The unparalleled artistic, cultural, and intellectual upheaval in the final decades of the Austro-Hungarian Monarchy has been amply treated by a growing literature, in and out of Austria and Hungary. Much of what we call "the modernist movement" in music, literature, the arts, social thought, philosophy, and psychology was indeed started in the fertile, sensual, and decaying intellectual climate of turn-of-the-century Vienna and, also, Budapest. There was a certain playfulness and experimentalism in the air, the creative élite became attracted to novelty and invention, intellectual challenge and a call for change.

Less has been written about the link between the spiritual and artistic upsurge in that "World of Yesterday" and the subsequent post-World War I exodus of the Austro-Hungarian intellectual élite. The revolutionary movement in the arts and thought of pre-War Vienna and Budapest was radically transformed right after the collapse and dissolution of the Monarchy in 1918-1920. The modernist movement suddenly lost momentum and was transformed into a more professional, and more conservative, tradition. It was also, however, gradually relocated into other countries such as Austria, Czechoslovakia, Germany, Soviet Russia, Great Britain, and, ultimately, the United States. What follows in an attempt to show some of the characteristic patterns of this migration of intellectual and artistic experimentalism and innovative spirit, illustrated here by three creative Hungarians who contributed to US culture and civilization in some major way.

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Budapest Roots

One of the most well-known examples as to how the experimental mind emigrating from Hungary contributed to, or interacted with, American culture, is in music. All the Hungarian musicians who went to the US received their musical education at the Music Academy of Budapest, founded by Franz Liszt himself in 1875. A few remarks on the history of the Academy may help to get a better understanding of the musical and intellectual background of the innovative generation whom we may call the ‘musical grandchildren’ of Franz Liszt, the great musicians who were educated in the early decades of the century in Budapest and left Hungary between the Wars.

Liszt made a major effort to include his native Hungary into the more civilized, Western part of Europe. He is remembered today as a composer and a piano virtuoso and less for his organizational achievements in the international field of music of which Hungary benefited perhaps most. Right after the Austro-Hungarian Compromise of 1867, Liszt settled down in what was Pest, then a small, German-speaking, provincial city with a single bridge connecting with Buda (they were to be united in 1873). He stayed there from 1868 through the early 1870s and his very presence contributed to the spiritual growth of the city into Budapest. He literally handpicked the first professors of musicology, violin, cello, and some others and founded a musical tradition equal to the very best in Europe. He had both the reputation and the authority to attract some of the best people, both Hungarians and foreigners, who came to the new Music Academy at his invitation. Professor Jenő Hubay gave up a promising career in Brussels, where he worked with the great Ysaïe, to return to Budapest and founded his own school of violin at the Academy where he was to stay for the rest of his life. Professor David Popper, originally from Prague and arguably the greatest cellist before Pablo Casals, came from a distinguished position as concertmaster in Vienna to teach and perform in Budapest and with Hubay he formed a unique string quartet to present classical and contemporary chamber music, which included quartets, trios, and piano quintets by Johannes Brahms, Antonín Dvořák, Josef Suk, Karl Goldmark, and others. Professor Hans Koessler came from his native Bavaria and became the teacher of subsequent generations of Hungarian composers. Though he was conservative in his own music and a follower of Brahms, he allowed his students a great measure of freedom to write their own, modern music. His students included Béla Bartók, Zoltán Kodály, Ernst von Dohnányi, Leo Weiner, Emerich Kálmán, Albert Szirmai and several other well-known composers.²

None of these examples of late 19th century “modernism” should allow us to believe, however, that Budapest was altogether a capital of modern music.
Liszt himself was modern, the Academy much less so. His lesser-known and certainly less popular late music foreshadowed in some ways the early Bartók who himself felt “that Liszt’s importance from the viewpoint of the further development of music is greater than that of Wagner.” As he added in his inaugural address at the Hungarian Academy in 1936, “the compositions of Liszt exerted a greater fertilizing effect on the next generation than those of Wagner.” The Music Academy, however, set out to preserve classical values and nurtured conservative tastes. The ideal was the late-Romanticism of Johannes Brahms, who often came from nearby Vienna to the Hungarian capital where some of his work was first performed by the Hubay-Popper Quartet and local pianists like Vilma Adler-Goldstein. Really modern music was not appreciated: Gustav Mahler, for example, was applauded as a conductor and director of the Budapest Opera (1889–1892), yet his first Symphony written and performed during the same Budapest years was treated with almost unanimous indifference. However, some of the moderns were invited to discriminating Budapest including Claude Debussy and Giacomo Puccini so it is difficult to argue that the musical public of the Hungarian capital was not at all susceptible to the voice of the incoming 20th century.

It was in the decade that immediately preceded World War I when most modern trends swept across the country, in literature, the arts, philosophy, the social and the physical sciences. This indeed was a renaissance of Hungarian national culture and the birth of modernism in the country. It symbolically started with the poetry of Endre Ady (1877–1919) whose Új versek (New Poems) made a veritable literary revolution in 1906, and with the poetry anthology A holnap (Tomorrow) (1908–1909) with Ady, Mihály Babits, Béla Balázs, and Gyula Juhász among the most prominent names represented. The movement got into full speed with the launching of the (mainly) literary periodical Nyugat (West) in 1908 which was to become the dominating organ of the modernists through World War II, and published vintage modern poetry and prose by authors like Endre Ady, Mihály Babits, Margit Kaffka, Frigyes Karinthy, Dezső Kosztolányi, Zsigmond Móricz, Árpád Tóth and a host of others.

The literary pioneers had their counterparts in almost every other field. The art-group Nyolcak (The Eight) with Károly Kernstok, Róbert Berény, Béla Czóbel and other excellent artists were just as important members of this generation as Béla Bartók and Zoltán Kodály in music. Modernism was present in almost every field, and usually well ahead of many European countries. The very best left early, usually during or right after the revolutions of 1918–1919. In photography Hungary lost André Kertész, Brassai [=Gyula Halasz], in film, Béla Balázs who was the first major film-theoretician in the
world (Der sichtbare Mensch, 1924) and a versatile filmmaker, and other filmmakers such as Sir Alexander Korda, Michael Curtiz, and Joe Pasternak. Though making their reputation in Germany, avant-garde artists such as Sándor Bortnyik, Lajos Kassák, Hugo Scheiber, Béla Kádár returned to their native Hungary when Hitler took over in the Reich. Some stayed outside the country and left for the United States.

