İslâm Araştırmaları Dergisi, Sayı 6, 2001, 93-129

Toward an Open Science and Society: Multiplex Relations in Language, Religion and Society –Revisiting Ottoman Culture–

Recep Şentürk*

In this paper I introduce a new concept, "open science," to denote a pluralist and democratic science culture. I claim that an open society requires, on both the local and the global levels, an open science. For science culture plays a significant role in shaping the political cultures which have a direct impact on social relations and human rights. I call for reform of our exclusionist science culture with the aim of better understanding the world, and, at the same time, of promoting a more democratic attitude towards alternative explanations and interpretations. I argue that essentialism and exclusive focus on causal relations should be abandoned not only because they represent only one way of looking at the world, but also because of their negative social implications. Explored are examples of the traditional Islamic social (*fiqh*) and human (*nahw* and *balaghah*) sciences as actualized within the Ottoman milieu. Likewise, it is argued that the example of the medical field, where the legitimacy obtains among parallel traditions originating from different civilizations, can serve as a model for other scientific fields.

Intellectual disagreement may lead to social conflict and the violation of basic human rights, in particular freedom of conscience and expression. Yet, as is argued in this study, this is avoidable by adopting a multiplex approach to language, religion and society. Explored are the examples of the Islamic humanities (e.g. *nahw*

Dr., TDV, İslâm Araştırmaları Merkezi (İSAM). The core claim I expand here was briefly presented earlier in a symposium on the Humanities on the Birth of the Third Millennium, jointly organized by Fatih University, Istanbul, and Binghamton University, New York (5-6 June, 2000). I thank the organizer Alparslan Açıkgenç for his feedback. I also thank Şerif Mardin, who gave me the opportunity to discuss my ideas with his research group at Sabancı University, Istanbul. Above all, I am grateful to my friends from the Center for Islamic Research for their comments, in particular, Tahsin Görgün, Şükrü Özen, Adnan Aslan, İlhan Kutluer and Talip Küçükcan.

and *balaghah*) and social sciences (*fiqh*[1]) as they were practiced in the Ottoman milieu[2]. References are also made to recent developments in the medical field, which exhibits signs of an open science. My purpose here is to explore the subtle relationship between science culture and pluralism, but not to analyze scientific traditions as such. In other words, it is an attempt in "sociology of rights" as it bears to sociology of science.

I argue that the structure of our science with a unilayered ontology gives rise to the transformation of intellectual and scholarly contests into political conflicts, an unintended consequence that eventually leads to a closed society, oppression, and the violation of human rights, particularly freedom of thought, conscience and expression. The current structure of science does not allow the coexistence of different concepts of science and knowledge as it postulates that there can be only one type of legitimate science and knowledge and therefore variation in the field of science must be rejected as deviance. In a scientific milieu where variation constitutes deviation, the rise and survival of a different type of knowledge results in a power struggle. Thus, an intellectual contest is transformed into political rivalry, which continues until that the system of knowledge with the more powerful advocates excludes the others and sets limits to human knowledge. Yet this is a problem we may overcome by what I call an "open science," a term I have coined to refer to a democratic and pluralist science culture.

Sharing the same premises and concerns in his path-breaking works, Popper warned against the perilous effect of grand theory and historicism on society.[3] He urged that we should make, produce and teach science in such a way that it should contribute to democratic ideals and human rights rather than hinder or block them. He labeled historicists and grand theorists, like Plato and Marx, as enemies of open society[4] due to the political impact of their theories. The basic assumption in Popper's works is that a strong relationship exists between science and political culture.

---

1 *Fiqh* is the traditional Islamic discipline that specializes on the study of human action ('amal). On *fiqh* see Nicolas P. Aghnides, *An Introduction to Mohammedan Law and a Bibliography*, (Lahore: Sang-e-meel Publications, 1981 [1969]), 23-169.

2 In the Ottoman context the word "science" is used as a translation of Arabic *al-'ilm* or Turkish *ilim* which indicates both natural (*'ulûm tabi'iyya*) and religous sciences (*'ulûm shar'iyya*).

3 See Karl Popper, *The Open Society and Its Enemies* I-II (New York: Routledge, 1973). Popper states the purpose of his work as follows: "It tries to contribute to our understanding of totalitarianism, and of the significance of the perennial fight against it. It further tries to examine the application of the critical and rational methods of science to the problems of the open society. It analyses the principles of democratic social reconstruction, the principles of what I term 'piecemeal social engineering' in opposition to 'Utopian social engineering'. And it tries to clear away some of the obstacles impending a rational approach to the problems of social reconstruction" (1-2).

4 See also Karl Popper, *The Poverty of Historicism* (New York: Routledge, 1991). The relationship between science culture and social life in Popper's perspective is a complicated one. "The course of human history is strongly influenced by the growth of human knowledge" he writes (vi). In this work, he documents how the belief in the unity of scientific method, advocated by what he calls "historicism," is misused to create a closed society. Popper warned that historicist social science is dangerous for a democratic society and struggled against it.

Yet, ironically, the kind of science culture Popper called the enemy of open society is still taught as canonic science in the schools of democratic societies. If Popper was right, then by basing our education on the theories of the enemies of open society, we are doing a disservice to democratic society and culture. Popper advocated that "democratic social construction" should begin with a reconstruction of the culture of science.[5] Otherwise, if the culture of science is incompatible with our democratic ideals, the project of democracy is destined to fail.

Recently, Wallerstein and his colleagues on the Gulbenkian Commision issued a call to "open" our "social sciences" to the disadvantaged segments of Western and non-Western societies. They offered some solutions to the ethnocentric structure of current social science.[6] Yet Wallerstein's goal in this particular project appears not at the reform of the science culture as a whole but only at that of the community of social scientists. In his other writings, however, Wallerstein makes explicit the need for social reform to which, as his work suggests, a reform in the culture of the social sciences would significantly contribute.

Popper's exploration of the relationship between the culture of science and social structure has not been pursued in sociology and philosophy of science since his death. Wallerstein cannot be seen as a follower of Popper, because his approach is directed at an entirely different set of concerns. Nor is his critique of the current theoretical structure of science based on Popper's point of departure. Instead, his critique derives from completely different premises. Furthermore, their perspectives on Marxism are clearly incompatible. To my knowledge, sociological works sharing Popper's approach and concerns have yet to appear.[7] The present study should serve as a modest step in this direction.

Both Popper and Wallerstein accomplished a great service by highlighting the relationship between the structure of scientific and political cultures. Yet, this effort needs to be expanded by exploring the social impact of various constructions of ontology, epistemology and methodology used in science which usually escapes the attention of sociologists. None of these background elements in science, contrary to the words of their advocates, are God-given, natural, essential or universal. Instead, they all represent the achievement of a particular group of intellectuals in

---

5 Popper was convinced that democratic reform could be inhibited by a particular culture of social science: "It does so by criticizing those social philosophies which are responsible for the widespread prejudice against the possibilities of democratic reform. The most powerful of these philosophies is one which I have called *historicism*" (2).

6 See, *Open the Social Sciences: Report of the Gulbenkian Commission on the Restructuring of the Social Sciences*, (Immanuel Wallerstein, Chair) (Stanford, CA: Stanford University Press, 1996).

7 Recently a book by George Soros appeared using the term in the title, yet its approach to the problem of democratic reform is from an economic and political angle and thus represents a different approach to the issue. See George Soros, *Open Society: Reforming Global Capitalism* (London: Little, Brown and Company, 2000). Soros introduces his book as follows: "This is a book of practical philosophy: it offers a conceptual framework that is meant to serve as a a guide to action. I have been guided by that framework in both my moneymaking and philanthropic activities, and I believe that it can also apply to society at large: It provides the guiding principles for a global open society" (ix).

constructing an image of the world to be shared by other humans. No theory is sacred or indispensable.

Ancient wisdom was also aware of how intellectual conflicts may lead to political ones. For instance, Rumi warned against dashing against each other like boats on an open sea in the process of searching for truth. He advised how to prevent intellectual contests from serving the cause of social conflict and illustrated the process by a story about a disagreement on the description of the elephant by people in a dark place:

> The elephant was in a dark house: some Hindus had brought it for exhibition. In order to see it, many people were going, every one, into that darkness. As seeing it with the eye was impossible, (each one) was feeling it in the dark with the palm of his hand. The hand of one touched its ear: to him it appeared to be like a fan. Since another handled its leg, he said, "I found the elephant's shape to be like a pillar." Another laid his hand on his back: he said, "Truly, this elephant was like a throne." Similarly, whenever any one heard (a description of the elephant), he understood (it only in respect of) the part that he had touched. ... If there had been a candle in each one's hand, the difference would have gone out of their words. The eye of the sense-perception is only the palm of the hand; the palm has not power to reach the whole of him [the elephant]. ... We are dashing against each other, like boats: our eyes are darkened, though we are in the clear water.[8]

Rumi's purpose in telling the above story was to convey the moral of refraining from conflicts caused by differences of ideas. From this story, we can deduce that he emphasized the following ideas as moral principles: there should be room for the advocates of different ideas, because none represents the truth in its totality despite the sincerity of the claims by their advocates. Therefore, those who have ideas should recognize their own limits and the merits of the others. Total knowledge is beyond human reach; we can acquire only a partial knowledge of universe.

Yet, at present, these moral lessons are usually not part of our science culture and education. The formative age of children is characterized by intensive exposure to the science culture in the schools and elsewhere. The children are pressured, intentionally or unintentionally, by their families and teachers to internalize science culture and to use it in their daily life. Yet, the implications for the future social relations and attitudes of the students of a given culture of social science or humanities have yet to be fully explored.

In this connection, Goethe's observation is striking. He described Ottoman science culture in 1827 as involving three stages. In the first stage, the children were taught about the power of God and that no harm could reach them without being predetermined by God. According to Goethe, this belief brought a relaxation to the students' psychology.

---

8 *The Mathnawi of Jalaluddin Rumi*, trans. by Reynold A. Nicholson (Lahore: Islamic Book Service, 1989), III, 71-2. For the usage of this story by İbrahim Hakkı Erzurumî, to solve the conflict between theologians, natural scientists and astrologists, see his *Ma'rifetnâme*, (Istanbul: Matbaa-i Ahmed Kamil, 1330), 85.

> You must have studied the history of the Church like me for fifty years to understand how all things came together. However, it is very interesting how the Mohammedans [Muslims] begin their education. As a foundation in religion, they strengthen their youth first in the conviction that nothing could happen to man except what is previously determined by God the Almighty; so they become ready for their entire live, relaxed and need nothing else.[9]

After inculcation of the Islamic creed, which is founded on faith in God's existence and omnipotence, the next phase of education commences, which involves training in philosophy. During the study of philosophy, Ottoman students were taught to view every commonly accepted truth from a critical perspective, almost approaching skepticism. They learned that one could defend a claim and the opposite of it in an equally convincing manner, using rational arguments.

> I will not examine what is true or false, useful or harmful in that teaching. But something from that faith lies in us all, even if we have never been thought that. ... Then the Mohammedans start their lecture in Philosophy with the teaching that nothing exists the opposite of which you cannot claim. They thus train the mind of their youth in such a way that they assign them to find the opposite of a given opinion and to articulate it. Consequently, they gain competence in thinking and articulating.[10]

It is true that, through this practice, Ottoman students gained competence in thinking and articulating their thoughts, but more important, they gained respect for alternative ideas and their advocates as they came to realize that ideas and their opposites should be treated equally. Since Goethe was interested only in the intellectual implications of such an education, he did not look at its social implications. But we can observe that Ottoman students were prepared to live and communicate in a diverse or cosmopolitan society that contained numerous ethnic and religious communities, such as Christian (including those of the Armenians, Orthodox and Coptic) and Jewish. Even the Islamic community was diverse, including many different schools (*madhahib*) of theology, such as Sunnis and Shiites and the schools of law such as Hanafis, Shafiis, Malikis and Hanbalis. The intellectual cleavages, however, had not been allowed to lead to social conflicts, of course, with occasional exceptions. If Ottoman science culture had instructed solely that the truth is one, as they did at the first stage of their education, then they would have shown no respect and tolerance for alternative ideas and the communities who adopted them. This should not be seen as nihilism, relativism or skepticism. On the contrary, Ottoman education provided for a certainty of faith, yet without bigotry. Goethe describes how doubt eventually led to certainty in the Ottoman education.

