Composing for the Media: Hanns Eisler and Rockefeller Foundation Projects in Film Music, Radio Listening, and Theatrical Sound Design

By James Tobias

Professor, English Department, Program in Film and Visual Culture
University of California, Riverside
1326 Industrial Street, #205
Los Angeles, California 90021

james.tobias@ucr.edu

Chapter 1
Introduction: Methods, Goals, and Summary Conclusions

Hanns Eisler and Theodor Adorno's *Composing for the Films* (Oxford University Press, 1947) remains a standard textbook reference on the problems and problematics of composing music for the commercial film. The textbook is essentially an expanded treatment of Eisler's motivations, observations, and conclusions, informed with Adorno's critical judgments of music and musical effects in the contemporary moment, in regards to his Film Music Project in which Eisler composed new scores for a variety of existing films, from animated short to documentary to narrative feature. The project was funded by the Rockefeller Foundation and administered

from 1940 through 1942 at the New School for Social Research located in New York City. But the relationship of the text to the project has long remained unclear. Since Adorno was not technically involved in the Film Music Project, the kind and degree of his contributions to *Composing for the Films* has been a matter of speculation. This confusion is related to another, more important set of questions relating to the methods of the project itself, which have persisted as the text has become a canonical reference in studies of film music over the past 60 years.

While the text's usefulness has historically been seen to rest in the ways in which it aimed at providing a critique and to some degree an alternative methodology to dominant practices of Hollywood film music production – an alternative which would place film music neither in the overt performance mode of the musical nor the largely secondary position of supplying "mood" for largely image – and dialogue-based narrative features – critics have complained over the intervening half century since its publication that the text itself fails on both these counts. Charges that the text is repetitive and, poorly formed as critique, have plagued the work since before its publication (see below); and as recently as 1998, musicologist Nicholas Cook maintained that while Eisler proposes a mode of structuring the relations between image and music that would be antithetical to the dominant classical Hollywood practice, nevertheless the composer simply reversed the specific function of film music from illustrative parallelism to agitative counterpoint, failing to either explain how meaning arises in the combination of sound and image or to broaden film music practice as a result of achieving such an understanding. It's true that Eisler attempted to reverse "parallelism" with "counterpoint," to create film music that would work against the image and destabilize the ideological dominants working through the techniques of mediated vision; though it should also be mentioned that Eisler certainly claimed usefulness for both parallel and contrapuntal methods.

But a central problem lurks: why should music in film be the vehicle for either parallelism or counterpoint? In other words, why, in a theoretical sense, should music be taken up as the missing element that completes the film, and in completing it, warranting its aesthetic value? Especially in the case of Eisler, whose Rockefeller Foundation-funded Film Music Project revolved around re-scoring already edited film sequences, the usual Hollywood composer's complaint that music was too often treated as a secondary and inessential element was turned on its head. In effect, while Eisler's goals for the film music project putatively revolved around raising standards for composition in film music, there is a reverse metonymy operating in its logic – music comes in to stand, not for the film itself, but for the art of film more broadly, since film suffers as an art if its music is not worthy. A logic of musical exceptionalism circulates through the pages of *Composing for the Films*.

That text's claims of the power of music composition to elevate film aesthetics, that is, in that context, to make entirely contemporary the resources available to the technically mediated work of mass culture and bring to cinema its optimum aesthetic and cultural effect, turned not only on the recent technological maturity of sound film, but also stemmed from the contradictions inherent in the film production process where multiple creative personnel labored on a multimedia work for mass audiences (generally, in the case of cinema, resolving primary authorship of the completed work in favor of the director, not the composer or the writer, as opposed to television conventions, which grant significant authorial authority to the producer as opposed to the director). Further and more fundamentally, the logic of Eisler and Adorno's commentary depended on music's ambiguous capacities for articulating representational meaning in the visual mimesis of "reality" captured in a pro-filmic image. The notion that a work of mass culture circulating among broad cross-sections of national and international

populations fails to offer redeeming social values, or worse, actively compromises common sense values or indeed circulates harmful messages and actively harms the morality and principles of its audiences is a claim routinely applied to television, video games, music video, or the internet/web most recently. Yet the charge is ancient, and in the twentieth century was made variously about modern literature, the nickelodeon, or the cinema as well. Music has been no exception, of course, as recent charges about rap musicians confirm; in the 1930s, radio broadcasting was perhaps an auditory version of that "vast wasteland" which FCC Commissioner Newton Minow famously would find television to be in 1961. Eisler and Adorno's concerns, then, were not atypical, but an inflection, in the idiom of critical theory and serial music composition, of broadly circulating concerns over the effects of mass media.

But what we might call in Eisler a musical exceptionalism – the belief that music – rather than, say, cinematic realism or critical documentary -- might redeem cinema suggests a particularly interesting set of questions about the goals and context of his film music study carried out at the New School for Social Research with support from the Rockefeller Foundation. What did Eisler aim to achieve, particularly, by testing multiple film scores against a single film or film sequence? Was he aiming at applying music theory to film soundtracks, or, more importantly, was he aiming more generally at a film music praxis entailed by a larger critical theorization of film as mass art? The difference here is important, because at issue is whether we are properly evaluating Eisler and Adorno's text and Eisler's film music work and on what grounds: music for cinema, or composing mass media? That is, should the book be considered a poorly executed discussion of film music, as Virgil Thomson suggested it was, or a study that does not make enough of music? Or rather, should it be considered as a pragmatic challenge to industrial cinema to innovate with respect to its "social functions," and thus, a

musical and auditory intervention conceived from the point of view of social theories which considered serial music as an advanced form of industrialized, rationalized aesthetics? Taking the latter approach means treating Eisler as a creative worker with ideas about organizing film production as much as about composing music for cinema; it requires, in turn, a broader critical account which locates a logic of musical or auditory exceptionalism operating not only in the film work but, of course, in the cultural and institutional conditions of its times. In other words, if today "digital convergence" or Web 2.0 supplies many of the rhetorical meanings in explanations about how media change, why was it, around 1940, that "listening" held that function, at least in the context of Eisler's Film Music Project?

Ultimately, of course, it is impossible to disentangle entirely the critical orientation and function of such a logic of musical exceptionalism from musicologically informed critiques of aesthetics, form, and social meaning as long as the music in question relies on evaluative musical aesthetics, whether traditional or contemporary. The difficulties arising in the analyses of critical philosophers like Adorno – whether, for instance, his well-known and much-cited negative comments on jazz indicate that his mode of analysis is indebted to a "Mandarin," racist elitism – suggests, though, that even Adorno's subtle analysis of "deviation" and musical structure as immanent to the analysis required in any performance of a musical score suggests that immanence, as Lacoue-LaBarthes has said of Heideggerian transcendence, ends in politics. But the larger point is that there are questions of greater importance than relating musicological form to political effects if what is at stake, as we find in Eisler, is an effort working according to a logic of musical exception to transform the cinema through an open, only quasi-systemic intervention into cinema scoring where cinema reception is taken, before it is considered a site for the delivery of musical products, as a site of political effects. There is more at stake, then,

than Eisler and Adorno's own suggestion that film music composition was an opportunity to deploy the "resources" of the "new music," that is, to modernize the musical practices of the cinema industry so that this most advanced industrial art form could be considered truly contemporary in style, internationally-oriented, and aesthetically complete.

The larger question becomes clear once we phrase that distinction. Let's consider that Eisler's project was *critically* rather than merely *musicologically* oriented, that is, aimed at remediating cinematic representation by emphasizing auditory sense and meaning, where cinema is understood to work in combination with other mass media forms like radio, phonography, or theater, and not simply in terms of autonomous musical forms, and where affect prompted in the site of reception is as much about active listening practices as about the tendency for the industrial cinema image to atomize individual desire within mass culture (that is, to compose for the films some critical redemption from what Eisler, Adorno, Brecht, or Horkheimer believed was the culture industries' great capacity for mass deception). In this case, then, what does this musical exceptionalism – again, in this case, not at all a marginal, experimental, or alternative practice but one situated in the very heart of the mid-twentieth century U.S. cultural institutions and industries -- say about the ways music as it was heard, whether in combination with other media, whether aesthetically up-to-date or "regressive," was understood to be undergoing transformations according to cultural, political, and technological forces in the advanced industrial nations of the middle 20th century? To what degree had music become a mode of envisioning what we would call today "convergent" media practices, that is, the affinities in production, distribution, and reception of distinct media properties mediated in terms of consumer "interaction"? Most centrally, for Eisler and for the Rockefeller Foundation more broadly, what did it mean to listen critically in a reception context popularly understood as

dominated by the image? How, in other words, was active, critical reception thought to be transposed, via some ameliorative practices of listening, out of passive consumption?