The immediate pre-World War I period nurtured a gifted and ambitious generation with politically liberal or sometimes leftists ambitions to change the outdated social and political system of the country. Most of the people who left Hungary after World War I were members, students, or followers of this generation. In music, they invariably came from the Music Academy and were, often, though not exclusively, Jewish. The best known names are those of the conductors: Fritz Reiner, Eugene Ormandy, George Szell, Antal Dorati, Eugen Szenkár, Georges Sebastian, Ferenc Fricsay, István Kertész, and Sir Georg Solti. Violinists from the school of Jenő Hubay included Joseph Szigeti, Stefi Geyer, Ferenc (Franz von) Vecsey, Emil Telmányi, Ede Zathureczky, and Yelly d’Aranyi.

The lists are impressive by themselves and they speak highly of the ability of many of the professors in Budapest to give not only a thorough musical training but also, often, a good sense of how to explore the contemporary world. For the post-World War I generation of Hungarian musicians, Béla Bartók and Zoltán Kodály were the great examples to look up to and follow. To understand and appreciate the importance of their legacy, it is important for us to turn to a major representative of that next generation. As Eugene Ormandy pointed out in a 1937 article for The Hungarian Quarterly, it was due to them “that Hungary has emerged as a musical entity. This Hungarian music of the twentieth century is intensely nationalistic and, while nationalistic art is of necessity limited and destined to a comparatively short life, paradoxically enough the worlds of these two composers in the very intensity of their nationalism transcend(ed) nationalistic bounds.” Ormandy added, “In the dramatic inevitability of Bartók, we have a composer who might be compared to Beethoven.” “Breaking away from the over-refined, essentially cerebral and decadent music of the post-Romantic period, Bartók has injected new life blood into his music. It has a savagery and yet withal a youthful vitality that makes it of universal importance. ... Typical of Bartók are the frequent use of arabesques, rapid, passage work, myriads of trills, leaps into strange intervals and an unsymmetrical construction.” Bartók and Kodály revived “the racial idiom of Magyar music,” Ormandy acknowledged, “to portray the distinct individuality of Hungarian music.”

The modernism of the music and ideas of Bartók and Kodály, their philosophy and lifestyle, their integrity and puritanism served, in many ways,
as a model for their students at the Music Academy, the next generation of musicians. Ormandy himself, together with Fritz Reiner and George Szell, was the very first to present the music of Bartók to audiences outside Hungary. They remained deeply committed to modern music throughout their career. Though mainly performing a classical repertoire, Eugene Ormandy also had a real interest in contemporary music such as that of Sergei Rachmaninov whose work he frequently performed for the first time with Van Cliburn and the Philadelphia Orchestra.\textsuperscript{13} He recorded other Russian composers such as Dimitri Shostakovich (Concerto for Cello and Orchestra, Op. 107), and Dimitri Kabalevsky (Concerto No. I for Cello and Orchestra, Op. 49) and regularly added works by Richard Strauss (Heldenleben, Death and Transfiguration, Metamorphosen for 23 Strings). Gustav Mahler was a natural on his program. Antal Dorati, besides being a composer himself, performed many of his contemporaries including, particularly, Paul Hindemith.\textsuperscript{14} Both Fritz Reiner and George Szell took an active interest in contemporaries. Reiner played Stravinsky,\textsuperscript{15} as well as, quite regularly, Bartók, and also pieces by William Schuman, Zoltán Kodály and Leo Weiner. Szell shared his enthusiasm for Bartók, recording his music as well as that of Gustav Mahler, Leoš Janáček, and Zoltán Kodály, and also performed Jean Sibelius, Sergei Prokofiev, Igor Stravinsky, Paul Hindemith, Sir William Walton and lesser known American contemporaries such as the young composer Lukas Foss.\textsuperscript{16}

\textbf{Szigeti}

The man who did most for modern music among the Hungarian musicians was probably the violinist Joseph Szigeti. The virtuoso was perhaps the most celebrated and well-known student of Jenő Hubay and carried the Hubay tradition literally all around the world. All his life he was most conscious of the continuity of the Brahms tradition in both Vienna and Budapest and valued this tradition he received from his Budapest professor Hubay. He recalled Budapest as a center for the discovery of talented young people like Rafael Kubelik, Franz von Vecsey, Isadora Duncan, and, somewhat earlier, Gustav Mahler and Arthur Nikisch,\textsuperscript{17} and, we may add, Hans Richter. The example of Szigeti is relevant in demonstrating the strong links between the old Music Academy tradition and the musical philosophy of the post-World War I generation.

On one occasion around 1955 Szigeti quoted a letter by Johannes Brahms to Eduard Hanslick dated December 11, 1888 inviting the music critic to come over to the Billroths’ next day “and help Hubay and myself turn pages and
play wrong notes – perhaps also to drink a good glass?” In an effort to reach out for the past, Szigeti added,

... I felt that these notes might interest the listener of our days who has been to a great extent deprived of the real 'habitat' of chamber music: the small Hall and – better still – the music room in which the congenial few gather around the players in rapt concentration. I was in my late teens when I turned pages at a rehearsal of the d minor Sonata. Leopold Godowsky and [my master] Jenő Hubay [rehearsed it] in preparation for their concert in Budapest, some twenty years after [Brahms had brought the pencil manuscript of his work to my master Hubay for] this Vienna 'try-out.' ... One has reason to feel grateful for having been born at a time when these sonatas were still a comparative rarity, when [their performances presupposed mature players] they had not yet become class room ‘material’ and grateful ‘vehicles’ for debut recitals. There were at the time no dozen – or – so recordings from which the student could choose his 'model'; ... As the rare live performances he heard were mostly by mature interpreters and took place in halls of modest proportions (world famous performers like Ysaye, Sarasate, d'Albert, Busoni played in Vienna's Bösendorfer Saal, in the old Paris Salle Pleyel in the rue Rochechouart seating barely 4 or 500, in the small 'Royal' Hall in Budapest) the intimate chamber-music characteristics of these sonatas were brought home to him... Hubay told me at the time how much these fine points meant to Brahms, how literally he took his marking[s]... 

