Very few twenty-century scientists made as a lasting influence on modern society as Albert Einstein and Sigmund Freud. Physicists routinely use the theories Einstein developed a century ago to analyse and comprehend cosmological and quantum phenomena. Similarly, some of the vital models contemporary psychologists routinely apply in order to explain psychosexual developments and human psyches are credited to Freud. Perhaps less known to the general public is the magnitude of influence Fyodor Dostoevsky and Leo Tolstoy had on both Einstein and Freud. Einstein once declared: “Dostoevsky gives me more than any scientist, more than Gauss.” Freud too ranked Dostoevsky’s *The Brothers Karamazov* alongside the works of Shakespeare in terms of its literary significance. Tolstoy had likewise influenced Einstein and Freud.

Two of the subjects, in which they held a common interested with comparable magnitude, were God and the purpose of human life. All of them, without exception, had passionately been occupied by and written and talked extensively about these subjects. The purpose of this book is to closely examine the beliefs of the quartet based on the books and articles they produced over a span of many years. The author has made a great effort to make their views as comprehensible as possible for the general reader without diluting or oversimplifying them.

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What They Believed: Albert Einstein, Sigmund Freud, Fyodor Dostoevsky, and Leo Tolstoy
The Reason for Life
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Albert Einstein,
Sigmund Freud,
Fyodor Dostoevsky, and
Leo Tolstoy

Waltenegus Dargie

Δήμη
Berlin  New York  London  Sydney  Toronto
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What was to be the value of the long looked forward to,  
Long hoped for calm, the autumnal serenity  
And the wisdom of age? Had they deceived us  
Or deceived themselves, the quiet-voiced elders,  
Bequeathing us merely a receipt for deceit?  
The serenity only a deliberate hebetude,  
The wisdom only the knowledge of dead secrets  
Useless in the darkness into which they peered  
Or from which they turned their eyes. There is, it seems to us,  
At best, only a limited value  
In the knowledge derived from experience.  
The knowledge imposes a pattern, and falsifies,  
For the pattern is new in every moment  
And every moment is a new and shocking  
Valuation of all we have been. We are only undeceived  
Of that which, deceiving, could no longer harm.

T.S. Eliot, *Four Quartets*
# Table of Contents

Introduction .................................................................................................................... 11

Part I: The Significance of God ................................................................................... 21
   Freud .......................................................................................................................... 24
   Einstein ..................................................................................................................... 43
   Dostoevsky .............................................................................................................. 60
   Tolstoy ..................................................................................................................... 76

Part II: The Purpose of Human Life ............................................................................. 98
   Freud ........................................................................................................................ 101
   Einstein .................................................................................................................... 118
   Dostoevsky ............................................................................................................ 134
   Tolstoy .................................................................................................................... 154

Part III: The Significance of the Bible ........................................................................ 180
   Freud ...................................................................................................................... 183
   Dostoevsky ............................................................................................................. 202
   Einstein ............................................................................................................... 217
   Tolstoy ................................................................................................................... 232

Summary ....................................................................................................................... 256

   *The Significance of God* ....................................................................................... 256
   *The Purpose of Human Life* ................................................................................. 261
   *The Significance of the Bible* ............................................................................... 264

Biographical Reference ............................................................................................... 270
Content Reference ....................................................................................................... 270
Index ............................................................................................................................ 275
Introduction

Very few twenty-century scientists made as lasting an influence on modern society as Albert Einstein and Sigmund Freud. Physicists routinely use the theories Einstein developed a century ago to analyse and comprehend cosmological and quantum phenomena. The ripples in the fabric of spacetime physicists observed on September 14, 2015 at the Laser Interferometer Gravitational-Wave Observatory (LIGO) confirmed for the first time the existence of gravitational waves, which Einstein, using his Theory of General Relativity, predicted a hundred years ago. Similarly, some of the vital models contemporary psychologists routinely apply in order to explain psychosexual developments and human psyches are credited to Freud. We also owe to Freud most of the psychoanalytical expressions we ubiquitously apply to convey the psychological states of mind, such as neurosis, phobia, repression, fixation, projection, Oedipal complex, compulsion, transference, death instinct, erogenous zones, Freudian slip, disavowal, displacement, identification, libido, narcissism, and paranoia.

Perhaps less known to the general public is the magnitude of influence Dostoevsky and Tolstoy had on both Einstein and Freud. Einstein once declared: “Dostoevsky gives me more than any scientist, more than Gauss.” To appreciate the weight of this declaration it suffices to remark that without the prior foundation laid by Gauss and his students (most notably Riemann), perhaps it would have been impossible for Einstein to develop his General Relativity Theory. Freud too ranked Dostoevsky’s *The Brothers Karamazov* alongside the works of Sophocles and Shakespeare in terms of literary significance. Tolstoy had likewise influenced Einstein. The pacifist and
anarchistic philosophy to which Einstein subscribed for nearly three decades before the advent of the Second World War and his lifetime mistrust of the military establishment were, for the most part, due to the influence of Tolstoy.

Two of the subjects, in which they held a common interest with comparable magnitude, were God and the purpose of human life. All of them, without exception, had passionately been occupied by and written and talked extensively about these subjects. Indeed, almost all of Dostoevsky’s books contain frequent references to God and intense dialogues about the meaning of life and many of his literary characters are well versed in the Bible. Tolstoy became overtly occupied with religion shortly after the publication of Anna Karenina when he was turning fifty and for the next twenty-five years it became his primary occupation. Besides, in his autobiography he succinctly describes how he had been searching for the meaning and purpose of life for a long time and how he eventually believed in God and in moral principles, and argued why he considered the teaching of Jesus to be timeless and universal in its application. But he also unequivocally rejected the deity and supernatural conception of Jesus, the existence of miracles and prophecies, and the sacredness of the Bible. Furthermore, Tolstoy attempted to reconstruct the “original” narration of the New Testament by editing and “harmonising” the four Gospels. His book, The Kingdom of God is Within You is a culmination of thirty years of careful diagnosis of the faults and ills of modern societies and a passionate but rational entreaty to the prescription of The Sermon on the Mount in order to correct the faults and to heal the ills.

Freud investigated the origin of religion for more than forty years. In Totem and Taboo he investigates the anthropological and psychological roots of religion. In Moses and Monotheism he applies psychoanalysis to determine the emergence of Judaism and Christianity, and offers an alternative account as to how the
Israelites “actually” made their exodus out of Egypt. In *The Future of an Illusion*, he makes an in-depth study of the multifaceted relationships between religion and neurosis. In *Civilisation and Its Discontents*, Freud links the sense of guilt and the emergence of conscience in humanity to a secret wish for punishment, which in turn is linked to an original crime committed by humanity, the murder of the primordial father. Freud considered his study on religion as a well-connected and consistent development.

Even though the intensity of his interest in religion varied throughout his life, for Einstein it was a matter of great interest. Whilst living in Europe, he often shared his views among a few close friends and acquaintances, but during the latter part of his life, after he took residence in the United States following his persecution by the Nazis, he became publicly assertive and published a number of articles on religion and its relevance to modern societies. Einstein took his belief in God seriously and considered that all his scientific discoveries were consistent with his belief. Indeed one can justifiably argue that the main reason for Einstein to reject (or regard as incomplete) the claims of quantum physics is due to his religious outlook.

Notably my subjects represent diverse religious views. Dostoevsky and Tolstoy were born into Russian Orthodox Christian families; Dostoevsky never departed from his childhood religion whilst Tolstoy rejected his, becoming an atheist for two decades, then rejecting atheism, and eventually finding his own religion. Freud and Einstein were born into Jewish families. Freud rejected his childhood faith when he was still a youth and went on to become an outspoken atheist. Einstein never seriously adhered to Judaism but never entirely renounced it either. Instead, he accepted the existence of an impersonal God who has created a perfect and beautiful universe, but who does not interfere with his creation. The combined published works of this quartet on the matter of
religion is a century old, an indisputable and uninterrupted chain of intellectual thinking on the existence of God and the purpose of human life.

The oldest among them, Dostoevsky, was born on 11 November 1821 in Moscow whilst the youngest of them, Einstein, was born on 14 March 1879 in Ulm, the Kingdom of Württemberg in the German Empire. In between these dates come Tolstoy and Freud, respectively, the former born on 9 September 1828 in Yasnaya Polyana, Russia, and the latter on 6 May 1856 in the Moravia town of Příbor, within the Austrian Empire.

These men possessed extraordinary intellectual independence and originality. Dostoevsky studied engineering at a well-known military academy in St. Petersburg and started off with a promising job in the same city as a lieutenant. But a year later, at the age of twenty-two, he resigned from the army in order to become a full time writer. Within a few years he won accolades from some of the most prominent literary critics of his time in St. Petersburg and was admitted into their inner circles. But he also became a subject of much ridicule and criticism within those same circles on account of his Christian faith and steadfast opposition to socialism. His position on these two subjects remained essentially unchanged throughout his life. Dostoevsky believed that even if it were humanly possible to attain the ideals of socialism on earth, the implementation of such ideals would rob individuals of their freedom to choose and to take responsibility for their own life. Dostoevsky strongly maintained his position that individual freedom is to be valued above the individual as well as the collective wellbeing.

There was every indication that Tolstoy would conform to the patterns of the society into which he was born, for he was born a count to a rich family. Even though he grew up an orphan, his upbringing was by and large similar to other aristocratic
minorities. As a young man, he enjoyed his privilege fully (he had his own servant since childhood, who was condemned to serve his master even when he was in a university prison), frequented fancy and expensive high society balls, and gambled and caroused. He joined the University of Kazan at the age of sixteen but withdrew from it after a short stay. His professors labelled him as “unable” and “unwilling” to study. At the age of twenty-three and after having pursued a variety of avenues in search of happiness, losing a large sum of money in gambling, and burying himself deeply in debt, he suffered intense mental anguish and a sense of worthlessness. At this time it occurred to him that something in his life was fundamentally wrong, outright false, and superficial. He craved a fresh and authentic life and decided to leave everything behind him and lead a simple and hardworking life in the Caucasus. It was there in Caucasus that he tried to write seriously. The beauty of the open fields and the majesty of the mountains, the simplicity of life, the honesty of the people, brought out the best in him. Now away from the bustle and hassle of city life, he was able to recognise the illness of the society with which he had hitherto proudly identified himself. Aylmer Maude, Tolstoy’s biographer, lists some of these ills: lies were easily told; etiquette demanded the adoption of French (albeit a borrowed language and imperfectly spoken); governmental positions were obtained through relationships and connections; young and old, men and women alike were infected by a viral and insatiable appetite for gossip at all levels of society; all sectors of society from the youth to the elderly were afflicted by a spirit of lasciviousness; people in his social circles wore fake and inconsequential religious masks; no authentic work was done in any governmental establishments; and everyone strove to get rich without risking investment and as quickly as possible.

