Tagore and Einstein met through a common friend, Dr. Mendel. Tagore visited Einstein at his residence at Kaputh in the suburbs of Berlin on July 14, 1930, and Einstein returned the call and visited Tagore at the Mendel home. Both conversations were recorded. The July 14 conversation is reproduced here, and was originally published in The Religion of Man (George, Allen & Unwin, Ltd., London), Appendix II, pp. 222-225.

TAGORE: I was discussing with Dr. Mendel today the new mathematical discoveries which tell us that in the realm of infinitesimal atoms chance has its play; the drama of existence is not absolutely predestined in character.

EINSTEIN: The facts that make science tend toward this view do not say good-bye to causality.

TAGORE: Maybe not, yet it appears that the idea of causality is not in the elements, but that some other force builds up with them an organized universe.

EINSTEIN: One tries to understand in the higher plane how the order is. The order is there, where the big elements combine and guide existence, but in the minute elements this order is not perceptible.

TAGORE: Thus duality is in the depths of existence, the contradiction of free impulse and the directive will which works upon it and evolves an orderly scheme of things.

EINSTEIN: Modern physics would not say they are contradictory. Clouds look as one from a distance, but if you see them nearby, they show themselves as disorderly drops of water.

TAGORE: I find a parallel in human psychology. Our passions and desires are unruly, but our character subdues these elements into a harmonious whole. Does something similar to this happen in the physical world? Are the elements rebellious, dynamic with individual impulse? And is there a principle in the physical world which dominates them and puts them into an orderly organization?

EINSTEIN: Even the elements are not without statistical order; elements of radium will always maintain their specific order, now and ever onward, just as they have done all along. There is, then, a statistical order in the elements.

TAGORE: Otherwise, the drama of existence would be too desultory. It is the constant harmony of chance and determination which makes it eternally new and living.

EINSTEIN: I believe that whatever we do or live for has its causality; it is good, however, that we cannot see through to it.

TAGORE: There is in human affairs an element of elasticity also, some freedom within a small range which is for the expression of our personality. It is like the musical system in India, which is not so rigidly fixed as western music. Our composers give a certain definite outline, a system of melody and rhythmic arrangement, and within a certain limit the player can improvise upon it. He must be one with the law of that particular melody, and then he can give spontaneous expression to his musical feeling within the prescribed regulation. We praise the composer for his genius in creating a foundation along with a superstructure of melodies, but we expect from the player his own skill in the creation of variations of melodic flourish and ornamentation. In creation we follow the central law of existence, but if we do not cut ourselves adrift from it, we can have sufficient

freedom within the limits of our personality for the fullest self-expression.

EINSTEIN: That is possible only when there is a strong artistic tradition in music to guide the people's mind. In Europe, music has come too far away from popular art and popular feeling and has become something like a secret art with conventions and traditions of its own.

TAGORE: You have to be absolutely obedient to this too complicated music. In India, the measure of a singer's freedom is in his own creative personality. He can sing the composer's song as his own, if he has the power creatively to assert himself in his interpretation of the general law of the melody which he is given to interpret.

EINSTEIN: It requires a very high standard of art to realize fully the great idea in the original music, so that one can make variations upon it. In our country, the variations are often prescribed.

TAGORE: If in our conduct we can follow the law of goodness, we can have real liberty of self-expression. The principle of conduct is there, but the character which makes it true and individual is our own creation. In our music there is a duality of freedom and prescribed order.

EINSTEIN: Are the words of a song also free? I mean to say, is the singer at liberty to add his own words to the song which he is singing?

TAGORE: Yes. In Bengal we have a kind of song-kirtan, we call it-which gives freedom to the singer to introduce parenthetical comments, phrases not in the original song. This occasions great enthusiasm, since the audience is constantly thrilled by some beautiful, spontaneous sentiment added by the singer.

EINSTEIN: Is the metrical form quite severe?

TAGORE: Yes, quite. You cannot exceed the limits of versification; the singer in all his variations must keep the rhythm and the time, which is fixed. In European music you have a comparative liberty with time, but not with melody.

EINSTEIN: Can the Indian music be sung without words? Can one understand a song without words?

TAGORE: Yes, we have songs with unmeaning words, sounds which just help to act as carriers of the notes. In North India, music is an independent art, not the interpretation of words and thoughts, as in Bengal. The music is very intricate and subtle and is a complete world of melody by itself.