Disapproving of Hubay's approach toward chamber-music, Szigeti also attended some of the classes in quartet playing under Budapest professor David Popper, cellist of the renowned Hubay–Popper Quartet.

Szigeti mastered practically the entire classical violin repertoire, and yet he became one of the few leading soloists in the world who was naturally attracted to contemporary music. Even the solo sonatas by Bach he started to play at the instigation of Milán Füst, a modernist poet who was his Budapest friend in their young days and became one of the leading spirits of the modernist movement in Hungarian literature and aesthetics. For him the living tradition of late 19th century music in Budapest and Vienna also implied the inclusion of contemporary music. This became evident right from the beginning, as Otto Eckermann carefully observed it as early as 1922, stating, "Mr. Szigeti is one of the few violinists who always brings novelties (the others always play the concerts which they studied in the Conservatory), and he commissioned me to look for appropriate new works." Composer Kurt Atterberg added in 1958, "It is very interesting to read just now that you were interested in new music already in 1922." "Szigeti was always eager to learn new things and to understand music from the composers' point of view: 'For what would the lives of mere interpreters be without the fertilizing influence of this vital contact with »Work in Progress?«' Szigeti believed that artists grew from their autosuggestive insights and stated, 'If we concede — as
I am inclined to do — an important role to this autosuggestive faculty in our work, what better schooling in it than commerce with new works and their composers?” Eugene Ysaye said of Szigeti’s art after World War I, “I found in Szigeti that rare combination of musician and virtuoso. As an artist he seemed conscious of a high mission into which he put all his faith, and he placed technique entirely at the service of musical expression.”

At 80, he was awarded the George Washington Award of the American Hungarian Studies Foundation for identifying “himself with the new, untried and progressive,” giving of himself “unstintingly so that a significant new voice in music might be heard.” More contemporary composers of all nationalities dedicated their work to, or were commissioned by, Szigeti than perhaps any other contemporary soloist. Often at an early stage of their career, he readily lent the power of his charisma to Hungarians such as Béla Bartók, Pál Kadosa, Antal Molnár, Americans like George Templeton Strong, Russians such as Nikita Magaloff and Sergei Prokofiev, the Armenian Aram Khachaturian, Irishmen like Sir Hamilton Harty, Englishmen like Alan Rawsthorne, the Italian Alfredo Casella, the Lithuanian–Jewish Joseph Achron, the Swiss Ernest Bloch, and the Polish Alexander Tansman. He considered it important to keep a whole series of contemporary music on his program, such as work by the Polish Karol Szymanowski, the French Albert Roussel and Darius Milhaud, the Roumanian Filip Lazar, the Russian Igor Stravinsky, the Italian Ferruccio Busoni and Ildebrando Pizzetti, as well as the Englishmen Sir Edward Elgar and Sir Arnold Bax, and, later, the American David Diamond, Charles Cadman, and Henry Cowell. He also worked in close collaboration with both Paul Hindemith and Igor Stravinsky. There was a great deal of the Liszt tradition continued in these gestures. He often invited composers to appear in recital with him performing their own work “thus creating a little oasis in a recital program where the composer and not the reproducing artist is the center of interest.” In the 1950s, he repeated a number of series entitled “20th Century Cycles” in several US universities and music centers, which he recalled as a “pleasure evening series of eleven contemporary master-pieces, entitled ‘Sonatas of the 20th Century.’ I give this series about fifteen times on different campuses in America and also in Zurich and over the Italian Radio in 1959. I recorded it for the Swedish Radio.”

In cases where he could not promote a contemporary work himself, he did everything in his power to make other artists interested, as it happened for example in the case of Gian Francesco Malipiero’s Concerto for Violin and Orchestra which he showed “to my friend, Maestro George Szell,” as well as to Leopold Stokowski in New York and Henri Barraud at the Radio Diffusion Française in Paris. By carrying the tradition of an active interest in the
contemporary, Szigeti made an example to his entire generation throughout a long and productive life. As Manoug Parikian saluted him in *The Royal Academy of Music Magazine* on his 80th birthday in 1972, "All this would seem commonplace in these days of over-consciousness of contemporary music; in the 1920s and 1930s, in the midst of virtuoso-type recitals and endless repetitions of the same five or six concertos it was a brave crusade. His deep knowledge and understanding of the spirit of Bach, Mozart and Beethoven was as important as his search for new music."

In the US, Szigeti's delayed popularity has been attributed to the slow growth of intellectual sophistication in American audiences. His was a long and tedious journey toward making contemporary music recognized in the country. His pioneering efforts in front of select audiences of metropolitan music halls, enterprising campus groups and on élitist radio programs were often unnoticed and at best not remembered. When he received a copy of Henry Cowell's new *Sonata for Violin and Piano* (1945) from the Publishers asking him to perform it, Szigeti ironically noted on the cover letter, "They sent me this Sonata which was written for me and which I had premiered at Carnegie!! Machine-made 'promotion'..." Gelatt asserts that this fact "...detracts nothing from Szigeti's personal achievement. For no one has contributed more to that growth than the violinist himself." He was of course often criticized for his programming. "Playing the Roussel *Sonata No. 2* once lost Szigeti a prospective manager who heard him perform at Carnegie Hall. Modern composers do not sell programs, Szigeti was promptly informed. Recalling this incident Szigeti wrote, 'needless to say I was entreated once again to mend my already notoriously incorrigible ways of programming.' Yet, his pioneering efforts led to a break-through even in the US where his philosophy of musical programming came through triumphantly when playing the world premiere of the Bloch *Concerto* in Cleveland in 1938; Bartók's *Contrasts* with Benny Goodman and the composer in Carnegie Hall in 1939; Prokofiev's *Sonata in D*, op. 94 in Boston in 1944 and his *F minor*, op. 80 in San Francisco in 1946; and premiered Prokofiev's *Concerto in D* and the Ravel *Sonata* in the United States.