In Caucasus Tolstoy joined the army as a non-commissioned officer and went to Crimea to fight against the allied forces of
France, England, the Ottoman Empire, and the Kingdom of
Sardinia. He fought for two years bravely but Russia lost the
war. Three months later he resigned from the army and for the
next six years spent much of the time writing books and
traveling in Europe. At the age of thirty-three he returned to his
ancestral estate and settled there for the rest of his life, leading
a reclusive life devoted to farming and literature.
Tolstoy’s intellectual independence asserts itself in many ways.
His stories about the Crimean war give candid accounts of the
grimness of war as experienced on both sides (unlike the
popular literary culture which romanticised battles and heroic
death). His mature novels consistently lament the banality,
shallowness, and moral deprivation of the Russian aristocracy.
Later in life Tolstoy would pointedly attack the Russian
Orthodox Church for having been an instrument of oppression
and for having markedly departed from her initial purpose of
existence. His criticism was consistent with his chosen lifestyle
and his endeavour to change the lives of ordinary people. He
abdicated virtually all forms of material ownership, refused to
be served by anyone, not even by house servants and maids; he
earned his own living, not only by writing, but also through
hard labour in the field. As he grew old, his criticism of the
established way of life became harsher and sharper. This is how
he describes his feeling in his autobiography: “The life of our
class, of the wealthy and the learned, was not only repulsive to
me but had lost all meaning. The sum of our action and
thinking, of our science and art, all of it struck me as the
overindulgences of a spoiled child. I realized that meaning was
not to be sought here. The actions of the labouring people, of
those who create life, began to appear to me as the one true
way. I realized that the meaning provided by this life was truth,
and I embraced it.”

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1 LTCON p. 68.
An appreciation of the intellectual independence of Freud may be gained by considering the vast amount of controversy surrounding his theories and philosophy on human psychosexual development, the instincts of life and death, the Oedipal complex, the interpretation of dreams, and women’s sexuality, to mention some of them. He studied medicine at the University of Vienna and embarked on a scientific carrier as a neurologist with a research focus on dysfunctions of microscopic regions in the human brain’s nervous system. The apparent difficulty of explaining some nervous disorders physiologically persuaded Freud to gradually transfer his research focus away from neurology and towards the study of the psychological origins of these disorders. Freud thus immersed himself for the rest of his life deep into the study of human psychology, proposing several models and theories to comprehend, explain, synthesise, and govern the human psyche.ii

It would be presumptuous to write about the intellectual independence of Einstein in a brief introduction but it suffices to state that he was 26 years old when he questioned the fundamental premises of classical physics. Besides, he made some fundamental discoveries, including the existence of photons; and proved the existence of atoms and molecules. He demonstrated the inadequacy of Newtonian physics to explain the behaviour of objects travelling at a speed approaching the speed of light or those interacting inside a high gravitational field. He was not an established scientist at the time; neither did he hold a doctoral degree which would qualify him for a proper research career. Many years later Einstein once again asserted his independence by rejecting quantum mechanics as an incomplete science, even though he was unable to disprove Heisenberg’s Uncertainty Principle.
The exceptional intelligence and literary insight of my subjects was well known to and recognised amongst themselves. In reviewing *Anna Karenina*, Dostoyevsky once wrote:

Anna Karenina as an artistic production is perfection. It appears most opportunely as a thing to which European literature of our epoch offers no equal. Moreover, its idea is something of our own—native to us, distinguishing us from the whole European world—it is our national “new world” or at least its beginning, a word such as one does not hear in Europe, yet which, for all her pride, she greatly needs.²

In turn Tolstoy, in a letter he wrote to the philosopher Strakhov on 26 September 1880, expresses the following:

Just recently I was feeling unwell and read *House of the Dead*. I had forgotten a good bit, read it over again, and I do not know a better book in all our new literature, including Pushkin. It is not the ton, but the wonderful point of view—genuine, natural, and Christian. A splendid, instructive book. I enjoyed myself the whole day, as I have not done for a long time. If you see Dostoevsky, tell him that I love him.³

During his brief correspondence with Freud, Einstein acknowledged in a letter he wrote on 26 April 1931 the solid contributions of Freud to the study of human psychology:

I greatly admire your passion to ascertain the truth—a passion that has come to dominate all else in your thinking. You have shown with irresistible lucidity how inseparably the aggressive and destructive instincts are bound up in the

² AM pp. 399.
³ JF p. 846.
human psyche with those of love and the lust for life. At the same time, your convincing arguments make manifest your deep devotion to the great goal of the internal and external liberation of man from the evils of war.\(^4\)

Whereas the scientific community has closely examined the scientific works of Einstein and Freud, their philosophical works on the meaning and purpose of human life and what they believed about God are not as closely examined. The same can be said of the philosophy of Dostoevsky and Tolstoy on these subjects, even though their novels are widely read and their literary merits are well acknowledged. The purpose of this book is to survey the beliefs of the quartet as exhaustively but also as comprehensibly as possible by relying primarily on the body of works they published about their belief over a span of many years.

The book consists of three parts. The first part deals with God as the origin of life and his significance as regards human existence. Except Freud, who as an atheist believed that life is an accidental phenomenon, all the others believed that God is the origin of life. This part surveys the different views of my subjects about God and the justifications for their views. The second part deals with the philosophies of my subjects about the meaning and purpose of human life. The third part deals with the significance of the Bible for modern life. As they developed their philosophies, all of them, without exception, considered it indispensable to examine the Bible and its claims. Indeed, Tolstoy and Freud went to the extent of rewriting parts of the Bible in order to “re-establish” accounts which they believed were deliberately removed, distorted, modified, or added to by biblical writers and editors. The final chapter provides a compact and comprehensible summary of the book.

\(^4\) NNEIN pp. 86-203.
i Freud defends Dostoevsky’s position in *Civilisation and Its Discontents* where he writes: “It does not seem as though any influence can induce human beings to change their nature and become like termites; they will probably always defend their claim to individual freedom against the will of the mass. Much of mankind’s struggle is taken up with the task of finding a suitable, that is to say, a happy accommodation, between the claims of the individual and the mass claims of civilisation. One of the problems affecting the fate of mankind is whether such an accommodation can be achieved through a particular moulding of civilisation or whether the conflict is irreconcilable (SFCIV p. 33).”

ii Stefan Zweig, the famous Austrian writer, once expressed his view about Freud as follows: “I believe that the revolution you have called forth in the psychological and philosophical and the whole moral structure of our world greatly outweighs the merely therapeutic part of your discoveries. For today all the people who know nothing about you, every human being of 1930, even the one who has never heard the name of psychoanalyst, is already indirectly dyed through and through by your transformation of souls (PG p. 457).”
Part I
The Significance of God

In this part I shall examine the significance of God to human existence. Except for Freud, who believed that God is a creation stemming from human existential anxiety, all the others accepted the existence of God and attribute to him the creation of the universe, including human life. Dostoevsky and Tolstoy believed in a personal God for whom human actions and behaviours (choices) are important, whilst Einstein rejected the notion of a personal God and claimed that human actions and behaviours are determined by infinite causes and effects in the same way the motion and rest of corporal objects are causally determined. Therefore, human beings are not responsible for their actions and behaviours. In other words, Einstein rejected the assertion that human beings possess freewill.

The analysis on Freud highlights (1) the different theories Freud proposed to explain the origin of God (God as a result of the externalisation of psychic realities) and (2) his attempt to interpret religion as the psychological conditions of neurosis and mass delusion. Freud explained God as the projection of human fatherhood into two ways. In his first explanation, he alleged that the sons of the first family which achieved self-consciousness murdered their primal father on account of their contention with him for the women he exclusively possessed and jealously and violently guarded. The murder experience induced in them deeply-felt regret and an insatiable desire to atone for the wrongs they committed as well as a fear of the spirit of the dead father who, they believed, would avenge himself. These
emotions perpetuated the memory of the primal father and eventually elevated him to the status of a god. In his second explanation, Freud viewed God as the exalted father who was once regarded by the child as an omnipotent authority.

The analysis on Einstein highlights Einstein’s recognition of (1) design in the configuration of the universe and the higher mathematics required to comprehend a very small portion of it and (2) the “apparent absence of evidence” comprehensible to the rational mind to suggest divine intervention. It also examines the relationship between Spinoza’s causal determinism and Einstein’s scientific discoveries, most importantly, his General Theory of Relativity. Einstein agreed with Freud that the biblical depiction of God is essentially anthropomorphic, for the biblical writers supposedly ascribed to God their own emotions and wishes, but rejected Freud’s claim that God is the creation of human fantasy and existential anxiety. Instead, Einstein ascribed human beings’ deepest craving for experiencing and worshipping God to an innate cosmic religious feeling. This same feeling, according to Einstein, is the primary motivation for scientific inquiry and discovery. He maintained that God not only instills in human beings the desire and capacity to seek and experience him, but also made his universe and the laws governing it accessible to human scrutiny, so that they can pursue the knowledge of God and love God. Einstein identified such persons as Democritus, Moses, Jesus, Francis of Assisi, Copernicus, Newton, and Baruch de Spinoza as people in whom the cosmic religious feeling was well developed.

The analysis on Dostoevsky’s belief in God highlights (1) Dostoevsky’s admiration of good stories and his recognition of good stories in the Bible, (2) his
identification with the suffering of biblical characters and appreciation of the authenticity with which their suffering is related, and (3) the experimentation in his great books with ideas and actions which are contrary to biblical values and their detrimental impact on personal and social life. Dostoevsky emphasised that disappointment with God is often a result of acutely perceived divine indifference and the absence of reason for the suffering in creation. In addition, he argued that love and freewill (that is, human freedom) would have been impossible without admitting suffering into creation. Interestingly, the rebellious characters in Dostoevsky’s books who reject God on account of divine indifference and the absence of justice in the world order he established end up rejecting justice altogether and become themselves indifferent to life.

The analysis on Tolstoy highlights his lifelong pursuit of perfection in all aspects of his life (physical, mental, and professional) and his discovery of perfection in Jesus Christ and in his Sermon on the Mount. Tolstoy, like Dostoevsky, maintained that the pursuit of perfection necessarily entails pain.
Freud

For more than forty years Freud explored the origins of God, demons, spirits, hell, and the afterlife, and how human beings first developed the consciousness of sin and guilt. He applied psychoanalysis techniques on children, paranoids, neurotics, and “primitive tribes” in order to establish the relationship between the processes of *psychic externalisation* and religion, maintaining that the claims of religion are essentially the product of psychic externalisation. Freud identifies three essential components of religion, namely, the capacity in human beings to experience religion, the substance of religion, and the process by which the substance of religion is developed. According to Freud, human beings have affinity for religion because either they are fearful of life or yearn to be unified with the world. The fearful regard the world as hostile to them whilst those who yearn to be unified with the world are acutely aware of their individuality and regard themselves as isolated from the world. We can demonstrate the relationship between the three components of religion with an example: A belief in *afterlife*. Freud identifies two interconnected primary causes for it. Accordingly, the ancients believed that the spirit of the dead desperately wished to return to his original dwelling, the body of the dead, and always remained in the vicinity of the body. At the same time, they believed that the spirit envied the living for enjoying life without him and wished to punish and draw the living after him. The living, fearful of revenge and never feeling safe, buried the dead far away from their immediate surroundings, in a location, as it were, beyond a river which marked the boundary between one’s dwelling place and the wild, or on an island. So, for the ancients, the spirits of the dead were thought to live literally beyond the river; and the expression “here” and “beyond” originated in this way. Freud
maintains that civilised races unconsciously and gradually abstracted the distance separating the two physical locations and in this way, heaven is considered an extension of the “beyond”.

