

## Chapter 29: Nasir Al-Din Tusi

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### Life

Khwajah Nasir al-Din Abu Ja'far Muhammad b. Muhammad b. Hasan, an accomplished scholar, mathematician, astronomer, and Shiite politician of the period of the Mongol invasion on the Assassins and the Caliphate, was born at Tus in 597/1201. After receiving early education from his father and Muhammad b. Hasan, he studied *Fiqh*, *Usul*, *Hikmah* and *Kalam* especially the *Isharat* of Ibn Sina, from Mahdar Farid al-Din Damad, and mathematics from Muhammad Hasib, at Nishapur. He then went to Baghdad, where he studied medicine and philosophy from Qutb al-Din, mathematics from Kamal al-Din b. Yunus, and *Fiqh* and *Usul* from Salim b. Badran.<sup>1</sup>

Tusi began his career as an astrologer to Nasir al-Din 'Abd al-Rahim, the Governor of the Isma'ilite mountain fortress of Quhistan during the reign of 'Ala al-Din Muhammad (618-652/1221-1255), the seventh Grand Master (*Khudawand*) of Alamut. His "correspondence"<sup>2</sup> with the *wazir* of the last 'Abbasid Caliph, al-Musta'sim (640-656/1242-1258) of Baghdad, was, however, intercepted by his employers, and he was removed to Alamut under close supervision, although he enjoyed there every facility to continue his studies. In 654/1256, he "played"<sup>3</sup> the last Assassin ruler Rukn al-Din Khurshah into the hands of Hulagu and then accompanied the latter as his trusted adviser to the conquest of Baghdad in 657/1258.<sup>4</sup>

### The Maraghah Observatory

Tusi's chief claim to fame rests on his persuading Hulagu to found the celebrated observatory (*rasad khanah*) at Maraghah, Adharbaijan, in 657/1259, which was equipped with the best instruments, "some of them constructed for the first time."<sup>5</sup> Here he compiled the astronomical tables, called *Zij al-Ilkhani*, which "became popular throughout Asia, even in China."<sup>6</sup>

Besides being dedicated to the advancement of astronomy and mathematics in the late

seventh/thirteenth century, this observatory was important in three other ways. It was the first observatory the recurring and non-recurring expenditure of which was met out of endowments, thus opening the door for the financing of future observatories.<sup>7</sup>

Secondly, just as Ibn Tufail (d. 581/1185) turned the Court of Caliph 'Abd al-Mu'min into an enviable intellectual galaxy that promoted the cause of knowledge and wisdom in the West, Tusi made the Maraghah observatory a “splendid assembly”<sup>8</sup> of the men of knowledge and learning by making “special arrangements”<sup>9</sup> for the teaching of philosophical sciences, besides mathematics and astronomy, and by dedicating the income of endowments to stipends. Thirdly, annexed to the observatory, there was a huge library in which were stored the incorruptible treasures of knowledge looted by the Mongols and Tartars during their invasions on Iraq, Baghdad, Syria, and other territories. According to Ibn Shakir, the library contained more than four hundred thousand volumes.<sup>10</sup>

Tusi retained his influential position under Abaqa, Hulagu's successor, uninterrupted until his death in 672/1274.

## Works

In an age of widespread political devastation followed by intellectual decline, Hulagu's patronage to Tusi is of singular importance in the history of Muslim thought. The revival and promotion of philosophical sciences in the late seventh/thirteenth century centred round Tusi's personality. To the Persians, he was known as “the teacher of man”<sup>11</sup> (*ustad al-bashar*). Bar-Hebraeus regarded him as “a man of vast learning in all the branches of philosophy.”<sup>12</sup> To Ivanow, he appears an “encyclopedist,”<sup>13</sup> and Afnan thinks him to be “the most competent ... commentator of Avicenna in Persia.”<sup>14</sup>

One also cannot help being impressed by the “remarkable industry” displayed by him in “editing and improving”<sup>15</sup> the translations made by Thabit bin Qurrah, Qusta bin Luqa, and Ishaq bin Hunain of Greek mathematicians and astronomers. Brockelmann has enumerated fifty-nine of his extant works,<sup>16</sup> but Ivanow attributes “something like one hundred and fifty works”<sup>17</sup> to him. The list given by Mudarris Ridwi runs to one hundred and thirteen titles, excluding twenty-one the attribution of which to Tusi is doubtful.<sup>18</sup>

Himself an accomplished scholar rather than a creative mind, Tusi's position is mainly that of a revivalist and his works are largely eclectic in character. But even as a revivalist and eclectic, he is not lacking in originality, at least in the presentation of his material. His versatility is indeed astonishing. His manifold and varied interests extend to philosophy, mathematics, astronomy, physics, medicine, mineralogy, music, history, literature, and dogmatics. His important philosophical works are listed below.

1. *Asas al-Iqtibas* (logic), 1947.
2. *Mantiq al-Tajrid*, (logic).
3. *Ta'dil al-Mi'yar* (logic).

