Omar Khayyám (1048–1131)

Omar Khayyám (1048 – 1131?) was a Persian polymath: philosopher, mathematician, astronomer and poet. He also wrote treatises on mechanics, geography, mineralogy, music, climatology and Islamic theology.

Born in Nishapur, at a young age he moved to Samarkand and obtained his education there, afterwards he moved to Bukhara and became established as one of the major mathematicians and astronomers of the medieval period. He is the author of one of the most important treatises on algebra written before modern times, the Treatise on Demonstration of Problems of Algebra, which includes a geometric method for solving cubic equations by intersecting a hyperbola with a circle. He contributed to a calendar reform.

His significance as a philosopher and teacher, and his few remaining philosophical works, have not received the same attention as his scientific and poetic writings. Al-Zamakhshari referred to him as “the philosopher of the world”. Many sources have testified that he taught for decades the philosophy of Avicenna in Nishapur where Khayyám was born and buried and where his mausoleum today remains a masterpiece of Iranian architecture visited by many people every year.

Outside Iran and Persian speaking countries, Khayyám has had an impact on literature and societies through the translation of his works and popularization by other scholars. The greatest such impact was in English-speaking countries; the English scholar Thomas Hyde (1636–1703) was the first non-Persian to study him. The most influential of all was Edward FitzGerald (1809–83), who made Khayyám the most famous poet of the East in the West through his celebrated translation and adaptations of Khayyám's rather small number of quatrains (Persian: ????????? ruba?iyat) in the Rubaiyat of Omar Khayyam.

Omar Khayyám died in 1131 and is buried in the Khayyam Garden at the mausoleum of Imamzadeh Mahruq in Nishapur. In 1963 the mausoleum of Omar Khayyam was constructed on the site by Hooshang Seyhoun.

1. The Formative Period

Abu'l Fat? Umar ibn Ibrahim Khayyam, commonly known as Umar Khayyam, is almost certainly the best known Iranian poet-scientist in the West. He was born in the district of Shadyakh of Nayshabur (originally “Nayshapur”) in the province of Khorasan sometime around 439 AH/1048 CE, and died there between 515
and 520 AH/1124 and 1129 CE. Considering the word “Khayyam,” means “tent maker,” it is likely that his father Ibrahim or forefathers were tent makers. Khayyam is said to have been quiet, reserved, and humble. His reluctance to accept students drew criticism from opponents, who claimed that he was impatient, bad tempered, and uninterested in sharing his knowledge. Given the radical nature of his views in the Ruba‘iyyat, he may merely have wished to remain intellectually inconspicuous.

The secrets which my book of love has bred,  
Cannot be told for fear of loss of head;  
Since none is fit to learn, or cares to know,  
’Tis better all my thoughts remain unsaid. (Ruba‘iyyat, Tirtha 1941 p. 266.)

Khayyam’s reference to Ibn Sina as “his teacher” has led some to speculate that he actually studied with Ibn Sina. Although this is incorrect, several traditional biographers indicate that Umar Khayyam may have studied with Bahmanyar, an outstanding student of Ibn Sina.

Following a number of journeys to Herat, Ray, and I?fahan (the latter being the capital of the Seljuqs) in search of libraries and in pursuit of astronomical calculations, Khayyam’s declining health caused him to return to Nayshabur, where he died in the district of Shadyakh.

2. The Philosophical Works and Thoughts of Umar Khayyam

Khayyam wrote little, but his works—some fourteen treatises identified to date—were remarkable. They can be categorized primarily in three genres: mathematics, philosophy, and poetry. His philosophical works which have been edited and published recently are:


“The Light of the Intellect on the Subject of Universal Knowledge” (Risalah al-?iya’ al-aqli fi maw?u’ al-’ilm al-kulli) . This treatise has also been called “The Treatise on Transcendence in Existence” (Al-Risalah al-ul a fi’l-wujud).

“On the Knowledge of the Universals Principles of Existence” (Risalah dar ’ilm kulliyat-i wujud).

“On Existence” (Risalah fi’l-wujud)
“Response to Three Philosophical Problems” (Risalah jawaban lithulth masa’il) (Malik (ed.). 412–422)

Except the first work mentioned above which is a free translation and commentary on a discourse by Ibn Sina, the other six philosophical treatises represent Khayyam's own independent philosophical views. It is noteworthy that Khayyam's philosophical treatises were written in the Peripatetic tradition at a time when philosophy in general and rationalism in particular was under attack by orthodox Muslim jurists—so much that Khayyam had to defend himself against the charge of “being a philosopher.”

“A philosopher I am,” my enemies falsely say,  
But God knows I am not what they say;  
While in this sorrow-laden nook, I reside  
Need to know who I am, and why Here stay. (translation by the author.)

In "On Being and Necessity", Khayyam defines "philosophy" along the Peripatetic line: “The essential and real issues that are discussed in philosophy are three, [first], 'is it?'...second, 'what is it?'...third, 'why is it?’” (Malik (ed.), 335). While these are standard Aristotelian questions, for Khayyam they have a wider range of philosophical implications, especially with regard to the following topics:

The existence of God, His attributes and knowledge  
Gradation of being and the problem of multiplicity  
Eschatology  
Theodicy  
Determinism and free will  
Subjects and predicates  
Existence and essence

2.1 The existence of God, His attributes and knowledge

In accordance with Peripatetic tradition, Umar Khayyam refers to God as the “Necessary Being” and offers several cosmological, teleological, and ontological (Risalah fi'l-wujud, 112) arguments for His existence. Khayyam discusses issues such as necessity, causality, and the impossibility of a chain of causes and effects continuing ad infinitum. Among other topics pertaining to God which Khayyam discusses are God's knowledge of universals and particulars and the complex nature of Divine essence.

2.2 Gradation of Being and the Problem of Unity and Multiplicity
For Khayyam, the most complex philosophical problem is to account for the gradation of beings and the manner in which they are ranked in terms of their nobility. In “On Being and Necessity”, Khayyam asserts:

What remains from among the most important and difficult problems [to solve] is the difference among the order of existents.... Perhaps I, and my teacher, the master of all who have proceeded before him, Avicenna, have thoughtfully reflected upon this problem and to the extent that it is satisfactory to our intellects, we have understood it.

In his treatise “On the Knowledge of the Universal Principles of Existence,” (Risalah dar ‘ilm kulliyat-i wujud, in Malik, 381) as well as a number of his other works, Khayyam adopts the Neoplatonic scheme of emanation and offers an analysis of a number of traditional philosophical themes within this context.

2.3 Eschatology

Khayyam has been accused of believing in the transmigration of the soul and even corporeal resurrection in this world. This is partially due to some of the inauthentic Ruba‘iyyat that have been attributed to him.