For one particular contemporary composer, self-exiled Béla Bartók, Szigeti did more in the United States than perhaps anybody else between 1940 and 1945. Their friendship started in the 1920s. They then toured together in Berlin in 1930. Szigeti used his connections to make Bartók's music available and popular to audiences in the US. He appeared with Bartók in recitals at the Library of Congress and played with the newly arriving Hungarian composer in 1940 in the Carnegie Hall. He was in touch with leading US conductors such as Leopold Stokowski and tried to get Bartók's American compositions performed. Szigeti was one of the loyal supporters of Bartók during his last
illness and tactfully helped the poor though proud composer to receive help from wealthy patrons such as Mrs. Elizabeth Sprague Coolidge in 1943. He was ready to be at Bartók’s disposal to the very last when the terminally ill composer requested his help to interest conductors in his Piano Concerto, the third and last he composed. After Bartók’s death, Szigeti served as one of the trustees on the board of the Bartók Archives in New York.

Joseph Szigeti lived most of his adult life abroad though he visited Hungary regularly to the end of his life except for a gap after World War II. Characteristically, the Leningrad (today: St. Petersburg) Conservatory headed by the famous composer Alexander Glazunov thought of him in 1928 as the right candidate to succeed the great Hungarian-born Maestro Leopold Auer as their violin professor, an invitation which he did not accept. (After several decades as the head of the institute, Glazunov himself left the Conservatory that same year to live abroad.)

Throughout, Szigeti maintained excellent relations with Hungarian musicians and helped a number of them start their own careers. He was instrumental in launching the career of cellist Janos Starker at the Indiana University School of Music when he stated in a letter of recommendation to Dean Wilfred C. Bain that Janos Starker is “not only a superb virtuoso but a sound musician, versed in all fields of chamber music and a man who, in his conversations with me on technical matters, revealed himself to be a thinking pedagogue and theoretician.” He was glad to be associated with Hungarian causes, and, together with Arthur Koestler and Nobel Laureate Albert Szent-Györgyi, was acknowledged by the honorary membership of the Association of Hungarian Authors in Foreign Countries, located in London, right after the revolution of 1956. Newcomers from post-1945 Hungary such as pianist Tamás Vásáry were glad to register their homage to the maître. Szigeti found it important to publish his autobiography in Hungarian as well thinking that “this new Hungarian intelligentsia should get to know me a little.” He asked Hungarian–American diplomat Andor C. Klay how he felt about it and Klay’s answer was most enthusiastic: “I have found that they know about you to a degree which is surprising in the light of your long absence from Hungary and their long years of isolation from the West. I recall examples from Camp Kilmer when I visited there in order to select some refugees to form a delegation which could be presented to the President and the Secretary. I raised various questions, ranging from the political to the cultural, in order to gauge their range of knowledgeability. Your name was repeatedly mentioned; I made a firm mental note of this. (No one knew, however, that you were living in the United States.)”

Szigeti always tried to include Hungarian pieces in his US programs and even his most popular ones such as the People’s Symphony Concerts on CBS
included a Scène de la Csárda by his master Jenő Hubay, Rhapsody in C by Ernst von Dohnányi and a piece by Bartók played together with the composer.  

Moholy-Nagy

Comparable in many ways to the achievement of Szigeti in the performing arts was the New Vision of László Moholy-Nagy, a most dramatic testimony to the significance and range of the modernist contribution in the visual arts from Hungary. Coming from the same generation of Jewish Hungarians, Moholy-Nagy (1895–1946) was probably the most versatile among the Hungarian artists, being an architect, photographer, designer, prolific author, and filmmaker. Together with fellow-Hungarian Marcel Breuer, he was a founding member of the Bauhaus school first in Germany and later, in 1937, in Chicago. Moholy became a pioneer in a number of diverse fields such as non-figurative, geometric art, in kinetic sculpture, typographical design, as well as in photography. Bauhaus founder and lifelong friend Walter Gropius also approached Moholy-Nagy's abstract art, his “new vision,” in musical terms at the opening of the Moholy-Nagy Exhibition at “London Galleries,” at the very end of 1936, providing one of the most lucid and rational explanations of abstract art ever given.

You know that musical work, a composition, consists, just like painting, of form and content. But its form is only in part a product of the composer, for in order to make his musical ideas comprehensible to any third person, he is obliged to make use of counterpoint which is nothing more than a conventional agreement to divide the world of sound into certain intervals according fixed laws. These laws of counterpoint, of harmony, vary among different peoples and in different centuries, but the changes are very slow... In earlier days the optical arts also had firm rules, a counterpoint regulating the use of space. The academies for art which had the task of keeping up and developing these rules, lost them – and art decayed. Here the abstract painters of our day took up the threads and used their creative powers to conquer a new statutory law of space. This new counterpoint of space, a new vision, is the core of their achievement.