4. *Tajrid al-'Aqa'id* (dogmatics), Teheran, 1926.
5. *Qawa'id al-'Aqa'id* (dogmatics), Teheran, 1926.
6. *Risaleh-i I'tiqadat* (dogmatics).
7. *Akhlaq-i Nasiri* (ethics).
8. *Ausaf al-Ashraf* (Sufi ethics)
9. *Risaleh dar Ithbat-i Wajib* (metaphysics).
10. *Ithbat-i Jauhar al-Mufariq* (metaphysics).
11. *Risaleh dar Wujud-i Jauhar-i Mujarrad* (metaphysics).
12. *Risaleh dar Ithbat-i 'Aql-i Fa'al* (metaphysics).
13. *Risaleh Darurat-i Marg* (metaphysics).
14. *Risaleh Sudur Kathrat az Wahdat* (metaphysics).
15. *Risaleh 'Ilal wa Ma'lulat* (metaphysics).
16. *Fusul* (metaphysics), Teheran, 1956.
17. *Tasawwurat* (metaphysics), Bombay, 1950.
18. *Talkhis al-Muhassal*, Cairo, 1323/1905.
19. *Hall-i Mushkilat al-Isharat*, Lucknow, 1293/1876.

## Akhlaq-i Nasiri

Nothing can be farther from truth than the assertion that *Akhlaq-i Nasiri* of Tusi is a mere “translation”<sup>19</sup> of *Tahdhib al-Akhlaq* of Ibn Miskawaih. The author was undoubtedly commissioned by Nasir al-Din 'Abd al-Rahim, the Isma'ilite Governor of Quhistan, to translate the *Kitab al-Taharat (Tahdhib al-Akhlaq)* from Arabic into Persian, but he did not accept the suggestion for fear of “distorting and disfiguring the original.”<sup>20</sup>

Besides, Ibn Miskawaih's effort is confined to the description of moral discipline; the domestic and political disciplines are altogether missing in his work. These, according to Tusi, are equally important aspects of “practical philosophy” and, therefore, are not to be ignored. With this in mind, Tusi compiled *Akhlaq-i Nasiri* on the following pattern.

With regard to content, the part on moral philosophy is a “summary”<sup>21</sup> and not a translation of *Kitab al-Taharat*, but the form, the arrangement of topics, and the classification of subjects is Tusi's own, which apparently give an air of originality to it.

For the parts on domestic and political philosophy, Tusi is greatly indebted to Ibn Sina<sup>22</sup> and Farabi,<sup>23</sup> and yet the mere addition of these two parts which completed practical philosophy (*hikmat-i 'amali*) in all its details, if not anything else, justifies Tusi's claim that *Akhlaq-i Nasiri* was written “not on the style of imitation nor in the spirit of translation, but as an original venture.”<sup>24</sup>

## Ethics

Following Ibn Miskawaih, Tusi regards ultimate happiness (*sa`adat-i quswa*) as the chief moral end, which is determined by the place and position of man in the cosmic evolution, and realized through his amenability to discipline and obedience. The concept of ultimate happiness is intrinsically different from the Aristotelian idea of happiness which is devoid of the “celestial element”<sup>25</sup> and also has no reference to the cosmic position of man.

The Platonic virtues of wisdom, courage, temperance, and justice (derived from the trinity of the soul – reason, ire, and desire) and their differentiation into seven, eleven, twelve, and nineteen species respectively, given by Ibn Miskawaih, figure prominently in Tusi's ethics, the only difference being that he reduced the last nineteen to twelve.

But following Aristotle's distinction in the soul of theoretical reason, practical reason, ire, and desire, and, unlike Ibn Miskawaih, he deduces justice from the culture of practical reason<sup>26</sup> without disclaiming the Platonic view of the proper and harmonious functioning of the triple powers of the soul. Unlike Aristotle and like Ibn Miskawaih, he ranks benevolence<sup>27</sup> (*tafaddul*) higher than justice, and love (*mahabbah*) as a natural source of unity, higher than benevolence.

Aristotle conceived of vice as an extreme of virtue either on the side of excess or defect. To Galen, vice was a malady of the soul. The Qur'an, after enunciating the general ethical principles of moderation,<sup>28</sup> defines vice as a disease of the heart.<sup>29</sup>

Ibn Miskawaih, after enumerating the eight generic vices of astuteness and stupidity (*safah* and *balahat*), rashness and cowardice (*tahawwur* and *jubun*), indulgence and abstention (*sharrahahat* and *khumud*), tyranny and sufferance (*jaur* and *mahanat*), on the Aristotelian pattern, describes at length the causes and cures of fear and sorrow. Ibn Miskawaih does not make it clear whether fear and sorrow constitute the excess or deficiency of ire and desire.

This problem is taken up by Tusi, and he finds out a solution for it, befitting his ingenuity. Disease is the deviation of the soul from equipoise (*i`tidal*). Aristotle and following him Ibn Miskawaih had thought of this deviation in terms of quantity (*kammiyyat*) and, therefore, the excess (*ifrat*) and defect (*tafrit*) of a state were for them the only two causes of moral diseases.

