12-year-old or 4-year-old children playing games. It is based on the Declaration of Independence and the U.S. Constitution, which come from a political theory of free and equal moral persons, based on John Locke's theory in The Second Treatise of Government. In Locke's theory, in a state of nature, persons are endowed with inalienable rights to property, life, liberty, and the pursuit of happiness. Property came first in Locke's theory. If persons did not have property, they did not have political rights. That is a political or moral theory. Children do not refer to moral theories when they play games. They refer to the rules, and they are heteronomous, they obey rules to avoid being punished for violating them, or they are autonomous and obey rules independent of whether they would be punished for violating them. That is not even a philosophically legitimate conception of autonomy. Autonomy is the choice of first principles to govern one's conduct as free and equal moral persons (Rawls, 1999).

When lower level problems are presented, they can be solved with lower level capabilities. How cars are driven is a relatively lower level problem. How cars are designed or how a shuttle is designed so as to be able to launch into space and return to Earth are higher order complex problems. Research subjects may have higher level capacities than are elicited by the particular problems with which they are presented, but their higher level capacities are not being elicited. The presented problems are too low. Any study attempting to identify someone's highest level capacities must present higher level problems. Problems such as assisted suicide are effective in eliciting higher level capacities. When one individual wants to end his or her life and asks someone else to help them, do they have a right to ask and does the other party have an obligation or a duty to respond? This is a high-level problem compared with playing marbles.

Some individuals posture that they have higher level capacities, but actually behave according to lower level capacities. There is not necessarily décalage from higher level capacity in the domain of intellectual development straight over to the other domains.

Empirical Evidence, Longitudinal and/or Cross-Sectional, to Support the Claimed Findings

Piaget and Kohlberg collected data and analyzed it in order to identify how people think. The timeframe for Piaget was from infancy into adolescence. For Kohlberg, the timeframe was from childhood until adulthood. Longitudinal studies are the desirable ideal in order to make claims about invariant developmental sequences. But if cross-sectional studies are used, these should be correlated with results based on Kohlberg's dilemmas, which are based on longitudinal study and have a set of scoring manuals with them. It is very difficult to have high interjudge rater reliability. Interjudge reliability among expert researchers and scorers can be as high as .95 on double-blind analyses. Less than a minimum of .80 is not adequate.

Age Range of the Research Subjects

The age range of the subjects and the size of the research pool on which a theory is based must be examined. Kohlberg's theory is a theory that applies across the entire span. Piaget's theory is one that applies to chronologically aged children and adolescents. Perry's theory only applies to college students. King and Kitchener (1994) use a broader age and educational range in their cross-sectional studies, which have samples from high school, college, master's, and doctoral educated individuals.

Structural Developmental Assessment Scoring Manuals and System, Scoring Systems, and Interjudge Rater-Reliability

Objective scoring systems that can result in reliable assessment of developmentally different responses to the same problems require specialized scoring systems within each domain. Scoring manuals must be ones suitable to the specification of various types of moral actions. Questionnaires about the domain of the good are usually semistructured interviews with open-ended reasoning questions, such as "What is good work?" These questions are judgments of value, conceptions of the good to an individual or joint good for several individuals.

Kohlberg's studies use fundamental deontological categories generated by Dewey and Tufts (1932) as the basis of his scoring manuals (Colby & Kohlberg, 1987b) to trace the development of justice reasoning. Armon (1984) uses the same system of categories of deontic judgments but uses them for conceptions of the good. The result is scoring judgments of value

and ends according to a deontological schema, with the outcome of scoring the good on a justice-reasoning scale. Conceptions of the good cannot be studied by applying these. Kohlberg's metaethical criteria are applicable only to the domain of justice-reasoning. What Kohlberg generated in the table of elements to analyze content of justice-reasoning responses is pioneering. Numerous researchers have proceeded to develop scoring manuals applicable to their studies, for example, Selman (1981) and King and Kitchener (1994).

The principles intrinsic to the article "Assisted Suicide: A Philosopher's Brief" (Dworkin et al., 1997), in which the argument in favor of assisted suicide is presented by comparing the issue with similar complex and contentious cases, such as abortion, was used to create the scoring manual for the domain of the good (Erdynast & Chen, 2014). Scoring manuals of conceptions of the good and the right must be philosophically organized. While scoring manuals constructed for the study of relations between developmental conceptions of the beautiful and moral development (Erdynast & Chen, 2014) are fundamentally Kantian, Kant's own philosophical arguments about the permissibility of both sexual relations between nonmarried adults and the permissibility of suicide are limited and contrary to his own philosophy of free and equal moral persons (Kant & Infield, 1963). The scoring manual for the dilemma on assisted suicide is based on principles applicable to free and equal persons in the article "Assisted Suicide: A Philosopher's Brief," (Dworkin et al., 1997).

Structural developmental scoring manuals with high levels of interjudge rater reliability must be used. The meaning of what research subjects have said in a response to a structured question is matched to what is in a scoring manual. Kohlberg had the intellectual courage to change and improve the scoring manuals four distinct times.

Conclusion

Specification of types of problems being addressed and specific metaethical categories being studied within moral development are required for making claims commensurate with the actual studies. Distinctions can be made about the domain of the issues under study from

among four domains: the real, the good, the right, and the beautiful, or some combination of domains that are involved if beyond a single distinct one. At the highest levels within each of the four domains, a distinct set of principles are applied to resolve the domain-specific problems. Moral problems within the domain of the good are not the same types of moral problems as those within the domain of justice-reasoning, and developmental stages or levels within the domain of the good do not compete with developmental stages or levels within the domain of justice-reasoning. Principles of caring and responsibility do not compete with principles of justice. If these two domains are indeed separate and distinct from one another, the highest level principles of decision making that are the end point of development in one domain are not what is used to resolve the problems in the other. The decision for a woman about whether to carry a pregnancy to term (Belenky, 1978) is a decision to be resolved by principles of rational choice and responsibility to self. Whether a woman has a right to have an abortion is a matter of justice specified by a Constitutional right and liberty for all women, which they can exercise on an individual basis. One of the important implications to the multiple domains theory is that if individuals do not exhibit different levels of development in different domains, those other domains may not exist. If one domain measures everything presented by multiple tasks, other domains are not necessary and these conflate into fewer ones.

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