EINSTEIN: Is it not polyphonic?

TAGORE: Instruments are used, not for harmony, but for keeping time and adding to the volume and depth. Has melody suffered in your music by the imposition of harmony?

EINSTEIN: Sometimes it does suffer very much. Sometimes the harmony swallows up the melody altogether.

TAGORE: Melody and harmony are like lines and colors in pictures. A simple linear picture may be completely beautiful; the introduction of color may make it vague and insignificant. Yet color may, by combination with lines, create great pictures, so long as it does not smother and destroy their value.

EINSTEIN: It is a beautiful comparison; line is also much older than color. It seems that your melody is much richer in structure than ours. Japanese music also seems to be so.

TAGORE: It is difficult to analyze the effect of eastern and western music on our

minds. I am deeply moved by the western music; I feel that it is great, that it is vast in its structure and grand in its composition. Our own music touches me more deeply by its fundamental lyrical appeal. European music is epic in character; it has a broad background and is Gothic in its structure.

EINSTEIN: This is a question we Europeans cannot properly answer, we are so used to our own music. We want to know whether our own music is a conventional or a fundamental human feeling, whether to feel consonance and dissonance is natural, or a convention which we accept.

TAGORE: Somehow the piano confounds me. The violin pleases me much more. EINSTEIN: It would be interesting to study the effects of European music on an Indian who had never heard it when he was young.

TAGORE: Once I asked an English musician to analyze for me some classical music, and explain to me what elements make for the beauty of the piece.

EINSTEIN: The difficulty is that the really good music, whether of the East or of the West, cannot be analyzed.

TAGORE: Yes, and what deeply affects the hearer is beyond himself.

EINSTEIN: The same uncertainty will always be there about everything fundamental in our experience, in our reaction to art, whether in Europe or in Asia. Even the red flower I see before me on your table may not be the same to you and me.

TAGORE: And yet there is always going on the process of reconciliation between them, the individual taste conforming to the universal standard.

Tagore contact with Romain Rolland dated from 1919 when Rolland wrote to compliment Tagore on his definition of narrow nationalism. At Rolland's request, Tagore signed his name to La Déclaration pour l' indépendence de l'esprit, which was probably the first organized attempt to mobilize intellectual opinion all over the world against war. Their first meeting took place in April, 1921, in Paris. The conversation reproduced here took place in August, 1930, in Geneva. A report of this conversation was first published in Asia (March, 1937).

TAGORE: Do you think that Geneva is likely to play an important role in the world of international relationship?.

ROLLAND: It may, but a good deal depends on factors over which Geneva has no control.

TAGORE: The League of Nations seems to me to be but one of the various forces which are at work here. At the present moment it is by no means the most instrumental for the readjustment of international relationships. It may or may not develop into a power for bringing greater harmony in the political world. I have much faith in the various international groups and societies and the individuals working in this place, and my hope is that they will eventually create in Geneva a genuine center of international activities which will shape the politics of the future. ROLLAND: We find a large number of people eagerly looking for a message from the East. India, they think - and I may add, rightly - is the country that can, in this epoch, give that message to the world.

TAGORE: It is curious to note how India has furnished probably the first

internationally minded man of the nineteenth century. I mean Raja Rammohan Roy; he had a passion for truth. He came from an orthodox Brahmin family, but he broke all bonds of superstition and formalism. He wanted to understand Buddhism, went to Tibet, studied Hebrew, Greek, Arabic, Persian, English, French; he traveled widely in Europe, and died in Bristol. Spiritual truth for him did not mean a kind of ecclesiasticism confined within sectarin sanctuaries; nor did he think that it could be inflicted upon people outside the sect by men who have professional rights to preach it as a doctrine. He realized that a bond of spiritual unity links the whole of mankind and that it is the purpose of religion to reach down to that fundamental unity of human relationship, of human efforts and achievements.

ROLLAND: I have often wondered at the spirit of religious toleration in India; it is unlike anything we have known in the West. The cosmic nature of your religion and the composite character of your civilization make this possible. India has allowed all kinds of religious faith and practice to flourish side by side.