Khayyam's philosophical treatises indicate that he did believe in life after death, and in this regard his views were in line with traditional Islamic eschatological doctrine. Khayyam the poet, however, plays with the notion of life after death in a variety of ways. First, he casts doubt on the very existence of a life beyond our earthly existence; second, he says that based on our very experience in this world, all things seem to perish and not return. Some of his poems play with the idea of the transmigration of the soul (ta‘asukh). This is more symbolic than actual; in numerous poems he tells us that we turn to dust and it is from our dust that other living beings rise. Khayyam's comments regarding the possibility of life after death may well have been an indirect criticism of the orthodox jurists who spoke of the intricacies of heaven and hell with certainty.7

2.4 Theodicy (The Problem of Evil)

The problem of theodicy, which Khayyam handles both philosophically and poetically, is one of the most prevalent themes in his quatrains, yet his approach differs in each medium. It is an irony that while in his philosophy Khayyam offers a rational explanation for the existence of evil, in his Ruba‘iyyat he strongly condemns the presence of evil and finds no acceptable justification for its presence. One may argue that such an inconsistency bears witness to the fact that the philosophical treatises and the Ruba‘iyyat are not authored by the same
person. While this remains a possibility, it is also reasonable that these seemingly contradictory works might belong to the same person. The discrepancy speaks to the human condition that despite our rationalization of the problem of evil, on a practical and emotional level we remain fundamentally bewildered by the unnecessary presence of so much pain and suffering.

Qa‘i Abu Na‘r, a statesman and scholar from Shiraz, posed the following question to Khayyam:

It is therefore necessary that the Necessary Being be the cause of the emergence of evil, opposition and corruption in the world. This is not worthy of Divine status. So how can we resolve this problem and the conflict so evil will not be attributed to the Necessary Being? (؟اررات الـتاء في الـعالم و الـجابر و الـباقة، Malik)

In his work “On the Necessity of Contradiction in the World and Determinism and Subsistence,” Khayyam offers three arguments to exonerate God from being the origin of evil by identifying evil with non-existence or absence. God, Khayyam argues, has created the essences of all the contingent beings, which are good in and of themselves since any being, ontologically speaking, is better than non-being.8 Evil therefore represents an absence, a non-being for which God cannot be blamed.

2.5 Determinism and Free Will

Both his Western and Eastern expositors consider Khayyam to be a determinist (jabri). However, his views on the subject matter are far more complex, as he demonstrates in On Being and Necessity, a work devoted almost entirely to the issue. It is noteworthy that instead of the traditional use of the term “determinism” (jabr), Khayyam uses the concept of necessity (taklif) to denote determinism or predestination. In his work “On the Necessity of Contradiction in the World, and Determinism and Subsistence,” Khayyam indicates that determinism is close to his philosophical perspective provided it is not taken to its extreme:

As to the question of his Highness [Qa‘i Nasawi] concerning which of the two groups (determinists or free will) are closer to truth I say initially and in the first sight, perhaps the determinists are closer to truth provided we do not enter into their nonsensical and absurd [claims] for those are far from truth. (?اررات الـتاء في الـعالم و الـجابر و الـباقة، 169)

Khayyam identifies three types of determinism:
Universal-cosmic
Socio-political
Ontological

By “Universal-cosmic determinism” Khayyam means we have been thrown into this world by accident, which creates in us a sense of bewilderment and existential anxiety. Khayyam expresses this when he says:

With Earth's first Clay They did the Last Man knead,  
And there of the Last Harvest sow'd the Seed:  
And the first Morning of Creation wrote  
What the Last Dawn of Reckoning shall read. (Ruba'iyyat, FitzGerald 1859, p. 41)

In the cosmic and universal sense, our presence in this world and our entry and exit is predetermined, a condition that Khayyam bemoans throughout his Ruba'iyyat.

The second sense of determinism is Socio-economic, which is rarely addressed by Muslim philosophers. Khayyam observed:

God created the human species such that it is not possible for it to survive and reach perfection unless it is through reciprocity, assistance, and help. Until food, clothes, and a home that are the essentials of life are not prepared, the possibility of the attainment of perfection does not exist. (?arurat al-ta?ad fi'l- 'alam wa'l-jabr wa'l-baqa', 143).

Finally there is “ontological determinism,” which relies on a Neoplatonic scheme of emanation which Khayyam considers to be “among the most significant and complex of all questions,” since “the order of the world is in accordance to how the wisdom of God decreed it” (Fi'l- kawn wa'l-taklif, 145). He continues, “Necessity is a command which is issued from God Most High, so people may attain those perfections that lead them to happiness” (Fi'l- kawn wa'l-taklif, 143). This Greek concept of happiness, restated by Farabi as “For every being is made to achieve the ultimate perfection it is susceptible of achieving according to its specific place in the order of being,” (Al-Farabi 1973, 224 ) implies that at least our ontological status is pre-determined.

2.6 Subjects, Predicates, and Attributes

In a complex discussion, Khayyam presents his views on the relationship between the subject, predicate, and attributes using a mixture of original insight and Aristotelian precedent. Dividing the attributes into two parts, essential and accidental, he discusses essential and accidental attributes and their subdivisions
such as abstract (i’tibari) and existential (wujudi) (Risalah fi'l-wujud, 102).
Continuing the argument in “The Necessity of Contradiction, Determinism, and
Subsistence” (?arurat al-ta?ad fi'l-'alam wa'l-jabr wa'l-baqa’, 164), Khayyam
proposes that conceiving essential attributes necessitates the presence of a priori
(badawi) concepts such as “animality which is an essential attribute of man.”

2.7 Existence (wujud) and Essence (mahiyyah)

Khayyam's ontological views can be formulated in the following ways:9

The existence of an existent being is the same as its essence. This view is
attributed to Abu'l-?asan Ash'ari, Abu'l-?asan Ba?ri and some of the other
Ash’arite theologians.
Commonly known as the principality of essence (i?alat al-mahiyyah), this view
maintains that essence is primary and existence is added to it. Many
philosophers such as Abu Hashim Juba’i and later Suhrawardi and Mir Damad
came to advocate this view.

Commonly known as the principality of existence, (i?alat al-wujud), this view
maintains that existence is primary and essence is then added.

Khayyam in Risalah fi'l-wujud writes that “existence is abstract (secondary)
(i'tibari) by way of emanation.” In addition, section seventeen of this treatise,
entitled “Existence is an Added Concept to Essence” states, “The traces of
existence can be found in all things such as accidents and there is no doubt that
existence is a concept added to essence, that is intelligible (?arurat al-ta?ad fi'l-
’alam wa'l-jabr wa'l-baqa’, 111). Clearly Khayyam supports the principality of
essence. By relying on reductio ad absurdum, he concludes that if essence were
to be secondary, it would have to exist prior to itself, which is impossible.
Khayyam states “essence is primary and nothing else,” because “essence was
non-existent and then became existent.” He goes on to argue “essence does not
need existence [to exist] and [its existence] is not in relation to an existent since
[if] essence prior to existing was non-existing (ma?dum), then how can
something need something else [in order to exist] prior to its existence?”
(?arurat al-ta?ad fi'l-'alam wa'l-jabr wa'l-baqa’, 125).