> Now, when it was said of every opinion that the opposite might as well be true, there emerges the doubt about which one of them is really true. There is no permanence in doubt, on the contrary it leads the mind to closer exploration and examination, from which the certainty emerges, if they all take place on a perfect manner. The certainty is the goal in which the human being finds

9 Johann Peter Eckermann, *Gespraeche mit Goethe* (Leipzig, 1948) 194-5.

10 *op.cit.*

> his inner peace. You see, this teaching is lacking nothing and we, with all our systems, are not ahead of it and that nobody at all can reach beyond it.[11]

The model of science I have conceptually outlined below for our time may not completely converge with the Ottoman concept of science, we can learn from Ottoman experience, which provided an earlier example of a pluralist society. Ottoman science culture has not yet been explored, which multiplies the difficulties I face.[12] Cosmopolitan Ottoman society extended from the Middle East to the Balkans and from the Caucasus to North Africa. The inhabitants of all these lands lived under Ottoman rule for many centuries in peace and a relatively minimum level of conflict compared to the amount of conflict we have observed in these regions since its collapse. Below, we will see how and to what extent Ottoman science culture contributed to mutual respect and understanding in this wide-ranging and all-embracing social mosaic. While doing this, we should be careful to avoid the error of anachronically comparing the Ottoman system with modern democracies.

I. From Closed to Open Science

Science is variably produced by philosophers, scientists and theorists who adopt different strategies in the process of conceptualization and explanation. And it is consumed by everyone in the world knowingly or unknowingly, directly or indirectly. It influences our lives in many subtle ways. How the scientific culture we consume subtly influences our political culture and social relations is a question yet to be fully explored. This issue is not inconsequential because what follows is a more practical question: "If our science culture is giving us, even unintentionally, a closed mindset, how can we reverse or reform it?" We need to be sensitive to the impact of science culture on political and social relations because, at present, science has already become the common culture and discourse of humanity on the global level through education. We should also explore the possibility of using science education and the spread of science culture, perhaps through indirect and subtle ways, at the service of human rights, democracy and open society.

The first step in this direction is to emphasize that contrary to what its advocates would like us to believe, there is no "universal" structure for science and scientific investigation. Nor is there any "ideal" structure or set of "absolute criteria" for scientific knowledge that all must accept and apply. Although scientific theories are usually presented to the public as natural, essential, universal or God-given, science and scientific methods represent *fallible* results of human efforts and derive their value from the services they provide us. In the *Structure of Science,* Nadel illustrated this as follows:

> If the conclusions of science are the products of inquiries conducted in accordance with a definite policy for obtaining and assessing evidence, the rationale

11 *op.cit.*

12 Regarding Ottoman science see the works of Ekmeleddin Ihsanoglu. For classical works in the field, see the works of Katip Celebi (e.g., *Kashfu'z-Zunūn*) and Tashköprîzâde (e.g., *Miftahu's-Sa'āda*).

> for confidence in those conclusions as warranted must be based on the merits of that policy. It must be admitted that the canons of assessing evidence which define the policy have, at best, been explicitly codified only in part, and operate in the main only as intellectual habits manifested by competent investigators in the conduct of their inquiries. But despite this fact the historical record of what has been achieved by this policy in the way of dependable and systematically ordered knowledge leaves little room for serious doubt concerning the superiority of the policy over alternatives to it.[13]

Yet the current science culture is saturated with contrary notions, which are, implicitly or explicitly, instilled in schools all over the world. Students learn that there is only one scientific fact, which must be shared by everyone. They are not taught that there can be alternative views, contradicting what we have been taught as scientific and true. Students are ignorant of the idea that parallel sciences and notions of truth can be concurrently adopted by different social groups, academic or otherwise. With the purpose of increasing its persuasive power, the present science culture emphatically excludes the possibility of alternative and complementary approaches, let alone the acceptance of the validity or legitimacy of alternative systems of knowledge. Consequently, an unchallengeable authority is attributed to science or a scientific theory and we are all requested to be assent to it. This approach eventually leads to the undisputable conviction, which reflects almost all features of a blind faith, that what we know is the eternal, universal and the only truth.

Is it so? Of course not. No human knowledge is a reflection of truth in its totality; instead scientific knowledge is an open-ended knowledge. It moves in unpredictable directions. There is a paradox here. We should learn and teach not only scientific truth, but its changing character as well. We may become afraid that in the future, potential yet inescapable change may undermine the authority of our theories and science. After all, truth gains authority if it is enduring. But, scientific truth is transient, open to evolution and replacement; it is a truth limited and finite.

Yet, given the ontology, epistemology and methodological premises of the current science, scientists and teachers cannot act otherwise. This exclusionist attitude and closed mindset are an outcome of the structure of the current science, not an outcome of personal bad manners or lack of democratic attitude.

Therefore, the solution lies not in changing personal attitudes but rather the *structure* of science, which unintentionally leads to such an exclusionist, and close-minded approach in its practitioners and consumers towards alternatives.

The solution offered here is an "open science," which is characterized by a (1) multiplex ontology, (2) multiplex epistemology, and (3) methodological pluralism. It is an alternative to the currently popular closed science, which is characterized by a (1) unilayered ontology, (2) unilayered epistemology and (3) methodological monism. As I will explain below, this is an attempt to change the structural features

13 Ernest Nadel, *The Structure of Science: Problems in the Logic of Scientific Explanation* (London: Routledge, 1982) 13.

of our science, so as to forestall the rise of authoritarian attitudes in social and political relations. In other words, it is an attempt to forestall social and political conflicts emerging from intellectual disagreements by reforming the structural features of our science that foster such a result.

From unilayered world to multiplex world

There are different strategies we can adopt in constructing the picture of the world to be used in our intellectual, academic or philosophical inquiries. The currently common strategy consists in constructing a unilayered image of the world and reducing all existing phenomena to this level. This strategy is intellectually faulty and socially perilous. Intellectually, it does not reflect the richness and complexity of the world. Socially, it leads to bias, discrimination and conflicts.

Closed science is based on essentialist metaphysics while open science is based on a relational metaphysics, which is open to alternative and complementary views, including the essentialist perspective. Unilayered ontology constructs a closed world with the aim of reducing all existence to a single layer. It draws boundaries around this layer and excludes or denies other phenomena.

Closed ontology should be rejected not only because of its intellectual imprecision, but also because of its social implications. This proposal should not be understood as defending one type of world view at the expense of the other, but as a suggestion for revision in the structure of the way we construct our image of the world. Briefly put, replacing the current unilayered and exclusionary ontology with a multiplex and open-ended one would better fit the multitude of levels of existence[14]. More important, it would forestall social exclusion due to difference in the world views.

The essentialist view searches for unchanging or permanent essences which need to be sifted from a variety of contingencies. From this perspective, the world consists of essences and contingencies and the scholar is the one who can distinguish between them. Likewise, from this perspective, doing science means an exhorted and systematic effort to discover the essence of the subject by unveiling the contingent attributes that envelope it.

The essentialist view focuses exclusively on the subject. The subject "in itself" and "in our perception" constitutes the subject matter of the intellectual activity called science. The essentialist view does not pay attention to the system of which the subject is a part. The entity alone constitutes the subject matter of the inquiry. Such a view provides only a fragmented view of the world with disjointed pieces.

For instance, a human being may be defined from an essentialist perspective as "a speaking animal" if speech is seen as the most essential quality by which a

14 For instance, the tension leading to the exclusion of either side that is caused by the dichotomy between the material and cultural levels in social and human sciences is commonly experienced. The same is true for the physical and spiritual levels in psychology, philosophy and religion.

human being is distinguished from other creatures. An objection may arise to the effect that a human being should be defined as a "thinking animal" on the grounds that "thinking" is the essence of being human. The fact that human beings live in a society is seen as an accidental quality. Social change, from an essentialist perspective, is the change of contingent qualities, not the essences. Essences are characterized by durability and universality.

Essentialist analysis is carried out in two main steps: First, isolation of the subject matter from its environment, and second, its disintegration into its component qualities until the essence stands out among the contingent qualities. The essentialist view sees the world as entities with qualities, some of which are contingent while others are essential. The relations between these entities and the network they constitute is neither a primary nor a secondary concern from this perspective.

By contrast, a purely relational ontology sees the world as interconnected entities. The focus is on the system in which the entity is embedded. Or better put, the entity is contextually analyzed. The distinction between the essential and the accidental qualities is not a concern for the relational ontology because the existence of such a distinction is perceived as debatable or denied. Likewise, the existence of an essence that composes the subject is also found debatable.

Yet, there is nothing compelling us to categorically deny the essentialist approach in order to adopt a relational perspective to the world. The relational approach can be combined with an essentialist approach if they are redefined from a inclusive perspective. One can both analyze the attributes, essential and otherwise, as well as the relations of a subject, for there is no logical necessity to assume that these approaches are mutually exclusive, as we are told by the popular science culture today.

One can argue that the essentialist and the relational approaches can coexist and complement if they are combined in a stratified image of the world and applied simultaneously. For such an inclusive approach we need to operationalize what I term an "open ontology," which postulates an "open world," a multiplex structure with multiple layers complementing each other. The presumed mutual exclusion between material and non-material levels, attributes and relations, qualitative and quantitative levels well illustrate the current closed ontological approaches.

Our world view becomes "open" when we discontinue excluding layers and dimensions that are accessible to different perspectives and intellectual communities. On the contrary, if we claim that the only world is the world we see, then our world view becomes "closed" as we draw a mental boundary around the existent and knowable world.

Open ontology is a way to surpass the false dichotomy between the exclusionist idealism and exclusionist materialism. They, rather than mutually excluding each other, represent the two levels of existence. "Matter" and "idea," constitute the two strata of existence, but they do not exclude the possibility of other strata

beyond them. For instance, God is neither matter nor idea. Both exclusionist materialism and idealism represent two types of closed ontology as they advocate "closed world views" with but a single layer of existence. Closed ontology has long tried to reduce the world into one level. But this effort has proved futile as it does not correspond to the most fundamental human experience.

Looked at from the perspective of its social implications, closed ontology leads to the exclusion of those who see the world differently. The drawn-out conflict between materialism and idealism is just one example. Their advocates have claimed that the materialist or the idealist ontology exhausted all that can exist and all that can be known. Consequently, variation is seen as a deviation. If a closed ontology is officially accepted by a state, then these deviations are corrected by the state power and all possible preventive measures are used to block the rise of alternatives. The experience of the USSR with an exclusionist, materialist world view, which cost millions of human lives, may be recalled here, which clearly demonstrates how a closed ontology nourishes a closed society.

From unilayered to multiplex epistemology

Currently, it is commonly accepted in the learned community that there can legitimately be only one type of scientific knowledge. Philosophers and scientists try to determine the qualities of the scientific knowledge. Once determined, the rest of knowledge should be rejected as academically illegitimate.[15] Such an approach to epistemology creates a closed system of knowledge. We can, however, alternatively, adopt a different approach to epistemology that will allow for different types of knowledge to be treated as equally legitimate.[16] The difference between this view and relativism is that it does not exclude the possibility of ultimate truth; rather, it reminds that different claims on truth should be treated respectfully within their own domain.

This is particularly illustrated by the multiplex view of the world, in which each layer of existence requires a different epistemology and produces a different type of knowledge. A strong connection between the world picture and the epistemology is observable in any major theory of science. A closed epistemology is characterized by a set of ideal and normative criteria to determine whether knowledge is scientific or not. Idealist and materialist epistemologies have mutually exclusive criteria to serve this purpose. A single-level world can be known only through a single strategy to obtain knowledge. In contrast, a multiplex world can be known through a variety of strategies designed to fit the particular needs of each level of existence.