Tusi for the first time propounded the view that the deviation is not only quantitative but also qualitative, and to this new type of deviation he gave the name of perversion<sup>30</sup> (*rada'at*). Consequently, a moral disease may have one of the three causes: (1) excess, (2) defect, or (3) perversion of reason, ire, or desire. This explains adequately that fear constitutes the perversion of ire, and sorrow, the perversion of desire.

Equipped with the theory of triple causation of the maladies of the soul, Tusi classifies the fatal diseases

of the theoretical reason into perplexity (*hairat*), simple ignorance (*jahl-i basit*), and compound ignorance (*jahl-i murakkab*), constituting its excess,–deficiency, and perversion – a classification which cannot be traced to Ibn Miskawaih.

Perplexity is caused by the inability of the soul to distinguish truth from falsehood due to the conflicting evidence and confusing arguments for and against a controversial issue. As a cure of perplexity, Tusi suggests that a perplexed man should, in the first instance, be made to realize that composition and division, affirmation and denial, i. e., the contraries, being mutually exclusive, cannot exist in one and the same thing at the same time, so that he may be convinced that if a proposition is true, it cannot be false, and if it is false, it cannot be true. After his assimilating this self-evident principle, he may be taught the rules of syllogism to facilitate the detection of fallacies in the arguments.

Simple ignorance consists in a man's lack of knowledge on a subject without his presuming that he knows it. Such ignorance is a precedent condition for acquiring knowledge, but it is fatal to be contented with it. The disease may be cured by bringing home to the patient the fact that intellection and not physical appearance entitles a man to the designation of man, and that an ignorant man is no better than a brute; rather he is worse than that, for the latter can be excused for its absence of reason, he cannot.

Compound ignorance is a man's lack of knowledge on a subject coupled with his presumption that he knows it. In spite of ignorance he does not know that he is ignorant. According to Tusi, it is almost an incurable disease, but devotion to mathematics may perhaps reduce it to simple ignorance.

Tusi regards anger (*ghadab*), cowardice (*jubun*), and fear (*khauf*) as the three prominent diseases of ire (*quwwat-i difa'*) on the side of excess, deficiency, and perversion, respectively. In his analysis of fear, especially the fear of death, and in his elaboration of the seven concomitants and ten causes of anger, he follows Ibn Miskawaih.

Similarly, excess of appetite (*ifrat-i shahwat*) is caused by the excess of desire while levity (*batalat*) results from its deficiency, and sorrow (*huzn*) and jealousy (*hasad*) constitute the perversion of this power. He defines jealousy as one wishing a reverse in the fortune of another, without longing to possess a similar fortune for oneself. Following Ghazali, he also distinguishes between envy<sup>31</sup> (*ghibtat*) and jealousy, by defining the former as a longing to have the fortune similar to the one possessed by another without wishing any reverse to him. Jealousy consumes virtue as fire consumes fuel, but envy is commendable, if directed to the acquisition of virtues, and condemnable if directed to lust for worldly pleasures.

Tusi regards society as the normal background of moral life, for man is by nature a social being, and his perfection consists in evincing this characteristic of sociability towards his fellow-beings. Love and friendship, therefore, constitute the vital principles of his moral theory – a theory in which apparently there is no place for the retired and secluded life of an ascetic.

In a later work, *Ausaf al-Ashraf*, however, he approvingly writes of asceticism as a stage in mystical life. He claims no mystic experience and makes it clear in the preface that his effort is a purely intellectual appreciation and rational formulation of the mystic tradition.<sup>32</sup> Though not a mystic, he is an advocate of a rational treatment of mysticism. He classifies it into six progressive stages, each stage, excepting the last, having six moral states of its own.

The first stage is that of the preparation for the mystic journey (*suluk*), the necessary requirements of which are faith in God (*iman*), constancy in the faith (*thabat*), firmness of intention (*niyyat*), truthfulness (*sidq*), contemplation of God (*anabat*), and sincerity (*khulus*).

The second stage consists of the renunciation of the worldly connections which obstruct the mystic path. There are six essentials of this stage and these are repentance over sins (*taubah*), asceticism of the will (*zuhd*), indifference to wealth (*faqr*), rigorous practices to subdue irrational desires (*riyadat*), calculation of virtues and vices (*muharabat*), harmony between actions and intentions (*muraqabat*), and piety (*taqwa*).

The third stage of the mystic journey is marked by aloofness (*khalwat*), contemplation (*tafakkur*), fear and sorrow (*khauf* and *huzn*), hope (*rija'*), endurance (*sabr*), and gratitude to God (*shukr*).

The fourth stage covers the experiences of the traveller (*salik*) before reaching the final goal. They are devotion to God (*iradat*), eagerness in devotion (*shauq*), love of God (*mahabbah*), knowledge of God (*ma'ri fat*), unshakeable faith in God (*yaqin*), and tranquillity of the soul (*sukun*).

The fifth stage consists of resignation to God (*tawakkul*), obedience (*rida'*), submission to the divine will (*taslim*), certitude about the oneness of God (*tauhid*), effort for union with God (*wahdat*), and absorption in God (*ittihad*).

In the sixth stage the process of the absorption in God reaches its culmination and the traveller is ultimately lost (*fana'*) into the oneness of God.