This may lead the reader to believe that Khayyam was the first Muslim
philosopher to support the theory of the principality of essence, but a more
careful reading reveals an interesting twist: namely, that Khayyam's
understanding of how essences came to be casts doubt on his belief in the
principality of essence. Towards the end of the Risalah fi'l-wujud he uses the
Neoplatonic scheme of emanation to explain the origin of essences and states:
“Therefore, it became clear that all substances (dhat) and essences (mahiyah) emanate from the essence of the First Exalted Origin, in an orderly fashion, may glory be upon Him.” The traditional Neoplatonic scheme, at least in Ibn Sina’s version, clearly considers this succession to be existential, whereby levels of existence emanate from the One. Khayyam replaces essence with existence here and the question is whether he equates them and thereby deviates from his teacher Ibn Sina. Khayyam furthermore explains that “[essences] are all good in themselves and there is no evil in them in any form or fashion” (arurat al-ta‘ad fi‘l-‘alam wa‘l-jabr wa‘l-baqa‘, 130). This deviates from the standard definitions of an essence and is much closer to Plato’s forms than the traditional notion of mahiyah.

It appears that Khayyam equates existence and essence as having emanated from God in an orderly fashion, but there is no explanation of how essence becomes primary and existence secondary. In fact, if existence did not exist how could essences come to be? They would have to come to be without Being-be there to receive them, as it were. Either essence or existence emanated from God separately, in which case their priority and posterity are not essential as is the relationship between father and son, or their priority is accidental. The latter is not the type of priority that Khayyam has in mind; if essence is to be essentially prior to existence, they both could not have been emanated from God and one should be a byproduct of the other, i.e., an ontological level of reality.

In another work, The Brightening of the Intellect on the Subject of Universal Knowledge, Khayyam offers three reasons why existence is not added to essence and therefore is primary. A summary of his reasons is as follows:

Existence cannot be added to essence; otherwise an infinite succession will follow.
Existence is not added to essence; otherwise essence should have existed prior to existence, and this is absurd.
With regard to the Necessary Being, existence clearly is not added to essence, for dualism would follow.
To refute the primacy of essence over existence, Khayyam offers an argument based on the relationship between subject and predicate. He argues that “Existence exists and does not need another existence;” (Risalah fi‘l-wujud) but, cognizant of the counterargument, he also states that one may object by saying that the same argument holds true with regard to essence. So one can say, “A man is a man through man-ness and man-ness does not need another man-ness to be man-ness” (Risalah fi‘l-wujud).

Although the distinction between the principality of wujud (a?alat al-wujud) and
Khayyam's philosophical works are the least studied aspects of his thought, and were not even available in published form until a few years ago. They permit a fresh look at overall Khayyamian thought and prove indispensable to an understanding of his Ruba’iyyat. In his philosophical works, Khayyam writes as a Muslim philosopher and treats a variety of traditional philosophical problems; but in his Ruba’iyyat, our Muslim philosopher morphs into an agnostic Epicurean. A detailed study of Khayyam's philosophical works reveals several explanations for this dichotomy, the most likely of which is the conflict between pure and practical reasoning. Whereas such questions as theodicy, the existence of God, soul and the possibility of life after death may be argued for philosophically, such arguments hardly seem relevant to the human condition given our daily share of suffering.

It is in light of the distinction between “is” and “ought,” the “ideal” and the “actual,” that discrepancies between Khayyam's Ruba’iyyat and his philosophical views should be understood. Khayyam's Ruba’iyyat are the works of a sober philosopher and not that of a hedonistic poet. Whereas Khayyam the philosopher-mathematician justifies theism based on the existing order in the universe, Khayyam the poet, for whom suffering in the world remains insoluble, sees very little evidence to support theism or any type of eschatological doctrine.

3. The Ruba’iyyat (Quatrains)

Here with a Loaf of Bread beneath the Bough,
A Flask of Wine, a Book of Verse—and Thou
Beside me singing in the Wilderness—
And Wilderness is Paradise enow. (Ruba’iyyat, FitzGerald 1859, 30)

Although Umar Khayyam's Ruba’iyyat have been admired in the Persian speaking world for many centuries, they have only been known in the West since the mid 19th century, when Edward FitzGerald rendered the Ruba’iyyat into English.

The word Ruba’i (Ruba’iyyat -plural), meaning “quatrain,” comes from the word
al-Rabi’, the number four in Arabic. It refers to a poetic form which consists of a four-lined stanza and two hemistiches for a total of four parts. Also known as taranah (snatch) or dobaiti (two-liner), its short and simple form provides a type of “poetic punch line.”

The overwhelming majority of the literary works on the Ruba‘iyyat have been devoted to the monumental task of determining the authentic Ruba‘iyyat from the inauthentic ones. In our current discussion, we shall bypass that controversy and rely on the most authoritative Ruba‘iyyat in order to provide a commentary on Khayyam's critique of the fundamental tenets of religion. The salient feature of his critique address the following:

Impermanence and the quest for the meaning of life
Theodicy
The here and now
Epistemology
Eschatology
Determinism and free will
Philosophical wisdom

3.1 Impermanence and the quest for the meaning of life

The Ruba‘iyyat's overarching theme is the temporality of human existence and the suffering that one endures during a seemingly senseless existence. Clearly, such a view based on his observation of the world around him is in sharp contrast with the Islamic view presented in the Quran: “I (Allah) have not created the celestial bodies and the earth in vain.” (Quran, 38:27) Umar Khayyam was caught between the rationalistic tradition of the Peripatetics deeply entrenched in the Islamic religious universe and his own failure to find any meaning or purpose in human existence on a more immediate and experiential level. Khayyam the poet criticizes the meaninglessness of life whereas Khayyam the philosopher remains loyal to the Islamic Peripatetic tradition which adheres to a theocentric world view.

Using the imagery of a kuzah (“jug”) and clay throughout the Ruba‘iyyat, Khayyam alludes to the temporality of life and its senselessness:

I saw the potter in the market yesterday
Pounding and pounding upon a piece of clay
“Behold,” said the clay to the potter
Treat me gently for once like you, now I am clay (translation by the author.)
Khayyam fails to see a profound meaning in human existence; his existential anxiety is compounded by the fact that we are subject to our daily share of suffering, a concept that runs contrary to that of the all merciful and compassionate God of Islam.

3.2 Theodicy and Justice

The problem of suffering has an ominous presence in the Ruba‘iyyat, which contains both Epicurean and Stoic themes. On theodicy, Khayyam remarks:

In what life yields in this Two-door monastery
Your share in the pain of heart and death will tarry
The one who does not bear a child is happy
And he not born of a mother, merry (translation by the author.)

And also:

Life is dark and maze-like, it is
Suffering cast upon us and comfort in abyss
Praise the Lord for all the means of evil
Ask none other than He for malice (translation by the author.)

It is an irony that while Khayyam complains about theodicy and human suffering throughout his Ruba‘iyyat, in his philosophical works he offers a treatise almost entirely devoted to a philosophical justification of the problem of evil. It is noteworthy that theodicy as a theological and philosophical problem in Islam never received the attention it did in Western intellectual tradition. In early Islamic history theodicy was briefly discussed by a number of theologians, but the subject matter was soon dropped, partially because the orthodox theologians saw it as questioning God's wisdom.

3.3 Here and Now

For Khayyam the poet, traditional metaphysics, or what he calls “the tale of the seventy-two nations,” is merely a flight of fancy for the human condition, which he describes as a “sorrow laden nest.” The art of living in the present, a theme dealt with in Sufi literature, is a type of wisdom that must be acquired, since living for the hereafter and heavenly rewards is conventional wisdom more suitable for the masses.