---

15 An alternative to this essentialist approach to science is the conventionalist approach. It has been adopted by some Muslim scholars like Katip Celebi who define "science" as a set of problems (*masāil*). There are also some contemporary scholars who also adopt a conventionalist approach to science, like Seligman, the editor of the *International Encyclopedia of Social Sciences*. See his "What are the Social Sciences?", vol. 1, pp. 3-7.

16 Here again the purpose is not to analyze epistemological systems but to draw attention to the impact of their structure on the social order.

The age-old tension between the material and the cultural levels constitutes a good example. Materialist ontology accepts the material level alone and tries to reduce culture to it. Idealist ontology, on the other hand, accepts only the cultural level and aims to reduce matter to it. For the former, the way in which we know material nature is also a valid way to know culture. For the latter, the way we know the ideal level should at the same time be used in exploring nature. Both are closed systems on the ontological and epistemological levels.

Yet if we accept both the material and the cultural levels, this will allow us to accept variance in knowing both worlds. Then, it will become possible for us to produce two types of knowledge, one about material nature, the other about culture. A scholar will know how to operate on different levels of existence in the course of philosophical and scientific inquiry.

This approach will produce an open epistemology that would acknowledge the legitimacy of different types of knowledge. Knowledge gains legitimacy if it can find a niche for itself in the universe by adding a new dimension to our world.

Sociologically speaking, closed and open ontological systems have different impacts on social relations. Accepting only one type of legitimate knowledge will lead to excluding intellectual and social communities with different types of knowledge. During the last century, humanity suffered from such an approach. Ideological nation-states, whether fascist or socialist, tried to eliminate different types of knowledge in their societies. Likewise, imperialist states tried to transplant a particular type of knowledge in their colonies to replace the indigenous knowledge, which had traditionally helped those societies to understand the world in a meaningful way.

Open epistemology, however, will bring about tolerance towards different types of knowledge and the intellectual and social groups in possession of these types of knowledge. One type of epistemology will not be considered to be universal. Likewise, there will be different sets of criteria, according to different perspectives, to determine whether a piece of knowledge is scientific or not.

Closed epistemologies lead to conflict in epistemic communities who have no tolerance for difference. Open epistemology allows for the coexistence of different epistemic communities, which forestalls the transformation of scholarly competition to a power struggle and political conflict. Open epistemology has the potential to curb the impact of power on intellectual contests.

From methodological monism to methodological pluralism

A multiplex ontology leads to a multiplex epistemology while both require a methodological diversity. Multiple methods will be needed by different levels of existence and the epistemology consistent with it.

By contrast, a unilayered ontology leads to a methodological monism. It claims that there is and that there can only be one scientific method. Alternative and complementary methods are thus rejected on the grounds of methodological mo-

nism. Scholars who believed in the unity of sciences also advocated a unity of methods. Yet, the subject matter resisted the implementation of identical methods. For instance, the application of the methods of physics has long been debated in the social sciences and humanities. Positivist scholars have argued that the scientific method is universal and applicable on the universal level.

Currently, the methods of explanation and interpretation in the humanities and social sciences provide examples of a closed methodology. Each one claims to be the sole path to scientific knowledge and declares the other illegitimate. Exclusion of the other is required by the assumptions on the ontological and epistemological levels. The exclusion on the ontological and epistemological levels are extended to the methodological level as well.

Consequently, the way to promote methodological diversity or an open methodology is to replace the closed ontology and epistemology with open alternatives. Unless we change the way in which we see the world, the effort to produce and concurrently employ different methods will have no theoretical ground. Say, if we accept that there is only matter, it is impossible to use both explanatory and interpretive methods in the social sciences and humanities.[17] If we want both methods to be concurrently applied, we should acknowledge a two-layer world, material and cultural.[18] Then, we can apply explanation on the material level and interpretation on the cultural level. This would not mean that we refuse to admit the possibility of other layers, either.

Open science sees that it is possible for human beings to operate in parallel universes, knowledge systems and methods that may be endless in number. This is true particularly for the humanities and social sciences. Yet although physics has moved in this direction long ago, the cultural sciences still operate in a simple and single-level world. This is perilous not only for science but also for society.

After this conceptual discussion about the contours of an open science we can now explore historical examples. For this purpose, I will examine the Arabic humanities and Islamic *fiqh* as implemented in the Ottoman milieu to measure the extent of their openness.[19] This will enable us to continue the discussion about actual historical examples. Our purpose in this exercise is restricted to the special concerns of this study and not to a general discussion of the Ottoman humanities and societal sciences.[20]

---

17 Theodore Abel illustrated this tension in an excellent manner. See his "The Operation called *verstehen*," in *Theorie und Realitat*, ed. Hans Albert (Tubingen: J.C.B. Mohr, 1964) 177-90.

18 We are also aware that there is a layer called the spiritual. There is no logical necessity to deny it if methods can be developed to analyze it as well.

19 For the social organization of the Ottoman educational structure and intellectuals as a separate class known as the *ulema*, see Madeline C. Zilfi, *The Politics of Piety: The Ottoman Ulema in the Postclassical Age (1600-1800)*, (Minneapolis: Bibliotheca Islamica, 1988).

20 The Ottoman world was stratified, or multiplex; it was believed there was a hierarchy of existence (*marâtib al-wujûd*) and a hierarchy of sciences (*marâtib al-'ulûm*), as well as a multiplex truth (*haqîqat*). This is

II. Open Humanities: Revisiting the Auxiliary Sciences ('ulum al-âleh)

In Arabic, the humanities are called the auxiliary or instrumental sciences (*'ulum al-âleh*) because they were viewed by the *ulema* as tools in the service of *fiqh*. Scholars of *fiqh* debated whether or not humanities was a part of *usûl al-fiqh*. This debate illustrates how the humanities, represented mainly by *nahw* and *balaghah*, are strongly connected to the social and normative science which was represented by *fiqh*, in the Islamic and Ottoman tradition.

The Ottoman legacy[21] provides an interesting case to explore further the ideas I outlined in theory above. In general, it is possible to view the Ottoman social organization and sciences as a developed extension of the broader Islamic and Arabic legacy. Ottomans managed to successfully establish and maintain a multinational and multicultural state for many centuries in the Balkans and the Middle East by adopting the *millet* system as a legacy of earlier Muslim states. Likewise, they also adopted the earlier Islamic sciences and educational system. Below, I will demonstrate, based on the prevailing approach to the humanities adopted by the Ottomans that the Ottoman humanities education fostered a methodological pluralism, and thus an open science, which can be seen as both a foundation and a reflection of *millet* system in the field of science. Students thus educated were intellectually better equipped to respect alternative views and modes of life.[22] I will draw on the

best summarized by Tashköprîzâde, the author of *Miftâhu's-sa'âda*, who writes in the introduction to his well-known work on the enumeration of the sciences in the Ottoman world: "Know that for things there is existence at four levels: in writing, in speech, in minds and in entities. Each preceding one is a reason for the succeeding one. This is because writing indicates the utterances denoting what is in the minds and which denotes what is an entity. It is manifest that existence as an entity is the real and authentic existence. Existence in the mind is debated as to whether it is real or figurative. However, the first two types are certainly figurative. Then, what follows is that the sciences concerning the first three types of existence are, for sure, auxiliary. Yet the sciences concerning the entities are either practical (*'amalî*, 'about action'), which is sought not for itself but for an external purpose or theoretical, which is sought for itself alone. Then they [i.e., sciences] are either derived from religion, which are the religious sciences, or produced by reason alone, which are the philosophical sciences. These are the seven founding principles, each with branches." Ahmad b. Mustafa al-Shahir bi Tashköprîzâde, *Miftahu's-Saadah wa Misbahu's-Siyâdah fi Mevzu'âtu'l-'ulûm*, ed. by Kâmil Kâmil Bekri and Abdulwahhab Abunnur, (Cairo: Daru'l-kutub al-haditha, n.d.) I: 74.

21 Victoria R. Holbrook observes that, after the fall of the empire, Ottoman legacy in humanities was not claimed by the successor nation-states. "[no] state has instituted Ottoman culture as its past, though Turkey may now be in the process of recuperating it. Each emerging nation constructed a literary institution requisite to the modern state—a literary cannon narrating the national myth, inculcated in school—by rhetorically suppressing parts of Ottoman culture. The Turkish republican case would be unique among them insofar a continuity of identity exists between modern Turkish and Ottoman culture. While Balkan states, for example, could reject Ottoman literature as "foreign" and fit the nationalist discourse of the day, for Turkey to do so required invention of a discourse representing its "own" literature as foreign. Most interesting today, in view of present multiculturalist challenges, would be an understanding of Ottoman literary culture as the sum of practices subsequently broken down along nation-state lines, but the Ottoman has served all its disinheritors as "other," and knowledge of the discursive universe of Ottoman literature consists largely of hypothesis carrying a high degree of polemical charge" (1994: 2).

22 The freedoms in Ottoman society should not be anachronically compared with the ones in modern democracies but with the ones in the societies from the same period. The freedoms in Ottoman society lag, not unexpectedly, behind the democratic societies of our time in some aspects, but they were incomparably ahead of the freedoms in other societies of the middle ages.

books most commonly used by Ottoman *madrasa* teachers and students, which is sociologically more significant than the specialized literature on humanities.

For the purpose of supporting my argument, I will demonstrate how the Ottoman humanities in Arabic concurrently applies both causal and interpretive methods. This will show that the language we use possesses both causal and non-causal relations, and that, therefore, it must be analyzed by the concurrent application of different methodological tools. Consequently, understanding the world cannot be exhausted by causal analysis alone and requires the simultaneous application of both causal and non-causal analytical tools.

A relational approach to discourse

I see Ottoman humanities in Arabic[23] as an example of open science for the following reasons. First, its approach is relational but not essentialist. Second, it has a multiplex ontology. Third, it recognizes the existence of both causal and non-causal relations in language. Fourth, it develops and employs at once different methods for the analysis of different levels and types of relations. Below, I will elaborate on these points.

Such scholars writing in Arabic adopted a relational approach to language and recognized various types of relations among the components of a sentence. The most important among these relations are *'amal, isnâd, ta'alluq* and *idâfa* which we will discuss below in greater detail. The subject matter, the text, was perceived as an overlapping network of various types of relations. Each network was analyzed from a different methodological standpoint. I should note that the issues I will touch upon below are more complex than what I will briefly present here. Given my purpose, I will not delve into the details of the linguistic or literary questions. Instead, I will try to highlight the way Ottomans did science and its implications for the broader social structure.

Now we can have a comparative look at some of the relations recognized by humanities in Arabic, more specifically *'amal, isnâd, ta'alluq* and *idâfa*.

'Amal (causation and effect), which literally means work or action, indicates both the interaction between *'âmil* (cause or governing word) and *ma'mûl* (subject or the word which is governed by another one) and the outcome of this relationship. *'Âmil* is used to indicate the cause of the change of reading or pronunciation at the end of a word, which is also called a *ma'mûl*. The changes of pronunciation at the end of words, which are conceived as the result of identifiable causes, are also called *i'râb*. In English, *i'râb* can be defined as the changing pronunciation of

23 A historical note to clarify a possible misunderstanding may be useful at this point. Non-Arabs writing in Arabic were called *mawâlî* scholars by Arabs. Turks, Berbers, Iranians, Indians and others adopted Arabic as the *lingua franca* of the international community of Muslim scholars and contributed to the Arabic humanities. Ottoman Turkish scholars also adopted this tradition until the demise of the *madrasa* system and authored works on the humanities in Arabic.

the case endings, vowel points or vowel sounds. In Turkish, they are called *harekeler*, plural of *hareke*, which literally means action or movement[24]. It is generally accepted that every action or movement in nature requires a cause. Language is also treated the same way. *'Amal*, which is attributed to an *'âmil*, is seen as the cause of *i'râb*[25]. *İ'râb* is a characteristic of Semitic languages and does not exist in other languages. Consequently, it may be challenging for those who are not familiar with the Semitic languages to conceptualize *i'râb*. A concrete example may be useful to illustrate it: There are three ways the ending for the word *Zayd* can be pronounced; it can be $Zayd^{un}$, $Zayd^{an}$ or $Zayd^{in}$ depending on its place in the sentence, which gives rise to the question of why these changes occur.