The questions this research aimed to answer, then, are the following: in the formulation of Eisler's film music project, how were the goals determined to go beyond theories of music composition or aesthetics? How was the project strategically supported by the Rockefeller Foundation, and on what basis was the project accepted? How did the Rockefeller Foundation's interest in the project align or intersect with other projects funded by the Foundation? What were the goals and outcomes of these projects, and in the case of aligned or intersecting goals or outcomes, what do those intersections suggest about the production of musical forms and media forms, about theories and practices of listening? If concerns driving the research in Eisler's case were shared with other projects, do these indicate other materials, reception practices, or formal aesthetic practices which might clarify Eisler's aims and results?

The research entailed a thorough reading of documents pertaining to three projects funded in the late 1930s and early 1940s by the Rockefeller Foundation which had significant or primary interests in music or musical sound; and a brief inspection of Rockefeller Foundation documents relating to programming and policy decisions relating to these projects. The projects researched in addition to that of Eisler's include the Princeton Radio Listening Project, which was structured as a reception study of radio broadcasting generally, but, while interested in news broadcasters and advertising, also observed that the majority of radio listening was to musical material. Significantly, Theodor Adorno contributed to this project under the direction of social psychologist Paul Lazarsfeld, producing an important if not conflicted inflection of psychoanalytic theory with post-Marxist critical theory. In addition to a number of important documents which indicate that the broad success of the Princeton project helped pave the way for

other projects related to music and listening, I will discuss Adorno's contributions to the Princeton Project and relate these to Eisler's project and the development of the Eisler/Adorno text, *Composing for the Films*.

An additional project, initiated after the Princeton project but before Eisler's, was directed by Harold Burris-Meyer, audio engineer and drama instructor at New Jersey's Stevens Institute of Technology. Burris-Meyer is a particularly interesting figure in the question of musical sound in the mid-20th century, since his interests and contributions extended from developing flexible audio environments for sound effects and music in the theatre intended to benefit not only motion pictures but also the then-emergent production format of television; to providing consulting services to the Muzak Corporation, which used his expertise to optimize sound installations in factories so that emotional motivation of workers achieved through music would not be adversely effected by factory noise, and so that loudspeaker announcements providing central control of distributed work environments would remain functional despite musical broadcast; and to contributions to the Department of Defense during World War II including building speaker arrays deployed on warplanes such that enemy combatants could be addressed from the air.

The archival sources suggest that Burris-Meyer was more broadly interested in the emotional manipulation and control of masses of people through auditory media. His move from engineering audio environments for the dramatic theatre to engineering audio environments for theatres of war implies what might be called an only loosely coherent musical behaviorism. In fact, it appears that it was precisely this dangerously incoherent aspect of Burris-Meyer's work which seems to have spelled the end of Rockefeller Foundation funding after several successful outcomes achieved through Rockefeller support. What is most relevant to the Eisler project here

is the primary emphasis on audience reaction, on musical sound at the point of reception. However, Rockefeller personnel introduced Eisler to Burris-Meyer, it seems, and documents show that the Foundation hoped at one point that some collaboration could be achieved; in addition, it appears that Rockefeller personnel were careful to structure funded projects so that complementary interests could be brought to bear on each other, presumably whether participants were completely aware of the methodologies and implications of neighboring projects. Thus, Eisler not only met Burris-Meyer in New Jersey, but was briefed about the Princeton radio project also, and informed of several of the advances made there in the area of gathering information about audience response to musical meaning.

Finally, In addition to researching the Rockefeller Archive Center's holdings on these three projects, I also reviewed policy and programming statements relevant to the projects themselves as well as to the questions around cultures of listening, music, and audio culture which I have raised regarding their mutual structuring. Of course, with the benefit of hindsight, we are able to piece together the importance of these three projects both for each other in their own day, and for their implications for the larger historical and critical contexts of middle to late 20th century technological media and their reception. All did not proceed as Rockefeller Foundation personnel might have hoped: Adorno's work seems to have been understood only after his departure from the Princeton Radio Project; the Foundation's Assistant Director for the Humanities, John Marshall, found Adorno and his work unyielding in conference with audio industry professionals. Eisler, as is well known, was forced to undergo deportation after years of harassment by the FBI, culminating in embarrassing publicity for the Foundation. Burris-Meyer became convinced that audio control of human emotions was possible for a large enough portion of an audience to provide effective crowd control – a line of research his contact at the

Rockefeller Foundation, John Marshall, ultimately found irrelevant for understanding the artistic or cultural values of music.

Thus, following musical meaning purposefully through the domains of radio, theatre, and motion pictures meant inadvertent excursions into the sternly cynical heights of critical theory with Adorno in the late 1930s and early 1940s, into sonic warfare and musical behaviorism as Burris-Meyer's succeeded his early Rockefeller-supported activities with work for the Department of Defense and the Muzak Corporation in the early 1940s, and into false accusations of aiding communism in the case of Eisler in the middle 1940s. Yet with the highly productive results as well as the unintended outcomes of the Rockefeller Foundation's music projects, the Foundation demonstrated the new status of music as a determining factor in a historical phase in which media "convergence" was thought to proceed more through listening as an ambivalent behavior than through a single, transformed technical substrate (as in "digital" convergence theories).

Eisler's project, although funded after both Burris-Meyer and Princeton, arguably took on concerns arising in each of those earlier projects, and further allowed those concerns to be conceived in terms of cinema, a medium which not only combined music with the power of the moving image, but did so on an internationally accepted mass scale. Musical sound in this historical context operates in terms of a species of convergence less in terms of media technology but rather in terms of cultural forms and industrial practices. It is in this way that musical sound could become the anchor for what I've called the musical exceptionalism of Eisler's project; this musical exceptionalism grounded Eisler's intervention into the Hollywood film.[1] This larger context suggests that while the Film Music Project may have taken its materials

[1] While to some degree the new optical film of the late 1920s had allowed a technological convergence enabling the sound-mixed film and in providing a recording and mixing and distribution medium foreshadowing the capacities of the multimedia computer, this would only have been a

from contemporary debates on musical and filmic aesthetics, more broadly in fact it did function as a critical intervention into commercial film practice. Of course, Eisler's was not the only project funded to investigate aspects of the movies. However, Eisler's project *was* an activity whose focus on musical meaning allowed the benefits of a broadly intermedial focus and strategy in its relation to other projects.

Still, if Eisler's project was significant as a musical intervention into the industrial arts of the movies, its significance comes neither, strictly speaking, in terms of an artisanal mode of alternative production (as James, 2006, describes in regards to figures of the Los Angeles avant-garde), nor in specifically technological advances, of which advances in film industry sound mixing and recording, on the one hand, or new techniques for audience response measurement, of which Eisler was well aware, nor, finally, in terms of an avant-garde that was conceived as oppositional in ethos. His critical orientation while receiving Rockefeller support, and indeed, while working in the Los Angeles film industry, was rather towards the material of the interface between the film music composer as theorist-musician, the cultural critic of mass commodity production (Adorno, who co-authored the major legacy of his work for Rockefeller, *Composing for the Films*) and Rockefeller grant administrators, administration methods, and other Rockefeller projects. Eisler's film music project, then, is a key instance of a complex mediation between cultural institutions, cultural criticism, and cultural industries.