Freud likewise claims that the origin of the strong yearning and the capacity for religion in human beings are the emergence of self-awareness and the feeling of incompleteness it gives rise to in human psyche. According to Freud, normally “we are sure of nothing so much as a sense of self, of our own ego. This ego appears to us as autonomous, uniform, and clearly set off against everything else.” In reality, however, this is a delusion, for “the ego extends inwards, with no clear boundary, into an unconscious psychical entity that we call the id, and for which it serves, so to speak, as a façade… yet externally at least the ego seems to be clearly and sharply delineated.”

Freud maintains that this clear and sharp external distinction the ego perceives of itself is not an inborn awareness; it is rather a gradual acquisition of reality which comes through experience and pain. Initially, an infant’s ego does not distinguish any frontier between itself and the world. Indeed, not only the infant does initially feel its unity with the world, but also considers the world as belonging to it entirely. Its realisation of the distinction between self and the world it lives in begins to emerge partly as a result of pain. “It must make the strongest impression on him that some sources of stimulation, which he later recognises as his own physical organ, can convey sensations to him at any time, while other things—including what he most craves, his mother’s breast—are temporarily removed from him and can be summoned back only by a cry for help. In this way the ego is for the first time confronted

\[1\] SFCIV p. 3-4.
with an ‘object’, something that exists ‘out there’ and can be forced to manifest itself only through a particular action.”

Thus the infant begins to realise its distinctness and to separate off the external world from itself. But the initial sense of unity, the strong feeling of “an indissoluble bond, of being one with the external world as a whole” remains inside, side by side with the newly acquired knowledge, even as the latter solidifies and becomes dominant as the child matures. Neither is the boundary between the ego and the external world indestructible, Freud warns, and indicates both normal and pathological conditions which can dissolve the frontier, the normal condition being the state of love:

At the height of erotic passion the borderline between the ego and object is in danger of becoming blurred. Against all the evidence of the senses, the person in love asserts ‘I’ and ‘you’ are one, and is ready to behave as if these were so. What can be temporarily interrupted by a psychological [i.e., normal] function must of course be capable of being disturbed by morbid processes also. Pathology acquaints us with a great many conditions in which the boundary between the ego and the external world becomes uncertain or the borderlines are actually wrongly drawn. There are cases in which parts of a person’s own body, indeed parts of his mental life—perceptions, thoughts, feelings—seems alien, divorced from the ego, and others which he attributes to the external world what has clearly arisen in the ego and ought to be recognised by it. Hence, even the sense of self is subject to be disturbances, and the limits of the self are not constants.4

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2 Ibid. P. 5.
3 Ibid. P. 5.
4 Ibid. 5.
When abnormal conditions obliterate the ego’s boundary, they tend to isolate and shrink it rather than enlarge and unify it with the external world, in which case, the ego is susceptible to be desirous of religion through which it yearns and strives to attain unity with the external world. In which case, according to Freud, psychic externalisation, a process by which an individual attributes an internal (psychic) reality to an external object or being, becomes the root source of the substance of religion. It typically occurs when the individual is simultaneously confronted with strong but opposing thoughts, one of them being the cause of intense mental anguish. Freud particularly identifies two primary types of externalisation mechanisms which give rise to religion, namely, projection and displacement.

During projection, the individual attributes ownership of his or her own thought to an external object. Freud lists several instances of this behaviour in human beings; one of them being the reaction of a person when another person she at once loves (admires) and hates dies. She grieves because that person is no longer alive but she also feels relieved because a secret death wish is now fulfilled. Such ambivalence creates anxiety and distress and a sense of guilt and leads the living person into believing that the departed person envies and hates her because she still enjoys life, and now wishes to punish her (to kill her) for being fortunate. Thus, the living dreads and perpetuates the existence of the departed in the psychic world and invents mechanisms (taboos) to protect herself from him.

The double feeling—tenderness and hostility—against the deceased, which we consider well founded, endeavours to assert itself at the time of bereavement as mourning and satisfaction. A conflict must ensue between these contrary feelings, and as one of them, namely, the hostility, is altogether or for the greater part unconscious, the conflict cannot result in a conscious
difference in the form of hostility or tenderness as, for instance, when we forgive an injury inflicted upon us by someone we love. The process usually adjusts itself through a special psychic mechanism, which is designated in psychoanalysis as projection. This unknown hostility, of which we are ignorant and of which we do not wish to know, is projected from our inner perception into the outer world and is thereby detached from our own person and attributed to the other. Not we, the survivors, rejoice because we are rid of the deceased, on the contrary, we mourn for him; but now, curiously enough, he has become an evil demon who would rejoice in our misfortune and who seeks our death. The survivors must now defend themselves against this evil enemy; they are freed from inner oppression, but they have only succeeded in exchanging it for an affliction from without.5

Displacement is similar to projection, but here the individual seeks or finds a third object to which they can transfer psychic reality, such as fear or hatred or libidinal impulses. Freud observes that displacement is a ubiquitous attribute of normal as well as psychopathological conditions and its formation may be simple or very complex. For example, a child may hate and fear a tiger it has never seen in real life (but of which it has heard a lot or which it has seen on a paper) because it unconsciously associates the tiger’s strength and autonomy with the strength and autonomy of the father it fears and admires at the same time. Thus the child transfers its feelings of ambivalence towards its father to the tiger and experiences the same intensity of ambivalence (anxiety and admiration in their mixed state) whenever it encounters a representation of a tiger.

5 SFTOT p. 48-49.
Freud shares another instance of displacement he once experienced during a therapy session in Vienna:

My patient demanded that a utensil which her husband had purchased and brought home should be removed lest it make the place where she lives impossible. For she has heard that this object was bought in a store which is situated, let us say, in Stag Street. But as the word ‘stag’ is the name of a friend now in a distant city, whom she has known in her youth under her maiden name and whom she now finds ‘impossible’… the object bought in Vienna [becomes] just as taboo as this friend with whom she does not want to come into contact.6

In its positive sense, the formation or manifestation of displacement may not be apparent. Human beings may unconsciously or consciously transfer their affection to someone or something with which they associate some attribute of a person or an object they love. For example, a man may fall in love with a woman who reminds him of his mother, towards whom, according to Freud, he is (unconsciously) sexually attracted.

Freud maintains that externalisation is not limited to thoughts and feelings. In fact, the most elementary externalisation process begins with sexual impulses in childhood. These impulses exist from the very beginning but first they are dissociated from one another and are not directed towards any particular object. Instead, gratification is sought within one’s own body, mainly through the experience of sensation. Then the child enters into a second phase in which the sexual impulses become more united but still object selection does not take place. Instead, the Ego becomes the object of gratification and the child acts as if it were in love with itself. With maturity, externalisation and with it object selection takes place. Even in

6 Ibid. p. 27.
its matured stage, however, the state of falling in love, Freud observes, contains an instance of a psychic displacement, for one is bestowing to an object the love that initially and essentially belongs to the ego:

To a certain extent man remains narcissistic, even after he had found outer subjects for his libido, and the objects on which he bestows it represent, as it were, emanations of the libido which remain with his ego and which can be withdrawn into it. The state of being in love, so remarkable psychologically, and the normal prototype of the psychoses, corresponds to the highest stage of these emanations, in contrast to the state of self-love.7

Similar externalisation processes, Freud claims, must have led to the emergence of religion and everything that belongs to it. Ever since human beings became conscious of their existence and the existence of a mostly hostile and trying universe surrounding them, they have tried to harmonise internal realities with external realities. In the beginning, they overestimated their power and believed that harmonisation could be attained through strong wishful thinking, but gradually they began to grasp their true place (namely, their insufficiency compared to the vastness of the universe and the overpowering forces of nature) and, with the evolution of their perception, their ability to harmonise with nature changed, undergoing complex psychological transformations and adaptations. In the process, according to Freud, human beings unconsciously gave expression to their fleeting but precious feelings by personifying them in order to rediscover them outside of themselves. According to Freud the traces of these developments can be detected in primitive people, neurotics, and children.

7 Ibid. p. 64.
...spirits and demons were nothing but the projection of primitive man’s emotional impulses; he personified the things he endowed with affects, populated the world with them and then rediscovered his inner psychic processes outside himself, quite like the ingenious paranoiac Schreber, who found the fixations and detachments of his libido reflected in the fates of the ‘God-rays’ which he invented.8

A neurotic person, Freud explains, believes that contact between real objects can be established in the same way it can be established between psychic realities. Because he can bring together thoughts and wishes which are temporary and spatially far removed from each other in a single act of fantasy, he mistakes an ideal connection (i.e., existing only in thought) for a real one and imagines that the control he has, or thinks he has, over his thoughts also enables him to wield corresponding control over real objects. For example, a neurotic person considers himself as a real murderer because he nurses a death wish towards someone, and firmly believes that the death wish will lead to actual death. Consequently, he suffers from a strong guilty feeling that is comparably equal in intensity to the guilt of a true murderer. Likewise, Freud supposes, in the beginning man must have externalised intense internal realities (wishes) towards external beings and seriously believed in his own fantasy.

Based on these essential premises, Freud proposes different theories to explain the emergence of religion as a consequence of externalised psychic realities. One of these theories is based on a child’s early experience with the parents it idealises. The child realises that its parents gave life to it (“created it”) and from its birth on supplied everything it needs to develop as a human being. As the child grows, its perception of the world

8 Ibid. p. 66.
progressively matures, but with this maturity so does its awareness of the vastness of, and the danger in, the world, and of the limitation of its parents as its providers and protectors, increase as well. So through an act of wishful thinking, it psychologically transfers the role of the parent to a more powerful and more loving being whom it can, through an act of fantasy, access always and everywhere. Within this scheme, however, God as the creator, provider, and protector is nothing more than a projection of the parents, particularly, of the father.