The changes in *i'râb* are explained as an outcome of the relationship between *'âmil* and *ma'mûl*. The 16th century Ottoman scholar Birgivi (d. 981/1573) in his famous grammar books *al-'awâmil* and *Izhâr*, which served as the standard text books in the Ottoman madrasa system, enumerated them for beginners as totaling one hundred, 60 of which are *'âmil*, 30 of which are *ma'mûl* and 10 of which are different types of *i'râb*. Without the connection of *'amal*, each word remains as a separate entity, a *mufrad*, while *'amal* connects the separate entities and produces the sentence.

Isnâd is used to explain the construction of a relationship between two major parts of the sentence: the subject and the predicate or the *musnad ilayh* and the *musnad*. *Isnâd* is a tool employed in the analysis of how different individual meanings (*mufradât*) are linked to each other to produce a new more complicated (*murakkab*) meaning.

Ta'alluq is another major type of relationship in the text, though less central than *'amal* and *isnâd*. *Ta'alluq* literally means 'connection'. As a term, it indicates the relationship of a transitive verb to the subject, *muta'allaq* (plural, *muta'allaqât*). A transitive verb may have more than one mutaallaq which is characteristic of the transitive verb and is not the same as *isnâd*. Briefly put, *ta'alluq* is used to show the relationship of a transitive verb to its object (*maf'ûl*) or objects.

The *idafa*, on the other hand, is used to indicate the dyadic relationship between two nouns that constitute a genitive, or possessive, case. One is called *mudâf* while the other is called *mudâf ilayh*.

To reiterate, *'amal*, *isnâd*, *taalluq* and *idafa* are the four major types of relations which have been constructed and employed by Arabic linguists and humanists, who perceived the sentence and the text as a network of networks. Here the focus will be exclusively on the two most commonly used relationship, *'amal* and *isnâd*, which will be sufficient for the purpose of the present study.

---

24 *I'râb or hareke* is translated to English as 'vowel point' while *harekelemek* is translated as 'vowelization'.

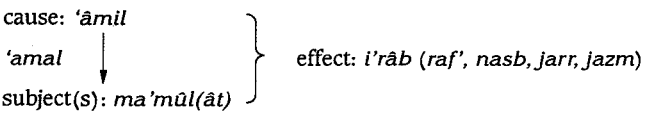
25 The term *'amal*, like the term action, indicates both the process and the outcome. The latter is also called *i'râb*.

Causality is a long-debated issue among humanists. Some scholars have drawn attention to the role of the speaker and argued that the real cause was the speaker himself. For instance, according to Radiy, commentator on *al-Kafiya* for Ibn al-Hajib, the cause is the speaker and *'awâmil* are merely tools of the speaker; yet the scholars of syntax treated them as if they were the causes of the meanings and their signs. Consequently the tools had been called causes[26]. However, Birgivi writes that *'âmil* commands a change of ending on the word by means of the occurrence of different meanings on the word such as *fa'iliyyah* and *maf'uiliyyah*. From this perspective, *'âmil* is not an independent actor; it requires the agency of meaning. By such a conceptualization, Birgivi attempted to integrate the levels of utterances and meanings.

'Amal: analysis of the structure of causal relations

The concept of *'amal* is a methodological tool used to detect and analyze the structure of causal relations in the sentence. It is used to answer the question of why words have different endings. The changes are causally attributed to the configuration of relations of the word under investigation. From this perspective, its position in the structure of the sentence, but not an inner cause emanating from the word itself, determines the ending of the word.

Figure 1: 'Amal and the Structure of Causal Relations



As defined by Ibn al-Hajib "*'âmil* is that with which the meaning requiring *i'râb* manifests itself."[27] The number of *'awâmil* (causes) are empirically and inductively determined. Likewise the *'amal* (effects) they produce are also empirically determined. *'Amal* may be thought to be universal, but there are restrictions on it. A particular cause does not always produce the same effect because the qualities of *ma'mûl* also plays a role in the outcome. The causality is not unidirectional, rather there are constraints imposed on it by *ma'mûl*. Both *'âmil* and *ma'mûl* logically require and depend on each other.

The word (mufrad) on its own is not given an *i'râb*. A word can have *i'râb* only after becoming part of a complex system (*murakkab*), that is a sentence. Such a word is called *mu'rab*. There are words that resist change. They are termed *mabni*.

---

26 Radiyyüddin N. M. Radi el-Esterabadi, *Şerhü'r-Radi 'alâ al-Kâfiya*, (Tahran: Müassatü's-Sadıq, 1978/1398), I, 82.

27 İbn al-Hâjib, Kâfiya, (Istanbul: Salah Bilici Kitabevi, 1986), 4. See also Nuraddin Abdurrahman al-Jami, el-Fawâid al-Diyâiyya Sharh Kâfiyat-i Ibn Hajib (ed. Usama Taha al-Rifâî) (Istanbul: Daru'l-Kitab al-Islami, n.d.), 37.

İ'râb is a primary characteristic of nouns. Verbs are, as a rule, *mabni*. Yet the present tense (*fi'l mudari'*) also behaves as a *mu'rab* because it resembles a noun in several aspects.

The rule about *mu'rab*, which is the word in a sentence, is to change the endings or vowel points, verbally or nonverbally (*taqdiran*, 'virtually'), in accordance with the changes in *'awâmil*, be they visible or invisible causes. This demonstrates that both causes and effects should be searched on two levels: first, on the visible level of utterance (*lafzî*) and second, on the invisible or virtual level (*ma'navî*). The causes and effects that belong to the second category are latent, however, their existence is felt through their impact on the visible level.

İ'râb is the change at the end of the word which indicates the succeeding meaning. It is a sign through which *'amal* becomes manifest; otherwise *'amal* is considered to remain hidden from the eyes. *İ'râb* (vowel point) has four kinds: *raf'* (the ending 'u' marked by the vowel point *damma*), *nasb* (the ending 'a' marked with the vowel point *fatha*), *jarr* (the ending 'i' marked with the vowel point *kasra*) and *jazm* (the ending without a vowel which is marked by the vowel point *sukûn*). For instance, *raf'* is the sign of being *fa'il*, *nasb* is the sign of being *maf'ul* while *jarr* is the sign of the possessive case (*idâfah*).

From the perspective of the structure of causal relations, there are two types of sentences: verbal (*al-jumla al-fi'liyyah*) and nominal (*al-jumla al-ismiyya*). There is a structural difference between nominal and verbal sentences from the perspective of the relations on the level of *'amal*. The verbal sentence begins with a verb, which is also the *'âmil* in the sentence, and may have more than one *ma'mûl*. The nominal sentence begins with a noun and is constituted by two elements, *mubtada* (subject of a clause; literally, 'the prime word' with which the sentence begins) and *khabar* (predicate; literally 'knews' or 'information'). In the nominal sentence, neither one of the words is *'âmil*. Instead, an invisible *'âmil* latently operates on them and makes their endings raf' (the ending 'u').

Example 1	**Qâma**	**Zayd^{un}**
	(verb)	(actor)
	'âmil	*ma'mûl*
	fi'l	*fâ'il*

The following examples will be helpful to illustrate the causal analysis of the sentences. First, I will demonstrate how grammarians of Arabic analyze causal relations in verbal sentences using three examples. Next, I will demonstrate how they analyze the causal relations in nominal sentences with two examples.

This is a verbal sentence because it begins with the verb *qâma*. The meaning of the sentence is "*Zayd* stood up." The verb *qama* is an *'âmil* and acts on *Zayd*, which is a noun, and causes it to be *marfû'*. The mark of *raf'* is the *damma* (the 'u' ending) at the end. This is the simplest form of a verbal sentence.

Here is another verbal sentence. Yet this time the verb is transitive and acts on two *ma'muls*, one is called *fâ'il* (literally, 'the actor') while the other is called *maf'ul* (the object).

Example 2	**'Alima**	**Zayd^{un}**	**al-mas'alat^{a}**
	(verb)	(actor)	(object)
	'âmil	*ma'mûl*1	*ma'mûl* 2
	fi'l	*fâil*	*maf'ûl*

The meaning of the sentence is "*Zayd* knew the matter". *'Alima* is a transitive verb that changed the ending of *Zayd* to *Zayd*^{un}, because it is the *fâ'il*. It also changed the ending of *al-Mas'alah* to al-Mas'alat^{a} because it is the *maf'ûl* in the sentence.

Here is yet another example where one cause acts on three subjects and brings about three results.

Example 3	**Hasiba**	**Zayd^{un}**	**Amr^{an}**	**Fadil^{an}**
	(verb)	(actor)	(object 1)	(object 2)
	'âmil	*ma'mûl*1	*ma'mûl* 2	*ma'mûl* 3
	fi'l	*fâil*	*maf'ûl 1*	*maf'ûl 2*

The meaning of the sentence is "*Zayd* thought that *'Amr* was Fadil." *Hasiba* is a transitive verb with two objects. As an *'âmil*, it caused the pronunciation of *Zayd* to be *Zayd*^{un}, because *Zayd* is the actor in the sentence. *Hasiba* also caused the word *'Amr* to be pronounced as *'Amr*^{an} because it is the *maf'ûl*. Same is true for *Fâdil*, the second *maf'ûl*, which is also pronounced as *Fadil*^{an}.

So far we have examined the basic structure of verbal sentence. Now I'll present the structure of nominal sentence. Nominal sentence is called so because normally it begins with a noun. It has two parts: mubtada and khabar. The ending (*i'râb*) of them is raf' (the 'u' ending).

Here is an example of a simple nominal sentence.

Example 4	**Zayd^{un}**	**Âlim^{un}**
	(prime noun)	(news as one word)
	mubtada	*khabar*
	invisible *'âmil*	invisible *'âmil*
	ma'mûl	*ma'mûl*

The meaning of the sentence is "*Zayd* is a scholar". *Zayd* is pronounced as *Zayd*^{un} because it is the *mubtada*. What caused this change is an invisible cause (*'âmil ma'navî*). *'Âlim* is also pronounced as *'âlim*^{un} because another invisible *'âmil* caused it so. In this example the *khabar* is a single word.

Example 5	**Zayd^{un}**	**yu'allim^{u}**	**dars^{an}**	**tullâb^{a}hu**
	(prime noun)	*Fi'l* (Latent Fâ'il)	*Maf'ul* 1	*Maf'ul* 2
	mübtada	(news as sentence–**khabar** *ka jumla*)		
	invisible *'âmil*	invisible *'âmil*		
	ma'mûl	*ma'mûl*		

Yet nominal sentences are not always so simple. Here is a more complex example in which the element of *khabar* is a sub-sentence. The sub-sentence that occupies the place of *khabar* is in fact a verbal sentence.

The meaning is "*Zayd* is teaching a lesson to his students". *Zayd* is *mubtada*, thus it is pronounced as *Zayd*^{un}. The *khabar*, the second element in the nominal sentence, is not a word this time, instead it is a sentence, a verbal sentence. Consequently, we need to analyze the internal connections of *khabar* as well. The sentence as a whole is the *ma'mûl* of the invisible cause. The outcome of the invisible *'âmil* is also invisible; it is not on the level of utterance but it is a virtual one (*taqdiri*).

My purpose in the above summary is not to analyze the grammatical structure of sentences in Arabic. Rather I intend to illustrate how a causal analysis is carried on to demonstrate the reasons why the endings of words are pronounced differently. What is important for our purpose at the moment is to note how causal relations are defined, detected and operationalized during the analysis.

Ottoman humanities went beyond the level of causal analysis and used interpretive methods. They did not view them as mutually exclusive as is the case in the closed humanities in our time. Now we can have a look at how interpretive methods were also used by Ottoman humanists.