TAGORE: Perhaps that has also been our weakness, and it is due to an indiscriminate spirit of toleration that all forms of religious creeds and crudities have run riot in India, making it difficult for us to realize the true foundation of our spiritual faith. The practice of animal sacrifice, for instance, has nothing to do with our religion, yet many people sanction it on the grounds of tradition. Similar aberrations of religion can be found in every country. Our concern in India today is to remove them and intensify the larger beliefs which are our true spiritual heritage.

ROLLAND: In Christian scriptures too, this theme of animal sacrifice dominates. Take the opening chapters: God gave preference to Abel because he had offered a lamb for sacrifice.

TAGORE: I have never been able to love the God of the Old Testament.

ROLLAND: ... The emphasis is wrongly placed, and the attitude is not spiritual in the larger sense.

TAGORE: We should stress always the "larger sense". Truth cannot afford to be tolerant where it faces positive evil; it is like sunlight, which makes the existence of evil germs impossible. As a matter of fact, Indian religious life suffers today from the lack of a wholesome spirit of intolerance, which is characteristic of a creative religion. Even a vogue of atheism may do good to India today, even though my country will never accept atheism as her permanent faith. It will sweep away all noxious undergrowths in the forest, and the tall trees will remain intact. At the present moment, even a gift of negation from the West will be of value to a large section of the Indian people.

ROLLAND: I believe that scientific rationalism will help to solve India's question. TAGORE: I know that India can never believe in mere intellectual determination for any long period of time; balance and harmony will certainly be restored. That is why a temporary swing in one direction may help us arrive at the central adjustment of spiritual life. Science should come to our aid to be humanized by us at the end.

ROLLAND: Science is probably the most international element in the modern world; that is, the spirit of cooperation in scientific research. But we have today poison gas at the disposal of politicians. It is tragic that scientists are at the disposal of military powers who are not in the least interested in the progress of human thought and

culture ... The problem today is not so much the antagonism of nations as the clash between different classes in the body of a nation itself. This does not, of course, justify or minimize to any degree the real curse of aggressive nationalism and the spirit of war.

TAGORE: Words are too conscious; lines are not. Ideas have their form and color, which wait for their incarnation in pictorial art. Just now painting has become a mania with me. My morning began with songs and poems; now, in the evening of my life, my mind is filled with forms and colors.

Tagore and H.G. Wells met in Geneva in early June, 1930. Their conversation is reported here.

TAGORE: The tendency in modern civilization is to make the world uniform. Calcutta, Bombay, Hong Kong, and other cities are more or less alike, wearing big masks which represent no country in particular.

WELLS: Yet don't you think that this very fact is an indication that we are reaching out for a new world-wide human order which refuses to be localized?

TAGORE: Our individual physiognomy need not be the same. Let the mind be universal. The individual should not be sacrificed.

WELLS: We are gradually thinking now of one human civilization on the foundation of which individualities will have great chance of fulfillment. The individual, as we take him, has suffered from the fact that civilization has been split up into separate units, instead of being merged into a universal whole, which seems to be the natural destiny of mankind.

TAGORE: I believe the unity of human civilization can be better maintained by linking up in fellowship and cooperation of the different civilizations of the world. Do you think there is a tendency to have one common language for humanity? WELLS: One common language will probably be forced upon mankind whether we like it or not. Previously, a community of fine minds created a new dialect. Now it is necessity that will compel us to adopt a universal language.

TAGORE: I quite agree. The time for five-mile dialects is fast vanishing. Rapid communication makes for a common language. Yet, this common language would probably not exclude national languages. There is again the curious fact that just now, along with the growing unities of the human mind, the development of national self-consciousness is leading to the formation or rather the revival of national languages everywhere. Don't you think that in America, in spite of constant touch between America and England, the English language is tending toward a definite modification and change?

WELLS: I wonder if that is the case now. Forty or fifty years ago this would have been the case, but now in literature and in common speech it becomes increasingly difficult to distinguish between English and American. There seems to be much more repercussion in the other direction. Today we are elaborating and perfecting physical methods of transmitting words. Translation is a bother. Take your poems - do they not lose much by that process? If you had a method of making them intelligible to all people at the same time, it would be really wonderful.

TAGORE: Music of different nations has a common psychological foundation, and yet that does not mean that national music should not exist. The same thing is, in my opinion, probably true for literature.