Other Rockefeller projects, the establishment of the American Film Center, for example, indicate that Eisler's project was itself part of an attempt to better understand and intervene in a relationship between mass audiences and mass culture that was thought to hold dangerous propensities for mass deception, but not necessarily from any specifically critical orientation in

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partial convergence in technological terms. Radio, for example, imported cinema's large 15 inch discs so that by the early 1940s live radio was becoming a thing of the past.

either a Frankfurt School, psychoanalytic, or cultural sense but rather in light of two major understandings reflected in documents pertaining to all three of these projects and reflected in policy statements. First, the Foundation understood that mass audiences and mass culture could be a dangerous combination on the one hand, since historical truths did not necessarily make for good films; it was seen as ironic that such a scientifically endowed medium as cinema routinely told stories that were scientifically absurd. Second, authority figures from governmental, academic, cultural, and corporate media enterprises all shared concern to one degree or another that the research interests and capacities of commercial interests (in radio for example) had become dominant in what was seen partly as a public organ, and therefore had engendered a contradiction: audio and audiovisual mass media were seen to have evolved a powerful form in which to educate or enlighten the public but because this development had come through commercial concerns, little understanding had been made of precisely their communicative potential as such. That technical, educational, and aesthetic aims understood to be at stake in Eisler's project, then, is indicative of the importance that music-related studies had at this point in time.

Rockefeller support for the American Film Center and other significant Foundation projects oriented toward the motion picture industry and film culture generally await additional research. In any case, the particular significance of the Rockefeller music projects is that, by observing musical movements across the media, a new problematic was arrayed wherein art, education, technology, and social action were not only seen to be intimately concerned with one another but at the same time, their motives, origins, or effects unfortunately conflated with one another. Crucially, this interrelation and this conflation was thought through the lens of music. In this sense, Eisler's abbreviated scores included in the appendices of *Composing for the Films*

are more than musical scores – they are graphical appendages to a critical text generated at the heart of the vexing question of media programming and mass agency in an age when collectivization was thought to be all but inevitable. As contemporary researchers in Germany and elsewhere begin to piece together remaining fragments and versions, it is important to remember that the scores attached to *Composing for the Films* may as much serve as incomplete diagrams of larger administrative and theoretical concerns and challenges for the mid-century U.S. media industries as much as the scores may indicate important developments in Eisler's career. This project thus aimed at recovering relations among these three important mid-century research projects in modern, mass cultural listening, from radio, to cinema, to theater.

Chapter 2
Policies for Enlightening, Programs for Listening

According to archive documents, the Foundation originally took an interest in mass media when in 1934 the trustees "asked us to take an interest in these media as a means 'to widen the area of public appreciation.'"[2] Early discussions about funding projects in mass media at the Rockefeller Foundation clearly indicate the central problem, indeed, the reason for the importance for these projects. The Foundation was initially unsure whether to fund these projects through the Humanities Division of the Rockefeller Foundation or whether they should be funded as educational projects through the allied General Education Board. The discussion here turned, it appears, on whether media were to serve education or culture. To the degree that the mass media were considered to wield power and influence, their role was undeniably educational, regardless of the actual content – and hence, concern on the part of the Rockefeller administrators as to the use of film or radio for propaganda. On the other hand, to the degree that

[2] Program and Policy – Public Opinion 1942 : RG 3 Series 911 Box 5 Folder 51

these new media had been developed and dominated by largely commercial interests, their potential benefits to the public had been obscured by profit-oriented industrial practices.

In inter-office correspondence responding to meetings on this topic and dated January 22, 1936, David Stevens writes that the media of film and radio are of "great importance for formal education and for the general diffusion of culture." However, vested interests "virtually prevent taking chances with anything that does not have demonstrated 'entertainment value' for the public at large." It is not too strong to say that in Stevens' eyes this development is a disaster for the humanities in contemporary culture. The effect of commercial exploitation of the new media is that while advanced technology and production techniques have radically expanded the potential of media materials, Stevens continues:

> […] as yet relatively little is actually known of the possibilities that radio and motion pictures offer. It is, indeed, almost as if language had been used only for purposes of advertising: little by little its possibilities for other purposes would be recognized; but only when as those who recognized them were freed from the domination of commercial purpose would they discover much of what we know of the uses of language both in literature and in science.[3]

Stevens saw that whatever the "language" of the new media might ultimately be, it was being severely stunted in both its aesthetic and scientific potential by the overwhelming importance of commercial success. The practical question then is how to explore the educational and cultural uses of film and radio. How, simply, to begin? Find academics and practitioners at home in the new media, and let them lead the way with guidance and support from the Foundation. Stevens' conclusions provide insight into the way the Foundation supported and structured innovation:

> The most promising way of achieving this end seems to be in offering a few younger men with a talent for these mediums (sic) an opportunity for relatively free experimentation.

Such experimentation would be given to men selected so as to produce work that would be:

> directed toward serious purposes – men interested primarily in education, literature, criticism, or in disseminating the findings of the social or natural sciences. While their experimentation would not lack

[3] Program and Policy – Public Opinion 1942: RG 3 Series 911 Box 5 Folder 50, 1.

> direction, it would not be limited by a too narrow concept of its purposes, but would be free to explore whatever possibilities the interests of the experimenters suggested as vital.[4]

Dividing between formal education and culture would be too artificial; "… in general, the predominating aim should be the free development of the medium." For this reason, all projects were to be allocated to one general program (that is, neither exclusively educational nor cultural). Realistically, however, decisions had to be made so that strategic funding could take place; Stevens' proposal was amended at a staff conference on May 7, 1936 to the effect that projects were to be routed through the Humanities Division of the Foundation unless they had direct bearing on classroom and school programs, in which case presumably they were to go through the General Education Board.

The Princeton Radio Project's initial primary investigator, Hadley Cantril, and Paul Lazarsfeld, who actually directed it once it was granted; Stevens Institute of Technology's Harold Burris-Meyer; the New School for Social Research's Hanns Eisler – all fit Stevens' description of persons both highly conceptually oriented and talented as practitioners. Lazarsfeld's team would concentrate on innovating methods and technologies for gathering information as to radio listening behaviors that might indicate cultural patterns instead of advertising potential, and thus, not unlike those analyses of television that cultural scholars of reception would attempt in the 1980s. Eisler had been involved in both progressive cultural activities as well as early sound film production in Germany, and brought the ability to turn advanced musical composition techniques to popular cultural milieus; famously, he had disavowed Schoenberg's modernist ideology but deployed Schoenberg's methods of harmonic innovation to compose musically sophisticated popular song that was nonetheless highly accessible to everyday listeners. Finally, Burris-Meyer had experimented for years with audio

[4] Ibid, 2.

engineering in the dramatic theatre, and had already produced experimental drama with the stage conceived as a laboratory for auditory innovations that would ultimately benefit other media. All these grantees met Steven's criteria in having demonstrated the ability to merge theoretical with practical concerns in an experimental approach to their chosen field; all would work out expansive conceptual frameworks and then subsequently allow detailed work to inflect and re-define those frameworks as the result of an experimental method –at least in terms of process. The model of cultural innovation here relied on guided experimentation, but crucially, this guiding was oriented towards remediation of a perceived crisis in the humanities, not towards technological or other ends.

Additional academic expertise along with technical or industrial advice would be secured by calling in consultants at appropriate moments in the relevant process. "Relatively free experimentation" was to put the scientific and poetic evolution of the advanced, technicized "languages" of culture back on track. Rather than being determined by purely commercial interests, this experimentation's relative limits would be those determined through the cultural administrators of the Foundation. Thus, outcomes for each project would face a difficult challenge – not only does experimentation in a cultural or aesthetic field often simply lead further afield, and not back around towards helping to clarify a conceptual framework, divining whether specific projects contributed in a way proportionate with the money spent on them to general cultural uplift would pose specific challenges. Of course, each grant would include a scheme for evaluation, but nonetheless, it may be that some of the unintended –although not necessarily negative -- outcomes of these projects might have had to do with the vicissitudes of this relatively open-ended strategy for creating vital uses of the mass media.