On this Khayyam asserts:
Today is thine to spend, but not to-morrow,
Counting on morrow breedeth naught but sorrow;
Oh! Squander not this breath that heaven hath lent thee,
Nor make too sure another breath to borrow (Whinfield 2001, 30; modified by the author.)

And also

What matters if I feast, or have to fast?
What if my days in joy or grief are cast?
Fill me with Thee, O Guide! I cannot ken
If breath I draw returns or fails at last. (Whinfield 2001, 144)

Khayyam's emphasis on living in the present, or as Sufi's say “Sufi is the Son of time,” along with his use of other Sufi metaphors such as wine, intoxication and love making, have been interpreted by some scholars as merely mystical allegories. Although a mystical interpretation of the Ruba‘iyyat has been advocated by some, it remains the view of a minority of scholars.

The complexity of the world according to Khayyam the mathematician-astronomer necessitates the existence of a creator and sustainer of the universe; and yet on a more immediate and existential level, he finds no reason or meaning for human existence. This leads to the theme of doubt and bewilderment, since reason necessitates that every design should have a designer—and yet one fails to find a designer or a purpose for the very existence of the design.

3.4 Doubt and Bewilderment

Humans, Khayyam tells us, are thrown into an existence they cannot make sense of:

The sphere upon which mortals come and go,
Has no end nor beginning that we know;
And none there is to tell us in plain truth:
Whence do we come and whither do we go. (Whinfield 2001, 132)

The inconsistency between a seemingly senseless existence and a complex and orderly world leads to existential and philosophical doubt and bewilderment. The tension between Khayyam's philosophical writings in which he embraces the Islamic Peripatetic philosophical tradition, and his Ruba‘iyyat where he expresses his profound skepticism, stems from this paradox. In his Ruba‘iyyat Khayyam
embraces humanism and agnosticism, leaving the individual disoriented, anxious and bewildered; whereas in his philosophical writings he operates within a theistic world where all things are as they should be. Lack of certainty with regard to religious truth leaves the individual in an epistemologically suspended state where one has to live in the here and now irrespective of the question of truth.

Since neither truth nor certitude is at hand
Do not waste your life in doubt for a fairyland
O let us not refuse the goblet of wine
For, sober or drunken, in ignorance we stand (translation by the author.)

3.5 Eschatology

The Ruba‘iyyat casts doubt on Islamic eschatological and soteriological views. Once again the tension between Khayyam's poetic and philosophical modes of thought surfaces; experientially there is evidence to conclude that death is the end.

Behind the curtain none has found his way
None came to know the secret as we could say
And each repeats the dirge his fancy taught
Which has no sense—but never ends the lay (Whinfield 2001, 229)

In the Ruba‘iyyat, Khayyam portrays the universe as a beautiful ode which reads “from dust we come and to dust we return,” and “every brick is made from the skull of a man.” While Khayyam does not explicitly deny the existence of life after death, perhaps for political reasons and fear of being labeled a heretic, there are subtle references throughout his Ruba‘iyyat that the hereafter should be taken with a grain of salt. In contrast, in his philosophical writings we see him argue for the incorporeality of the soul, which paves the path for the existence of life after death. The irreconcilable conflict between Khayyam's observation that death is the inevitable end for all beings, and his philosophical reflections in favor of the possibility of the existence of life after death, remains an insoluble riddle.

3.6 Free Will, Determinism and Predestination

Khayyam is known as a determinist in both the East and the West, and deterministic themes can be seen in much of the Ruba‘iyyat. But if we read his Ruba‘iyyat together with his philosophical writings, the picture that emerges may be more rightly called “soft determinism.” One of Khayyam's best known quatrains in which determinism is clearly conveyed asserts:

www.PoemHunter.com - The World's Poetry Archive
The Moving Finger writes; and, having writ,
Moves on: nor all your Piety nor Wit
Shall lure it back to cancel half a Line,
Nor all your Tears wash out a Word of it (Ruba’iyyat, FitzGerald 1859, p. 20)

In his philosophical treatise “On the Necessity of Contradiction in the World, and Determinism and Subsistence” Khayyam adheres to three types of determinism. On a universal or cosmic level, our birth is determined in the sense that we had no choice in this matter. Ontologically speaking, our essence and our place on the overall hierarchy of beings appears also to be predetermined. However, the third category of determinism, socio-political determinism, is manmade and thus changeable.

At first they brought me perplexed in this way
Amazement still enhances day by day
We all alike are tasked to go but Oh!
Why are we brought and sent? This none can say. (Ruba’iyyat, Tirtha 1941, 18)

Thus a reading of the Ruba’iyyat in conjunction with Khayyam’s philosophical reflections brings forward a more sophisticated view of free will and determinism indicating that Khayyam believed in free will within a form of cosmic determinism.

3.7 Philosophical Wisdom

Khayyam uses the concept of “wine and intoxication” throughout his Ruba’iyyat in three distinct ways:

The intoxicant wine
The mystical wine
The wine of wisdom

The pedestrian use of wine in the Ruba’iyyat, devoid of any intellectual significance, emphasizes the need to forget our daily suffering. The mystical allusions to wine pertain to a type of intoxication which stands opposed to discursive thought. The esoteric use of wine and drinking, which has a long history in Persian Sufi literature, refers to the state of ecstasy in which one is intoxicated with Divine love. Those supporting the Sufi interpretation of Ruba’iyyat rely on this literary genre. While Khayyam was not a Sufi in the traditional sense of the word, he includes the mystical use of wine among his allusions.
Khayyam's use of wine in the profound sense in his Ruba’iyyat is a type of Sophia that provides a sage with philosophical wisdom, allowing one to come to terms with the temporality of life and to live in the here and now.

Those imprisoned by the intellect's need to decipher
Humbled; knowing being from non-being, they proffer
Seek ignorance and drink the juice of the grape
Those fools acting as wise, scoffers. (modified by the author)

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Khayyam's use of wine in the profound sense in his Ruba’iyyat is a type of Sophia that provides a sage with philosophical wisdom, allowing one to come to terms with the temporality of life and to live in the here and now.

Those imprisoned by the intellect's need to decipher
Humbled; knowing being from non-being, they proffer
Seek ignorance and drink the juice of the grape
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circle and a hyperbola), and demonstrates that the solution \( x \) is equal to the length of a particular line segment in the diagram.

Solving algebraic problems using geometric tools was not new; in the case of quadratic equations methods like this date back at least as far as the Greeks and probably to the Babylonians. Predecessors such as al-Khwarizmi (early 9th century) and Thabit ibn Qurra (836–901 CE) already had solved quadratic equations using the straightedge and compass geometry of Euclid's Elements. Since negative numbers had not yet been conceived, Muslim mathematicians needed to solve several different types of quadratic equations: for instance, \( x^2 = mx + n \) was fundamentally different from \( x^2 + mx = n \). For cubics, there are fourteen distinction types of equation to be solved. In his "Treatise on Demonstration of Problems of Algebra" Khayyam notes that four of these fourteen have been solved and says that al-Khazin (d. 961/971) was one of the authors, having solved a problem from Archimedes' treatise On the Sphere and Cylinder that al-Mahani (fl. ca. 860) had previously converted into a cubic.