The limitation of this theory is that in his theory of displacement, Freud identifies a third target entity, which is a real object or person, to which an internal ambivalence is transferred or attributed. In this theory, however, Freud implicitly rejects the existence of a third entity, God, (who, according to Freud, is rather a product of the child’s imagination). So, the theory makes sense if only the child first creates God and then projects (attributes) the role of the parent to him. But in none of the cases of neurosis he investigated did Freud encounter patients who first created a non-existent object and then attributed or transferred psychic reality to it. If a man falls in love with a woman who reminds him of his mother, the woman is a real person; if a wife transferred her hostility of her maidenhood friend to a utensil, the utensil in question is a real rather than an imagined object; if a child transfers his ambivalence of his father to a paper tiger, the picture is a representation of a real tiger the strength of which is associated with the father.

Freud’s second theory is based on the relentless striving of human beings to conquer and subdue the forces of nature and to make them useful for their own advantage. In the early stages of civilisation, Freud maintains, human beings perceived these forces (thunder, storm, earthquake, flood) as an expression of a strong emotion, rage. Since only living beings
can produce and express rage, primitive people believed that the rage must have come from living beings who were invisible and much stronger than they, yet who were more or less like themselves. In the same way human beings invented physical tools to subdue and tame nature and increase their productivity; they created psychological tools, namely, worship and sacrifice, to pacify these beings and to use them for their own advantages. In this respect, religion is simply an historical and psychological means of production.

The third theory, which is perhaps Freud’s most profound endeavour to explain the essence of religion, is based on an existential tragedy that concerns the primal father. According to Freud, right in the beginning of human civilisation, the *system of Totem* took the place of all religion and social institutions. Even at the time he wrote *Totem and Taboo* (around 1913), he alleged that this was the case among several primitive tribes of the world which organised themselves into small clans, each clan taking the name of its totem.

A *totem* can be an animal, a plant or a force of nature, but most often an animal. A totem, according to Freud, is a projection of the tribal ancestor of a clan and its tutelary spirit and its protector. Freud identifies five prevailing *taboos* concerned with *Totemism*, and psychoanalyses their significance to uncover the underlying psychic realities they represent. Accordingly, first of all, members belonging to the same totem pledge allegiance to support each other in times of need. Secondly, marriage or any form of sexual relationship between members of the same totem is prohibited. Violation of this prohibition is punishable by death or by lifetime banishment from the clan. Thirdly, the totem animal shall not be killed except as a sacrifice during a solemn ritual or festival. However, on this occasion, all members shall come together, kill the totem, and partake in the sacrificial meal, eating the entire meat and leaving no part of it.
Fourth, children inherit their maternal totem instead of their paternal totem. *Taboos*, Freud explains, express themselves in prohibitions, renunciations, and restrictions against strong inclinations in the unconscious mind, for what is not desired to be done need not be forbidden. This characteristic is particularly apparent in compulsive neurotics, paranoids, and hysteries who impose upon themselves taboos in their attempt to displace unconscious desires and wishes. Freud claims that two compelling and innate wishes are encoded in the taboos of the totem animal. These wishes are the desire to commit incest and to murder those who are nearest and dearest. These wishes are by no means specific to primitive tribes, Freud underlines, rather they are inherent in all human beings, even though they may not be apparent or remain latent throughout a lifetime, never manifesting themselves to the consciousness mind. The more unconscious they remain, however, the less accessible they are for correction and, therefore, the stronger and the more active they function, influencing and shaping overt actions and behaviours. These two desires are intimately interrelated. A child’s first ‘sexual’ relationship, Freud asserts, is with its mother through the act of touching or attachment. Since touching is the beginning of every act of possession, the child, psychologically speaking, starts to consider the mother as its exclusive love object. But the mother also belongs to the father, a fact the child quickly and painfully recognises and in consequence of which develops hostility towards its father and wishes him death, for the father has by now become a rival. At the same time, however, the father is also the child’s protector and its provider. In this manner and at quite an early age the child learns to accommodate opposing and distressful feelings (Freud labels this condition as Oedipal complex). Through time, the child discovers other channels by which it can defuse erotic tensions thereby reconciling with the feeling of
ambivalence and attaining psychic equilibrium. Freud maintains that the failure to discover alternative erotic channels is the prime cause of neurosis.

The same cannot be said of primitive men, Freud presumes. The primal horde father, who was jealous, possessive, and violent, not only took away the mother (emotionally speaking) from the child, but also literally took all the females for himself and drove away all of his grown up sons from his place and fiercely protected the women. Freud builds his theory on a hypothesis proposed by Thomas M. Savage who, in an article he published in the Boston Journal of Natural History (Vol. 5, pp. 1845-47), makes the following observation:

We may indeed conclude from what we know of the jealousy of all male quadrupeds, armed, as many of them are, with special weapons for battling with their rivals, that promiscuous intercourse in a state of nature is extremely improbable... If we therefore look back far enough into the stream of time and judging from the social habits of man as he now exists, the most probable view is that he originally lived in small communities, each with a single wife, or if powerful with several, whom he jealously defended against all other men. Or he may not have been a social animal and yet have lived with several wives, like the gorilla; for all the natives agree that only the adult male is seen in a band; when the young male grows up a contest takes place for mastery, and the strongest, by killing and driving out the others, establishes himself as the head of the community. The younger males being thus driven out and wandering about would also, when at last successful in finding a partner, prevent too close breeding within the limits of the same family.

According to Freud, right at the beginning, soon after the first primal father and his household became self-conscious, the sons the primal father drove out joined forces, came back,
fought with their father, and defeated him. Then the brothers slew and ate the father and thus put an end to his dominion.

Together they dared and accomplished what would have remained impossible for them singly. Perhaps some advance in culture, like the use of a new weapon, had given them the feeling of superiority. Of course these cannibalistic savages ate their victim. This violent primal father had surely been the envied and feared model for each of the brothers. Now they accomplished their identification with him by devouring him and each acquired a part of his strength. The totem feast, which is perhaps mankind’s first celebration, would be the repetition and commemoration of this memorable, criminal act with which so many things began, social organization, moral restrictions and religion.9

After the event, Freud explains, the brothers experienced a series of fluctuating emotions; now a sense of exalted liberation, now a sense of consuming guilt; now a festive joy, now mourning; now a sense of satisfied triumph, now remorse; now relief, now an extraordinary longing for the father and a desire to atone for the horrible crime they committed. “They hated the father who stood so powerfully in the way of their sexual demands and their desire for power, but they also loved and admired him.”10 After all, that same violent and oppressive figure was their chief protector. Thus the brothers began to accommodate opposing psychic forces, which gave rise to strong ambivalence, and sought an external object towards which the ambivalence can be displaced. Which is how the totem animal came to existence, Freud concludes:

They undid their deed by declaring that the killing of the father substitute, the totem, was not allowed, and

9 Ibid. p. 97.
10 Ibid. p. 98.

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renounced the fruits of their deed by denying themselves the liberated women. Thus they created the two fundamental taboos of totemism out of the sense of guilt of the son, and for this very reason these had to correspond with the two repressed wishes of the Oedipus complex. Whoever disobeyed became guilty of the only two crimes which troubled primitive society.\textsuperscript{11}

By treating the totem animal with respect the brothers expressed their respect to the father. But, by that same action, they were also declaring that had the father treated them the way they treated the totem animal, they would not have killed him. The slaughter of the animal and the partaking of the sacrificial meal were reminders to the brothers of what had actually taken place, and that each had contributed to the deed and should therefore overtly acknowledge his responsibility. Since the root cause of the problem was considered to be the ownership of all the females by a single male, the brothers agreed to remain monogamous and the prohibition of incest and the introduction of monogamy were thus introduced into the totem \textit{taboo}.

Furthermore, unless they renewed their pledge with one another by means of a repeated ritual of sacrifice and communal meal, Freud asserts, the brothers knew that their pledge would eventually become weak and ineffective and that the bond that tied them together would break, endangering the existence of the tribe. That is how the totem ritual established itself and was passed over to subsequent generations. In the long run, according to Freud, the murdered father was exalted to the position of a protective spirit and then to a god.

Freud took his theory very seriously. He published \textit{Totem and Taboo} in 1913 and took it as his primary reference for all the subsequent books and articles he was to write on religion. The

\footnotesize{\textsuperscript{11} Ibid.}
last book he published was *Moses and Monotheism* in 1939, a few months before his death. In an article he wrote in 1928 about Fyodor Dostoevsky\(^\text{12}\) he pointed out that it is not by accident that the central themes of three of the greatest works of literature are parricide and incest. He was referring to Sophocles’ *Oedipus the King*, Shakespeare’s *Hamlet* and Dostoevsky’s *The Brothers Karamazov*. In *Oedipus the King*, both parent and son try their best to avoid a fateful oracle, but in the end Oedipus kills his father and marries his own mother. In *Hamlet* the king father is murdered by his brother who marries the queen and claims the throne. In *The Brothers Karamazov*, a wicked father is brutally murdered by his illegitimate son but all the legitimate sons contribute to the murder, consciously or unconsciously. Here as well, women are portrayed as the prime motive for the murder. Father and son (Dmitri) bitterly compete to win the heart of a young woman and Ivan Karamazov is in love with his brother’s fiancée.

If one removes poetic moderation from the stories, Freud explains, all three works deal with one and the same theme, which is the inextricable connection between parricide and incest. In *Oedipus*, poetical moderation displaces the child’s wish to murder the father and commit incest with his mother to fate. In *Hamlet*, the displacement is made towards the uncle, but Hamlet’s procrastination in killing him may be seen as an involuntary admission of his identification with the murderer. In *The Brothers Karamazov*, the wish to murder the father is made explicit whereas the desire to commit incest is implicit. Freud sees a great externalisation at work in Dostoevsky’s novel. Whilst murder plays a significant role in all Dostoevsky’s mature books, it plays a particular role in *The Brothers Karamazov*, his last and most significant literary achievement, in which also Freud identifies a personal confession. In this book the real

\(^{12}\) SFDOS
murderer of the patriarch figure is an epileptic just like Dostoyevsky himself. By identifying himself in this way with the murderer, Dostoevsky was neurotically admitting his own contribution to the murder of his father, Freud claims. The contribution was, of course, in the form of a death wish, which he had developed as a child and had subsequently suppressed to the extent of barely being conscious of it, until the actual death of his father came to pass when he was eighteen years old. Freud referred to two biographical incidents in Dostoevsky’s life to defend his assertion. As a boy Dostoevsky suffered from the terror of death and used to leave a message when he went to bed, beseeching his family not to rush to bury him if he failed to wake up in the morning. Then in his adult years, Dostoevsky became epileptic and remained so for the rest of his life. Freud supposes that the epilepsy must have started when first Dostoyevsky heard the murder of his father and characterises the epilepsy as affective as opposed to a physical ailment of the brain. (Dostoevsky had a difficult and exacting father who suffered from nervous disorder).