## Domestic Science

Acknowledging his debt to Ibn Sina,<sup>33</sup> Tusi defines home (*manzil*) as a particular relationship existing between husband and wife, parents and children, master and servant, and wealth and its possessor. The aim of domestic science (*tadbir-i manzil*) is to evolve an efficient system of discipline, conducive to the physical, social, and mental welfare of this primary group, with father as its controlling head. The father's function is to maintain and restore the equipoise of the family, having in view the particular dispositions of the constituents and the dictates of expediency in general.

Wealth is necessary for achieving the basic ends of self-preservation and race-preservation. For its acquisition, Tusi recommends the adoption of noble professions and the achievement of perfection in them, without ever giving way to inequity, infamy, and meanness. Hair-dressing and filth-clearing are,

no doubt, mean and repulsive professions, but they are warranted on the ground of social expediency.

Tusi regards the saving of wealth as an act of prudence, provided it is not prompted by greed or miserliness, and does not cause hardship to the constituents of the home or involve the risk of one's integrity and prestige in society. In matters of expenditure, he stands for moderation in general. Nothing should be spent which may smack of extravagance, display, miscalculation or stinginess.

Not gratification of lust, but procreation and protection of property are the basic aims of marriage. Intelligence, integrity, chastity, modesty, shrewdness, tenderness of the heart, and, above all, obedience to husband are the qualities which ought to be sought in a wife. It is good if she is further graced with the qualities of noble birth, wealth, and beauty, but these are absolutely undesirable if not accompanied with intelligence, modesty and chastity.

Administrative expediency requires that the husband should be awe-inspiring. He may be benevolent and magnanimous to his wife, but in the wider interests of the home, he should avoid excessive affection, keep her in seclusion, and should not confide secrets or discuss important matters with her. Polygamy is undesirable because it invariably upsets the whole domestic organization. Women are feeble-minded by nature and psychologically jealous of another partner in the husband's love and fortune.

The concession of polygamy is reluctantly given by Tusi to kings because they are in a position to command unconditional obedience, but even for them it is desirable to avoid it as an act of prudence. Man is to the home as heart is to the body, and as one heart cannot give sustenance to two bodies, so one man cannot manage two homes. So great is the sanctity of home in Tusi's eyes that he even advises people to remain unmarried if they are unfit to enforce family equilibrium.

On the discipline of children, Tusi, following Ibn Miskawaih,<sup>34</sup> begins with the inculcation of good morals through praise, reward, and benevolent censure. He is not in favour of frequent reproof and open censure; the former increases the temptation, and the latter leads to audacity. After bringing home to them the rules regarding dining, dressing, conversation, behaviour, and the manner of moving in society, the children should be trained for a particular profession of their own liking. The daughters should be specifically trained to become good wives and mothers in the domestic set-up.

Tusi closes the discussion with the greatest emphasis on the observance of parental rights, as enjoined by Islam. Psychologically speaking, children realize the rights of the father only after attaining the age of discrimination, but those of the mother are evident from the very start of life. From this Tusi concludes that paternal rights are largely mental, while maternal ones are largely physical in character. Thus, to the father one owes unselfish devotion, veneration, obedience, praise, etc., and to the mother, the provision of food, clothes, and other physical comforts.

Lastly, servants are to home as hands and legs are to man. Tusi recommends that they should be treated benevolently, so that they may be inspired to identify their interests with those of their master.

The underlying idea is that they should serve out of love, regard, and hope, and not out of necessity compulsion, and fear, which affect adversely the interests of the home.

To sum up: Home for Tusi is the centre of domestic life. Income, saving, expenditure, and the discipline of wife, children, and servants, all revolve round the general welfare of the family group as a whole.

## Politics

Farabi's *Siyasat al-Madinah* and *Ara' Ahl al-Madinat al-Fadilah* form the first attempt towards the philosophical formulation of a political theory in the Muslim world. He used *'ilm al-madani* both in the sense of the civic science and the science of government. Following him, Tusi has also used *siyasat-i mudun* in both of these senses. In fact, his treatment of the need for civic society (*tamaddun*) and the types of social groups and cities is largely derived from Farabi's views on the subject.<sup>35</sup>

Man is by nature a social being. To substantiate his position, Tusi refers to *insan*, the Arabic word for man, which literally means to be gregarious or associating. Since this natural sociability<sup>36</sup> (*uns-i taba'i*) is characteristically human, it follows that the perfection of man consists in evincing this characteristic fully towards his fellow-beings. Civilization is another name for this perfection. It is for this reason that Islam has emphasized the superiority of congregational prayers over those offered in isolation.

The word *tamaddun* is derived from *madinah* (city) which means living together of men belonging to different professions for the purpose of helping one another in their needs. Since no man is self-sufficient, everyone is in need of help and co-operation from others. Wants differ from man to man and the same is true of the motives which induce one to co-operation. Some seek co-operation for the sake of pleasure; others are prompted by the consideration of profit; and still others aim at goodness or virtue. This diversity in the causes of co-operation leads to conflict of interests resulting in aggression and injustice. Thus arises the need for government to keep everyone content with his rightful lot without infringing the legitimate rights of others.