In the Algebra, Khayyam sets out to deal systematically with all fourteen types of cubic equations. He solves each one in sequence again through the use of intersecting conic sections. In an algebra where powers of \( x \) corresponded to geometrical dimensions, the solution of cubic equations was the apex of the discipline. Khayyam also considers circumstances under which certain cubic equations have more than one solution. Although he does not handle this topic perfectly, his effort nevertheless stood out from previous efforts.

A geometric solution to a cubic equation may seem peculiar to modern eyes, but the study of cubic equations (and indeed much of medieval algebra) was motivated by geometric problems. Khayyam was nevertheless explicitly aware that the arithmetic problem of the cubic remained to be solved. He never produced such a solution; nor did anyone else until Gerolamo Cardano in the mid-16th century.

4.2 The Parallel Postulate and the Theory of Ratios

The process of reasoning from postulates and definitions has been basic to mathematics at least since the time of Euclid. Islamic geometers were well versed in this art, but also spent some effort examining the logical foundations of the method. They were unafraid to revise and improve upon Euclid's starting points, and they rebuilt the Elements from the ground up in several ways. Khayyam's Explanation of the Difficulties in the Postulates of Euclid15 deals with the two most important issues in this context, the parallel postulate and the definition of equality of ratios.
Euclid's fifth “parallel” postulate states that if a line falls on two given lines such that the two interior angles add up to less than two right angles, then the given lines must meet on that side. This statement is equivalent to several more easily understood assertions, such as: there is exactly one parallel to a given line that passes through a given point; or, the angles of a triangle add up to two right angles. It has been known since the 19th century that there are non-Euclidean geometries that violate these properties; indeed, it is not yet known whether the space in which we live satisfies them. The parallel postulate, however, was not subject to doubt at Khayyam's time, so it is more appropriate to think of Islamic efforts in this area as part of the tradition of improving upon Euclid rather than as the origin of non-Euclidean geometry. Khayyam's reconstruction of Euclid is one of the better ones: he does not try to prove the parallel postulate. Rather, he replaces it with two statements, which he attributes to Aristotle, that are both simpler and more self-evident: two lines that converge must intersect, and two lines that converge can never diverge in the direction of convergence. Khayyam then replaces Euclid's 29th proposition, the first in which the parallel postulate is used, with a new sequence of eight propositions. Khayyam's insertion amounts to determining that the so-called Saccheri quadrilateral (one with two altitudes equal in length, both emerging at right angles from a base) is in fact a rectangle. Khayyam believed his approach to be an improvement on that of his predecessor Ibn al-Haytham because his method does not rely on the concept of motion, which should be excluded from geometry. Apparently Na?ir al-Din al-?usi agreed, since he followed Khayyam's path a century or two later.

Book II of Explanation of the Difficulties in the Postulates of Euclid takes up the question of the proper definition of ratio. This is an obscure topic to the modern reader, but it was fundamental to Greek and medieval mathematics. If the quantities joined in a ratio are whole numbers, then the definition of their ratio poses no difficulty. If the quantities are geometric magnitudes, the situation is more complex because the two line segments might be incommensurable (in modern terms, their ratio corresponds to an irrational number). Euclid, following Eudoxus, asserts that A/B = C/D when, for any magnitudes x and y, the magnitudes xA and xC are both (i) greater than, (ii) equal to, or (iii) less than, the magnitudes yB and yD respectively. There is little wonder that Khayyam and others were unhappy with this definition, for while it is clearly true, it does not get at the heart of what it means for ratios to be equal.

An alternate approach, which may have existed in ancient Greece but is only known for certain to have existed from the 9th century CE, is the “anthypairetic” definition (Hogendijk 2002). The Euclidean algorithm is an iterative process that is used to find the greatest common divisor of a pair of
numbers. It may be applied equally well to find the greatest common measure of two geometric magnitudes, but the algorithm will never terminate if the ratio between the two magnitudes is irrational. A sequence of divisions within the algorithm results in a “continued fraction” that corresponds to the ratio between the original two quantities. Khayyam, following several earlier Islamic mathematicians, defines the equality of $A/B$ and $C/D$ according to whether their continued fractions are equal.

One may wonder why the proponents of the anthyphairetic definition felt that it was more natural than Euclid’s approach. There is no doubt, however, that it was preferred; Khayyam even refers to the anthyphairetic definition as the “true” nature of proportionality. Part of the explanation might be simply that the Euclidean algorithm applied to geometric quantities was much more familiar to medieval mathematicians than to us. It has also been suggested that Khayyam’s preference is due to the fact that the anthyphairetic definition allows a ratio to be considered on its own, rather than always in equality to some other ratio. Khayyam’s achievement in this topic was not to invent a new definition, but rather to demonstrate that each of the existing definitions logically implies the other. Thus Islamic mathematicians could continue to use ratio theorems from the Elements without having to prove them again according to the anthyphairetic definition.

Book III continues the discussion of ratios; Khayyam sets himself the task of demonstrating the seemingly innocuous proposition $A/C = (A/B) \cdot (B/C)$, a fact which is used in the Elements but never proved. During this process he sets an arbitrary fixed magnitude to serve as a unit, to which he relates all other magnitudes of the same kind. This allows Khayyam to incorporate both numbers and geometric magnitudes within the same system. Thus Khayyam thinks of irrational magnitudes as numbers themselves, which effectively defines the set of “real numbers” that we take for granted today. This step was one of the most significant changes of conception to occur between ancient Greek and modern mathematics.

4.3 Root Calculations and the Binomial Theorem

We know that Khayyam wrote a treatise, now lost, called Problems of Arithmetic involving the determination of n-th roots (Youschkevitch and Rosenfeld 1973 ). In his Algebra Khayyam writes that methods for calculating square and cube roots come from India, and that he has extended them to the determination of roots of any order. Even more interestingly, he says that he has demonstrated the validity of his methods using proofs that “are purely arithmetic, founded on the arithmetic of the Elements.” If both of these statements are true, then it is
hard to avoid the conclusion that Khayyam had within his power the binomial theorem \((a + b)^n = a^n + nan^{-1}b + ... + bn\), which would be the earliest appearance of this important result in medieval Islam.

4.4 Astronomy and Other Works

Khayyam moved to Isfahan in 1074 to help establish a new observatory under the patronage of Malikshah, the Seljuk sultan, and his vizier, Nizam al-Mulk. There is little doubt that Khayyam played a major role in the creation of the Maliki calendar, the observatory's most significant project. In addition to the calendar, the Isfahan observatory produced the Zij Malikshah (of which only a fragment of its star catalogue survives); it seems to have been one of the more important astronomical handbooks.

Several treatises on other scientific topics are also attributed to Khayyam: a work on music theory that uses ratios to deal with musical intervals, another on weights and balances, and another on a mathematical problem in metallurgy. All of his texts seem to have been taken seriously.

5. Khayyam in the West

5.1 Orientalism and the European Khayyam

The earliest extant translation of the Ruba'iyyat was produced by Thomas Hyde in the 1760s when his translation of a single quatrain appeared in the Veterum Persarum et Parthorum et Medorum Religionis. It was not until the 19th century, however, that the Western world and literary circles discovered Umar Khayyam in all his richness.