The value of radio research in particular was addressed in a document entitled "Next Jobs in Film and Radio." This document, written by John Marshall, asserted that a dangerous alienation existed in the radio public, caught between infeasible aspiration – often primed by the unrealistic fantasies of radio and film – and actual accomplishment. Thus, the value of listening research in the Princeton project was framed as a place for potentially productive work in the areas between mental health and mass mediation. Further, the Princeton Project suggested to Marshall that similar attention should be paid to motion pictures. I quote the document at length:

> Thus, for example, research has now brought the Princeton Project to the point of saying that the existing discrepancy between individual aspiration and accomplishment is a fruitful area for further study at a time when our culture (e.g. through broadcasting) is postulating aspirations, for the realization of which it is not supplying the requisite economic and educational means. Recognizing this area as fruitful, the Project is now proceeding to discover what wants radio would have to serve, if it were to aid in overcoming (or modifying) tensions which existing discrepancies give rise to.
>
> If this second job is one for social psychology, the Princeton Project should yield a pathology of ignorance on which radio could base its efforts to widen public appreciation of the various fields of knowledge. A next step, then, should be a similar study of the motion picture audience, -- the feasibility of which JM is now looking into.
>
> If these two jobs are undertaken, a third job, with things as they are, is virtually inevitable; namely, to clear the way for an appreciation of genuine knowledge in the various fields, by aiding the public to recognize the essential incompleteness of what is now too frequently offered – in effect, the exploration of what might be called the 'pathology of influence.' Here perhaps is a constructive approach to the problem of propaganda – seemingly the only approach sufficiently objective to be appropriate for an agency like the Foundation."
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> Here, the main thing to be learned by the public about propaganda is what it does not impart, that is, that it is incomplete, when contrasted with genuine knowledge. But in using the mass media to achieve these aims, is it in fact strengthening the tendencies towards "collectivism"?
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> Actually, this is not a question to be answered by the Foundation, but rather by the society it serves. Its job, then, is to discover: (in bold in original) if our society is willing to let collectivism take its course; or, if not, in what respects it wishes to modify that course. In other words, in what respects would this collectivistic trend run counter to folkways implicit in our culture, to a degree that would produce dangerous strains in our social structure?
>
> This question evidently rests on another assumption, that one safeguard against the occurrence of such strains is to give the public as full a knowledge of their probable character as much in advance of their actual occurrence as is humanly possible, and so to give society an opportunity to anticipate the consequences of current developments before they have come to the point of serious strain.
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> In this job, the first step, then, is to make explicit folk ways implicit in our culture, with which a collectivist trend would come into conflict. In one sense, collectivism itself is such a folkway, as is evidenced, for example, by the general welfare and interstate commerce clauses of the Constitution – not to mention subsequent legislation based on them which now has complete public acceptance. But other folkways undoubtedly existed which would inevitably come into varying degrees of conflict with an increasingly

> collectivistic trend, as for example, those which cluster under the heading of individual freedom of thought speech and action (sic), or others connected with the view that our society resolves its conflicts by reason rather than by force or authority.[5]

For Marshall, radio and film are thus central organs (the metaphor of the healthy body is invoked in the document, and the problem is that the public does not have knowledge of the healthy functioning of cells, the "cellular structure of our society") of what will be a "democratic propaganda."

> If the thinking citizens, which we hope a reorganized general education can produce, are to play their part in our society, the present influence of radio and film is crucial. Without the guidance this fourth job can provide, we have no assurance what that influence will be.
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> With it we have a basis for what might properly be regarded as a democratic propaganda, democratic in the sense that the cultural will of the majority might be helped to prevail; democratic, too, in the sense that there need be no concealment of its ends. It would, in fact, expose its purposes, and invite scrutiny of them, confident that its ultimate persuasion was that of reason than of will. To establish such propaganda actually might be an important first step in establishing the legitimate influence of radio and film in a society like ours.[6]

The difficult position that Marshall is working out here has specifically to do with the relationship between collectivism, that is, radical progressive thought, and mass culture. Is there an inherent, perhaps "ideological" function in the operation of the mass media such that it produces collectivity? If so, can such collectivism be democratic, or is any such collectivist formation one based on force or coercive persuasion? By defining collectivization as a negative outcome, and yet by observing that the mass media speak to collected masses, Marshall is left with a quandary about the society that would be either persuaded to impulsive action or to democratic ideals through mass means. Because of the way these terms have been set out, what that society is like is never really defined other than it is seen to be ignorant (completely divorced from means and scene of production by virtue of the facts of reception of film and radio), subject to influence by unseen authors, and yet at the same time, inherently democratic

[5] Program and Policy, Public Opinion 1942: RG 3 Series 911 Box 5 Folder 50, "Next Jobs in Film and Radio," 7 – 8, RF date 9/13/38. This document circulated not only at the Foundation but also was sent to colleagues at the BBC, which appears to have been often consulted on the problematics of mass media, cultural policy, public education, and propaganda

[6] ibid.

and anti-totalitarian by virtue of a reservoir of latent "folkways" which precede the rise of the mass media and might somehow ultimately form its ground.

These contradictions indicate the seriousness of the crisis precipitated for cultural administrators with the growing influence of mass media. As a side note, it is interesting to compare this description of folk behaviors that might be elicited and emphasized to resist totalitarian collectivism with Ernst Bloch's notion of non-contemporaneity elaborated only slightly earlier before Bloch's emigration to New York: archaic, pre-capitalist practices which, in surviving into and in spite of the capitalist age, might indicate routes for revolutionary renewal.[7] Of course, Bloch was writing as a critical theorist holding sympathies for German communist and collectivist movements, while Marshall appears, at least here, rather as an American liberal. Each tradition, as it will be seen, accounts for the contradictions of mass audiences and mediation in distinct ways.

In 1940, a memo from John Marshall confirms that the funding of art and of reception studies were conceived as complementary. Marshall suggests that a proposal to study a reception study of the motion picture audience similar to the Princeton Radio Project be considered. The difficulty, though, was locating such a project – Princeton Radio would ultimately move to Columbia for reasons of academic coherence, geographic expediency, research compatibility, and so forth. Eisler's project was considered important for what it might bring to light about listening in the motion picture context – not simply for its musical innovations or compositional art. The project is described, in the context of an appreciation for the usefulness of reception studies, as a project developing the art of film. Any particular interest in the art of music itself is definitely subordinate to these larger concerns and contexts; in

[7] Bloch, Ernst, see, for example, *Spirit of Utopia*; or for the more specific account, *Heritage of Our Times*

addition, Burris-Meyer's project on sound-effects is seen specifically as a parallel effort together with which Eisler's project was to be understood in its strategic importance.

> At present, our only investment in this field is in Eisler's project at the New School. That of course typifies a rather different kind of research – research which aims at developing the art of motion pictures. Consideration of the Association of Documentary Film Producers' request for a more general study of this kind makes me doubt the wisdom of support for anything but specific projects like Eisler's. That enterprise, particularly in conjunction with Burris-Meyer's studies of sound effects, seems likely to yield results of real significance for the art.[8]

The outcome of this discussion was to focus film projects on the American Film Center, although it was noted that funds for a Black ("negro" in the archive documents) film production were being recommended through the GEB.

At approximately this point in time, the Foundation had projects funded or had recently terminated projects categorized as follows; importantly, Eisler's project is categorized not as film production but rather as "Film Research," suggesting that indeed the critical orientation of the project in terms of learning to compose not so much for the films but for audience response was the defining value of Eisler's work from the Foundation's standpoint.