Isnâd: analysis of the structure of hermeneutic relations

Isnâd is an analytical tool used to investigate the structure of hermeneutic relations in the sentence and the text. It is used to answer of how a complex meaning is variably constructed by solitary meanings. It also helps answer the question of why the same utterances have different meanings on different occasions and settings. The answer is a relational one because the meaning of speech is attributed to the constellation of its (1) internal relations, (2) external relations with other speeches, and (3) the social context. External relations with the larger discourse and social setting is called *al-hâl*, which has the power of shaping the talk. Taftazani, the commentator of *Talkhis al-Miftah li al-Qazwini*, defines *al-hâl*, in his work titled *Mukhtasar al-Ma'âni*, as the "entire speech" (*al-kalam al-kulli*)[28] which may be translated as 'discourse'. The context may normatively require a certain type of speech (*muqtaza al-hâl*) but it does not determine it. Speakers customarily act in

28 Taftazani, *Mukhtasar al-Ma'âni 'alâ Talkhis al-Miftah* (Qum: Daru'l-Fikr, 1411), 27.

accordance with the requirements of the situation, but they have the choice of deviating from it for exterior reasons. The *isnâd* approach is structural but not deterministic as it does not completely strip the power of choice from the speaker.

From the perspective of *isnâd*, which primarily operates on the level of meaning, there is only one type of sentence, and any distinction made between nominal and verbal sentences is disregarded. There is only one structure, and this is constituted by *musnad* ('predicate') and the *musnad ilayh* ('subject'). I will use the same examples as above to demonstrate the contrast between the perspectives of *isnâd* and *âmal*.

Here is a simple example. It is a verbal sentence, but this aspect is no longer significant at the level of *isnad*. What is important now is to determine the *musnad* (predicate) and the *musnad ilayh* (the subject) and their relationship.

Example 1	**Qama**	**Zayd^{un}**
	(predicate)	(subject)
	musnad	*musnad ilayh*

Qama is the *musnad* (predicate), *Zayd*^{un} is the *musnad ilayh* (subject). The meaning of *qama* is attributed to *Zayd*, thus we are informed that *Zayd* stood up.

Here is a more extended sentence. This time there are three words in the sentence. Yet we know that *isnâd* connects only two words. The concept of *ta'alluq* is introduced at this point to also explain the link of the third word to the network of relations in the sentence.

Example 2	**'Alima**	**Zayd^{un}**	**al-mas'alat^{a}**
	(predicate)	(subject)	(object)
	musnad	*musnad ilayh*	*muta'allaq* of the verb

The verb *'alima* is the *musnad*, *Zayd*^{un} is the *musnad ilayh* while *al-mas'alata* is a *muta'allaq* of *'alima*. Therefore, the relationship of the verb *'alima* with *Zayd*^{un} is not the same as its relationship to *al-mas'alata*.

The number of *muta'allaqât* may be mutiplied as illustrated by the following sentence.

Example 3	**Hasiba**	**Zayd^{un}**	**Amr^{an}**	**Fadil^{an}**
	(verb)	(subject)	(object 1)	(object 2)
	musnad	*musnad ilayh*	*muta'allaq* 1	*muta'allaq* 2

Now we can examine how *isnâd* is operationalized in nominal sentences.

Example 4	**Zayd^{un}**	**âlim^{un}**
	(subject)	(predicate)
	musnad	*musnad ilayh*

The fact that a nominal sentence begins with a noun is not important from the perspective of *isnâd* because, as far as the structure of interpretive relations is concerned, there is no difference between the nominal and verbal sentences. There is again *musnad* and *musnad ilayh*. In the preceding example *Zayd* is the subject while *alim*^{un} is the predicate.

Here is a more complicated example in which the *musnad* is not a single verb or a noun but a complete sentence.

Example 5	**Zayd^{un}**	**yu'allim^{u}**	**dars^{an}**	**tullâb^{a}hu**
	musnad ilayh	*musnad*	*muta'allaq* 1	*muta'allaq* 2

Zayd^{un} is the *musnad ilayh* while *yu'allim*^{u} *dars*^{an} *tullâb*^{a}*hu* as a sentence is the *musnad*. The *yu'allim*^{u} has two *muta'allaqs*: *dars*^{an} and *tullâb*^{a}*hu*. In this example, the predicate is a sentence which is attributed to a subject, the proper noun *Zayd*.

Speech (*kalâm*) is, according to Ibn al-Hajib, "two words with *isnâd*," which is impossible unless there are two nouns or a verb and a noun because *isnâd* must be related to a noun[29].

I have thus far described the hermeneutic methods simultaneously used by the Ottoman humanists. At this conjuncture, the question rises as to how they connected the two levels of analysis, namely the causal and interpretive. Below, I will briefly answer this question.

The relationship between causal and interpretive structures

Isnâd and *'amal* are two types of relationship between *mufradât* (solitary words) which serve as the building blocks in the complex (*murakkab*) structure of speech, *kalâm*, and thus need to be connected to each other. It should also be noted once again that these elements are not always visible. *'Amal* belongs to the level of utterance while *isnâd* belongs to the level of meaning. The former establishes the connections among the elements of the speech at the level of utterances while the second does so at the level of meanings. By doing so, the two levels of existence are taken into account.

Arabic scholars did not reduce *'amal* and *isnâd* to each other, rather they kept them separate. Occasionally, two words may at once be linked through the *'amal* and *isnâd* relationship. This should be seen as merely a coincidence and not mislead us into thinking that they are the same. Usually, they do not converge. For instance, *harf al-jar* and *majrûr*, the *mudâf* and *mudâf ilayh*, the verb and its *maf'ûl* are not linked through *isnâd*.

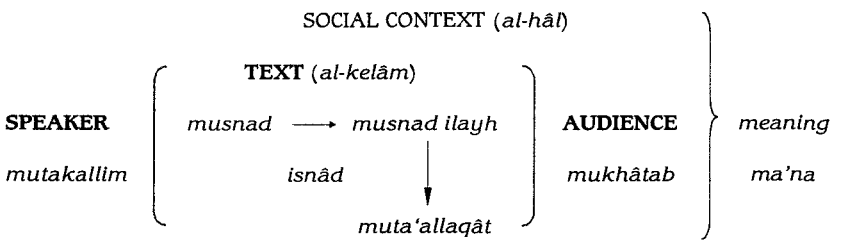
29 Ibn al-Hajib, *al-Kâfiya*, p. 1. Molla Jâmi, *al-Fawâid*, p. 15-18.

This creates the problem of defining the terms of relationship between *'amal* and *isnâd*. Is one the cause of the other? Or is there no relationship between them? This issue is related to the question of how the levels of utterances and meanings are connected. As I noted earlier, Birgivi defined the changes in the utterance as an indication of the occurrence of different meanings. This is one possible answer to demonstrate how the levels of utterance and meaning are connected. Due to the space problem, I cannot present other perspectives on this issue.

The meaning charged to *isnâd* derives from the interaction of these two levels. The complex (*murakkab*) meaning is an outcome of interaction between three levels: utterances (*alfâz*), solitary (*mufrad*) meanings and social context (*al-hâl*). Consequently, a level of existence and analysis is not completely independent; instead there is a sophisticated structure of relations between the two structures from different levels which creates a meta-structure.

From this perspective, the speech is a meta-structure or a network of networks produced by the interaction of the substructures at the levels of utterance and meaning. Therefore the structure of the speech can only be understood by taking them into account in interaction with each other.

Figure 2: Isnâd and the structure of interpretive relations



The level of meaning is further elaborated by al-Jurjani to two levels, the meaning and the 'meaning of the meaning' (*ma'na al-ma'na*). The former level consists of the surface meaning of speech while the latter indicates the figurative and the metaphorical meaning of it. In one of his examples, al-Jurjani uses the clause "she is a woman who sleeps in the morning" (*naûm al-duhâ*). The surface meaning is understood and true but it is not completely what is meant by this sentence. We need to look for the meaning of the meaning. The sentence means, on the metaphorical level, that "she is so affluent that she has someone else to take care of her needs."[30]

30 Abdulqahir al-Jurgani, *Kitâb Delâil al-I'jâz*, (ed. Mahmud Muhammad Shakir) (Cairo: Matbaa al-Madani, 1412/1992), 262.

Now that I have demonstrated how Ottoman humanities operated on the causal and interpretive levels, we can switch to the second case, which I will examine from the perspective of "open science." *Fiqh* is the societal science of the Ottomans for which the humanities we have been analyzing so far is considered to be a tool.

III. Open Social-Normative Science: Revisiting fiqh

Fiqh is the science developed by Muslims to analyze action (*'amal*) in general and in particular what pertains to one's rights and obligations in social relations. "One's knowledge concerning one's rights and obligations bearing on action" is the most commonly used definition of *fiqh*[31]. This definition is attributed to Abu Hanifa, the founder of the Hanafi school of law. It is based on the purpose (to obtain knowledge about one's rights and responsibilities) and the subject matter of science (actions or social relations involving rights and responsibilities). Yet, there is another commonly known definition of *fiqh*, attributed to al-Shafii, the founder of the Shafii school of law. It states that *fiqh* is the extrapolation of judgments based on proofs.[32]

In *fiqh*, action is composed of two levels: the observable level which is termed *zâhir*, and the unobservable level which is called *bâtin*. A general rule states that "actions involve intent."[33] This commonly cited rule is derived from a well-known saying of the Prophet Muhammad, related by al-Bukhari in his collection of reputedly authentic words, *Sahih al-Bukhari, viz.* that "actions are judged by intentions. Thus, everyone gets what he intends."[34] Consequently, *fiqh* also has two levels: external *fiqh* dealing with the objective aspect of action and the internal *fiqh* dealing with the inner, or subjective, aspect of action. The former uses rational and empirical methods and serves as the foundation of law. The latter, in addition to the aforementioned methods, also uses some intuitive methods; these are, however, restricted to the subjective realm alone and serve as the foundation of morality. This hierarchical structure will be further explored below.

In the Ottoman system, *fiqh* provided meaning for social relations with fellow Muslims as well as with non-Muslims. Tensions arose from time to time between those who emphasized the external, or observable, side of action and those who stressed the internal side. Jurists constituted the former group while philosophers and Sufis comprised the latter group. Katip Çelebi argued that philosophical thought,

---

31 See for instance, the most widely respected and used book of *usul al-fiqh* in the Ottoman *madrasa*, namely Molla Husrev's *Mirqâtu'l-Wusûl* and its commentaries, which I will discuss below. It is available in many editions.

32 Also cited by Molla Husrev in *Mirqatu'l-Wusul* and a number of other sources.

33 Weber also accepts a similar concept of action in his *Economy and Society*. Weber wrote: "We shall speak of 'action' insofar as the acting individual attaches a subjective meaning to his behaivor—be it overt or convert, omission or acquiescence. Action is 'social' insofar as its subjective meaning takes account of the behavior of others and is thereby oriented in its course" (p. 1, 4).

34 The text of the hadith in Arabic: "*Innemâ al-â'mâl bi an-niyyah. Wa innama li kulli imriin ma nawâ.*" (Bukhari, I, 1).

revived by Mehmet the Conqueror, was relatively de-emphasized in the following centuries, which had caused intellectual decay.[35] Yet this is debatable given the fact that the rational sciences (*al-'ulum al-'aqliyya*) had always continued to be a major part of the Ottoman *madrasa* education until it was terminated by the Turkish Republic. A simple examination of the *madrasa* cirricula—in addition to court records, *fatwa* collections, *kânunnâme* and *âdâletnâme* genres— document the increasing importance attributed to *fiqh* in the Ottoman world *vis-à-vis* other intellectual traditions. Katip Çelebi, an Ottoman *âlim* and historian of science, writes that,

> The transmission of philosophy and science [i.e. *falsafa* and *hikma*] to formerly Roman lands after the Islamic conquest to the middle of the Ottoman state was also beneficial. The honor of persons in these ages was proportionate to the level of their education and comprehension in the rational and traditional sciences. In their day, there were great scholars, some of whom had the knowledge of both philosophy and of law such as Shams al-Dîn al-Fanârî and the virtuous Cadi Zâde Rûmî ... The latter was the last person of his kind and the period of decay commenced on his death, the wind of science slowed down and lost its power due to the prohibition ... on the teaching of philosophy which was thereby replaced by the teaching of *Hidâya* and *Akmal*.[36] Consequently, all sciences decayed leaving only their forms...."[37]

Katip Çelebi's critique is significant because it highlights the connection between *fiqh* and philosophy and the concern of the *ulema* to maintain this link, at least for the healthy functioning of *fiqh*. Katip Çelebi advocated illumination philosophy, which was known as *ishrâqiyya*, and claimed that it was the basis of *tasawwuf*.[38] According to this Ottoman scholar with a critical mind, if there is not a solid philosophical training in the curriculum, social sciences cannot florish. He also emphasized that social scientists and religious scholars should be well-versed in the quantitative sciences[39].