Gropius described Moholy-Nagy's whole work as “a mighty battle to prepare the way for a new vision, in that he attempts to extend the boundaries of painting and to increase the intensity of light in the picture by the use of new technical means, thus approximating nearer to nature. Moholy has observed and registered light with the eye of the camera and the film camera, from the prospective of the frog and the bird, has tried to master impressions of space and thus developed in his paintings a new conception of space.”
Indeed, Moholy-Nagy was a most intense and insightful observer of the "modern" world of the 1920s and 1930s. Like some of the very best of his generation, he went very far in the visual exploration of form, construction, spacial relationships, and light effects.50 "We might call the scope of his contribution 'Leonardian,' so versatile and colorful has it been," Walter Gropius eulogized him at his Chicago funeral in 1946.51 "His greatest effort as an artist was devoted to the conquest of pictorial space, and he commanded his genius to venture into all realms of science and art to unravel the phenomena of space. In painting, sculpture and architecture, in theater and industrial design, in photography and film, in advertising and typography, he constantly strove to interpret space in its relationship to time, that is motion in space."52

What Gropius tried to explain particularly was the source of Moholy-Nagy's modernism, the basis of his deep and enthusiastic interest in anything new. "Constantly developing new ideas he managed to keep himself in a stage of unbiased curiosity from where a fresh point of view could originate. With a shrewd sense of observation he investigated everything that came his way, taking nothing for granted, but using his acute sense for the organic."53

"Many of us will remember his peculiar freshness when he was facing a new problem in his art. With the attitude of an unprejudiced, happy child at play he surprised us by the directness of his intuitive approach. Here I believe was the source of his priceless quality as an educator, namely his never ceasing power to stimulate and to carry away the other fellow with his own enthusiasm. What better can true education achieve than setting the student's mind in motion by that contagious magic?"54

Just like many other contemporary artists of the early 20th century representing varied brands of modernism, Moholy was aptly described as a technical pioneer "who was fascinated and stirred by the dynamic pace of the machine age. His élan vital thrived on the tempo and the motorized rhythm of big-city life."55 He deeply believed in the new unity of art and technology.56 The big European and American metropoles exerted an unmistakably "modern" influence and left a lasting imprint on his whole generation. The great experience of Moholy's life, too, was the big city and the continuous mechanization of the world and human life with it. For him, modern man's structure was indeed mechanical, "the synthesis of all his functional mechanisms."57 "Man is unique in the insatiability of his functional mechanisms, which hungrily absorb every new impression and never cease to crave for more. This is one reason for the continuing need for the creation of new forms," he went on explaining his artistic philosophy in his Malerei, Photographie, Film.58 As an artistic expression of his functionalist artistic philosophy, Moholy-Nagy
experimented with what he called the "space modulator," a pioneering optical-kinetic sculpture pointing towards a new art form. Some of his other ideas contributed significantly to new branches of knowledge such as cybernetics and semantics.

Experimentation was a natural in Moholy's whole life, starting with his participation in the Ma group in Budapest and his cooperation with Lajos Kassák. But it was in Germany, in the early Bauhaus period that his experimenting qualities started to blossom and young Moholy became particularly productive.

A primary example is his discovery of a new kind of creative photography, a new artistic discipline. He became convinced that photography came to replace painting in representing reality. In his painting, he was striving for "organized order." In his photography he proved to be a superb master of new techniques, but his photographs became artistically significant really through "his completely novel and individual manner of looking at familiar things - the use of bold foreshortening, unusual angles, and superimposed light-dark structures, such as the shadow of a net or a fence." His growing reputation made Sir Alexander Korda request that he do the special effects for his The Shape of Things to Come, based on a novel by H. G. Wells.

His experimental photography gave fresh impetus to advertising techniques. To this end, he renewed the art and technology of typography as well, in order to create a new form for communicating messages. He suggested that "printing processes had not undergone a significant change, either technically or aesthetically, since Gutenberg's time, and that the printed image should be made lively and interesting and should be brought up to date to make it worthy of the twentieth century." Here again, his innovative spirit was almost preoccupied with "modern technology and the use of machines. To express the character of the technological age, contemporary products of the printing industry will have many points in common with the latest machines, i.e. they will have clarity, compactness and precision. ... Opportunities for innovations in typography are constantly developing, based on the growth of photography, film, zincographic and galvanoplasic techniques. The invention and improvement of photogravure, photographic typesetting machines, the birth of neon advertising, the experience of optical continuity provided by the cinema, the simultaneity of sensory experiences - all these developments open the way for an entirely new standard of optical typographic excellence; in fact, they demand it."

Though Moholy-Nagy in his American years continued to do the experimental art of his German Bauhaus period and gradually became a very influential teacher of his ideas, he, just like Szigeti, had a long fight for the
recognition of the modern in the United States. It all started very promisingly. While a refugee in London, in May 1937 he received a telegram from the Industrial Artists Association saying “starting industrial design school in fall [-] backed by industrialists [-] modest beginning but real opportunity to establish project along lines bauhaus [-] looking for head [-] gropius recommends you highly [-] would you consider it [-] at what figure [-] cable.” The idea to invite him came from his mentor Walter Gropius, then Chairman of the Department of Architecture at Harvard, who worked out even some of the details with the people in Chicago. For Moholy this sounded like intellectual salvation, as in London he had bitterly complained that “from a spiritual point of view one can reach here nothing or only the minimum and that every stimulus and every excitement is missing.” He was also anxious to get back and work in a school just as in the old days of the Bauhaus. Now the chances were good to build up an American version of the Bauhaus in Chicago and Moholy eagerly answered, “for plan highly interested [-] please send more details.”

His friend Walter Gropius, then 60, was most optimistic about the US environment. “We feel very well;” he wrote to Moholy shortly afterwards, “a lot of the aspects of our stay here are brilliant, and I think if we succeed in making good use of our chances something will be allowed to be built here.” He called America a “pleasant continent,” and gave details as to the Chicago plans based on the money of department-store-millionaire Marshall Field and located in one of his buildings. One of the crucial points of Moholy-Nagy’s candidacy was his many relations with British and German industry, and firms like Simpson and International Textile, as well as Julian Huxley were provided as references. Huxley gave “a magnificent testimonial” saying how sorry he was to see Moholy leave England. Moholy characteristically noted, “Nevertheless we have the notion that every Englishmen feels easier and less responsible if we get such offers from America.” In fact, it was Huxley’s personal relationship with the President of the Board of Trustees of the Association of Arts and Industries, E. H. Powell, that ultimately helped the artist to get his contract.