Radio:

Experiments in Broadcasting, University Broadcasting Council

World Wide Broadcasting Foundation

Rocky Mountain Radio Council (all RF grants)

University of Wisconsin School Broadcasting, terminated 1939

Cleveland Board of Education Experiment in School Broadcasting, terminated December 1939 (both GEB grants)

Research in Radio: Office of Radio Research, Columbia, granted until September 1941

Princeton Radio Listening Center, current grant-in-aid to expire June 1940

[8] Program and Policy – Public Opinion 1942 : RG 3 Series 911 Box 5 Folder 49, memo, March 26, 1940, "DHS from JM"

Harvard University, Charles Siepmann's lectureship in broadcasting (all RF grants)

Ohio State University Evaluation of School Broadcasts, until June 1942 (GEB)

Film Production and Distribution:

American Film Center, current funds terminating January 1941

Film Library Museum of Modern Art, current funds terminating June 1941 (both RF grants)

GEB projects funded

University of Minnesota for an experiment in film production

Association of School Film Libraries

Commission on Human Relations

Film Research:

Eisler study of effects of music in sound films (RF)

American Council on Education Motion Picture Project (GEB)

Thus, John Marshall's recommendation to Eisler that he seek help from the Hayes Office when in Hollywood soliciting film samples for his project: Eisler's project was largely seen not simply as a contribution to film music or to music generally, but as an inquiry into the mechanisms of film as a medium with enormous cultural and social influence: mass media with a role conceived by Marshall as pedagogical more than ideological, to be sure. The Foundation's enlightened interest in art, technology, and education coincided and was informed by studies of public opinion and increasingly, in the war period, of studies of totalitarian communications. The massive cultural influence imputed to motion pictures on the basis of lessons learned from the Princeton Radio Project helped justify support for and interest in the other film projects listed above, although strictly speaking the Princeton Radio Project didn't establish the Foundation's

interest in motion pictures, but rather was simply one of the earlier projects to achieve results that might have been extended to motion pictures. There was also interest in funding an American Film Institute on the model of the London Film Society; in regard to this latter, concerns came together about youth consumption of films, films' influence over public taste; availability and appropriateness of films to groups that want to screen them, and so forth.[9]

By 1943, the Foundation was envisioning post-war projects in film and radio. They were interested in having Rudolph Arnheim to formulate a "positive aesthetics of mass communication." Specifically, they had noticed "boomerangs" in the work of Lazarsfeld's work with a program analyzer: effects which are the opposite of those intended by the mass mediated work, and the interest in Arnheim's aesthetic theory here may well be a pointed turn away from Adorno's dialectical aesthetic theory which found little redemption, and much contradiction at work in the midst of mass media cultural prominence, corporate media development and ownership, and mass audience agency. But the Foundation seems to have stayed its course. By 1949, the Foundation funded student training in television program development, recognizing that television programming would be the basis for television's competition with radio and film.[10] In a post-script to the same memo, Marshall notes the wide influence of the seminal German Expressionist film *Caligari*, suggesting that he has long desired to find and support avant-garde work which might expand commercial production techniques.[11]

What is revealed in these documents is, in effect, a long-term strategy evolving to combine an essentially modernist avant-gardism with liberal public and cultural policy with what appears as a largely nativist belief in the fundamentally democratic character of American traditions. The masses may be ignorant, but in this instance this ignorance was merely an effect

[9] Program and Policy – Public Opinion 1942 : RG 3 Series 911 Box 5 Folder 49, March 26, 1940, marked as "DHS from JM"

[10] Program and Policy – Public Opinion 1942 : RG 3 Series 911 Box 5 Folder 51 , inter-office correspondence from John Marshall, June 14 1949

[11] ibid, 4.

of the successful rapid technological development of the mass media, and the combined efforts of administrators, educators, academics, and creative professionals could restore value to the overly commercial articulation of film and radio. This intermedial approach to conceiving and strategizing projects in the production, distribution, and reception of mass media was underlined by the observation that uplifting the mass media would not be undertaken by industry alone; any such attempt would have to involve talented artists occupying a contradictory position as they applied an avant-garde orientation of one stripe or another to the reception of film, electronically enhanced theatre, or radio; and finally, would entail consultations between academics, industrialists, and technologists at different points and levels in the process.[12]

Despite what appears to be a long-term consistency on the part of the Rockefeller Humanities Division in regards to media-as-culture, film and radio projects were mounted by the Foundation at a particular point in the history of the media themselves. 1934, the year that the Foundation trustees directed the Foundation to develop policy and programs in film and radio, is roughly the point at which the sound film conclusively had proved its dominance over non-sync film, and what's more, had largely put in place the dominant conventions for Hollywood narrative and musical films. Sound effects, dialog, and music were now all routinely being deployed in the sound film, and equipment was available for sound mixing of these various types of auditory material according to what Altman has described as a model of "verisimilitude" that we can understand for our purposes here as, broadly speaking, auditory realism. Voices were matched to bodies; music faded down when important dialog was spoken; sound effects were mixed to momentarily interrupt music or dialog. Sonically accurate reproductions of space were less important than the proper amplitude ratio of effect, voice, and music.

[12] Heidegger's roughly contemporaneous (1938) claim in "The Age of the World Picture" that knowledge production in the modern age was now the province of researchers who negotiated the exchange of data at conferences or meetings is interesting to consider in this light.

Thus, Eisler's project on "effects of music in sound film" should not be read as a project interested in a secondary register of meaning in the cinema, but rather, given the triumphant status of sound in cinema by the mid-1930s, rather, as a cutting-edge research project aimed at first, pushing the limits of understanding the audience experience in the cinema, by insisting on a popularly accessible yet technically advanced musical style that would parallel the advanced technical accomplishments of the image as mise-en-scene and montage. For its part, radio had achieved national network penetration; beyond any of these particular media, music publishing was active in licensing and distributing properties across the motion picture, radio, and phonography industries. Popular music, whether "serious" or "light," moved through all the mass media – but the experience of listening to machines was strange for all its familiarity. Listening to machines, or machine listening? In a way, this subtle distinction formed the point at which Theodor Adorno would clash with the Foundation's John Marshall. Adorno would perform one of the major intersections of psychoanalytic social theory with Frankfurt School critical theory under the auspices of the Princeton Radio Project in his work on the new, regressive, listening – but the achievement would not settle smoothly with the needs of Foundation administrators to balance interests between industrial conferees, academic colleagues accustomed to competing methodologies of study, and the study team of the Project.

Chapter 3
Music on the Air: Adorno and the Princeton Radio Research Project

i. Overview of the Project and its Context:

In a late 1940s presentation summarizing Rockefeller Foundation support of radio projects, John Marshall outlined the Foundation's specific goals and interests in radio. First, the Foundation and its affiliated researchers intended to discover those purposes to which radio

might be used to achieve broader public appreciation of a variety of different fields of knowledge. Second, there was the question of the public interest: what did the public want from radio, and how could radio satisfy those ends? And finally, support for radio study projects was intended to further the study of propaganda. As indicated above, these goals were seen as relevant not only for radio but towards mass media more generally, as determined by the Trustees' direction. The direction that radio studies might take would also help direct other studies to be undertaken in motion pictures.

Dating from 1934 up until the time of Marshall's statement, the foundation had granted funds to ten projects, mostly oriented towards national and regional projects, but this group included at least one dedicated to the international reach of broadcasting. General interests of participants at the time included what we now call "distance learning." For instance, the National Music League's project aimed at stimulating listeners for "sophisticated" music, and in so doing, was thought to help provide opportunities for young musicians. The projects listed below were radio projects deemed by Marshall, several years after Princeton Radio Research concluded, to have been companion projects, and so this is a cumulative list of the radio projects to the end of the 1940s:

1. University Broadcasting Council of Chicago
2. World Wide Broadcasting Foundation
3. National Music League
4. Radio Research at Princeton University
5. Rocky Mountain Radio Council
6. Harvard University
7. Listening Center at Princeton University

8. Radio Research at Columbia University (continuation of the Princeton project)

9. Listening Center at Stanford University

10. Library of Congress

Among these projects, the Princeton Radio Research Project aimed to answer the following questions, wrote Marshall: "What role does broadcasting play in the lives of listeners? Who listens? Where does listening take place? What is listened to? Why do people listen? How do they listen? What are the effects of listening?"[13]

A committee of academics and industrial personnel was formed to advise the Foundation and the Princeton researchers, although these figures were not necessarily involved in the project's development after funding was granted or its grueling review, which ultimately granted continuance of the project but would relocate it from Princeton to Columbia. The committee's make-up reflected the Foundation's interest in seeing views exchanged amongst the various interested sectors, and included Frederick Willis, assistant to the president of CBS; John Royal, Vice-President in charge of operations at NBC; James Baldwin, Executive Director of National Association of Broadcasters; Levering Tyson, National Advisory Council on Radio in Education; Hadley Cantril, Professor of Psychology in the School of Public Affairs at Princeton, and originator of the grant application; and W.W. Charters, a specialist in education and professional development at Ohio State University at the time, and a founding editor of the *Journal of Higher Education.* The make-up of the panel at this point suggests two interesting points: one is that there were no specialists available on listening and that listening was conceived as a mediated cultural activity, not a neurological or a physiological capacity. Interestingly, technical matters were likewise to be located at a much lower level of project administration, presumably to be