---

35 See Katip Çelebi (d. 1659), *Mîzanu'l-Hak fi İhtiyâri'l-Ehakk*, (published in modern Turkish with the original text as *İslam'da Tenkit ve Tartışma Usulü* [The Methodology of Critique and Debate in Islam], ed. by Süleyman Uludağ and Mustafa Kara (İstanbul: Marifet Publishers, 1990), 37-47.

36 Two works on *fiqh* in Ottoman society as well as the Islamic world in general, especially those areas with Hanafi population such as India and Anatolia. During the colonization of India and South Asia, the British had the *Hidaya* translated (into English). See Charles Hamilton, *The Hedaya or Guide: A Commentary on the Mussulman Laws*, (Lahore: Premier Book House, n.d.)

37 Katip Çelebi, *Kashf al-Zunûn*, I: 680.

38 See Katip Çelebi (d. 1659), *Mîzanu'l-Hak fi İhtiyâri'l-Ehak*, 89. We have to be cautious about the remarks by Katip Çelebi. Because he belonged to *ishrâqi* school of philosophy, it is possible that he was unhappy about the decline of interest in this particular philosophical school and his remarks on the decline of philosophy may apply only to this school of philosophy. There are many indications that history training continued, with no break in the Ottoman *madrasa*. For instance, Goethe's aforementioned remarks provides evidence for this.

39 For his comparision between one judge (qâdi) who knows math and one who does not know it, see Katip Çelebi, *Mîzanu'l-Hak fi İhtiyâri'l-Ehak*, (43). In this work he almost makes fun of the *ulema* who studied no math, geography or astronomy, including the shaykhulislam of the time.

The hierarchy of Ottoman social knowledge (marâtib al-'ulûm)

In Ottoman culture, which built upon the earlier Islamic legacy, as is illustrated in the table below, *fiqh* has a multiplex, or hierarchical, structure on the ontological, epistemological and methodological levels. This hierarchy in the conceptual level is also reflected on the hierarchy of scholars, or to put it better, their division of labor by which they specialize in different levels and aspects.

Ottoman scholars, the majority of whom followed the Hanafi school of law, almost unanimously agreed that *fiqh* has four layers[40]:

(1) *Al-Fiqh al-akbar* ['the greater *fiqh*']: The theology and philosophy in which ontological and epistemological questions are explored. It is commonly called *kalâm*.

(2) *Usûl al-fiqh* ['the foundations of *fiqh*']: The common philosophy and methodology of all Islamic sciences including the social and normative branches.

(3) *Al-Fiqh al-'amalî* ['*fiqh* pertaining to action']: The social and normative science dealing with the external, observable or objective aspects of action. It is also called *furû al-fiqh* (literally, branches of *fiqh*).

(4) *Al-Fiqh al-wijdânî* ['the inner *fiqh*']: The social and normative science dealing with the internal or intentional aspect of action. It is also known commonly as *tasawwuf*.

The ontology of *al-fiqh al-akbar* includes several levels, both material and non-material. The latter has many layers, the highest being God. God's existence can be known through rational inquiry. The attributes of God cannot be completely defined by ontology, however, they can only be truly known through the revelation of the Prophets as is stated in the Koran and Hadith. The other layers are outlined in the works on the "hierarchy of existence" (*marâtibu'l-wujud*)[41].

Al-fiqh al-akbar studies the external world through objective ways of knowledge (*asbâb al-'ilm*) which include the following[42]: (1) reason: *al-'aql al-salîmah*, (2) sense perception: *al-hawâss al-salimah*, and (3) reported knowledge: *al-khabar al-sâdiq*. The latter consists in three sources including, the Koran, Traditions of the Prophet Muhammad (hadith) and history. It can be seen that the theological knowledge is based on the concurrent application of rational, empirical and traditional sources. The result is called *'aqîdah* while the specialist on this level is known as *mutakallim*.

---

40 For an example see the work of the well-known Ottoman scholar Molla Husrev, *Mirqâtu'l-Wusûl* and the commentary on him by the same author, *Mir'âtu'l-Usûl fî Sharh-i Mirqâtu'l-Vusûl*. Ottoman scholars produced a number of commentaries on these texts, e.g. Muhammed İzmirî, *Hâshiyet-ü Mir'âtu'l-Usûl* I-II, (Istanbul: Matbaa-yı Amire, 1309 H.); Mawlana Khalid Affandi, *Hâshiye 'alâ Mir'âtu'l-Usûl*, I-II, (Istanbul: Matbaa-yı Amire, n.d.)

41 See Semih Ceyhan, "Abdullah Salâhî Uşşâkî'nin Vücûd risâleleri" (Unpublished master's thesis).— Marmara Üniversitesi 1998.

42 For a modern conceptualization of Islamic epistemology see Alparslan Açıkgenç, *Scientific Thought and its Burdens* (Istanbul: Fatih University Publications, 2002).

According to *al-fiqh al-akbar*, objective knowledge cannot exhaust the world. At this point, *al-fiqh al-akbar* defers to *al-fiqh al-wijdânî* or *tasawwuf* which specializes on the spiritual life and the inner dimensions of human actions. One may also use subjective methods of knowledge such as intuition, dream and the eye of heart, among others, which are commonly known today as mystical paths to knowledge. However, these methods and the knowledge thus attained cannot be used in one's objective dealings in social life. Because of the subjective nature of this type of knowledge, one may refer to them on the personal level yet with no binding force on the other people. Objective social life requires the application of objective knowledge which is commonly and equally accessible to everyone in society. The Sufi knowledge is occasionally called *ma'rifah* or *'irfân* to distinguish it from the objective knowledge which is termed *'ilm*.

At this point, the discourse switches from the level of *al-fiqh al-akbar* to the level of *al-fiqh al-'amalî*, or the practical *fiqh*, which is the specialization of the doctors of religious law, the *fukahâ*. Accordingly, the sources of knowledge at this level are determined differently. Each source of knowledge in *al-fiqh al-'amalî* is called "evidence," or "proof," in Arabic *dalîl* (pl. *adillah*). The evidences in *fiqh* are classified as major and auxiliary ones. The four major evidence (*al-'adilla al-arba'ah*) comprise (1) the Koran, (2) traditions of Prophet Muhammad known as *sunna*, (3) consensus of scholars termed *ijmâ'*, and (4) analogy, traditionally called *qiyas*. The auxiliary evidences comprise, among numerous others, (1) culture: *'urf*, (2) necessities: *Darûrât*, (3) 'latent analogy': *Istihsan*, and (4) previous religions: *shar' man qablanâ*.

Al-fiqh al-'amalî employs both causal and teleological explanation. Causal explanation (*ta'lîl*) is used to explain the relationship between evidence, which is also called as 'cause' (*'illah* or *sabab*) and judgment, *hukm*. Teleological or functional explanation is used while exploring the relationship between a judgment and its effects, functions and implications. Philosophy of legislation, *hikmat al-tashri'* is a branch of *fiqh* devoted specifically to explore the functions served by the religious rules.

On the contrary, *al-fiqh al-akbar* or theology relies exclusively on causal explanation in its effort to prove the principles of Islamic faith. From this perspective, God is the 'cause of all causes' (*sabab al-asbâb*). Causal thinking is viewed by rationalist Muslim theologians as an objective and common ground between Muslims and non-Muslims which is need for a dialogue between contesting groups. Yet the issue of determinism by the causes in nature is a debatable question between two major branches of Islamic theology, namely the 'Ash'arî and Mâtûrîdî schools. The former school advocates that causation does not work independently of divine knowledge and power at every moment; thus God's agency is required each time a cause produces a result. The latter school, however, argues that the omnipotent and omniscient God created the world of causes and effects and let them produce certain

effects which he assigned to them. Both schools agree that the causal determination by no means constrain God's power.

Another difference between *al-fiqh al-akbar* and *al-fiqh al-'amalî* is observable in their approach to the issue of certainty in knowledge. The former requires certainty (*yaqîn*) while the latter allows the usage of conjecture (*zann*) in its explanations. From this perspective, the field of faith and creed cannot be based on conjecture and supposition because it is the foundation of religion. However, the field of practical relations and social life cannot be completely based on certainty. Therefore, the conjectural knowledge plays a major role in *al-fiqh al-'amalî* while it is excluded in principle at the level of *al-fiqh al-akbar.*

The *faqîh* must know how to handle concurrent application of all these sources while preserving the hierarchy among them. The methods applied in using these sources are also structured in a hierarchical manner, which can be observed in the daily practice of the judges and other religious authorities. The *cadi* and the *mufti* are responsible for applying *fiqh* to the practical questions in the daily social life.[43] The method the *cadi* uses is called *usûl-i qadâ,* 'the method of trial'. The method the *mufti* uses is called *usûl-i iftâ,* the method of issuing a religious decision, which are outlined by *rasm'ul-mufti,* the branch of *fiqh* specializing in the problems and methods of issuing *fatwas.* If a mufti is *mujtahid,* his fatwa is also considered an *ijtihad.* But if a scholar is at lesser level and incapable of making an independent judgment, the *fatwâ* may be issued by following the method of *takhrij* or *tarjih,* which involves the extrapolation of a judgment from a canonical law book[44], rather than producing one by his own effort directly from the main and auxiliary evidences. I will not discuss these concepts in detail since our purpose is not to analyze these methods but to explore the structure of relations among them.

---

43 The role of the qâdi included application of the Islamic law in the courtroom, while the role of the *mufti* was to resolve social conflicts, if possible, informally through negotiation, preaching and peacemaking between the parties involved. The *mufti* was also responsible for answering questions about all aspects of religion not only legal issues in order to provide spiritual guidance to the community. The opinion of the *mufti* is termed *fatwâ* which gains its binding power from voluntary agreement while the decision by the qâdi acquires its binding power by the use of state power.

44 Among the canonical *fiqh* books in the Hanafi school, the works of Imam Muhammad al-Shaybani occupy the most important place. He is the author of two sets of works commonly known as *zahiru'r-rivayah* and *nâdiru'r-riwâya.* The former is also called *kutub al-usûl* and had been transmitted through solid chains known as *mutawatir.* They include *al-Jami' al-Kabîr, al-Jami' al-Saghîr, al-Siyar al-Kabîr, al-Siyar al-Saghîr, al-Ziyâdât* and *al-Mabsût* which is also known as *al-Asl.* The latter group of Imam Muhammad's works, which are not transmitted as commonly as the former books, includes: *al-Âthâr, al-Hujaj, Kharûniyyât, Kaysâniyyât, Jurjâniyyât and Raqqiyyât.* These texts are systemized and expanded by later generations. These later canonical books are represented by *al-mutûn al-arbaa'* ('four texts'): *Kanz* by Abu al-Barakat Hafizuddin al-Nasafî, *Daqâiq al-Riwâya* by Sadr al-shariâh, *al-İkhtiyâr* by al-Mawsili and *Majmau'l-bahrayn* by ibn al-Sâ'atî. Another set is known as *al-kutub al-thalatha* ('three texts') which includes: *Qudûrî, Kanz* and *Fatawâ Walwâlîjiyya.* (Ömer Nasuhi Bilmen, *Hukuki İslamiyye ve Istilahati Fikhiyye Kamusu,* (Istanbul: Bilmen Yay., n.d.), 249.