WELLS: Modern music is going from one country to another without loss - from Purcell to Bach, then Brahms, then Russian music, then oriental. Music is of all things in the world most international.

TAGORE: May I add something? I have composed more than three hundred pieces of music. They are all sealed from the West because they cannot properly be given to you in your own notation. Perhaps they would not be intelligible to your people even if I could get them written down in European notation.

WELLS: The West may get used to your music.

TAGORE: Certain forms of tunes and melodies which move us profoundly seem to baffle Western listeners; yet, as you say, perhaps closer acquaintance with them may gradually lead to their appreciation in the West.

WELLS: Artistic expression in the future will probably be quite different from what it is today; the medium will be the same and comprehensible to all. Take radio, which links together the world. And we cannot prevent further invention. Perhaps in the future, when the present clamor for national languages and dialects in broadcasting subsides, and new discoveries in science are made, we shall be conversing with one another through a common medium of speech yet undreamed of.

TAGORE: We have to create the new psychology needed for this age. We have to adjust ourselves to the new necessities and conditions of civilization.

WELLS: Adjustments, terrible adjustments!

TAGORE: Do you think there are any fundamental racial difficulties?

WELLS: No. New races are appearing and reappearing, perpetual fluctuations. There have been race mixtures from the earliest times; India is the supreme example of this. In Bengal, for instance, there has been an amazing mixture of races in spite of caste and other barriers.

TAGORE: Then there is the question of racial pride. Can the West fully acknowledge the East? If mutual acceptance is not possible, then I shall be very sorry for that country which rejects another's culture. Study can bring no harm, though men like Dr. Haas and Henri Matisse seem to think that the eastern mind should not go outside eastern countries, and then everything will be all right.

WELLS: I hope you disagree. So do I!

TAGORE: It is regrettable that any race or nation should claim divine favoritism and assume inherent superiority to all others in the scheme of creation.

WELLS: The supremacy of the West is only a question of probably the past hundred years. Before the battle of Lepanto the Turks were dominating the West; the voyage of Columbus was undertaken to avoid the Turks. Elizabethan writers and even their successors were struck by the wealth and the high material standards of the East. The history of western ascendancy is very brief indeed.

TAGORE: Physical science of the nineteenth century probably has created this spirit of race superiority in the West. When the East assimilates this physical science, the tide may turn and take a normal course.

WELLS: Modern science is not exactly European. A series of accidents and peculiar circumstances prevented some of the eastern countries from applying the discoveries made by humanists in other parts of the world. They themselves had

once originated and developed a great many of the sciences that were later taken up by the West and given greater perfection. Today, Japanese, Chinese and Indian names in the world of science are gaining due recognition.

TAGORE: India has been in a bad situation.

WELLS: When Macaulay imposed a third-rate literature and a poor system of education on India, Indians naturally resented it. No human being can live on Scott's poetry. I believe that things are now changing. But, remain assured, we English were not better off. We were no less badly educated than the average Indian, probably even worse.

TAGORE: Our difficulty is that our contact with the great civilizations of the West has not been a natural one. Japan has absorbed more of the western culture because she has been free to accept or reject according to her needs.

WELLS: It is a very bad story indeed, because there have been such great opportunities for knowing each other.

TAGORE: And then, the channels of education have become dry river beds, the current of our resources having been systematically been diverted along other directions.

WELLS: I am also a member of a subject race. I am taxed enormously. I have to send my check - so much for military aviation, so much for the diplomatic machinery of the government! You see, we suffer from the same evils. In India, the tradition of officialdom is, of course, more unnatural and has been going on for a long time. The Moguls, before the English came, seem to have been as indiscriminate as our own people.

TAGORE: And yet, there is a difference! The Mogul government was not scientifically efficient and mechanical to a degree. The Moguls wanted money, and so long as they could live in luxury they did not wish to interfere with the progressive village communities in India. The Muslim emperors did not dictate terms and force the hands of Indian educators and villagers. Now, for instance, the ancient educational systems of India are completely disorganized, and all indigenous educational effort has to depend on official recognition.

WELLS: "Recognition" by the state, and good-bye to education!

TAGORE: I have often been asked what my plans are. My reply is that I have no scheme. My country, like every other, will evolve its own constitution; it will pass through its experimental phase and settle down into something quite different from what you or I expect.