[13] While these are the questions reviewed by Marshall long after the study concluded, in fact, they are taken from the document Project I, which as a result of Cantril's proposal had previously been adapted from the Project 15 to be organized by the Federal Radio Education Committee. "Project I (Old Project No. 15): The Essential Value of Radio to All Types of Listeners" 200R 1.1 200 Box 271 Folder 3234.

determined by whoever would become director. Intending to serve as director of the project, Cantril would submit to the Foundation the project proposal that ultimately would be funded, but the final application and its approval would emerge only after a significant period of time - approximately a year, judging by the dates of the archive documents - during which project development proceeded through consultations with the panel of industry, academic, and federal representatives. Radio research and policy, as far as the Foundation's Humanities Division was concerned, focused on two basic matters: "cultural effectiveness," and "range of public service." [14]

In addition to the activities of the project itself, to which I will come shortly, two significant studies that had not been planned as part of the granted proposal were also made. A survey of listener interest through WIXAL in Boston was carried out with the conclusion that narrowly focused shortwave radio networks might provide educational solutions given the challenges of mass audiences and commercial broadcasting. Paul Lazarsfeld, who would become the director of the Princeton Radio Research, remarked *a propos* this study: "Shortwave broadcasting is perfectly suited for teaching special interest groups … Even if there are only a few prospects in each community they can be tied together to an intellectual network… I feel convinced that the increasing use of shortwave stations will enforce a steadily increasing number of specialized stations …." And, in response to the mass hysteria occurring on the occasion of Orson Welles 1938 *War of the Worlds* broadcast, Hadley Cantril produced a monograph entitled *The Invasion from Mars*. In summary, these two special projects neatly frame the concerns of the Foundation and the panel it convened: would radio be used to ameliorate problems of

[14] 200 R Radio (10 RF Projects) 1949 RG 1.1 Series 200 Box 275 Fldr 3277, "Radio: Introduction to 10 Projects in Radio to which the Rockefeller Foundation Contributed Support" 2.

transmitting information, or would it be used as a weapon of irrationality, propaganda that might cause chaos? Educational broadcasting had its work cut out for it.

Granted for an initial two years, the project would run from early 1937 to early 1939 in an effort to isolate research problems and develop methodologies to handle them. The project would receive criticism for being too diffuse in its orientation, while receiving praise for its innovative opening up of possibilities. In general, however, a broadly oriented survey of problems, methods, and techniques was exactly what had been called for during the initial two-year term, and in spite of opinions to the effect that the project seemed too loosely formulated, its funding was renewed. However, participation by CBS meant that the project would maintain a field office in New York City; this secondary location contributed to Princeton Radio Research Project's isolation from other research activities at Princeton. While the project received continuance on the occasion of its first review, it would move to Columbia University shortly thereafter.[15]

On the basis of insights gained from the Princeton Radio Research Project and in accordance with the Foundation's increased wartime interest in funding Totalitarian Studies, radio projects were extended to directly analyzing Nazi radio broadcasts. Here, the earlier interest of the Princeton researchers in the authority of the newscaster and the emotional response of the audience crystallized, through an increasingly psychoanalytic lens, with Hans Speier and Ernst Kris being funded to study Hitler's wartime addresses to the German public, with funding beginning in 1941 and continuing with award money from April 1, 1942. Speier had been a Docent at the German Hochschule fur Politik in Berlin; Kris had been Assistant Curator for the Kunsthistorische Museum in Vienna, and Senior Research Office in the Monitoring Service of the BBC from the outbreak of war until July 1940. Kris had been a

[15] Ibid 28 – 37.

member of the faculties of the Institute of Psychoanalysis in Vienna. According to his CV, (Walter) Ernst Kris had been joint editor with Freud of *Imago*; *International Review for Psychoanalysis and Imago*, and *The Collected Works of Sigmund Freud*. He cites as a comment with his CV that despite his expertise in the diverse fields of art history and psychology (which seemed little connected at the time, he says) "the common problem being that of man's reaction to the appeal of symbolic stimuli."[16] Questions for study included:

1) To what degree to essentially political events, the speeches of German party leaders determine the presentation of the war in Germany?

2) How do German and British broadcasts regarding the war to domestic audiences differ?

3) What are the instructions given to Nazi speakers?

4) How do historical concerns such as the views of the German Navy League and the German imperialists of the last war get taken up in current war news?

Kris' expertise is expected to help train American specialists in analyzing German war radio. [17] Kris proposed to "carry out research in the field of social psychology of totalitarian communication systems." Earlier analysis in Britain had resulted in a large, trained, research staff at the disposal of the British radio and intelligence services; the goal was to replicate that training for American radio and intelligence services. An interview of Kris by Marshall on December 12, 1940 brought this conclusion: "Studies that Kris has made in London convince him of the possibility of going beyond the current flow of communication about the war to the means and the even to the instructions that underlie it, and definite instructions can safely be

[16] 200 R New School for Social Research Music Filming 1939 – 1941, RG 1.1 Series 200 Box 259 Folder 3098, Grant Resolution # 41014
[17] 200 R New School for Social Research Music Filming 1939 – 1941, RG 1.1 Series 200 Box 259 Folder 3098, Grant Resolution #42030

taken for granted in the totalitarian countries. Any clues to them could give added meaning to the current communications studies." [18]

In this light, decoding the totalitarian message of the mass medium beyond the material flow of sound waves was to deliver the Fascist radio network, along with its own personnel nodes and networks, which was seen generating the overcoded instructions. Having apparently arranged work for Kris with renowned social psychologist Harold D. Laswell at the New School, who would also serve on the review committee for the Princeton Radio Research Project, Marshall was faced with the question of how far such methods could go. This resolutely non-empirical use of psychoanalytic social psychology to decode enemy chain of command and military intent was apparently worth the risk simply because of the potential value of its practical results. "JM acknowledges that he is much impressed by Kris. He is bound to agree with Laswell that he is a speculative thinker, but feels that if he is good at speculation his work might add much to the evidence that is now being gathered. Furthermore, it seems undeniable that Kris has had unusual insight into the actual content of propaganda in Britain. On the whole, therefore, he may be the man to undertake a study of the whole complex Nazi *gleichshaltung*." Telegrams to and from the BBC and correspondence from Charles Siepmann confirm Marshall's interest in Kris and more broadly reflect the policy of the Foundation to consult with counterparts at the BBC on the feasibility and rationale of their policy and programs.

These developments reveal a hermeneutic influence whose strength increased in time over the course of the Princeton Radio Project: post-Freudian psychopathology was increasingly deployed in analysis of various aspects of the complex relationships between audio technologies, radiography and phonography, radio producers, distributers, administrators, regulators,

[18] 200 R New School for Social Research Music Filming 1939 – 1941, RG 1.1 Series 200 Box 259 Folder 3098John Marshall Interview with Ernst Kris, December 12 1940

geographic constraints, material capacities, and audiences, relationships which were either too new or too unfamiliar, perhaps too far from the original pedagogical goals of the project, or perhaps simply too close to home for those involved, to be identified as anything but an overdetermination of audience and citizen, and as such would be subject to a meta-psychological analysis of a mass *subjectivity* enabled by networked communication devices. On the other hand, we will see in the case of Burris-Meyer that a somewhat distinct orientation to investigating the power of sound technologies to produce response nonetheless found a similarly overdetermined construction of audience and citizen, which he will resolve in favor of developing technology that would enable the mediatic control of mass *corporeality* so as to instrumentally determine the functional usefulness of the bodies so engaged. Ultimately for Adorno and for Eisler, such an overdetermination of audience and citizen would only be susceptible to dialectical method, whether in theory or practice. But dialectical method would neither be adequate in the face of the multiform complexities of the mediation of mass subjectivity and mass corporeality, nor will it sufficiently be able to resolve operations of mediation and mass culture generally in the face of the emergence of a new and specific status of listening and listening effects, now sustained within the virtual topography of networked media, folding out and over mediation as a merely material process. This intensification from mediated material culture to networked virtuality, barely incipient through practices of listening, and harder to see in the mass culture of the motion picture, would have been the determining development to be grasped by studies of listening, not simply an overdetermination of mass audience and citizen. This development remained opaque for all modes of critical thought put to work in the Rockefeller listening projects, whether the psychoanalysis-inflected Princeton Radio Research, the critical theory-oriented Film Music Project, or the mediatic yet pragmatic behaviorism of Burris-Meyer's sound control systems.