Table 1: Atlas of Islamic Sciences in the Ottoman Society

Sciences 'Ulûm	Ways to knowledge Esbâb-i 'ilm	Constructions Istikrâj, Istinbât	Specialists
Al-fiqh al-akbar: the Greater fiqh Kalam, Falsafa, Hikma Theology and Doctrinal Philosophy	**I- Objective Ways** 1- Reason: 'Aql Salîm 2- Senses: Hawass Salîmah 3- Reported knowledge: Khabar Sadiq a- the Koran: tafsir b- Traditions: hadith c- History: tarikh	1. Wajib: Necessary 2. Mümkin: Contingent 3. Mümteni': Impossible	Mutakallim Hakîm, Feylesûf
Fiqh-i Vicdani, Tasawwuf Internal fiqh Mysticism and Ethics	**II- Subjective Ways** 1- Intuitions: Ilham 2- Dreams: Ru'ya Saliha 3- Exposition: Kashf	Ahlak: Morality Tasawwuf: Self-purification	Mutasawwif
Usûl al-fiqh: Principles of reasoning based on fiqh	**III- Evidences of Law** (Adilla Shar'iyya) a- Main Sources 1- The Book: the Koran 2- The Tradition: Sunna 3- Consensus: ijma 4- Analogy: qiyâs b- Auxiliary Sources 1- Culture: 'urf 2- Necessities: Darûrât 3- Hidden analogy: Istihsân 4- Previous religions	Ijtihad: Theory 1- Fard: mandatory a- 'Ayn: individually b- Kifâye: collectively 2- Harâm: illegal 3- Wâjib: required 4- Makrûh: blameworthy 5- Mandûb: recommended 6- Mustahab: praiseworthy 7- Mubâh: permissible 8- Halâl: legal	Mujtahid a- Mutlak b- Fi'l-Madhhab
Furu-i fiqh: Paractical fiqh (religious, ethical, juridical and political rules)	**IV- Application** 1- Usûl-i qadâ 2- Usûl-i iftâ (Rasm'ul-muftî) a- tahrij b- tarjih	Sharia & kanun 1- Ibâdât: Worships 2- Muamelât: Exchanges a- Nikâh: Marriage b- Bay': Transactions 3- 'Uqubât Penal Law 4- Siyar: Constitutional and International law	Qâdi mufti Mudarris Imam

Briefly put, *fiqh* works with *ijtihad*, *fatwâ* and *qadâ* or *hukm*. *Ijtihad* is the way by which theories in *fiqh* are produced through the personal efforts of great scholars of Islam; these rules are defined by *usûl al-fiqh*, commonly known today as the 'principles of Islamic jurisprudence'. The majority of the Ottoman *ulema* agreed that, due to the lack of qualified scholars, the gate of *ijtihad* had been closed; yet they accepted that, theoretically, there was no obstacle to *ijtihad*. But, this approach intellectually weakened the *fiqh* tradition, which was one of the reasons why it lost its strength in the face of new ideas. Even if the gate of ijtihad was, on the theoretical level, considered to be open, there were very few scholars qualified to enter through it.

In the above chart, members of the *ulema* order and the various types reasoning in *fiqh* are identified. How did these two hierarchies, one conceptual, the other social, conjoin? The *fatwa* was issued by *mufti*, the jurisconsult. The *hukm* was issued by the political authority, locally represented by the cadi, judge, whose unchallenged political authority was also supported by religion. "In civil law cases within the scope of the şeriat, even the sultan had to respect the kâdî's decisions."[45] The highest level of reasoning was *ijtihad* which was carried on by the mujtahids, who were thought by the majority of the scholars to have been discontinued. It should also be noted there is no group corresponding to a "lay class" in the Islamic religious and cultural structure. Nor is there any distinction between the sacred and the secular. Instead there was a class of *muqallids*, or adherents, who might any time join the learned class by further study, without any need for ordination by a religious institution, say a church.

Table 2: Intellectual and Social Structure of Fiqh in the Ottoman Society

Social Group	Types of Reasoning in fiqh	Corresponding strata of the Ulema	Present in Empire
'ulema: intellectuals	*ijtihad*	*mujdehid*: theorist	officially debated
	tajdid	*mujaddid*: reviver	officially debated
	iftâ	Sheikh al-Islam *mufti*: Jurisconsult	present
	hukm: court rule	kazasker: head judge *qâdi*: judge	present
'awâm: commoners	*taqlid*: adherence	*mudarris*: professor *imam*: priest *muqallid*: adherent	present

45 Halil İnalcık, *The Ottoman Empire: the Classical Age 1300-1600*, trans. by Norman Itzkowitz and Colin Imber (London: Weidenfeld and Nicolson, 1973), 75.

The public role of *fiqh* is, as expressed by the modern normative legal perspective, evident in the *sharî'ah*, laws derived from the "main sources" (*adilla asliye*) and *kanun*, laws derived from "auxiliary sources" (*adille fer'iye*), especially from *'urf*, culture. The *fuqahâ* were responsible for the production and application of all these laws, which were deduced from diverse sources by a variety of methods. As *Mejelle*[46] also has it, Ottoman jurisprudence respected custom because it accepted that "custom is law," provided that it does not contradict the "main sources," and is authorized by the ruler, the sultan. For this reason it is also called "sultanic," or "*örfî*" law. The *kanun* is not an Ottoman construction; it originated in the practice of the early caliphs and the founding fathers of *fiqh*. As to the *sharî'ah* laws, two fermans (in 1648 and in 1687) proclaimed that Ibrahim Halebi's work, *Multaqa'l-Abhur*, a canonical text on *fiqh*, as the official law of the state.[47] Ottoman rulers followed the tradition of *kanun* which they inherited from earlier Islamic states, and resorted to its use especially for the framing of penal law, *'uqûbât*, and special laws for certain regions and status groups.[48] Inalcik describes how an *örf* became a law, a process that must be interpreted against the background of the science of *usûl al-fiqh*, the so-called principles of Islamic jurisprudence, whose structure we briefly described above, as follows:

> Tax and population surveys in particular gave rise to suggestions for new laws. When the Ottomans took such a survey in a newly conquered region, their first step was to ascertain the pre-conquest laws and customs of the area. They did not seek to annul the laws, customs and institutions of conquered territory but preferred to maintain many local usages, hoping thereby to avoid the unrest that might follow the sudden introduction of a new system. Furthermore, experience had taught them that drastic change brought a decrease in tax revenues. In these areas the commissioner of the survey merely abolished those practices which were contrary to the seriat and Ottoman legal principles. The others he recorded and forwarded to the capital for the sultan's approval. In later surveys, alterations might be made or Ottoman laws replace the old regulations.[49]

Among the Ottoman *kanuns*, that of Mehmet the Conqueror and of Sulaiman the Lawgiver[50] stand out. Both sultans employed the *ulema* of their time who applied *usûl al-fiqh* in the production and application of *kanuns*. As İnalcık states, "Suleyman I took the title of 'Caliph on Earth' with great seriousness. He personally studied Islamic jurisprudence and entrusted Ebussuud (1490-1574) with the task of bringing the secular laws of [the] state into conformity with the şeriat"[51]. İnalcık

46 The Turkish spelling is *Mecelle*.
47 Halil Cin, "Tanzimat Döneminde Osmanlı Hukuku ve Yargılama Usulleri," in *150. Yılında Tanzimat*, ed. by Hakkı Dursun Yıldız (Ankara: Türk Tarih Kurumu, 1992). On the history of the Ottoman legal system, see Akif Aydın, *Türk Hukuk Tarihi* (İstanbul: Beta 2001), 14. 99, p. 14.
48 İnalcık, 71.
49 İnalcık, 71.
50 He is also known in the West as the Sulaiman the Magnificent.
51 İnalcık, 182

also states that "[t]he sultan's official diploma appointed the kâdîs to administer and execute both şeriat and kânûn."[52]

The role of *fiqh* in public life becomes most evident if we look at the revolutions and rebellions in the late Ottoman State. All the successful revolutions had a *fatwa* from the Shaikhulislam delegitimizing the Caliph by proving that he was no longer qualified for this post according to *fiqh*. This also demonstrates that any revolutionary activity without the backing of the *ulema*, especially the office of the Shaikhulislam, was doomed to failure. This explains why even the most radical of the reformist thinkers recognized the power of *fiqh* and could not reject it outright.[53]

I have thus far highlighted the multiplex structure of *fiqh*. It should be clear now how multiple levels of existence (*maratib al-wujud*), multiple levels of knowledge (*maratib al-'ulûm*) and a diversity of methods were concurrently employed by various groups of scholars who advocated different views. Intellectual disagreement thus organized did not lead to social and cultural conflict under ordinary conditions. The variance of opinion among the scholars of *fiqh* is an innate feature of the system and a source of strength. Among *fuqahâ*, not only the schools of law, but also the *ijtihad, takhrij, tarjih, qadâ* and *hukm* varied within a single school. The Ottomans knew how to combine these otherwise conflicting elements in a productive manner through a multiplex concept of existence and knowledge.

Yet, when the open nature of the Ottoman scientific culture was not effectively implemented, conflicts mushroomed all over the empire. The cleavage between the sufis and the jurists was the most common one, known also as the cleavage between *tekke* and *madrasa* or the mystic dervish lodge and the rational academy. Likewise, the cleavage between different schools of law was also another potential source of conflict. In the same manner, opposing *fatwas* by different *muftis* was yet another potential cause of social conflict. But, these sources of potential conflict were controlled by quelling the rise of conflict at the outset. There are, of course, instances of such conflicts throughout the long Ottoman history, but, in general, we may observe that intellectual contest and tension were contained by means of an open social science, based on a multiplex ontology, epistemology and methodological pluralism.

This multiplex science long served as the social science of the Ottoman *millet* system which had room for all social groups regardless to their religion and science culture. For the Ottomans agreed that the truth (*haqiqat*) has multiple levels, such as linguistic truth (*haqiqah lughawiyya*), customary truth (*haqiqah urfiyya*), religious truth (*haqiqa shar'iyya*)[54]. Likewise, they also agreed that truth varied

52 İnalcık, 75.

53 Şükrü Hanioğlu, *Abdullah Cevdet* (İstanbul: Üçdal Neşriyat, n.d.), 139-41.

54 See, Abu Sa'îd al-Khadîmî, *Barîqa Mahmûdiyya fî Sharh Tariqat-i Muhammadiyya wa Shari'ah Nabawiyya*, (İstanbul: Matbaa-ı Dari'l-Hilafeti'l-Aliyye, 1326 H.), 7-8. al-Khadimi advocates that the customary truth (al-haqîqa al-'urfiyya) overrides the linguistic and legal truth.

according to *shariah* (law), *tariqah* (mystic intution) and *haqiqah* (experimental gnosis)[55]. The varied conceptions of truth and their proponents were accorded place in the hierarchical intellectual and social structure. This is what we call the *millet* system. If Ottoman social science had not been an "open science," Ottomans would never establish and long maintain such an "open society."

The rivalry between the essentialist and relational views in fiqh

Above, I have highlighted some of the cleavages within *fiqh* which demonstrates that it is not an undifferentiated body. Another important example is presented by the theoretical division between essentialist and relational views on *fiqh*.

One of the major reasons behind the Ottoman success in peacefully combining rival epistemic communities in a cosmopolite social structure should be looked for in a very fundamental choice they made on the ontological, epistemological and methodological levels. Ottomans choose the relational approach of the *Ahl al-Sunnah* school over the essentialist approach of the Mutazila school. The Mutazila school was adopted by some of the Abbasid caliphs, whose reign has been called the "period of intellectual persecution" (*mihna*) by historians. The essentialist Mutazila scholars postulated that since the essence of the subject was one, so also must truth be one. Consequently, they waged a war, backed by the state mechanism, against their opponents from *Ahl al-Sunnah*. The founder of the Hanbali school of law, Ahmad ibn Hanbal, among others, suffered greatly during this period of persecution. The cause of the persecution, I would claim, lies in the essentialist world view of the *Mu'tazila* school. I will illustrate the tension between *Ahl al-Sunnah* and Mutazila, using the problem of good and evil in law and ethics.