The voyage of the Ruba'iyyat to the West began when Sir Gore Ouseley, the British ambassador to Iran, presented his collection to the Bodleian Library at Oxford University upon his return to England. In the 1840s Professor Edward Byles Cowell of Oxford University discovered a copy of the Ruba'iyyat of Khayyam and translated several of the Ruba'iyyat. Amazed by their profundity, he shared them with Edward FitzGerald, who took an immediate interest and published the first edition of his own translation in 1859. Four versions of FitzGerald's Ruba'iyyat were published over his lifetime as new quatrains were discovered. Realizing the free nature of his work in his first translation, FitzGerald chose the word rendered to appear on the title page in later editions instead of "translation" (Lange 1968).

5.2 The Impact of Khayyam on Western Literary and Philosophical Circles
While the connection between the Pre-Raphaelites and Umar Khayyam should not be exaggerated, the relationship that Algernon Charles Swinburne, George Meredith, and Dante G. Rossetti shared with Edward FitzGerald and their mutual admiration of Khayyam cannot be ignored. The salient themes of the Ruba’iyyat became popular among the Pre-Raphaelites and their circle (Lange 1968). Khayyam's popularity led to the formation of the “Omar Khayyam Club of London” (Conway 1893, 305) in 1892, which attracted a number of literary figures and intellectuals. The success of the Club soon led to the simultaneous formation of the Omar Khayyam Clubs of Germany and America.

In America, Umar Khayyam was well received in the New England area where his poetry was propagated by the official members of the Omar Khayyam Club of America. The academic community discovered Khayyam's mathematical writings and poetry in the 1880's, when his scholarly articles and translations of his works were published. Some, such as William Edward Story, praised Umar as a mathematician and compared his views with those of Johannes Kepler, Gottfried Wilhelm Leibniz, and Isaac Newton, while others drew their inspiration from his literary tradition and called themselves “Umarians.” This new literary movement soon attracted such figures as Mark Twain, who composed forty-five burlesque versions of FitzGerald's quatrains and integrated them with two of FitzGerald's stanzas entitled AGE-A Ruba’iyyat (Twain, 1983, 14). The movement also drew the attention of T.S. Eliot's grandfather William Greenleaf Eliot (1811–1887), two of T.S. Eliot's cousins, and T.S. Eliot himself. Umar Khayyam's Ruba’iyyat seems to have elicited two distinct responses among many of his followers in general and the Eliot family in particular: admiration for a rational theology on the one hand, and concern with the rise of skepticism and moral decay in America on the other.

Among other figures influenced by the Ruba’iyyat of Umar Khayyam were certain members of the New England School of Transcendentalism, including Henry Wadsworth Longfellow, Ralph Waldo Emerson, and Henry David Thoreau (Aminrazavi 2013; for a complete discussion on Umar Khayyam in the West see Aminrazavi 2007, 204–278).

Conclusion

In the foregoing discussion, we have argued that Umar Khayyam was a philosopher-sage (?akim) and a spiritual-pragmatist whose Ruba’iyyat should be seen as a philosophical commentary on the human condition. The salient features of Umar Khayyam's pioneering work in various branches of mathematics were also discussed. Khayyam's mathematical genius not only produced the most
accurate calendar to date, but the issues he treated remained pertinent up until the modern period when a number of Western and Russian mathematicians produced considerable scholarship.

For Khayyam, there are two discourses, each of which pertains to one dimension of human existence: philosophical and poetic. Philosophically, Khayyam was the last Peripatetic in the Persian speaking world before philosophical thinking eclipsed the Eastern part of the Islamic world for several centuries. Khayyam defended rationalism against the rise of orthodoxy and made an attempt to revive the spirit of rationalism which was so prevalent in the first four centuries in Islam. Poetically, Khayyam represents a voice of protest against what he regards to be a fundamentally unjust world. Many people found in him a voice they needed to hear, and centuries after he had died his works became a venue for those who were experiencing the same trials and tribulations as Khayyam had.
Come Fill The Cup

Come, fill the cup, and in the fire of spring
Your winter garment of repentance fling.
The bird of time has but a little way
To flutter - and the bird is on the wing.

Omar Khayyam
For Some We Loved

For some we loved, the loveliest and the best
That from His vintage rolling Time hath pressed,
Have drunk the Cup a round or two before,
And one by one crept silently to rest.

Omar Khayyam
The Rubaiyat Of Omar Khayyam

Translated into English in 1859 by Edward FitzGerald

I.
Awake! for Morning in the Bowl of Night
Has flung the Stone that puts the Stars to Flight:
And Lo! the Hunter of the East has caught
The Sultan's Turret in a Noose of Light.

II.
Dreaming when Dawn's Left Hand was in the Sky
I heard a voice within the Tavern cry,
'Awake, my Little ones, and fill the Cup
Before Life's Liquor in its Cup be dry.'

III.
And, as the Cock crew, those who stood before
The Tavern shouted - 'Open then the Door!
You know how little while we have to stay,
And, once departed, may return no more.'

IV.
Now the New Year reviving old Desires,
The thoughtful Soul to Solitude retires,
Where the White Hand of Moses on the Bough
Puts out, and Jesus from the Ground suspires.

V.
Iram indeed is gone with all its Rose,
And Jamshyd's Sev'n-ring'd Cup where no one Knows;
But still the Vine her ancient ruby yields,
And still a Garden by the Water blows.

VI.
And David's Lips are lock't; but in divine
High piping Pehlevi, with 'Wine! Wine! Wine!
Red Wine! ' - the Nightingale cries to the Rose
That yellow Cheek of hers to incarnadine.

VII.
Come, fill the Cup, and in the Fire of Spring
The Winter Garment of Repentance fling:
The Bird of Time has but a little way
To fly - and Lo! the Bird is on the Wing.

VIII.
Whether at Naishapur or Babylon,
Whether the Cup with sweet or bitter run,
The Wine of Life keeps oozing drop by drop,
The Leaves of Life keep falling one by one.

IX.
Morning a thousand Roses brings, you say;
Yes, but where leaves the Rose of Yesterday?
And this first Summer month that brings the Rose
Shall take Jamshyd and Kaikobad away.

X.
But come with old Khayyam, and leave the Lot
Of Kaikobad and Kaikhosru forgot:
Let Rustum lay about him as he will,
Or Hatim Tai cry Supper - heed them not.

XI.
With me along the strip of Herbage strown
That just divides the desert from the sown,
Where name of Slave and Sultan is forgot -
And Peace is Mahmud on his Golden Throne!

XII.
A Book of Verses underneath the Bough,
A Jug of Wine, a Loaf of Bread, - and Thou
Beside me singing in the Wilderness -
Oh, Wilderness were Paradise now!

XIII.
Some for the Glories of This World; and some
Sigh for the Prophet's Paradise to come;
Ah, take the Cash, and let the Promise go,
Nor heed the rumble of a distant Drum!

XIV.
Were it not Folly, Spider-like to spin
The Thread of present Life away to win -
What? for ourselves, who know not if we shall
Breathe out the very Breath we now breathe in!

XV.
Look to the Rose that blows about us - 'Lo,
Laughing,' she says, 'into the World I blow:
At once the silken Tassel of my Purse
Tear, and its Treasure on the Garden throw.'