Administration of justice, therefore, is the chief function of a government, which should be headed by a just king, who is the second arbitrator, the first being the divine Law. He can exercise royal discretion in minor details according to the exigencies of time and occasion, but this too should conform to the general principles of the divine Law. Such a king, Tusi concludes, is the vicegerent of God upon earth, and the physician of the world temper.

As to the qualities of this monarch, he should be graced with the nobility of birth, loftiness of purpose, sobriety of judgment, firmness of determination, endurance of hardship, large-heartedness, and righteous friends. His first and foremost duty is to consolidate the State by creating affection among its friends and disaffection among its enemies, and by promoting unity among the savants, warriors, agriculturists, and business men – the four constituents of the State.

Tusi then proceeds to lay down the principles of war ethics for the guidance of rulers. The enemy should never be taken lightly, however lowly he might be, but at the same time war should be avoided at all costs, even through diplomatic tricks, without resorting to perfidy.<sup>37</sup> But if the conflict becomes inevitable, offensive should be taken only in the name of God and that too with the unanimous approval of the army. The army should be led by a man of dashing spirit, sound judgment, and experience in warfare.

Tusi particularly emphasizes the maintenance of an efficient secret service to have vigilance over the movements of the enemy. Again, diplomacy demands that the enemy should, as far as possible, be taken prisoner rather than killed, and there should be no killing after the final victory, for clemency is more befitting a king than vengeance. In the case of a defensive stand, the enemy should be overtaken by ambush or surprise attack, provided the position is strong enough; otherwise no time should be lost in digging trenches building fortresses, and even in negotiating for peace by offering wealth and using diplomatic devices.

Tusi, being the wazir of Hulagu, was well aware of the degeneration of monarchy into absolute despotism, and, therefore, advised the attendants upon kings to avoid seeking close contact with them, for being in their company is in no way better than associating with fire. No office is more perilous than that of a minister to a king, and the minister has no greater safeguard against the jealousies of the Court and the vagaries of the royal mood than his trustworthiness.

The minister should guard jealously the secrets confided to him, and should not be inquisitive about what is withheld from him. Tusi was held in great esteem by the Mongol chief, yet he agrees with Ibn Muqna` , that the closer one may be to the king, the greater should he show his respect to him, so much so that if the king calls him "brother," he should address him as "lord."

## Source Of Practical Philosophy

According to Tusi, the Qur'anic injunctions relate to man as an individual, as a member of a family, and as an inhabitant of a city or State.<sup>38</sup> This threefold division is evidently suggestive of the classification of practical philosophy into ethics, domestics, and politics by Muslim thinkers. The same is true of the content of these sciences; but it is no less true that later on these disciplines were considerably broadened under the influence of Plato and Aristotle. Shushtery's remark that "ethics was the only subject in which the East did not imitate the West," and that "the only influence which the West could bring to bear upon the East in connection with this subject, was the method of scientific treatment,"<sup>39</sup> is more true of domestics and politics, where Greek influence is least traceable, than of ethics proper.

## Psychology

Instead of proving the existence of the soul, Tusi starts with the assumption that it is a self-evident reality and as such it needs no proof. Nor is it capable of being proved. In a case like this, reasoning out

of one's own existence is a logical impossibility and absurdity, for an argument presupposes an argumentator and a subject for argument, but in this case both are the same, viz., the soul.

## Nature of the Soul

The soul is a simple, immaterial substance which perceives by itself. It controls the body through the muscles and sense-organs, but is itself beyond the perception of the bodily instruments. After reproducing Ibn Miskawaih's arguments for the incorporeality of the soul from its indivisibility, its power of assuming fresh forms without losing the previous ones, its conceiving opposite forms at one and the same time, and its correcting sense illusions,<sup>40</sup> Tusi adds two of his own arguments.

Judgments of logic, physics, mathematics, theology, etc., all exist in one soul without intermingling, and can be recalled with characteristic clarity, which is not possible in a material substance; therefore, soul is an immaterial substance. Again, physical accommodation is limited and finite, so that a hundred persons cannot be accommodated at a place meant for fifty people, but this is not true of the soul. It has, so to say, sufficient capacity to accommodate all the ideas and concepts of the objects it knows, with plenty of room for fresh acquisition.<sup>41</sup> This too proves that the soul is a simple, immaterial substance.

In the common expression "My head, my ear, my eye," the word "my"<sup>42</sup> indicates the individuality (*huwiyyah*) of the soul, which possesses these organs, and not its incorporeality. The soul does require a body as a means to its perfection, but it is not what it is because of its having a body.

## Faeulties of the Soul

To the vegetative, animal, and human soul of his predecessors, Tusi adds an imaginative soul which occupies an intermediate position between the animal and the human soul. The human soul is characterized with intellect (*nutq*) which receives knowledge from the first intellect. The intellect is of two kinds, theoretical and practical, as conceived by Aristotle.

Following Kindi, Tusi considers the theoretical intellect to be a potentiality, the realization of which involves four stages, viz., the material intellect (*'aql-i hayulani*), the angelic intellect (*'aql-i malaki*), the active intellect (*'aql-i bi al-fi'l*), and the acquired intellect (*'aql-i mustafad*). It is at the stage of the acquired intellect that every conceptual form potentially contained in the soul becomes apparent to it, like the face of a man reflected in a mirror held before him. The practical intellect, on the other hand, is concerned with voluntary and purposive action. Its potentialities are, therefore, realized through moral, domestic, and political action.