However, what that shift meant for listening was clear to many of the persons involved. Between 1934 and 1941, listening had ceased being merely a crisis for democracy at the national level but had become a matter of national security in a global war. Brecht's "little radio" indeed had gigantic reach.

ii. The Princeton Radio Research Project In Its Early Stages

The Princeton Radio Project was developed in the event of the convergence of a proposal by Dr. Hadley Cantril (a Harvard trained psychologist then an assistant professor at Columbia Teacher's College with an impending appointment in the Psychology Department of Princeton), and Rockefeller Foundation participation in a federal study of the increasingly hard to neglect cultural influence of radio broadcasting. Cantril presented a preliminary proposal to John Marshall in May 1936 after a conversation with Marshall on the subject. This preliminary proposal laid out significant principles and motivations for the revised proposal which would ultimately be funded. The primary motivation cited was that which Marshall would cite in the policy presentation two years later (cited in Part 2, "Policies for Enlightenment, Programs for Listening", above), and which was broadly in line with the Trustees directive of 1934, now increasingly specific: the question mark of the public interest in radio against what was considered the well-understood value for commercial radio interests. On May 16, 1936 Cantril submitted his first proposal with the following rationale given for the study:

> "Whereas the commercial sponsor is concerned chiefly with sales and is satisfied with a rough quantitative statement of the value of his radio program in terms of sales-promotion, the individual interested in finding out the cultural value and listener reactions to a given program is confronted with a much less definite task. He wants to know not only how many people listen, but why they listen and how the program is affecting them in their personal lives."[19]

[19] Princeton Radio 200 R 1936 1.1 200 Box 271 Folder 3233, "A Preliminary Study to Devise a Method for Ascertaining the Effectiveness and the Effects of Radio programs of a Broad Cultural Nature" 1.

According to an interview with Marshall on October 19, 1936, Cantril's initial verbal proposals took issue with the studies to be undertaken by the Federal Radio Education Committee because he believed that their conceptualization of what would constitute educational radio to be too narrow. Instead, Cantril proposed to study the radio audience more directly to see what they found educational, desired to learn, or needed help understanding. He planned to use adapt and develop methodologies of public opinion analysis, market research, and social psychology. Cantril mentioned CBS' assistant director for market research, Dr. Frank Stanton, formerly of Ohio State University, as a co-investigator on the project. Rockefeller sponsorship was being solicited by a number of potential grant applicants similarly interested in ascertaining the interests of listeners without the commercial emphasis of industry listener studies. As it happened, the Town Hall of the Air radio forum and the Music League project funded by the Foundation had developed interest in such studies, and thus Cantril's suggestion had immediate relevance. [20]

In a follow-up interview of Frank Stanton, John Marshall learned that Stanton's research at Ohio State and CBS had found that radio listeners' habits were determined more by program than by signal strength. This was clearly a key insight, and part of the CBS testimony to the FCC on radio frequency allocation. Yet CBS had turned down further studies, which apparently were considered by Marshall "ahead of their time." Here again, market research, public opinion polls, and social psychological methods were considered the latest and most dependable methods. Whatever form the project would take, Marshall and Stanton both agree here with Cantril's concerns about too narrow a determination of what might constitute educational programming.

[20] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3233, interview of Hadley Cantril by John Marshall at Princeton University, 10/19/36; John Marshall telephone interview of Cantril 11/3/36.

The task would be to determine "what interest programs of known appeal have for listeners, and further, so far as possible, what the individual basis of those interests is."[21]

On the basis of the broad relevance of these discussions, Cantril re-submitted a grant proposal, dated December 31, 1936, asking for approximately $60,000 ($10,000 more than the previous proposal and conversations had suggested) for a two-year study of radio listeners' interests and motivations, with determinants being age, sex, vocation, and class: "The specific role which radio now plays in the life of the farmer and city dweller should be compared."[22] In correspondence dated 1/9/1937, Marshall informs Cantril that he is likely to be appointed to a committee that will review the 16 projects set up under the Federal Radio Education Committee – "For it was more or less agreed at a conference in Washington yesterday that some of the outcomes aimed at in the FREC's list of projects might well result from studies undertaken outside the committee." In essence, Cantril's study is seen as possibly accomplishing some of the goals being sought from these other Federal projects, and so he is being asked to review them.[23] As a result of Cantril's participation in these Federal meetings, an interview 2/2/37 between Marshall, Cantril, and Levering Tyson of the Council on Radio in Education indicates, Cantril will re-formulate his project. He will refrain from attempting broadcasts as demonstrations of what a first-class educational program for radio would be; the more relevant matters are ascertaining listener's interests, understanding the values of current broadcasting, and making broad studies of radio's capacity for public service. Of these, Cantril would apparently concentrate on listener's interests and data collection and interpretation techniques regarding them,[24] with FREC Project 15 ultimately reformulated as Project 1 but proposed otherwise

[21] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3233 John Marshall interview with Frank Stanton, Assistant Director Research Division, CBS, November 6 1936:
[22] Box 271 Folder 3233, proposal submitted as correspondence from Hadley Cantril to John Marshall.
[23] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234
[24] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234, John Marshall interview with Cantril and Levering Tyson, Council on Radio in Education, 2/2/37.

according to Cantril's design with this narrower set of activities foreseen.[25] Thus, the dimension of demonstration or praxis has disappeared from his first proposal, and the need for investigative frameworks and hermeneutic procedures has correspondingly increased. Tyson recommends the project,[26] as it positions a study FREC wanted to see carried out in a well-funded position in a productive and presumably supportive academic setting. The Foundation grants the proposal, but Frank Stanton of CBS declines the offer of a co-directorship. Instead, he comes on as associate director at a smaller salary.

Cantril proposed a project which first and foremost would develop techniques for gathering data which would help ascertain listening motivation for radio programs of educational value, with an explicit view that commercial radio whether formulated according to curricular concerns generally performed pedagogical functions, whether acknowledged or not by commercial broadcasters. Such data would ultimately be gleaned from existing commercial studies as well as from new studies to be undertaken, but in any case, the paramount aim was that of developing methodological innovation sufficient to understanding the mass cultures of listening. The data would help determine:

> the attitudes of representative listeners to the programs studied, the reasons why such programs are liked or disliked, the influences of such programs on the personalities and opinions of the listeners, some practical suggestions for the improvement of such broadcasts, and some theoretical clues regarding the nature of radio as a psychological novelty in our present culture.[27]

Radio was no longer a novel technological development in mass media culture, but a novel psychological one, and the project responded to concerns that its commercial value had outweighed other determinations of its use; this project would help determine policy-driven educational uses of radio. It's important to notice the emphasis on the "personality" of "representative listeners" here. Initially, data would be gathered through questionnaire-based

[25] PRR 1937 200R 1.1 200 271 3234 "Project I (Old Project 15): The Essential Value of Radio to All Types of Listeners" and attached correspondence from Marshall to Stanton acknowledging its arrival.
[26] Correspondence from Levering Tyson to John Marshall, 4/5/37.
[27] ibid 2.

interviews of elementary school teachers and students. While the initial grant budget requested funds merely for data gathering, an attached project description indicates that next steps included designing radio programs based on the insights gained through the reception studies, including broadcast of these programs "directly to school children in the New York area"[28] with follow-up questionnaires to provide a control for measuring the effective improvement achieved. What kind of information would be learned? Areas determined as key for producing quality educational radio included children's preferences for distinct types of programming, the relevance of age difference for such preferences, the roles of fantasy and imagery in children's appreciation of radio content, the size of the optimum group for classroom radio reception (the correlation, in other words, between matching the mass audience with classroom or auditorium size), the degree to which "active listening" would be desirable in the classroom, the ability of children to retain information delivered through radiophony in comparison to teaching and reading: the study aimed at questions of individual and group "psychology" articulated in terms of the value of direct participation with material remotely delivered in auditory form.[29] The survey of questions began "What kind of radio programs do you like to hear in your school?" with possible answers being dramatized stories, "dramalogues" based on famous lives, foreign programming, accounts of historical events by eyewitnesses, talks by well-known figures, "musical programs with songs for you to sing," accounts of a child's travels around the world, music appreciation programs, news, and sports. Subsequent questions would then provide data according to which preferences for these programming types might be clarified, along with quality guidelines.[30]

[28] Princeton Radio 200 R 1936 1.1 200 Box 271 Folder 3233, "Radio in the Elementary School: A Psychological Analysis and Interpretation" 4.
[29] Ibid, 3-4.
[30] Princeton Radio 200 R 1936 1.1 200 Box 271 Folder 3233, "Questionnaire for Students," 1.