XVI.
The Worldly Hope men set their Hearts upon
Turns Ashes - or it prospers; and anon,
Like Snow upon the Desert's dusty Face
Lighting a little Hour or two - is gone.

XVII.
And those who husbanded the Golden Grain,
And those who flung it to the Winds like Rain,
Alike to no such aureate Earth are turn'd
As, buried once, Men want dug up again.

XVIII.
Think, in this batter'd Caravanserai
Whose Doorways are alternate Night and Day,
How Sultan after Sultan with his Pomp
Abode his Hour or two and went his way.

XIX.
They say the Lion and the Lizard keep
The Courts where Jamshyd gloried and drank deep:
And Bahram, that great Hunter - the Wild Ass
Stamps o'er his Head, but cannot break his Sleep.

XX.
I sometimes think that never blows so red
The Rose as where some buried Caesar bled;
That every Hyacinth the Garden wears
Dropt in its Lap from some once lovely Head.
And this delightful Herb whose tender Green
Fledges the River's Lip on which we lean -
Ah, lean upon it lightly! for who knows
From what once lovely Lip it springs unseen!

XXII.
Ah, my Beloved, fill the Cup that clears
To-day of past Regrets and future Fears -
To-morrow? - Why, To-morrow I may be
Myself with Yesterday's Sev'n Thousand Years.

XXIII.
Lo! some we loved, the loveliest and best
That Time and Fate of all their Vintage prest,
Have drunk their Cup a Round or two before,
And one by one crept silently to Rest.

XXIV.
And we, that now make merry in the Room
They left, and Summer dresses in new Bloom,
Ourselves must we beneath the Couch of Earth
Descend, ourselves to make a Couch - for whom?

XXV.
Ah, make the most of what we may yet spend,
Before we too into the Dust descend;
Dust into Dust, and under Dust, to lie;
Sans Wine, sans Song, sans Singer, and - sans End!

XXVI.
Alike for those who for To-day prepare,
And those that after some To-morrow stare,
A Muezzin from the Tower of Darkness cries
'Fools! Your Reward is neither Here nor There! '

XXVII.
Why, all the Saints and Sages who discuss'd
Of the Two Worlds so learnedly, are thrust
Like foolish Prophets forth; their Works to Scorn
Are scatter'd, and their Mouths are stopt with Dust.

XXVIII.
Oh, come with old Khayyam, and leave the Wise
To talk; one thing is certain, that Life flies;
One thing is certain, and the Rest is Lies;
The Flower that once has blown forever dies.

XXIX.
Myself when young did eagerly frequent
Doctor and Saint, and heard great Argument
About it and about; but evermore
Came out by the same Door as in I went.

XXX.
With them the Seed of Wisdom did I sow,
And with my own hand labour’d it to grow:
And this was all the Harvest that I reap’d -
'I came like Water and like Wind I go.'

XXXI.
Into this Universe, and Why not knowing,
Nor Whence, like Water willy-nilly flowing:
And out of it, as Wind along the Waste,
I know not Whither, willy-nilly blowing.

XXXII.
Up from Earth's Centre through the Seventh Gate
I rose, and on the Throne of Saturn sate,
And many Knots unravel'd by the Road;
But not the Master-Knot of Human Fate.

XXXIII.
There was the Door to which I found no Key:
There was the Veil through which I could not see:
Some little talk awhile of Me and Thee
There was - and then no more of Thee and Me.

XXXIV.
Then to the rolling Heav'n itself I cried,
Asking, 'What Lamp had Destiny to guide
Her little Children stumbling in the Dark? '
And - 'A blind Understanding! ' Heav'n replied.

XXXV.
Then to the Lip of this poor earthen Urn
I lean'd, the secret Well of Life to learn:
And Lip to Lip it murmur'd - 'While you live,
Drink! - for, once dead, you never shall return.'

XXXVI.
I think the Vessel, that with fugitive
Articulation answer'd, once did live,
And merry-make, and the cold Lip I kiss'd,
How many Kisses might it take - and give!

XXXVII.
For in the Market-place, one Dusk of Day,
I watch'd the Potter thumping his wet Clay:
And with its all obliterated Tongue
It murmur'd - 'Gently, Brother, gently, pray!'

XXXVIII.
And has not such a Story from of Old
Down Man's successive generations roll'd
Of such a clod of saturated Earth
Cast by the Maker into Human mould?

XXXIX.
Ah, fill the Cup: - what boots it to repeat
How Time is slipping underneath our Feet:
Unborn To-morrow, and dead Yesterday,
Why fret about them if To-day be sweet!

XL.
A Moment's Halt - a momentary taste
Of Being from the Well amid the Waste -
And Lo! the phantom Caravan has reach'd
The Nothing it set out from - Oh, make haste!

XLI.
Oh, plagued no more with Human or Divine,
To-morrow's tangle to itself resign,
And lose your fingers in the tresses of
The Cypress-slender Minister of Wine.

XLII.
Waste not your Hour, nor in the vain pursuit
Of This and That endeavor and dispute;
Better be merry with the fruitful Grape
Than sadden after none, or bitter, fruit.

XLIII.
You know, my Friends, with what a brave Carouse
I made a Second Marriage in my house;
Divorced old barren Reason from my Bed,
And took the Daughter of the Vine to Spouse.

XLIV.
And lately, by the Tavern Door agape,
Came stealing through the Dusk an Angel Shape
Bearing a Vessel on his Shoulder; and
He bid me taste of it; and 'twas - the Grape!

XLV.
The Grape that can with Logic absolute
The Two-and-Seventy jarring Sects confute:
The subtle Alchemest that in a Trice
Life's leaden Metal into Gold transmute.

XLVI.
Why, be this Juice the growth of God, who dare
Blaspheme the twisted tendril as Snare?
A Blessing, we should use it, should we not?
And if a Curse - why, then, Who set it there?

XLVII.
But leave the Wise to wrangle, and with me
The Quarrel of the Universe let be:
And, in some corner of the Hubbub couch'd,
Make Game of that which makes as much of Thee.

XLVIII.
For in and out, above, about, below,
'Tis nothing but a Magic Shadow-show,
Play'd in a Box whose Candle is the Sun,
Round which we Phantom Figures come and go.

XLIX.
Strange, is it not? that of the myriads who
Before us pass'd the door of Darkness through
Not one returns to tell us of the Road,
Which to discover we must travel too.

L.
The Revelations of Devout and Learn'd
Who rose before us, and as Prophets burn'd,
Are all but Stories, which, awoke from Sleep,
They told their fellows, and to Sleep return'd.

LI.
Why, if the Soul can fling the Dust aside,
And naked on the Air of Heaven ride,
Is't not a shame - Is't not a shame for him
So long in this Clay suburb to abide?

LII.
But that is but a Tent wherein may rest
A Sultan to the realm of Death addrest;
The Sultan rises, and the dark Ferrash
Strikes, and prepares it for another guest.

LIII.
I sent my Soul through the Invisible,
Some letter of that After-life to spell:
And after many days my Soul return'd
And said, 'Behold, Myself am Heav'n and Hell'.