These two incidents, Freud alleges, indicate the coexistence of a strong death wish and an equally strong ambivalence manifested by a sense of guilt and hysteria. As a boy, Dostoevsky dealt with the death wishes by taking the place of his father and wishing the death upon himself, which produced in him a terror of dying. Similarly, when he first heard of the death of his father, Dostoyevsky’s impulsive reaction must have been to rejoice, Freud alleges, but soon a strong sense of guilt took its grip and produced a strong desire for punishment. The epilepsy was the punishment Dostoevsky inflicted upon himself.ii

To Freud, the greatness of the three literary achievements lies not merely in the greatness of the theme they admirably treat (Oedipal complex) but also in their capacity to reveal at once the three principal dimensions of aesthetic experience: the
psychology of the protagonist, the psychology of the author, and the psychology of the audience, both implicating and illuminating one another. Thus, *Hamlet* the book discloses at once (1) the unresolved Oedipus complex by which its Prince is haunted and (2) serves as an oblique testimony to the Oedipal drama of its author and to the unfinished emotional business with which he is still wrestling. (3) The readers, in being deeply moved by the story, betray a clue to their discovery in the tragedy of the prince of their own secrete history.\(^\text{13}\)

Freud maintains that the origin and significance of the two great monotheistic religions, Judaism and Christianity, can be explained by the theory of the murdered primal father. In both cases Freud recognises God as a powerful and harsh father and as the undistorted projection of the image of the murdered father. According to Freud, the murder story and the wish to atone for the guilt it generated are made explicit in Judaism and in its concept of atonement for sin while Christianity at once projects and replaces the primal picture. With the sacrificial death of the Son, Christianity unreservedly acknowledges the offence committed against the primal father and thereby satisfies human being’s deepest wish to atone for it. It also serves as reconciliation with the father, for Christianity “renounces” women for whose sake the sons rebelled against their father. In making the ultimate sacrifice, however, “the son also attains the goal of his wishes against the father. He becomes a god himself beside or rather in place of his father. The religion of the son succeeds the religion of the father.”\(^\text{14}\)

Freud considers Christianity as a deception, for he depicts Jesus the Son as one who has stolen the glory of the primal father. Freud was not the first to claim that the externalisation of psychic realities was responsible for the creation of God and

\(^{13}\) PG p. 318.

\(^{14}\) SFTOT p. 104.
religion. Half a century previously Ludwig Feuerbach in his *The Essence of Christianity* had already taken a radical position by claiming that instead of God having created man in his image, exactly the opposite was true. Feuerbach defines religion as man’s (man as a collective rational being rather than as an individual entity) attempt to reflect to himself his most treasured and most sacred inner values and ideals, and for this purpose he devised a mirror. This mirror is God. Feuerbach regards religion as a sort of consciousness, only in a mistaken form. According to Feuerbach, the primary reason for the existence of God is man’s misunderstanding of three psychic realities.

a) Firstly, man mistakes his deepest wish for perfection and completion for perfection and completion existing outside of him.

b) Secondly, man mistakes his ability to pursue and synthesise knowledge for knowledge existing independently of him.

c) Thirdly, man mistakes his ability to abstract and generalise ideas for an intelligent being that is divine and transcendental, existing outside and independent of him.

Thus, God, as an infinite and transcendent being, comes into existence. Feuerbach asserts that, in reality, God is nothing more than an expression of man’s wish to become complete, purified and infinite and to transcend the individual mind and existence, in order to achieve collective consciousness and unity. Similarly, Feuerbach sees the afterlife as the consummation of human perfection and Christ as the fulfilment of the greatest human desire, which is, to overcome death and become (like) God. Man satisfies his longing for immortality through the resurrection of Christ.

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The essential difference between Feuerbach and Freud lies in that, whereas Feuerbach ascribes man’s innate positive nature to the creation of God whom he endows with good qualities (love, sacrifice, wisdom), Freud ascribes this to man’s worst instincts, his selfishness, inadequacy, helplessness, viciousness, and anxiety.

If one were to accept Freud’s *theory of externalisation*, one would be compelled to draw the following conclusions. First of all, the root cause of religion is a serious crime committed at the beginning of man’s existence as a conscious being. Secondly, this crime was committed against a father or an authority figure. Thirdly, the guilt feeling, which was eventually pushed into the unconscious, was seminally transmittable (that is, inherited from the primeval sons only) to all subsequent generations. Fourthly, even though the females were the cause of the offence (albeit indirectly), the males were the prime culprits. Fifthly, the oldest religion is monotheism (the exaltation of the primal father) and that religion requires monogamy. This, of course, is the essential essence of both Judaism and Christianity, except that these religions claim that the disobedience of Adam was directed against God, who nevertheless, is regarded as the father of all. Even so all the descendants of Adam inherited the sinfulness of Adam the primal son, who rebelled against God, his father.
Einstein

“The most beautiful experience we can have is the mysterious. It is the fundamental emotion which stands at the cradle of true art and true science. Whoever does not know it and can no longer wonder, no longer marvel, is as good as dead, and his eyes are dimmed. It was the experience of mystery—even if mixed with fear—that engendered religion. Knowledge of the existence of something we cannot penetrate, our perceptions of the profoundest reason and the most radiant beauty, which only in their most primitive forms are accessible to our minds—it is this knowledge and this emotion that constitute true religiosity; in this sense, and in this alone, I am a deeply religious man.”

Indeed, Einstein believed in God, but he describes him in his writings as an impersonal God who possesses infinite intelligence and creative power. This God has created everything that exists, and governs it with a set of deterministic, timeless, harmonious, and potentially comprehensible natural laws. These laws are perfect (in that they are complete); therefore, there is no need for God to interfere in his creation. According to Einstein, the notion that God interferes in his creation makes God weak, irrational, and haphazard.

Einstein’s idea of an impersonal God attempts to reconcile two existential paradoxes. On the one hand, there is an apparent and highly complex intelligence manifested in the construction and operation of the universe; but, on the other, there is no scientific evidence lending itself to rational scrutiny to suggest God’s interference in his creation, in violation of the natural laws.

Einstein did not accept the assertion that the universe is an accidental phenomenon. He referred to the high standard of

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16 AEIDE p. 11.
mathematics required to comprehend even a very small fraction of the universe. To him all existing scientific observations suggest that things are put together with care and are conditioned by each other in a precise and deterministic order. Besides, although the universe may be subjected to scientific scrutiny, the task, nevertheless, requires painstaking discipline, singular devotion, and great mental strain, all of which exclude the possibility of accidental qualities in nature.

Einstein believed that it is possible to establish a concept of God through science as well as spiritual revelation, albeit an inherently incomplete one. Even an incomplete concept cannot be the achievement of an individual or a group of individuals, or even of a particular people or generation. Rather it is a result of a collective and gradual effort. However, some individuals may get a glimpse of the divine mind through exceptional endowment and devotion. (Among these, according to Einstein, are Democritus, Francis of Assisi, Spinoza, Kepler, and Newton). Einstein calls the scientific longing to unravel the mystery of creation and thereby experience God, a cosmic religious feeling, “without which pioneer work in theoretical science cannot be achieved.”\(^1\) The characteristic feature of this feeling is a deep conviction about the rationality of the universe and a belief that the only way to approach it is by rational examination. Persons who are induced by a cosmic religious feeling seek God dispassionately, with no wish for a reward or gain. A God who rewards and punishes human actions is inconceivable to them, because they consider that humans are not responsible for their actions or inaction any more than an inanimate object is responsible for the motion it undergoes.

Einstein maintained that the primary reason for a religion based on a personal God (who more or less resembles human beings and possesses desires and emotions similar to human desires

\(^1\) Ibid. p. 39.
and passions) is existential fear. When primitive man, whose grasp of causal relations in the objective world was poorly developed, was confronted by hunger, wild beasts, sickness, and death, he imagined illusory beings (gods) more or less resembling himself, to whom he assigned the cause and control of the objects of his fears. As his cultural and social awareness developed, Einstein explains, man found additional functions for the gods; he realised that fathers, leaders, and elders could not always provide protection and comfort as well as a sense of continuity and permanence to their community. It was only natural to transfer these responsibilities to immutable, immortal, omnipresent and invincible gods (or God) to whom every member could turn in times of need. But the new role required a reciprocal commitment. On their part, the believers committed to serve and worship the gods and to refrain from displeasing them or provoking them to anger. In this way the concept of religion emerged. No matter how advanced and exalted the idea of a personal God may appear, Einstein maintains, such a religion is conceived by man to satisfy deeply felt human needs and to assuage pain.

On several occasions, over a period spanning more than three decades, Einstein declared that he believed in the God of Spinoza. Even though different philosophers had influenced Einstein (Kant, Hume, Schopenhauer, and Mach, among others) in his lifetime, Spinoza’s influence on Einstein, both in his personal and professional life, was profound and lasting. His commitment to a deterministic universe, his imitation of the philosopher’s unpretentious life style, his lengthy and tireless odyssey in search of a single mathematical expression to unify gravitational and electromagnetic forces, his profound fascination with the subject of ethics, and his rejection of quantum physics as an incomplete science, may all be attributed to his belief in the God of Spinoza.
Spinoza asserts that since God’s existence is not self-evident, it must be inferred from ideas that are incontrovertibly true. These ideas must be singular (atomic), comprehensible to common sense, and definite, so that no conceivable postulate should be found to refute them.

In order to explain the essence of God, Spinoza began in his *Ethics* by categorising everything that exists into two fundamental classes: *substance* and *modes*. Since existence is a reality, substance is what necessarily exists, uncreated. It is the primary cause of everything else. Spinoza refers to substance as “God” or “Nature”. God may be conceived of as having infinite intelligence and infinite attributes. Without such attributes, he maintains, it is impossible to establish any idea about God. God’s attributes in turn manifest themselves through the modes they bring into existence (the word *mode* etymologically descends from the Latin word *modus*, which may mean *measure*, *extent*, or *quantity*. The word *modification* is conceptually linked to mode. Hence, in Spinoza’s concept of modes, the nature of created things mirrors the nature of God, however imperfectly, due to the infinity of God’s attributes).

Spinoza further classifies modes into *infinite modes* and *finite modes*. Infinite modes directly originate from God’s attributes, whereas finite modes are causally brought to existence by infinite modes or other finite modes. In other words, a contact with finite modes does not necessarily bring one into contact with God. The most important infinite modes are the natural laws, which determine the course of finite modes.

In Spinoza’s universe, substance and modes are intimately woven into infinite and deterministic chains of causes and effects. None of them can exist independently. There are two causal chains emanating from God and extending to modes. These are the *chain of Thought* (ideas) and the *chain of Extension*

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18 BSCOM pp. 213-382.
(physical objects extending in time and space). It is these chains and their eternal arrangement which determine how things should act or acted upon. Nothing and no one is free to determine its own course.