The imaginative soul is concerned with sensuous perceptions, on the one hand, and with rational abstractions, on the other, so that if it is united with the animal soul, it becomes dependent upon it, and decays with it. But if it is associated with the human soul, it becomes independent of the bodily organs, and shares the happiness or misery of the soul with its immortality. After the separation of the soul from the body, a trace of imagination remains in its form, and the punishment and reward of the human soul

depend upon this trace (*hai'at*) of what the imaginative soul knew or did in this world.<sup>43</sup>

The sensitive and calculative imagination of Aristotle apparently constitutes the structure of Tusi's imaginative soul, but his bringing the imaginative soul into relation with an elaborate theory of punishment and reward in the hereafter is his own.

As a matter of tradition handed down from Ibn Sina and Ghazali,<sup>44</sup> Tusi believes in the localization of functions in the brain. He has located common sense (*hiss-i mushtarak*) in the first ventricle of the brain, perception (*musawwirah*) in the beginning of the first part of the second ventricle, imagination, in the fore part of the third ventricle, and memory in the rear part of the brain.

## Metaphysics

According to Tusi, metaphysics proper consists of two parts, the science of divinity (*'ilm-i Ilahi*) and the first philosophy (*falsefah-i ula*). The knowledge of God, intellects, and souls constitutes the science of divinity, and the knowledge of the universe and the universals constitutes the first philosophy. The knowledge of the categories of unity and plurality, necessity and contingency, essence and existence, eternity and transitoriness also forms part of the latter.

Among the accessories (*furū'*) of metaphysics fall the knowledge of prophethood (*nubuwwat*), spiritual leadership (*imamat*), and the Day of Judgment (*qiyamat*). The range of the subject itself suggests that metaphysics is “of the essence of Islamic philosophy and the realm of its chief contribution to the history of ideas.”<sup>45</sup>

## God

After denying the logical possibility of atheism and of an ultimate duality, Tusi, unlike Farabi, Ibn Miskawaih, and Ibn Sina, argues that logic and metaphysics miserably fall short of proving the existence of God on rational grounds. God being the ultimate cause of all proofs, and, therefore, the foundation of all logic and metaphysics, is Himself independent of logical proof. Like the fundamental laws of formal logic, He neither requires nor lends Himself to proof. He is an *a priori*, fundamental, necessary, and self-evident principle of cosmic logic, and His existence is to be assumed and postulated rather than proved. From the study of moral life as well, he arrives at a similar conclusion and, like Kant in modern times, regards the existence of God as a fundamental postulate of ethics.

Tusi further argues that proof implies perfect comprehension of the thing to be proved, and since it is impossible for the finite man to comprehend God in His entirety, it is impossible for him to prove His existence.<sup>46</sup>

## Creatio ex nihilo

Whether the world is eternal (*qadim*) or was created by God *ex nihilo* (*hadith*), is one of the most vexing

problems of Muslim philosophy. Aristotle advocated the eternity of the world, attributing its motion to the creation of God, the Prime Mover. Ibn Miskawaih agreed with Aristotle in regarding God as the creator of motion but, unlike him, reasoned out that the world, both in its form and matter, was created by God *ex nihilo*.

Tusi in his *Tasawwurat* (written during the period of Isma`ilite patronage) effects a half-hearted reconciliation between Aristotle and Ibn Miskawaih. He begins by criticizing the doctrine of *creatio ex nihilo*. The view that there was a time when the world did not exist and then God created it out of nothing, obviously implies that God was not a creator before the creation of the world or His creative power was still a potentiality which was actualized later, and this is a downright denial of His eternal creativity. Logically, therefore, God was always a creator which implied the existence of creation or world with Him. The world, in other words, is co-eternal with God. Here Tusi closes the discussion abruptly with the remark that the world is eternal by the power of God who perfects it, but in its own right and power, it is created (*muhdath*).

In a later work, *Fusul* (his famous and much commented metaphysical treatise), Tusi abandons the above position altogether and supports the orthodox doctrine of *creatio ex nihilo*, without any reservation. Classifying Being into the necessary and the possible, he argues that the possible depends for its existence on the necessary; and since it exists by other than itself, it cannot be assumed in a state of existence, for the creation of the existent is impossible and absurd. And that which is not in existence is non-existent, and so the Necessary Being creates the possible out of nothing. Such a process is called creation and the existent, the created (*muhdath*).

Similarly, in *Tasawwurat*, Tusi agrees with Ibn Sina that from one nothing can proceed except one, and following this principle explains the emanation (*sudur*) of the world from the Necessary Being after the Neo-Platonic fashion. In *Risaleh-i `Aql*, *Risaleh-i `Ilal wa Ma`lulat*, and *Sharh-i Isharat* too, he supports, both logically and mathematically, pluralization in the creative process taken as a whole. But in later works, *Qawa'id at-`Aqa'id*, *Tajrid al-`Aqa'id*, and *Fusul*, he evidently attacks and blows up the very foundation of this principle, once held so dearly by him.