The question of evil and good had earlier occupied both theologians (*mutakallimûn*) and jurists (*fuqahâ*) and occasionally caused heated debates involving social conflicts. The pivotal question has been whether or not good and evil are natural or determined by divine will. Is it possible for us to know them by using our reason or do we need divine revelation to instruct us about what is good and evil? Three major positions developed around these questions.[56] I will briefly outline their perspectives.

---

55 See, Niyazi-i Mısrî, *Şerh-i Gazel-i Yunus Emre* (in Hüseyin Arif, *Yunus Emre*, İstanbul, Hicret yayınları 1977), 49-62. It is a commentary on a couplet by Yunus Emre: "Çıktım erik dalına, anda yedim üzümü / Bostan ıssı kakıdı, der ne yersin kozumu" (I climbed on a plumb tree and ate grapes there / The garden angrily reproached me and said: why do you eat my walnut!?). The tree mentioned in this poem is interpreted as human action, the plumb is the rational knowledge which belongs to *shari'ah*, the grape is the knowledge of *tarikat* while the walnut is the knowledge of *hakikat*. Another famous couplet by Yunus Emre: "Şeriat, tarikat yoldur varana / Hakikat ma'rifet andan içeri" (*Shari'ah* and *tarikat* are paths for those who travel it / Beyond them are the *hakikat* (truth) and *marifet* (gnosis)) (p. 67).

56 I will try to build "ideal types" in Weberian terms, which may not completely converge with actual examples. In my description of these three positions, I will have to make speculative generalizations because of space limitations. One should be aware that the details of these issues and the internal variation and evolution of these three positions requires further study. The purpose of this paper, it will be sufficient if the tension between the essentialist and the relationalist perspectives in *fiqh* becomes clear to the reader.

The first one is represented by the Maturidi school of theology which claimed that good and evil are neither natural nor essential, rather, they are relative and are declared to us through divine revelation which we understand by our reason.

The second position is represented by the Ash'aris, who advocated that reason plays no role in the issue of good and evil; it is revelation that determines what is good and evil, which is not necessarily intelligible to all of us.

The third major school on this issue is represented by the rationalist theologians of Islam, known as Mutazila, who asserted that good and evil are natural or essential and thus can be discovered by reason even without the guidance of revelation.

Both the Maturidi and the Ash'ari schools, which constitute the two branches of the People of the Tradition and Community, commonly known as the Sunni school, accept that good and evil are relative but not natural or essential. Therefore, Sunni scholars argued that good and bad fall in the domain of contingencies, but not in the domain of rational necessities. Rationally, an action cannot be judged to be good or evil with absolute certainty, because both possibilities may look convincing to some. Yet, with the guidance of revelation, we can determine for certain what is good and evil. The fact that the attributes of good and bad are contingent on the ontological level does not prevent us from making moral and normative judgments, characterized by certainty, with the aid of religion.

In contrast to the Sunni view, the Mutazilis have claimed that good and evil are natural, essential and universal. Goodness and badness are not contingent but essential qualities on the ontological level, therefore, they fall in the domain of rational necessities: reason discovers with absolute necessity and on the universal level whether an action is good or evil. What follows is that this certain knowledge must be shared by all, the same way as other rationally necessary knowledge is shared. If there is an objection, it cannot derive from rational thinking and must be rejected.

Ontologically and epistemologically speaking, both the People of Tradition and Community and the Mutazila, acknowledge two levels of existence: necessary beings and contingencies.[57] But the dividing line is controversial. The former think that the level of legal exchanges and social relations falls in the domain of contingencies; thereby the judgment of reason *alone* cannot be certain. In contrast, the latter, the Mutazila, advocates of the position that good and evil are not contingent qualities, and therefore, normative judgments by human reason *alone* are certain. These judgments may also be confirmed by revelation, if there is a religion; otherwise if there is no religion humans are naturally equipped to tell good from evil. The Sunni scholar makes a distinction between the physical and the sociocultural worlds yet for the Mutazilas there is no such distinction between the natural and the social

57 The world is divided into two categories: necessary beings and possible beings, the former is represented by God whose existence is necessary while the existence of the rest is contingent. This is on the ontological level. On the epistemological level, knowledge is also divided into two categories, necessary and possible. The former can rationally be proven with certainty and is logically required while the second is not so.

worlds. In both worlds, argues the Mutazila, reason produces judgments that can be rationally proven with certainty. Yet, the Sunnis deny that normative knowledge can rationally be obtained with complete certainty on the universal level.[58]

If we accept that both the physical and the social worlds are no different from each other, the methodological approach we adopt in studying them and the quality of the knowledge we acquire about them will also be the same. This is the Mutazila approach. Yet, if we accept that the physical universe is different from the social world, then the methods we employ in exploring them and the knowledge we obtain will also not be the same.

Mutazila evidently advocated for the unity of the world and the science while the People of the Tradition and Community defended the diversity of the world and different types of intellectual tools in exploring them. The latter claimed that there are things that we can know with absolute certainty on the ontological and epistemological levels with the help of theology, but when it comes to social relations and normative judgments on human actions, this is impossible. Jurisprudence is a science of rational and informed conjectures and logical probabilities, because it studies the domain of contingencies. Normatively speaking, according to the People of Tradition and Community, nothing is certain, from a *purely* rational approach in the social world. Yet the conjectural nature of juristic and moral knowledge does not undermine its binding power once it is accepted as "valid" in practice.[59]

Since one can rationally and with a certainty know both the physical and social worlds, rational research is incumbent on every Muslim in both domains, claims the Mutazila. From this perspective, adherence to a school of theology or law through imitation is refuted as a major sin. Yet for the People of the Tradition and Community, rational research by every individual is obligatory only in the domain of theology but not in the domain of jurisprudence where the imitation of the scholars is religiously allowed.

Likewise, in the absence of religion, people are regarded as accountable for all their actions and moral judgments from the Mutazila perspective, because they are within reach of the human mind. Yet from the Sunni perspective, people are responsible only for discovering by their mind the existence and unity of God alone,

58 This debate between the Sunnis and Mutalizis is similar to a parallel debate among sociologists. Sociologists are also divided into two groups about whether the physical and sociocultural worlds should be treated differently. Positivist sociologists argue that there is no distinction between nature and society while the idealist sociologists argue that they are different. Positivist sociologists use the methods of explanation also used by natural scientists, but the idealist sociologists developed a method peculiar to society which they call "understanding" (*verstehen*). See Theodore Abel, "The Operation called *Verstehen*" in *Theorie und Realitat*, ed. Hans Albert (Tubingen: J.C.B. Mohr, Paul Siebeck). See also Ernest Nagel, *The Structure of Science: Problems in the Logic of Explanation* (London: Routledge and Kegan Paul, 1982), 15-28.

59 *Ijtihad* is accepted to produce "informed conjectural" (*zanni*) knowledge, thus *fiqh* is based on the usage of informed conjectural judgments. Yet the uncertain nature of *fiqh* knowledge does not undermine its authority in practice, nor does it turn into skepticism and relativism.

because this is the most human mind can know with certainty. Furthermore, they are not morally and legally accountable, because it is believed that the moral and legal norms are beyond human reach.

From Mutazila perspective, since there is no distinction between the natural and social worlds, both of which we can know with certainty. Consequently, statements in the revealed texts, such as the Koran, concerning the natural and social worlds serve the purpose of informing humanity about God's judgment, which confirms what they can reach or have already reached through rational inquiry. Thus the Mutazila claims that the function of the sacred-revealed texts and prophets are informative (*ikhbari*). Yet the People of the Tradition and Community claim that statements about the social world are performative (*inshâî*),[60] that is, they are commands aimed at constructing the social world in a particular way to please God. For the Mutazila, the revelation and thus the Koran provide us with a kind of knowledge all humans can discover by means of rational thought. For the People of the Tradition and Community, revelation came to provide us with a type of knowledge that cannot be possibly attained through rational inquiry. The rules of religious law cannot possibly be discovered by reason *alone* although they must be intelligible to the mind.

The Ottomans adopted the Sunni view, which helped them successfully maintain peaceful relations between otherwise conflicting Muslim groups from different schools of thought and law. At the core of this approach is the view that the social and normative domain (*shar'iyyât*) is the domain of contingencies (*mumkinât*). Consequently, the practical *fiqh* was seen as a conjectural (*zanni*) science open to different deductions and extrapolations.

These ontological and epistemological premises can be seen as a major factor contributing to the cultural basis of social tolerance observable in the Ottomans towards the different legal and normative systems among their subjects. Ottoman society was constituted by *parallel*, but not alternative or mutually exclusive, cultural worlds within the *millet* system. The Ottoman social world was a multiplex one, which allowed for the coexistence of otherwise conflicting views.

This multiplex world view collapsed with the fall of the Ottoman empire. It gave way to a unilayered world view as the modernist Ottoman rulers adopted the positivist science culture in the process of modernization during the second half of the nineteenth century. Modernization was associated with an attempt to standardize ideas, laws and ideologies through a centralized educational system. Consequently, the multiplex culture that housed many epistemic communities was reduced to a single layer through the spread of state education. The closed science model has been adopted by successor states along with a closed society in the Middle East, the Balkans and North Africa.[61]

---

60 See Qâdi Abduljabbâr, *al-Mughni fi Abwab al-Tawhid wa al-'Adl*, the volume on *Shariyyat*, vol. 17.

61 As cited above, Victoria R. Holbrook observed that the Ottoman legacy in the field of literature was not

Conclusion: parallel worlds in the multiplex structure of text and action

In the age of globalization, civilizational clashes can be forestalled if we can find a way to obviate social and political conflicts emerging from disagreements on the intellectual level. I propose that our aspiration for a global open society needs a global open science. In the field of medicine, the legitimacy of various types of medical traditions, originating in different world civilizations, have already been officially acknowledged in some democratic countries, which may serve as a model for other physical, social and human sciences.

Text and action are multiplex structures and our world is more complex than we might suppose. Yet closed science aims to reduce this complexity into one single type of relationship among facts. My argument is that the relations between facts are multiplex. Only a multiplex ontology and epistemology can allow us to explore the multiplex structure of the network of relations in language, religion and the social world.

In an open structure, the layers can be expanded indefinitely and their order does not indicate ranking. Thus they should not be called alternative to each other. Instead, It would be more appropriate to call them "parallel" layers. For instance, in the debate over medicine, anti-positivist medicine is called "alternative" medicine, putting the hegemonic science at the center. Therefore, the term alternative implies the superiority of the established science; it reflects the exclusionist science culture for which only one science can be valid. I suggest that they should be called "parallel medicines" which is not loaded with this exclusionist implication. In the modern world, the so-called alternative medicine struggled for a long time to establish a legitimate place for itself. Yet, in some societies it is still outlawed.[62] Another reason why the term "parallel" should be preferred over "alternative" is that the latter implies mutual exclusivity while the former implies complementarity.

In open science, different perspectives are considered equal to each other and they are expected to complement each other. This is illustrated in the examples of the Ottoman humanities and social sciences, which concurrently employed causal and interpretive methods. Popper and Wallerstein have voiced concerns about the structure of our science and its implications for the social structure. In this study, which is prompted by similar concerns, I tried to advance their initiative by outlining a new approach for the construction of ontology, epistemology and methodology. I used the case of Ottoman science culture to demonstrate the possibility of the cohabitation of different epistemic communities with their parallel worlds. Yet, there

adopted by the successor nations. Same observation is true regarding the Ottoman legacy in the social science and social organization.

62 For instance, several branches of alternative medicine have been officially allowed in the US, but they are still illegal in Turkey, which may be taken as a sign of the degree of openness of the science culture and society.

is also a notable contemporary example, namely medicine. It may also serve as a model for other sciences.

We need to expand our world view from a unilayered one to a multiplex one if we desire to recognize the complexity of our world, but even more important, if we want to cultivate peaceful relations. A multiplex ontology is not only the foundation of open science, but it is also the foundation of an open society on the local and global levels.