The two chains do not cross each other, but they are both the manifestations of one and the same thing. For each conception of an idea in the realm of Thought, there is a corresponding physical manifestation in the realm of Extension. Likewise, for each action taking place in the realm of Thought, there is a corresponding action taking place in the realm of Extension, happening at the same time. Accordingly, it is erroneous to presume that a thought may precede a physical event or vice versa or that ideas and physical objects are linked with one another. From this essential assumption of independence, Spinoza concludes that the human mind cannot be absolutely destroyed with the body; something of it exists indefinitely: “In God there is necessarily a conception, or idea, which expresses the essence of the human body and which therefore is necessarily something that pertains to the essence of the human mind. But we assign to the human mind the kind of duration that can be defined by time only insofar as the mind expresses the actual existence of the body, an existence that is explicated through duration and can be defined by time. That is, we do not assign duration to the mind except while the body endures. However, since that which is conceived by a certain eternal necessity through God’s essence is nevertheless a something, this something, which pertains to the essence of mind, will necessarily be eternal (Ethics, proof of Proposition 23).”

Einstein, on the contrary, believes that the tenure of the human mind is limited by the life of the body. When the body perishes, so does the mind associated with it perish forever: “Neither can

19 Ibid. p. 396.
I nor would I want to conceive of an individual that survives his physical death.  

Spinoza also rules out the existence of God outside of his creation. Neither does he accord him freewill. Subsequently, God exists necessarily, and, out of this necessity he causes the world and everything in it to exist. God could have created the world in no other manner or in no other order. Everything that should exist exists out of necessity and God left nothing uncreated that should have existed. Since creation and its relationship with God are complete, there is no reason for God to interfere in nature. Hence, God does not and cannot displace, replace, or modify natural causes or effects. Spinoza (and Einstein, too) also asserts that God does not have a particular purpose for the world he created. The desire to ascribe personal qualities to God, he alleges, arose from man’s erroneous concept of cause and effect. 

Human beings find in their surroundings certain things readily available for their use and certain things requiring their design and craftsmanship. From the experience of producing tools for their own use human beings erroneously conclude that someone must have designed the things they found readily available—including the entire universe—for their exclusive use. Because they create tools on purpose, they likewise think that God must have created the universe for some purpose. Similarly, Spinoza maintains that human beings do not possess freewill, for their actions and behaviour are determined by the chain of events surrounding their life, which, in turn, are determined by other causes and effects, ad infinitum. Therefore, he concludes that nothing exists or occurs by chance. It is only that humans ascribe to chance or miracles the causes of events they are unable to locate in the infinite chain:

\[\text{AEIDE p. 11.}\]
...whatever the Jews did not understand, being at that time ignorant of its natural causes, was referred to God. Thus a storm was called the chiding of God, thunder and lightning were called the arrows of God; for they thought that God kept the winds shut up in caves, which they called the treasuries of God. In this belief they differed from the Gentiles, in that they believed the ruler of the winds to be God, not Aeolus. For the same reason miracles are called the works of God, that is, wonderful works. For surely all natural phenomena are the works of God, existing and acting through the divine power alone. So in this sense the Psalmist calls the Egyptian miracles ‘the powers of God’, because, to the surprise of the Hebrews, they opened the way to salvation in the midst of perils, thus evoking their extreme wonder (Theological-Political Treatise).21

While Einstein agreed with Spinoza’s essential concept of an impersonal God, he, nevertheless, seems to have differed from Spinoza on two points. Firstly, Spinoza was optimistic about knowing God adequately through rational analysis, whereas Einstein believed that God, as well as the universe, is ultimately beyond human comprehension. Secondly, Einstein seems to have accepted the separation between God and his creation. His reply to the question as to whether he was a Pantheist was equivocal:

I am not an Atheist. I do not know if I can define myself as a Pantheist. The problem involved is too vast for our limited minds. May I not reply with a parable? The human mind, no matter how highly trained, cannot grasp the universe. We are in the position of a little child, entering a huge library whose walls are covered to the ceiling with books in many different tongues. The child

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21 BSCOM p. 422.
knows that someone must have written those books. It does not know who or how. It does not understand the languages in which they are written. The child notes a definite plan in the arrangement of the books, a mysterious order, which it does not comprehend, but only dimly suspects. That, it seems to me, is the attitude of the human mind, even the greatest and most cultured, toward God. We see a universe marvellously arranged, obeying certain laws, but we understand the laws only dimly. Our limited minds cannot grasp the mysterious force that sways the constellations. I am fascinated by Spinoza's Pantheism. I admire even more his contributions to modern thought.\textsuperscript{22} On the singular issue of causal determinism, however, Einstein agreed wholeheartedly and consistently with Spinoza. Einstein’s commitment to causal determinism was not a matter of mere ideological consent; instead he made causal determinism the whole foundation of his scientific enquiry.

In his \textit{Ethics} Spinoza declares:

\begin{quote}
Nature is always the same, and its virtue and power of acting are everywhere one and the same, that means, the laws and rules of nature, according to which all things happen, and change from one form to another, are always and everywhere the same. So the way of understanding the nature of anything, of whatever kind, must also be the same, namely, through the universal laws and rules of nature.\textsuperscript{23}
\end{quote}

Some of the fundamental assumptions made by Einstein in his \textit{Special and General Relativity} theories are due to his earnest commitment to causal determinism and belief in the universal applicability of the laws of nature. One of these is the \textit{equivalence

\textsuperscript{22} GSV pp. 372-373.
\textsuperscript{23} BSCOM p. 278.
principle, which asserts that objects in a gravitational field (for example, on earth) behave exactly in the same way as objects in an accelerated field (in space). This simple observation enabled Einstein to establish how the geometry of the entire universe influences the motion of massive bodies and how these massive bodies, in return, influence the geometry of the universe.

The significance of a scientific theory is often judged by three criteria, namely, by its prediction, explanation, and testability features. 24 Between 1915 and 1919, Einstein’s General Relativity (GR) fulfilled the first two conditions, but there was no empirical data at the time to substantiate whether it fulfilled the third criterion. In May 1919, however, during the total eclipse of the sun, an opportunity presented itself for the acquisition of empirical data by which the claims of GR could be tested.

For more than two centuries prior to the introduction of GR, scientists had been trying to determine why, and by what magnitude, light was deflected (or bent) when propagating near a massive body (such as the sun). Newton made a plausible but tentative observation in 1704 but does not seem to have ever seriously dealt with the issue other than remarking that light consists of tiny particles and, therefore, like any other ordinary particles, should be subject to gravity. A century later (in 1801), the German astronomer Johann Georg von Soldner provided the first model to calculate the angle of deflection by taking light as a bundle of tiny particles moving at a very fast speed and by applying Newton’s laws of motion and gravity. Within his calculation, a light that barely touches the surface of the sun would be deflected by an angle of 0.9 seconds of arcs. A century after Soldner’s calculation, Einstein applied his newly developed theory to estimate the angle of deflection, and his calculation produced a value double that of the one calculated

24 Refer to SHTIM pp. 5-6.
by Soldner. Einstein could not confirm the accuracy of his result for the lack of empirical data required in order to draw comparison with his theoretical prediction. In May 1919, however, two British expeditions were organised independently to take a picture of the region of the sky centred on the sun during a total eclipse, and to determine the deflection of light around the sun. The photographs were taken and analysed, and the outcomes of the empirical observation proved consistent with Einstein’s prediction. Since then measurements obtained with the help of advanced cameras and powerful lenses have made it possible to make repeated observations, both within and outside of the solar systems, and all the observations confirm the accuracy of Einstein’s model.

When Einstein was first informed of the outcome of the investigation by the British expeditions, he was not surprised. His faith in causal determinism had already convinced him that the natural laws that apply to everyday objects here on earth apply also to other things everywhere in the universe, producing predictable outcomes.

Yet hardly a decade passed before Einstein’s causal determinism was put to a tough test. During the time span within which he developed the special and general relativity theories, the research field of quantum mechanics was also emerging, attracting some of the brightest minds of that time. The primary concern of this field is the determination of the fundamental particles that make up an atom and their properties and how they are related to, and conditioned by, one another. From the very outset, some of the experimental observations and the mathematical models proposed to explain the observations were unconventional, and, in some instances, even contradicted the laws of classical physics.

Ironically, it was Einstein himself who discovered photons (one of the fundamental atomic particles) and accurately determined their properties. These particles are massless, exhibiting
properties that can only be attributed to waves (interference and the property of being at multiple places at one time), and yet, they produce effects that can be produced by massive particles. Traditionally a wave is understood as a disturbance of some medium (air and water, for example) and the magnitude of the disturbance at any given point in time and space can be accurately described by a wave equation. If photons were to be taken as a wave, then what medium would this wave disturb and propagate through? If, on the other hand, photons were to be taken as particles, how could a single photon be in multiple places at the same time and how could multiple photons interfere with one another without displacing or deforming one another? Einstein called this phenomenon wave-particle duality. Since then quantum physicists have gone so far as to assert that indeed reality is nothing but a series of fields. When these fields are given sufficient energy they vibrate, and from this vibration different sorts of massive particles come into existence. When, on the other hand, the particles give up their energy, they virtually disappear and become fields once again.

The physicists Louis-Victor de Broglie and Ervin Schrödinger were foremost among their contemporaries seeking to establish the scientific foundation of quantum field theory. The former claimed, and experimentally proved, that an electron, which has a definite mass, also acts as a wave (in other words, the wave-particle duality is not an exclusive property of photons). In fact, according to de Broglie, all corporal objects act as waves; we do not experience them as waves in real life only because they have very small wavelengths. By accepting de Broglie’s wave claim, Ervin Schrödinger proposed a field equation by which the state and energy of an electron in an atom can be predicted. The equation is perhaps one of the most consequential developments in the field of quantum mechanics, but it also belongs to a group of equations in quantum mechanics which are counter-intuitive. By definition, a wave or a field equation
should express (in a deterministic sense) the magnitude and position of a wave as a function of time and space, but Schrödinger’s equation suggests that it is not possible to precisely locate an electron around the nucleus of an atom; one can only build a probable sense of its whereabouts.

This admission of uncertainty is further underpinned by Werner Heisenberg, who discovered an unsettling inequality in a vital equation relating the momentum of an electron to its velocity. This inequality led to his famous *uncertainty principle*. Simply put, it states that under no condition can one determine both the position and momentum of an electron with arbitrary precision. The more accurately one of them can be determined, the more uncertain one becomes of the other, regardless of the quality of the measurement apparatus one employs. Indeed the margin of error has nothing to do with the measurement apparatus; it is mathematically impossible to reduce the margin of error below a set limit. Since then scientists have discovered several pairs of properties of subatomic particles which cannot be determined simultaneously with arbitrary accuracy.