After what he labelled [this] “enervierenden kleinkram hier,” Moholy was eager to leave Britain and relocate, as it were, the Bauhaus spirit in Chicago. “Everything calls here for a better design in industry,” Gropius underlined the nature of the new job he helped to find for Moholy. He planned four classes in industrial art, in metal, wood, “typo-photo-film (commercial graphic),” and textile. Gropius suggested that he would “be given free hand to develop the thing in a direction as you like fit.” He also thought Moholy could put together his faculty as he pleased and the opportunity to start from scratch seemed to have particular advantages.
Moholy put enormous energies into what became officially called “the new bauhaus – American School of Design, founded by the Association of Arts and Industries.” First he had to fight for the very name bauhaus itself, for he thought that since the Americans had adapted weltanschauung, why couldn’t they have bauhaus as well. Immediately, he wanted to become part of the Bauhaus exhibition of the Museum of Modern Art at the Rockefeller Center in New York. He also intended to continue the old Bauhaus book series, particularly as the Nazi takeover closed the German market for the Bauhaus publications. He shared, however, the opinion of Gropius who saw great potentials in bringing over the Bauhaus to the US but considered it essential to adapt its methods to the country and to the character of her people.

*The new bauhaus* was finally opened in Chicago on October 18, 1937, “at the announced time,” as Moholy proudly reported to Gropius. He was pleased with his first experiences which he found interesting, particularly as he had earlier considered the Americans not clever enough and he had to realize how mistaken he had been. “Their intellectual standard, the quick copying of the facts is fascinating. Only their capacity of experiences must be enlarged, I think. They eat knowledge really with the spoon, with large, real, round soup spoons.” He persuaded some of the very best available people to join his faculty, including Archipenko for modeling, David Dushkin for music, the journalist Howard Vincent O’Brien to lecture on “the meaning of culture,” as well as three professors of the University of Chicago, Charles W. Morris to teach “intellectual integration,” Ralph W. Girard for life sciences, and Carl Eckart for physical sciences. “Kepes will arrive, with all the gods’ help, in the middle of November,” he added to the list.

The first academic year was successful. By the end, however, it brought about financial difficulties to an extent that Moholy-Nagy was advised by the Association of Arts and Industries to tell his faculty that if they were offered other positions “they should take them because the Association’s financial position made it probable that we would not open next semester.” Moholy-Nagy felt especially bitter about experiencing a typical émigré situation: “After I and my teachers were asked by the Association of Arts and Industries to come to this country and after we have shown every possible amount of good will, that the reason why she [Miss Stahle of the Association] could not raise money for the school was the resentment against foreigners in this country.” The school started to disintegrate: teachers were dismissed, the necessary equipment was less and less available. Moholy felt he had to look for other sponsors and get out of the Association. Gropius called the story “the first case of Chicago gangsterism that we experienced in actual fact,” and tried to use his prestige to help. Moholy, however, thought he should solve his own
problems "without bothering my friends." He added emphatically at the end, "America was always a country of pioneers and there is no doubt my next time will be a justification of this term."\(^80\) The students, about sixteen, showed "wonderful enthusiasm to continue the Bauhaus,"\(^81\) and though Moholy felt compelled to send farewell notes to his colleagues, he continued to fight for their survival. "Now sometimes I think why is to fight? As stranger in a foreign country! But I found such a great enthusiasm everywhere I go for the Bauhaus that I think it would be a pity to drop it. Also the last year I felt that I grew really, more and quicker than in the past 5 years all together."\(^82\) Oddly enough, he felt at home and, correspondingly, he wrote most of his letters, even the ones to Gropius, increasingly in English.

At Christmas 1938 the situation was still unchanged and Moholy’s wife Sybill complained bitterly to Mr. and Mrs. Gropius, "Es ist immer und immer die alte schmutzige Geschichte mit ihnen..."\(^83\) Moholy himself wrote a few days later a long letter to The New York Times and gave it a detailed story of their humiliation. Soon he was able to gather enough support and it became possible to open the school again under a new name, School of Design, at a new address, starting February 22, 1939. The “Sponsors’ Committee” included distinguished names such as Alfred H. Barr, Jr., Walter Gropius, and Julian Huxley. Soon he was able to offer a summer course for 1940 and a series of evening lectures for 1939–1940. By Christmas 1939 the storm was over and Moholy confidently reported to Gropius, “Indeed the school looks fine. We have much more and better machines and equipment than we had on Prairie Avenue [the location of the new bauhaus in Chicago] and as good luck, my public lecture on ‘The New Vision and Photography’ drew about two hundred and twenty people and was very well received.”\(^84\) He was also able to secure a grant of $10,000 from the Carnegie Foundation and again $7,500 somewhat later, and this was a major triumph.\(^85\) Characteristically, at this point he planned to invite Stravinsky to lecture and perform at the School. By March 1, 1942 the School had 120 students “which is absolutely wonderful as it is 20% more than last semester and so many art schools and colleges have lost rather than gained students.”\(^86\)

The School was blossoming when leukemia claimed Moholy’s life in 1946.\(^87\) Robert J. Wolff commented on the book by Sybill Moholy-Nagy on her husband, “Laszlo Moholy-Nagy will perhaps be best remembered as the man who not only helped to formulate one of the most vital manifestos of our time, but who, unlike many of his brilliant Bauhaus colleagues, had the power and the faith to fight to the point of death for the social implementation of the brave young words of the original Bauhaus documents.”\(^88\)
Von Neumann