LIV.
Heav'n but the Vision of fulfill'd Desire,
And Hell the Shadow of a Soul on fire,
Cast on the Darkness into which Ourselves,
So late emerg'd from, shall so soon expire.

LV.
While the Rose blows along the River Brink,
With old Khayyam and ruby vintage drink:
And when the Angel with his darker Draught
Draws up to Thee - take that, and do not shrink.

LVI.
And fear not lest Existence closing your
Account, should lose, or know the type no more;
The Eternal Saki from the Bowl has pour'd
Millions of Bubbls like us, and will pour.

LVII.
When You and I behind the Veil are past,
Oh but the long long while the World shall last,
Which of our Coming and Departure heeds
As much as Ocean of a pebble-cast.

LVIII.
'Tis all a Chequer-board of Nights and Days
Where Destiny with Men for Pieces plays:
Hither and thither moves, and mates, and slays,
And one by one back in the Closet lays.

LIX.
The Ball no Question makes of Ayes and Noes,
But Right or Left, as strikes the Player goes;
And he that toss'd Thee down into the Field,
He knows about it all -  He knows -  HE knows!

LX.
The Moving Finger writes; and, having writ,
Moves on: nor all thy Piety nor Wit
Shall lure it back to cancel half a Line,
Nor all thy Tears wash out a Word of it.

LXI.
For let Philosopher and Doctor preach
Of what they will, and what they will not -  each
Is but one Link in an eternal Chain
That none can slip, nor break, nor over-reach.

LXII.
And that inverted Bowl we call The Sky,
Whereunder crawling coop't we live and die,
Lift not thy hands to it for help -  for It
Rolls impotently on as Thou or I.

LXIII.
With Earth's first Clay They did the Last Man knead,  
And then of the Last Harvest sow'd the Seed:  
Yea, the first Morning of Creation wrote  
What the Last Dawn of Reckoning shall read.

LXIV.  
Yesterday This Day's Madness did prepare;  
To-morrow's Silence, Triumph, or Despair:  
Drink! for you know not whence you came, nor why:  
Drink! for you know not why you go, nor where.

LXV.  
I tell You this - When, starting from the Goal,  
Over the shoulders of the flaming Foal  
Of Heav'n Parwin and Mushtari they flung,  
In my predestin'd Plot of Dust and Soul.

LXVI.  
The Vine has struck a fiber: which about  
If clings my Being - let the Dervish flout;  
Of my Base metal may be filed a Key,  
That shall unlock the Door he howls without.

LXVII.  
And this I know: whether the one True Light,  
Kindle to Love, or Wrath - consume me quite,  
One Glimpse of It within the Tavern caught  
Better than in the Temple lost outright.

LXVIII.  
What! out of senseless Nothing to provoke  
A conscious Something to resent the yoke  
Of unpermitted Pleasure, under pain  
Of Everlasting Penalties, if broke!

LXIX.  
What! from his helpless Creature be repaid  
Pure Gold for what he lent us dross-allay'd -  
Sue for a Debt we never did contract,  
And cannot answer - Oh the sorry trade!

LXX.
Nay, but for terror of his wrathful Face,
I swear I will not call Injustice Grace;
Not one Good Fellow of the Tavern but
Would kick so poor a Coward from the place.

LXXI.
Oh Thou, who didst with pitfall and with gin
Beset the Road I was to wander in,
Thou will not with Predestin'd Evil round
Enmesh me, and impute my Fall to Sin?

LXXII.
Oh, Thou, who Man of baser Earth didst make,
And who with Eden didst devise the Snake;
For all the Sin wherewith the Face of Man
Is blacken'd, Man's Forgiveness give - and take!

LXXIII.
Listen again. One Evening at the Close
Of Ramazan, ere the better Moon arose,
In that old Potter's Shop I stood alone
With the clay Population round in Rows.

LXXIV.
And, strange to tell, among that Earthen Lot
Some could articulate, while others not:
And suddenly one more impatient cried -
'Who is the Potter, pray, and who the Pot? '

LXXV.
Then said another - 'Surely not in vain
My Substance from the common Earth was ta'en,
That He who subtly wrought me into Shape
Should stamp me back to common Earth again.'

LXXVI.
Another said - 'Why, ne'er a peevish Boy,
Would break the Bowl from which he drank in Joy;
Shall He that made the vessel in pure Love
And Fancy, in an after Rage destroy? '

LXXVII.
None answer'd this; but after Silence spake
A Vessel of a more ungainly Make:
'They sneer at me for leaning all awry;
What! did the Hand then of the Potter shake? '

LXXVIII:
'Why,' said another, 'Some there are who tell
Of one who threatens he will toss to Hell
The luckless Pots he marred in making - Pish!
He's a Good Fellow, and 'twill all be well.'

LXXIX.
Then said another with a long-drawn Sigh,
'My Clay with long oblivion is gone dry:
But, fill me with the old familiar Juice,
Methinks I might recover by-and-by! '

LXXX.
So while the Vessels one by one were speaking,
The Little Moon look'd in that all were seeking:
And then they jogg'd each other, 'Brother! Brother!
Now for the Porter's shoulder-knot a-creaking! '

LXXXI.
Ah, with the Grape my fading Life provide,
And wash my Body whence the Life has died,
And in a Windingsheet of Vine-leaf wrapt,
So bury me by some sweet Garden-side.

LXXXII.
That ev'n my buried Ashes such a Snare
Of Perfume shall fling up into the Air,
As not a True Believer passing by
But shall be overtaken unaware.

LXXXIII.
Indeed the Idols I have loved so long
Have done my Credit in Men's Eye much wrong:
Have drown'd my Honour in a shallow Cup,
And sold my Reputation for a Song.

LXXXIV.
Indeed, indeed, Repentance oft before
I swore - but was I sober when I swore?
And then, and then came Spring, and Rose-in-hand
My thread-bare Penitence apieces tore.

LXXXV.
And much as Wine has play'd the Infidel,
And robb'd me of my Robe of Honor - well,
I often wonder what the Vintners buy
One half so precious as the Goods they sell.

LXXXVI.
Alas, that Spring should vanish with the Rose!
That Youth's sweet-scented Manuscript should close!
The Nightingale that in the Branches sang,
Ah, whence, and whither flown again, who knows!

LXXXVII.
Would but the Desert of the Fountain yield
One glimpse - If dimly, yet indeed, reveal'd
To which the fainting Traveller might spring,
As springs the trampled herbage of the field!

LXXXVIII.
Ah Love! could thou and I with Fate conspire
To grasp this sorry Scheme of Things entire,
Would not we shatter it to bits - and then
Re-mould it nearer to the Heart's Desire!

LXXXIX.
Ah, Moon of my Delight who know'st no wane,
The Moon of Heav'n is rising once again:
How oft hereafter rising shall she look
Through this same Garden after me - in vain!

XC.
And when like her, oh Saki, you shall pass
Among the Guests star-scatter'd on the Grass,
And in your joyous errand reach the spot
Where I made one - turn down an empty Glass!

TAMAM SHUD
Omar Khayyam
The Shears Of Fate

Khayyam, who stitched the tents of science,
Has fallen in grief's furnace and been suddenly burned,
The shears of Fate have cut the tent ropes of his life,
And the broker of Hope has sold him for nothing!

Omar Khayyam