One of the earliest phenomena supporting the quantum field theory is the creation of W+ bosons inside the sun as a result of the conversion of protons into neutrons. A single proton is made up of two fundamental particles, two up quarks and one down quark. Similarly, a neutron is made up of two down quarks and an up quark. In a process called beta decay or radioactive decay, a single proton can be transformed into a neutron; in the process, another fundamental particle, which is called a W+ boson, which is 80 times heavier than its parent proton, is created! The heavy boson, however, does not survive for more than a fraction of a second before it degenerates into two other fundamental particles, namely, a positron and an electron neutrino. Two questions, as regards this process have been challenging physicists ever since:
1. How can so many fundamental particles emerge from a single conversion process when they were not a part of the proton in the first place? (It is not that a proton is smashed to pieces and its fundamental building blocks are disintegrated.)

2. How can a proton produce a neutron (having a comparatively an equal amount of weight) and a boson in addition, which is 80 times heavier than proton?

Theoretical physicists refer to Heisenberg’s *uncertainty principle* to explain this phenomenon. The equation that relates the error in the position and the error in the momentum of a particle to a constant number (Planck’s constant) can also be expressed in terms of the error in the energy and the error in the lifetime of a particle. In plain terms this means that a particle with a large amount of energy (or mass) can be created out of nothing, provided that the particle exists only for a short time.

Heisenberg’s uncertainty principle seriously challenges the assumption that the universe is a self-sustaining, predictable system, which is governed by a set of deterministic rules. It also suggests that the universe requires a fresh and perpetual supply of external energy to hold everything together. Max Planck,iii the father of quantum mechanics, in a speech he delivered to a group of scientists in Florence in 1944, suggests the existence of an intelligent force outside of the universe, which sets the universe in a perpetual motion:

There is no matter as such. All matter comes into being and persists only by the virtue of a force that vibrates the particles of an atom and holds them together in the tiniest solar system. Since in the entire universe there is neither an intelligent force nor an infinite force—man is so far unable to invent the desperately longed for mechanism that sets things into perpetual motion—, so we have to assume the existence of a conscious intelligent
spirit behind this force. This spirit is the origin of all matter. Einstein, however, did not accept this assertion and rejected quantum mechanics as incomplete science, adhering to causal determinism to the end of his life. Einstein’s uneasiness with quantum mechanics is not merely due to its potential contradiction with Spinoza’s causal determinism but also due to its fundamental clash with human intuition. In classical physics, the motion of an object (or more generally, any change the object undergoes) is a result of a cause. This essential property is called causality. The object remains in its initial state indefinitely if nothing causes it to change its state. Newton’s laws of motion essentially describe this simple fact. The imparting of energy to the object, which changes its state as a result, manifests a cause. The sum total of energy of the cause and the object before and after their interaction remains preserved. The same is true to the sum total of momentum. The laws of conservation of energy and momentum govern the preservation of energy and momentum. Causality upholds predictability or deterministic behaviour. For example, if the initial position and velocity of an object of specific mass is known, and a known amount of energy is imparted to the object, then it is possible to precisely determine its position, velocity, acceleration, and energy at any given time, regardless of where in the universe this object is found. This is essentially the mechanism by which scientists determine the position, velocity, and mass of planets and stars that are millions of light-years away from the earth.

Often, however, the complexity of real-world systems makes it difficult to determine their behaviour precisely, not because they are indeterminate by nature, but because determining all the interactions between their constituting elements and their

\[\text{MPWES}\]
surroundings is difficult. A typical example is determining the weather of a particular location, which is a result of several forces acting upon each other. Towards the end of the nineteen-century, Professor Ludwig Boltzmann introduced the concept of statistical mechanics to describe the properties of and interaction between complex systems and to make their behaviour predictable in a probabilistic sense. However, in classical physics, the term probability is simply associated with the difficulty of accounting all forces acting upon a deterministic system. Hence, classical physics essentially complies with Spinoza’s causal determinism. In quantum mechanics, however, the subatomic particles, which have the most basic structure and the action and reaction of which should be the simplest both to condition and determine, nevertheless, exhibit properties which are inherently indeterminate and do not subject themselves to the principle of causality or conservation of energy.

Since the time of Newton, mathematicians and physicists have developed models and equations by which the laws of physics (such as the laws of motion, the laws of thermodynamics, and the laws of electrodynamics) can be expressed. The essence of these models is that they are logical and intuitive. Similarly, the early quantum physicists, notably Heisenberg and Dirac, developed the mathematical models and expressions by which quantum reality can be explained. These models, however, are phenomenological, in that they yield results which agree well with experimental results but are not easily supported by theory; they are also neither intuitive nor rationally explainable.

Let us consider once again the problem of beta decay, which I briefly raised above. During beta decay, one of the up-quarks inside a proton (recall that a proton is made up of two up-quarks and a down-quark) gives up its energy and thereby transforms the proton into a neutron (which is made up of two down-quarks and an up-quark). The energy, which is radiated
from the transformed proton, in turn, creates an electron and a W+ boson, but after a short while, the W+ boson itself decays into a photon and a positron.

One of the interesting aspects of this process is that the electron and the positron are said to be in an entangled state. The two particles are essentially the same but exhibit opposite properties— the electron is a negatively charged particle whereas the positron is a positively charged particle; if the electron spins in a clockwise direction, the positron spins in an anticlockwise direction. After the pair is created, the positron and the electron may part in any two arbitrary directions at a speed of light. Suppose, the two take opposite directions to be infinitely away from each other. As it were, any modification we make to one of them will necessarily affect the other, regardless of the distance of separation between them. If we make the electron spin in an anticlockwise direction, for instance, the positron will necessarily change its direction and spins in a clockwise direction. This is why the two particles are said to be in a state of quantum entanglement.

The existence of this property has been time and again experimentally confirmed and seems to be a consistent property of sub-atomic particles. It applies not only to the spin of particles but also to their position, momentum, and polarisation.

One aspect which deeply puzzles quantum physicists since the time of Einstein is how the two particles exchange information, so as to reposition or reconfigure themselves whenever one of them undergoes a change in its quantum state. There can only be two possibilities, Einstein, argues in a paper he published with two of his colleagues at Princeton University in 1935²⁶:

1. The two particles must exchange instant messages to tell each other the moment they undergo a change. Or,

²⁶ EPR
2. They knew a priori what possible states each of them will undergo in future and make use of this knowledge to adjust their own future state (in other words, the two particles are already predetermined to act in all possible complementary ways in future, a position Einstein considered as plausible, since this would be consistent with Spinoza’s causal determinism).

The first possibility contradicts one of Einstein’s seminal discoveries, the Theory of Special Relativity; because it leaves the possibility open for a message to travel between the two particles at a speed faster than the speed of light. According to special relativity theory, the maximum speed that can be attained in our universe is the speed of light. The second possibility is equally implausible because it assumes that the two particles have a memory faculty, which enables them to remember. Experiment results seem to exclude the second possibility but they have so far not been able to positively confirm the first possibility either. Another serious implication of quantum entanglement is that it seems to suggest that the way we regard the physical world essentially modifies its configuration or state. Einstein called quantum entanglement spooky, and attributed it to the inadequacy (or, more precisely, the incompleteness) of the mathematical models or representations, which are used to describe quantum realities.
Biographical Reference


Content Reference

Dostoevsky


Pisma Dostoevsky, F. *Pisma*, (edited and annotated by A.S. Dolinin), 4 vols. (Moscow, 1928-1959)
## Tolstoy

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Author</th>
<th>Year</th>
<th>Publisher</th>
</tr>
</thead>
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<td>2009</td>
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<td>LTWAR</td>
<td>War and Peace</td>
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<td>1993</td>
<td>Wordsworth Classics</td>
</tr>
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<td>Anna Karenina</td>
<td>Tolstoy, L.</td>
<td>2003</td>
<td>Penguin Classics</td>
</tr>
<tr>
<td>LTDEA</td>
<td>The death of Ivan Ilyich and other stories</td>
<td>Tolstoy, L.</td>
<td>2010</td>
<td>Random House</td>
</tr>
<tr>
<td>LTMAS</td>
<td>Master and Man and other stories</td>
<td>Tolstoy, L.</td>
<td>2005</td>
<td>Penguin UK</td>
</tr>
<tr>
<td>LTKIN</td>
<td>The Kingdom of God is Within You</td>
<td>Tolstoy, L.</td>
<td>2007</td>
<td>Cosimo Classics</td>
</tr>
<tr>
<td>LTKIN2</td>
<td>The kingdom of God is within you</td>
<td>Tolstoy, L.</td>
<td>2005</td>
<td>Barnes &amp; Noble Books</td>
</tr>
<tr>
<td>LTCON</td>
<td>Confession</td>
<td>Tolstoy, L.</td>
<td>1983</td>
<td>W. W Norton &amp; Company</td>
</tr>
<tr>
<td>LTGOS</td>
<td>The Gospel in brief</td>
<td>Tolstoy, L.</td>
<td>2012</td>
<td>Andrews UK Limited</td>
</tr>
<tr>
<td>SMLAN</td>
<td>Land of the Firebird: The beauty of Old Russia</td>
<td>Massie, S.</td>
<td>1983</td>
<td>Simon &amp; Schuster</td>
</tr>
<tr>
<td>LTRAI</td>
<td>The Raid and Other Stories</td>
<td>Tolstoy, L.</td>
<td>1982</td>
<td>Oxford World’s Classics</td>
</tr>
</tbody>
</table>
Freud

SFDOS Freud, S., 1928. Dostoevsky and parricide. The Brothers Karamazov and the Critics, pp.41-55.