For a third and last look at the relocated fine, experimental minds of Hungary there is the case of John Von Neumann (1903–1957). The son of a rich and upwardly mobile Budapest banker, Von Neumann “was very much a Budapest type,” a “good Budapester of his time and social class,” as his longtime friend and fellow Hungarian, economist William Fellner noted. Though also of Jewish origin, the great mathematician had little to fear, even in Horthy’s Hungary after 1919–1920. His upper-middle class and well-connected family fled to Austria during the Soviet-type Republic of Councils of the Spring and Summer of 1919. Unlike most fellow-Jewish-Hungarians he was not victimized by the _numerus clausus_ quota system set up by the incoming Horthy administration and was accepted at the University of Budapest in 1921. Yet he almost immediately left for Berlin, Göttingen and, later, Zürich where he became a student of those prestigious universities and their professors, including Albert Einstein and David Hilbert. His is an important case to help us better understand the situation after 1919–20. Not only were Communists, Leftists, Radicals, and simply Jews victimized by the consequences of the dissolution of the Austro–Hungarian Monarchy, the revolutions of 1918 and 1919, and the ill-designed Peace Treaty of Trianon (1920) that partitioned Hungary herself. Whether or not they were technically harassed by rightwing thugs or stopped in their careers by the anti-Semitic _numerus clausus_ legislation of 1920, the devastating aftershocks of World War I left little or no chance for major creative talents to develop their abilities and forced them to leave the country. Hungary, and to a lesser extent Austria, ceased to provide the shelter where genius had been produced, nurtured, and educated over the previous several decades. Modernization was no longer possible, and it was not even wanted. Economic development came to a stop, there was no money available, and in the ensuing spirit of neo-conservatism, the prevailing political and social forces pushed out most of the people who were to introduce new ideas. After Trianon, progress was no longer the creed and cry of the post-War generation which was influenced by the various shades of conservative thought of Ottokár Prohászka, Gyula Szekfű, or Cecile Tormay.

First invited to Princeton in his late twenties, John Von Neumann was certainly one of those who, in the words of his friend and first biographer Stanislaw Ulam, desired “to blaze new trails and to create new syntheses.” Ulam distinguished this group of mathematicians from those who wanted to contribute “to the edifice of existing work” and added: “It was only toward the end of his life that he [Von Neumann] felt sure enough of himself to engage freely and yet painstakingly in the creating of a possible new mathematical discipline,” namely the theory of self-reproducing automata, as Ulam put it.
Stanislaw Ulam may have been right from a purely mathematical point of view, though he should have added Von Neumann’s pioneering studies on the theory of games and economic behavior, or his last efforts on the mathematical modelling and interpretation of the brain. But the real “modernism” of Von Neumann is indeed an all-embracing feature of his entire work and Weltanschauung. Von Neumann brought his (and his family’s) optimism and faith in technology and modernization to the United States from some of Hungary’s best years of economic development. He thought of new technology as something basically beneficial: developments in technology captivated him to such an extent that “he could barely find the time to work out his highly innovative mathematical ideas.”

Von Neumann’s optimism, his belief in “progress” was rooted essentially in a 19th century European tradition which had been based on French Enlightenment philosophy as well as the thinking of Charles Darwin and Herbert Spencer and transmitted continuously by the best Hungarian gymnasia. The celebrated Sándor Mikola (1871–1945), the dominating physics teacher and later principal of Von Neumann’s Budapest high school, based his entire textbook *A fizika gondolatvilága* (The Mind of Physics, 1933) on the underlying philosophy that “starting from some basic qualities, human spirit is in constant progress.”

When and why did Von Neumann turn from pure mathematics toward artificial and natural automata, “computing machines” and the brain? Some time during the early 1940s he realized that the safety of a system is not so much dependent upon the nature of its constituent elements but rather on its organizational principles, its complexity, and the quality and quantity of the information processed by it. His turn toward the theories of control and information was highly motivated and influenced by regular contact with his mentor and friend Rudolf Ortvay (1885–1945), professor of physics in the University of Budapest. Many of the ideas that came to captivate Von Neumann’s mind through the 1940s and 1950s originated in his long correspondence with Professor Ortvay who considered it his special duty to support and encourage young and talented people both in and out of his physics seminar. In his 1939 letters from Budapest, Ortvay literally pushed his young Princeton friend into dealing with complex issues such as the axiomatic method, the theory of games, computing machines, and particularly brain research.

Though it would be misleading to overestimate Ortvay’s influence, it did prove to be profound and lasting especially for two reasons: it was pertinent to the philosophical foundations of Von Neumann’s future work and it came just on the eve of World War II which gave Von Neumann’s interest an entirely new focus.

From the very early 1940s, the war effort directed Von Neumann’s work toward a whole series of new problems mostly related to defense, the struggle
against Nazi Germany, and, finally, the Cold War. The war years put him on an unending trail of government connections, starting, as of 1940, with his membership in the Scientific Advisory Committee of the Ballistic Research Laboratories, and his consultancy with the Navy Bureau of Ordnance as well as with the Los Alamos Scientific Laboratory. By the time he became one of the Atomic Energy Commissioners in 1955, he was invited to serve on some 20 other defense-related boards and committees working on very practical issues for the US Armed Forces, and particularly for the Air Force and the Navy. This impressive number of government commissions resulted in a wide array of pioneering tasks of a highly technical and practical nature where his experimental mind and engineering abilities were at their best. The list included the National Security Agency, the Central Intelligence Agency, the Weapons Systems Evaluation Group, the RAND Corporation, as well as nuclear research centers such as the Oak Ridge and the Livermore Laboratories and the Sandia Corporation.96 Toward the end of his life Von Neumann became one of the nation’s top defense experts involved in dozens of projects highly innovative and experimental in nature. When the newly established Enrico Fermi Award was conferred on him, almost too late, in 1956, he was applauded primarily for his contributions “to the art and science of the design and application of fast electronic calculating machines,” and was cited as “teacher, inspirer and original contributor to the profound problems of the logic of programming for the most effective use of these expensive and elaborate devices.97

It is probably justified to consider the computer a product of the war effort and the Cold War atmosphere. It became central to Von Neumann’s thinking also during World War II. His correspondence with Professor Rudolf Ortvay seems to suggest that the idea was first brought up by Ortvay from Budapest in early 1941.98 It was also Ortvay who, repeatedly from 1939 through 1941, hinted at the importance of brain research and the mechanism of the nervous system as a whole, providing a number of useful starting points for an elaborate research project.99 “I looked into your paper on [the theory of] games again...,” Ortvay wrote to Von Neumann in January 1941. “I liked it at the time very much as it gave me the hope that if I succeeded in directing your attention toward the connection of the brain-cells, you might be able to expose this problem.”100 Though war-related issues certainly contributed to Von Neumann’s development of large computing machines, such as ENIAC, EDVAC, and chiefly, JONIAC, it is highly likely that Ortvay’s encouragement and ideas had a fair share in alerting him to the links between complicated automata and the human nervous system. Even though his first major article in this field, “The General and Logical Theory of Automata,” was read as a
lecture only after the war, at the Hixon Symposium in September 1948, the roots of his experimental interest in automata and brain theory go back to the immediate pre-war years. Thus, his celebrated though tragically undelivered Silliman Lectures at Yale University, published as a booklet only after his death, in 1958, were partly built on the very ideas first brought up by Ortvay in their correspondence almost 20 years before. Nevertheless, no credit was given to Ortvay in the little book, or, indeed, by Arthur W. Burks in the edited text of Von Neumann’s *Theory of Self-Reproducing Automata*.