The reflection of the first intellect is said to have created the intellect, soul, and body of the first sphere. This position, he now points out, obviously implies plurality in what is created by the first intellect, which goes against the principle that from one nothing can proceed except one. As to the source of plurality, he further argues that it exists either by the authority of God or without His authority. If it exists by the authority of God, then there is no doubt that it has come from God. If, on the other hand, it exists without the authority of God, that would mean the setting up of another god besides God.[47](#)

Again, in *Tasawwurat*, Tusi holds the view that God's reflection is equivalent to creation and is the outcome of His self-conscious necessity. But in *Fusul*, he abandons this position as well. He now regards God as a free creator and blows up the theory of creation out of necessity. If God creates out of necessity, he argues, His actions should spring out of His essence. Thus, if a part of the world becomes

non-existent, the essence of God should also pass into nothingness; for the cause of its non-existence is conditioned by the non-existence of a part of its cause, the non-existence of which is further determined by the non-existence of the other parts of its cause and so on. And since all existents depend for their existence on the necessity of God, their nonexistence ultimately leads to the non-existence of God Himself.<sup>48</sup>

## Prophethood

After establishing freedom of the will and resurrection of the body, Tusi proceeds to establish the necessity of prophethood and spiritual leadership. Conflict of interests coupled with individual liberty results in the disintegration of social life, and this necessitates a divine Code from God for the regulation of human affairs. But God Himself is beyond all sensory apprehension; therefore, He sends prophets for the guidance of peoples. This, in turn, makes necessary the institution of spiritual leadership after the prophets to enforce the divine Code.

## Good And Evil

Good and evil are found mixed up in this world. The obtrusiveness of evil is inconsistent with the benevolence of God. To avoid this difficulty, Zoroastrians attributed light and good to Yazdan and darkness and evil to Ahriman. But the existence of two equal and independent principles itself involves a metaphysical inconsistency. Rejecting the view on this ground, Tusi explains away the reality and objectivity of evil with the enthusiasm of Ibn Sina, his spiritual progenitor.

According to Tusi, the good proceeds from God and the evil springs up as an accident (*'ard*) in its way. The good, for instance, is a grain of wheat thrown into the soil and watered, so that it grows into a plant and yields a rich crop. The evil is like the foam which appears on the surface of the water. The foam evidently comes from the water-courses and not from the water itself. Thus, there is no evil principle in the world, but as an accident it is a necessary concomitant or by-product of matter.

In the human world, evil is occasioned by an error of judgment or through a misuse of the divine gift of free-will. God by Himself aims at universal good, but the veils of the senses, imagination, fancy and thought hang before our sight and cloud the mental vision. Thus, prudence fails to foresee the consequences of actions, resulting in wrong choice, which in turn begets evil.

Again, our judgment of evil is always relative and metaphorical, that is, it is always with reference to something. When, for instance, fire burns a poor man's cottage or flood sweeps away a village, a verdict of evil is invariably passed on fire and water. But in reality there is nothing evil in fire or water; rather their absence would constitute an absolute evil in comparison to the partial evil occasionally caused by their presence.

Lastly, evil is the outcome of ignorance, or the result of some physical disability, or the lack of something

which provides for the good. The absence of day is night, the lack of wealth is poverty, and the absence of good is evil. In essence, therefore, evil is the absence of something – a negative, not a positive something.[49](#)

To the question why a finite sin is dealt with infinite punishment by God, Tusi replies that it is a mistake to attribute either reward or punishment to God. Just as the virtuous, by nature and necessity, deserve eternal bliss and happiness, so the vicious by nature and necessity deserve eternal punishment and despair.

## Logic

On logic, his works include *Asas al-Iqtibas*, *Sharh-i Mantiq al-Isharat*, *Ta'dil al-Mi'yar*, and *Tajrid fi al-Mantiq*. The first of these gives a comprehensive and lucid account of the subject in Persian on the lines of Ibn Sina's logic in *al-Shifa'*.

Tusi regards logic both as a science and as an instrument of science. As a science, it aims at the cognition of meanings and that of the quality of the meanings cognized; as an instrument, it is the key to the understanding of different sciences. When knowledge of meanings as well as of the quality of meanings becomes so ingrained in the mind that it no longer requires the exercise of thought and reflection, the science of logic becomes a useful art (*san`at*), freeing the mind from misunderstanding, on the one hand, and perplexity, on the other.[50](#)

Having defined logic, Tusi, like Ibn Sina, begins with a brief discussion of the theory of knowledge. All knowledge is either a concept (*tasawwur*) or a judgment (*tasdiq*); the former is acquired through definition and the latter through syllogism. Thus, definition and syllogism are the two instruments with which knowledge is acquired.