## Einstein

<table>
<thead>
<tr>
<th>Author</th>
<th>Reference</th>
</tr>
</thead>
</table>
# Index

Aeolus 49  
Afterlife 24, 41, 76, 68, 249, 258  
Afterlife 249  
_Aim-inhibited_ 106  
Alexander the Great 197  
Amenophis 190, 191  
Amunhatep 183  
Andrew, Prince 158, 159, 160, 161, 162, 164, 163, 172  
*Anna Karenina* 12, 18, 77, 82, 149, 156, 158, 164, 167, 168, 271  
Apocalypse 202  
Apostles 225, 232, 265  
Aristocracy 16, 84, 86, 156, 247, 262  
Atheism 13  
Augustine, St. 144  
Baruch de Spinoza 22, 256  
Beelzebul 243  
Belinsky 261  
Benjamin 184  
Bezukhov 77, 158  
Bolkonsky 158  
Boson 54, 55, 58  
**Boson**  
_W+_ 54, 58  
Brekhunov 173  
Buddha 84  
Canaan 183, 184, 185, 186, 187, 189, 193, 195, 266  
Caucasus 15, 78  
Chekhov 121  
Christ 23, 41, 61, 62, 64, 66, 69, 70, 72, 76, 78, 87, 113, 145, 180, 182, 200, 209, 210, 213, 214, 219, 223, 231, 235, 236, 256, 259  
Christian 13, 14, 18, 62, 87, 88, 134, 156, 199, 201, 218, 232, 247, 273  
Church  
**Orthodox** 78  
_Civilisation and Its Discontents_ 13, 20, 101, 104, 171, 200, 225  
Complex 11, 17, 28, 30, 34, 37, 39, 43, 57, 102,
109, 116, 136, 143, 200, 201, 205, 208, 220
Compulsion 11, 124, 135, 197
Confession 77, 81, 144, 167, 168, 169, 163, 250, 271
Copernicus 22, 201
Cossacks, The 77, 78
Crime and Punishment 60, 61, 75, 134, 203, 204, 210
Crimea 15
Cupiditas 130
Dark Continent 115
David, King 145, 184, 186, 218
de Broglie, Victor 53
Death of Ivan Ilyich 158, 172
Death of Ivan Ilyich, The 84, 172
Deity 190
Delusion 21, 25, 102, 111, 119, 170
Democritus 22, 44
Devils, The 60, 61, 72, 75, 135, 204, 210, 270
Dickens 64
Displacement 11, 27, 28, 29, 30, 32, 38, 31, 109, 258
Divine 126
Don Quixote 64
Dostoevsky 3, 11, 12, 13, 14, 18, 19, 20, 21, 22, 23, 38, 39, 60, 61, 62, 63,

Ego 25, 26, 27, 30, 65, 66, 31, 104, 106, 109, 110, 111, 113, 146, 182, 201
Egypt 13, 181, 183, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 198, 225, 226, 227, 236, 196, 265, 266, 268
Epicureanism 85
Epilepsy 39, 67, 39
Equivalence principle 51
Erogenous zones 11
Essence of Christianity 41, 272
Ethics 46, 47, 50, 124, 128, 131, 132
Exodus 181, 186, 187, 188, 193, 194, 195, 196, 198, 201, 226, 227, 266
Extension 46, 47, 125, 128
Externalisation 21, 24, 27, 29, 30, 38, 40, 42, 258, 268
Ezra 187
Female Sexuality 115
Feuerbach 41, 42, 272
Fixation 11
Foma Fomich 62
Francis of Assisi 22, 44
Frank, Joseph 60, 71, 39, 144, 206, 270
Future of an Illusion 13, 199, 272
Gandhi 264
Gauss 11
Gay, Peter 117, 199, 263, 270
Gerasim 172
Gospel in Brief, The 232, 233, 244
Gospel of John 69, 143, 238, 245, 267
Guilt 13, 24, 27, 31, 36, 37, 39, 40, 42, 103, 104, 110, 134, 142, 149, 150, 151, 171, 182, 200, 201, 205, 196, 206, 258, 259, 260, 263
Hamlet 38, 40, 210
Heisenberg 17, 54, 55, 57
Heliopolis 190
Herzen 261
Holbein 69
Homer 197
House of the Dead 18
House with the Mezzanine, The 121
Hume 45, 125
Hyksos 192
Identification 11, 23, 36, 38, 104, 109, 131, 133, 201, 263
277
Idiot, The 60, 63, 64, 69, 70, 72, 134, 144, 202, 204, 205
Ikhnaton 190, 192
Illusion 65, 84, 99, 225, 234, 258
Ilyusha 75, 145
internalisation 104, 109, 110, 116
Ippolit 69, 72, 73, 204, 205
Jacob 67, 67, 183, 184, 266
Jeremiah 67, 68, 247
Jeroboam 184
Jerusalem 184, 235, 237, 247, 267
Jew 189, 200, 201
Job 67, 68, 68, 180, 203, 204, 206, 207, 208, 209, 227, 257
Joseph 60, 71, 39, 144, 183, 184, 235, 206
Judah 184, 196
Judaism 12, 13, 40, 42, 182, 200, 219, 263, 266
Kant 45, 125
Karamazov 11, 38, 60, 61, 62, 69, 72, 73, 74, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 147, 148, 149, 151, 152, 134, 202, 203, 204, 205, 206, 207, 213, 203, 270, 272
Dmitri 38, 60, 77, 136, 137, 138, 140, 141, 142, 143, 147, 148, 149, 151, 152, 203, 206
Fyodor Pavlovich 60, 136, 139, 145, 152, 134
Ivan 38, 62, 72, 73, 74, 136, 137, 138, 140, 142, 143, 147, 148, 151, 152, 172, 202, 203, 204, 205, 208, 213, 215, 271
The Brothers 38, 60, 74, 75, 136, 138, 213
Karenin 166, 167
Kazan 15
Kepler 44
Kingdom of God is within You, The 87, 154
Kingdom of Israel 184, 188, 195, 266
Kingdom of Israel, the 184

278
<table>
<thead>
<tr>
<th>Kirillov 60, 61, 208</th>
<th>Moses and Monotheism 12, 38, 187, 188, 189, 199, 200, 201, 272</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitty 164, 165, 167</td>
<td>Myshkin 60, 70, 73, 134, 135, 144, 134, 204, 206</td>
</tr>
<tr>
<td>Kuzma Samsonov 140</td>
<td>Napoleon 160, 162, 210</td>
</tr>
<tr>
<td>Lebedev 202</td>
<td>Nastasya Filipovna 134</td>
</tr>
<tr>
<td>Lebyadkin, Captain 72</td>
<td>Nature 46, 50, 127, 273</td>
</tr>
<tr>
<td>Lebyadkina, Marya Timofeevna 75</td>
<td>Nehemiah 187</td>
</tr>
<tr>
<td>Levin 77, 82, 149, 164, 165, 167, 170, 171</td>
<td>Nebekasov 261</td>
</tr>
<tr>
<td>Levites 181, 191, 195, 196</td>
<td>Nervous system 17, 205</td>
</tr>
<tr>
<td>Libido 11, 30, 31, 108</td>
<td>Neurosis 11</td>
</tr>
<tr>
<td>Lord’s Prayer, The 233, 235</td>
<td>Neurotics 24, 30, 34, 272</td>
</tr>
<tr>
<td>Ma’at 190</td>
<td>Newton 22, 44, 51, 56, 57, 244</td>
</tr>
<tr>
<td>Mach 45</td>
<td>Newtonian physics 17</td>
</tr>
<tr>
<td>Master and Man 173, 271</td>
<td>Nikita 173, 174, 175, 176</td>
</tr>
<tr>
<td>Maude, Aylmer 15, 155, 270</td>
<td>Oblonsky 155</td>
</tr>
<tr>
<td>Mesopotamia 190</td>
<td>Oedipal 11, 17, 34, 39, 116</td>
</tr>
<tr>
<td>Meyer, Eduard 199</td>
<td>Oedipal complex 116</td>
</tr>
<tr>
<td>Midianite 185, 188, 193, 194</td>
<td>Oedipus 37, 38, 40</td>
</tr>
<tr>
<td>Modes 46</td>
<td>Oedipus the King 38</td>
</tr>
<tr>
<td>finite 46</td>
<td>Old Man 146, 147</td>
</tr>
<tr>
<td>infinite 46</td>
<td>Olenin 77, 78, 80</td>
</tr>
<tr>
<td>Moscow 14, 78, 82, 142, 156, 160, 215, 270</td>
<td>Orthodox 13, 16, 71, 77, 93, 144, 202, 242, 243</td>
</tr>
<tr>
<td>Moses 12, 22, 38, 89, 133, 181, 183, 184, 185, 186, 187, 188, 189, 191, 192, 193, 194, 195, 196, 198, 199, 200, 201, 217, 225, 226, 227, 228, 240, 242, 196, 256, 265, 266, 272</td>
<td>Ottoman Turks 156</td>
</tr>
<tr>
<td></td>
<td>Paranoia 11, 102, 111</td>
</tr>
<tr>
<td></td>
<td>Paranoids 24, 34</td>
</tr>
<tr>
<td></td>
<td>Pathology 26</td>
</tr>
<tr>
<td></td>
<td>Pentateuch 181, 187, 188, 199, 265, 266</td>
</tr>
<tr>
<td></td>
<td>Petersburg 14, 71, 78, 261</td>
</tr>
<tr>
<td></td>
<td>Petersburg, St. 71</td>
</tr>
</tbody>
</table>
Petrashevsky 71
Pharaoh 67, 181, 183, 185, 190, 192, 226, 227, 265
phobia 11
Pickwick 64
Pierre 77, 78, 80, 81, 158, 159, 160, 163, 164, 160, 163, 172
Pithom 183
Planck 55, 55, 273
Planck, Max 55
Pleasure principle 107
Primal father 21, 33, 35, 36, 40, 42, 105, 106, 145, 115, 259
projection 11, 21, 27, 28, 31, 32, 33, 40, 258
Promise Land, the 183, 186
Pushkin 18, 205
Qadesh-Barnea 265, 266
Quantum physics 13, 45, 260
Rameses 183
Raskolnikov 60, 61, 73, 134, 134, 203, 204, 210
Re’ 190
Reality principle 107
Red Sea 183, 185, 226
Rehoboam, King 184, 188, 195
Relativity
General 11, 22, 50, 51, 260
Special 59
Repression 11
Rogozhin 134, 135
Savage, Thomas 35
Schopenhauer 45, 84, 124, 169, 264
Schreber 31, 31
Schrödinger, Ervin 53, 54
Sellin, Ernst 188, 199, 196
Semyonov Square 71
Sermon on the Mount 12, 23, 76, 93, 100, 181, 246, 248, 259, 263, 264
Shakespeare 11, 38
Sin 24, 40, 66, 68, 87, 134, 140, 143, 144, 145, 146, 149, 150, 152, 198, 214, 235, 236, 241, 258, 259
Sinai 183, 185, 186, 187, 209, 227, 230
Slavs 156, 157
Smerdyakov 61, 74, 136, 138, 139, 140, 142, 143, 145, 147, 148, 152
Socrates 84, 163
Soldner 51
Soldner, Johann Georg von 51
Solomon 84, 159, 184
Sonia 134, 203
Spacetime 11
Stag Street 29
Stavrogin 61, 73, 135, 210, 211, 212, 213, 215
Stinking Lizaveta 139, 145
substance 24, 27, 46, 98, 103, 171, 260
Syria 187, 190, 237
Taboos 27, 33, 34, 37
Ten Commandments 183, 186, 217, 230, 243
Theological-Political Treatise 49, 219, 222, 223, 224
Thothmes 190
Thought 46, 47, 125, 126, 128
Thutmose 183, 187
Totem 33, 34, 36, 37
Totem and Taboo 12, 33, 37, 111, 199, 200
Totemism 37
Transference 11
Trinity 88
Turgenev 205, 261
Ulm 14
Uncertainty principle 54, 55
Uncertainty Principle 17
Vasili Andreevich 173, 174, 175, 176
Verkhovensky
Peter 135
Stepan 135
Vienna 29, 189
University of 17
Vronsky, Count 157, 164, 165, 166, 167
War and Peace 77, 78, 80, 81, 82, 158, 163

281
Wave equation 53

Württemberg 14

Yasnaya Polyana 14, 82

Zossima, Father 60, 61, 73, 145, 202, 203, 208