It is therefore possible to argue that Von Neumann’s long-standing experimental interest in automata and the nervous system, probably his single most important contribution to modern science, has its origins in the immediate pre-war years and in his continued links to Budapest colleagues such as Rudolf Ortvay. It is evident that the potential to deal with these issues was already there in his younger years and in his very first papers on the theory of games. The genuinely innovative character of his research and inquiry was only deepened and accentuated, rather than produced, by World War II and his long stay in the United States which, just as in so many other cases, helped to bring out the best indigenous qualities of the immigrant European mind. The spiritually liberating yet intellectually reinforcing two-way effect of leaving conservative Hungary and entering the US can be considered a most typical experience of Hungarian-American intellectual migrations.

"Commentators on American traits delight in quoting De Crèvecoeur’s classic remark that ‘the American is a new man who acts on new principles.’ To the many aspects of American exceptionalism and uniqueness one may add perhaps an often neglected though basic secret of innovative immigrant success in 20th century US: the genuinely heart reception given to the pioneering spirit, inconceivable in any European country at the time, the sheer sensation caused by the profoundly hospitable welcome to new ideas, novel approaches, fresh methods, unexplored dimensions of the human mind. Productive abilities were incomparably more readily welcomed, eagerly appreciated, and carefully accommodated, indeed, institutionalized, in the US than in the threatening atmosphere of totalitarian and dictatorial systems prevailing all across Europe, including the calamities of World War II, and the subsequent threats of the Cold War.

Though often overlooked, one of the very special forces that drew a large number of major people to the US in this long period of time from the 1930s into the 1980s was not just material benefits but the uniquely appreciating American welcome which liberated the innovative spirit and experimental eagerness for fresh inquiry from several generations of European scientists, scholars, and artists. For non-conventional minds such as those coming
from Hungary, this provided features and stimuli they so very badly missed in their homeland. Increasingly, the US represented the exhilarating experience once offered by turn-of-the-century Paris to the earlier generation of the Hungarian poet Endre Ady who felt "noble, fair, and great" not "beside the Danube [where] a demon army jibes and screams," but "beside the Seine" only.¹⁰⁴

Notes


6. Film director George Cukor was born in the US.


13. See Ormandy's correspondence with Princess Irina Sergeevna Volkonskaia, the daughter of Sergei Rachmaninov, 1955–1968; Columbia University, Butler Library, Rare Book and Manuscript Library.
14. Interview with Antal Dorati in the Paul Hindemith Project, Yale University, Yale School of Music, Oral History Collection.


22. Otto Eckermann to Kurt Atterberg, June 24, 1922, quoted in Kurt Atterberg to Joseph Szigeti, Stockholm, July 28, 1958, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 1, Folder 4. [English translation of a German translation by Atterberg.]


26. Diploma of the George Washington Award, April 19, 1972; Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 4, Folder 3.

27. Szigeti assisted by Nikita de Magaloff, Programme for June 13, 1935, Queen’s Hall, London. Inside: A Few Contemporary Works from Szigeti’s Repertoire. Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 2, Folder 1. See also V. Bazykin to Herbert Barrett, November 12, 1943, on Aram Khachaturian, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 1, Folder 3. Szigeti added to Bazykin’s signature in pencil: “in the meanwhile, he became Ambassador.”

28. Joseph Szigeti Memorial Exhibition, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 6, Folder 2.


30. Joseph Szigeti to Ralph Vaughan Williams, April 10, 1957, Boston University, Mugar Memorial Library, Box 1, Folder 4.


37. Ibid., 6-7.
41. Joseph Szigeti to Wilfred C. Bain, Palos Verdes Estates, CA, January 22, 1958, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 1, Folder 4.
42. Joseph Szigeti to Magyar Írók Szövetsége, Céligny (Geneva), November 17, 1958, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 1, Folder 4.
43. Tamás Vásáry to Joseph Szigeti, Chardonne, October 26, 1960, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 1, Folder 4.
46. Columbia Concerts Corporation of CBS to Joseph Szigeti, New York, December 31, 1940, Boston University, Mugar Memorial Library, Joseph Szigeti Papers, Box 1, Folder 3.
47. Moholy-Nagy’s films, lesser known today, included Berlin Still Life (1926), Marseille vieux port (1929), Lightplay: Black, White, Gray (1930), Gypsies (1932).
53. Ibid.
54. Ibid.
57. Laszlo Moholy-Nagy, Malerei, Photographie, Film (München, 1925), 23., quoted by Eberhard Roters, op. cit., 165.
60. Ibid., 172.
64. Ibid.
76. Laszlo Moholy-Nagy to Walter Gropius, Chicago, October 20, 1937, loc. cit.
78. Moholy-Nagy to Executive Committee, August 16, 1938, loc. cit.
86. Laszlo Moholy-Nagy to Mr. and Mrs. Walter Gropius, Chicago, March 9, 1942, Harvard University Libraries, The Houghton Library, Walter Gropius Papers, bMS Ger 208 (1221).
87. Moholy’s last available report on the school is dated September 27, 1943, and is most optimistic. Harvard University Libraries, The Houghton Library, Walter Gropius Papers, bMS Ger 208 (1221).
93. Steve J. Heims, op. cit., 118.
94. Ibid., 127, 409, quote 122.