Unlike Aristotle, Ibn Sina had divided all syllogisms into the copulative (*iqtirani*) and the exceptive (*istithna'i*). Tusi has followed this division and elaborated it in his own way. His logical works are Aristotelian in general outline, but he mentions four[51](#) instead of three syllogistic figures; and the source of this fourth figure is found neither in the *Organon* of Aristotle nor in any of the logical works of Ibn Sina.[52](#)

## Review

Tusi, as we have already seen, owes his ethics to Ibn Miskawaih and politics to Farabi; but neither of them reaches the depth and the extent of Ibn Sina's influence over him. Tusi's logic, metaphysics, psychology, domestics, and dogmatics – all are substantially borrowed from him. Besides, his long though casual connection with the Nizari Isma'ilites also influenced his ethical, psychological, and metaphysical speculations.

Historically speaking, his position is mainly that of a revivalist. But from the standpoint of the history of culture, even the revival of the philosophical and scientific tradition, especially in an era of political and intellectual decline, though marked by tiresome erudition and repetition, is no less important than origination, inasmuch as it prepares the ground for the intellectual rebirth of a nation.

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[1.](#) Zand's article on Tusi in *Hilal*, November 1956, Karachi.

[2.](#) Ivanow, *Tasawwurat*, p. xxv.

[3.](#) *Encyclopaedia of Islam*, Vol. IV, p. 980.

[4.](#) After passing into the service of Hulagu, Tusi, in the preface to *Zij al-Ilkhani*, referred to his connection with the Isma'illites as "casual" (Ivanow, op cit., p xxv) and also "rescinded" the dedication of *Akhlaq-i Nasiri* to Nasir al-Din 'Abd al-Rahim, his Isma'ili patron at Quhistan (Browne, *Literary History of Persia*, Vol. II, p. 456)

[5.](#) *Encyclopaedia of Islam*, Vol. IV, 981.

[6.](#) P. K. Hitti, *History of the Arabs*, p. 378.

[7.](#) Aidin Sayili's article in *Yadnameh-i Tusi*, Teheran University, Teheran, 1957, p. 61.

[8.](#) *Hukuma'-i Islam*, Vol.II, p.256.

- [9.](#) Yadnameh-i Tusi, p.66.
- [10.](#) Browne, op. cit., Vol. II, p. 485.
- [11.](#) Asas al-Iqtibas, p.YB.
- [12.](#) Browne, op. cit, Vol. III, p. 18.
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- [20.](#) Akhlaq-i Nasiri, p. 5.
- [21.](#) Ibid., p.6.
- [22.](#) Ibid., p. 145.
- [23.](#) Ibid., p. 175.
- [24.](#) Ibid., p.6.
- [25.](#) Ibid., p.44.
- [26.](#) Ibid., p.61.
- [27.](#) Aristotle regards "prodigality" as the extreme of liberality on the side of excess, and hence a positive vice, although it is for him "no sign of meanness, but only of folly" (Nichomachean Ethics, p. 105).
- [28.](#) Qur'an, ii, 190; v,2.
- [29.](#) Ibid., ii, 10.
- [30.](#) Akhlaq-i Nasiri, p. 114.
- [31.](#) Ghazali, Ihya', Vol.III, Chap.III
- [32.](#) Ausaf al-Ashraf, p. 1
- [33.](#) Akhlaq-i Nasiri, p. 145. The treatise referred to by Tusi is Kitab al-Siyasat, ed. Ma'luf, Beirut, 1911.
- [34.](#) Tahdhib al-Akhlaq, pp.46-54.
- [35.](#) Ara' Ahl al-Madinat al-Fadilah, pp. 53-85; Siyasat at-Madaniyyah, pp. 1-76.
- [36.](#) Compare this theory of natural sociability with Hobbes' view of man as "solitary, poor, nasty, brutish and short" (Roger, Students' History of Philosophy, p. 245).
- [37.](#) Compare it with Machiavellian ethics of "force and fraud." "A ruler will perish if he is always good. He must be as cunning as a fox and as fierce as a lion" (Bertrand Russell, A History of Western Philosophy, p. 528).
- [38.](#) Akhlaq-i Nasiri, p. 10.
- [39.](#) Outlines of Islamic Culture, Vol. II, p. 441
- [40.](#) Tahdhib al-Akhlaq, pp.3-7.
- [41.](#) Tasawwurat, p.25.
- [42.](#) Every body belongs to a soul, according to this argument. In modern times, William James too has used the same argument to prove that every thought belongs to a mind. "It seems as if the elementary psychic facts were not thought, this thought or that thought, but my thought, every thought being owned." W. James, Psychology (Briefer Course), p. 153
- [43.](#) Tasawwurat, p.23.
- [44.](#) Ghazali has located retention (hafizah) in the first ventricle (tajwif) of the fore part of the brain, imagination (wahmiyyah) in the middle ventricle of the brain, thought (tafakkur) in the middle of the brain, and recollection (tadhakkur) in the rear verticle of the brain. (Mizan al-`Amal, p. 25.).
- [45.](#) Afnan, op.cit., p. 106.
- [46.](#) Tasawwurat, p.8.
- [47.](#) Fusul, p. 18.
- [48.](#) Ibid., pp. 16-18.
- [49.](#) Tasawwurat, p.44.

[50.](#) Asas al-Iqtibas, p.5.

[51.](#) Ibid., p.379.

[52.](#) Afnan, op.cit., p. 101.

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