The ultimately revised and successful proposal would not only jettison the explicitly educational goals of Cantril's preliminary proposal (presumably, such a project would not fall into the domain of Rockefeller Foundation Humanities program, but rather fall within the jurisdiction of the General Education Board) and instead, expand on the methodological dimension and the question of broad cultural effects to make data gathering among the general population the focus of innovation. Cantril's appointment at Princeton ultimately placed him in that institution's School of Public and International Affairs, perhaps prompting, but in any case complementary with, an expanded research focus for the project, from regional, elementary education to matters considered of greater long-term importance for national media culture, and so, reflecting the rising importance of group psychology for studies of mass culture as public affairs (Cantril was, as mentioned above, a trained psychologist and had already co-authored with G. W. Allport a volume entitled *The Psychology of Listening,* published by Harpers in 1935). Cantril was encouraged by the Foundation to enlist industry colleagues such as Stanton, forwarded for co-directorship of the Project, helping consolidate the project's capacity to receive industry cooperation in development as well as to achieve actual effects in industrial practice.[31] Further, the proposal's development was organized with Rockefeller direction to dovetail with the research program of the Federal Radio Education Committee, bringing the researchers' academic and industrial goals and capacities in line with high level federal interest in radio at the national level.[32] Reformulations of the proposal in detail, then, were aimed at radio as a democratic instrument" and the inevitable contradiction between broadcast and all manner of distinct interests on the part of the public. "Studies of age, sex, vocational, and class differences are needed. The specific role which radio now plays in the life of the farmer and the city dweller

[31] Princeton Radio 200 R 1936 1.1 200 Box 271 Folder 3233, correspondence to John Marshall from Hadley Cantril, December 31, 1936.
[32] Princeton Radio 200 R 1936 1.1 200 Box 271 Folder 3234, correspondence to John Marshall from Cantril's collaborator, Dr. Frank Stanton of CBS' Market Research Department, April 9, 1937; correspondence to Marshall from Cantril, May 11 1937.

should be compared." Cooperation with Gallup's American Institute of Public Opinion was foreseen as a possibility once the initial studies had been completed, and Gallup enthusiastically recommended the project for approval.[33]

In line with the larger goals of the funded study, Cantril outlined the potential for the radio study to address the observed conflicts between the public interest and the commercial domination of mass media cultures across the board. Cantril outlined an extensive set of problems not simply arising from the conflicting aims of listeners and broadcasters but more fundamentally what was seen as the determining power on public opinion and behavior of mass media. That is, what Adorno would call the "ideological" function of radio was observed by participants generally and characterized less theoretically as an "inadequacy" that could be remedied by innovations in research, programming, and policy initiatives. Cantril submitted to the Foundation a statement which, because of its interest in elementary school education, appears to date from the his earlier conceptualization of the Radio Project as a research initiative aimed at understanding the use of radio in elementary schools. In this statement, "Inadequacy of Information as Furnished by the Newspaper, the Radio, and the Movies," Cantril commented notably that content presented in the mass media was: routinely presented out of context; was formulated to reflect political positions specific to one outlet or another (problematic precisely because most receivers would tend not to read, view, or listen to a variety of sources reporting on the same events, and thus could not be expected to achieve objective viewpoints as a practice of reception); false "dangers and scares" were "played up" such as Russian communism; aimed at

[33] Princeton Radio 200 R 1936 1.1 200 Box 271 Folder 3233, correspondence from Hadley Cantril to John Marshall, December 31 1936, 1, 4. Folder 3234, correspondence to John Marshall from George Gallup, May 19 1937. It should be pointed out here that Cantril's interests, like those of the Foundation, were presumably broadly international; Cantril suggested the Foundation take a look at a project proposed in a compatible spirit by a Stuart Dodd, sociology professor at the American University of Beirut, who aimed to study the use of radio in educating adult populations of modernizing tribes and villagers in what was then Palestine, Transjordan, and Iraq (folder 3234, correspondence from Hadley Cantril to John Marshall, May 29, 1937). The use of radio for national culture-building projects was understood within the broader context of radio as a means of communication which might reach beyond national as well as the sub-national agricultural-urban divides.

emotional excitement over informative content; omitted information that would broach cultural taboos or might conceivably cause unrest; failed to explain motivation and causality in reporting; limited debate to only two opposing views to the detriment of more complex accounts.

Cantril presented this summary by emphasizing a cross-media comparison. Print news aimed at local readers, overemphasizing less important regional events to the detriment of international news, and more broadly neglected higher-level conceptual discussions of "ideas" in favor of news of isolated events. Radio neglected possibilities for artistic innovations in entertainment, music, and drama in order to ensure commercial viability, and also failed to provide adequate programming for the diverse interests of its constituencies. Radio also failed to program varieties of programming according to a consistent allocation of frequencies for ease of listener use. The motion picture industry avoided realistic content for fear of public offense; offered only unchallenging human interest stories instead of "progressive" programming that would have "social value." In addition, motion pictures were seen as overly interested in internationally successful products to the detriment of films addressing local problems. In essence, radio, with its diversity of programming types ranging from news to drama to music, with abilities to distribute local as well as international material, was seen as operating with more of the technical and policy advantages of either print or motion pictures and fewer of their deficiencies. Ultimately, commercial monopoly control of all the media was seen as the primary determinant in their inadequacy for social service whether for the categories Cantril lined out according to then contemporary standards: information, arts, or entertainment.

But going along with monopoly control was that problem of "the psychology of the public." The alienation Marshall had noted between "aspiration" and "accomplishment" is cited here: "drabness and frustration in lives of people impel them to seek escape in emotional world of

unreality" (4). But further, education had failed to train people to seek real as opposed to "stereotypical" information about the world at large, and in Cantril's view the contemporary chaos of that larger world led people to seek simplistic explanations for causes and events, with radio and the press at fault in their providing of superficial accounts. These concerns all seem to reflect an understanding of Adorno and Horkheimer's views on mass culture. And there appears, though, perhaps a Heideggerian inflection here as well: the demands for specialization in the production of knowledge means that we are unable to verify knowledge personally. "He" who speaks seems to be a Heideggerian "they"[34]:

> The expert opinion for the man on the street on topics he does not know about is not necessarily that of the scientist or scholar, but the popular writer who talks the layman's language, and becomes his authority.[35]

Compartmentalization of contemporary popular thought meant that people all too easily accepted nonsense as information. Again, the problem lies in the nature of contemporary collectivity expressed as mass media listening:

> This lack of integrated thinking stems from the lack of integrated living in a society which is not rooted in a community way of life and has as yet evolved no substitute for the community way of living.[36]

In light of this document, it appears that both Cantril and Marshall located the problem of mass media in its replacement for community traditions that had failed to keep pace with the cultures of mass mediation. That "information" which Cantril refers to is understood here in a distinctive way. Documents about inadequacy of information are not concerned with news reporting alone, but with the distribution of cultural material more broadly, whether narrative film or music. On the one hand, what is to be studied in the Princeton Radio Project is the reception of a mass medium in the form of listening. At the same time, since Cantril is comparing efficacy across the media, it's clear that the particular modality of listening itself was

[34] Heidegger, Martin, *Being and Time* (New York: Harper, 1926) citation/page; also, "The Age of the World Picture" on research organization and knowledge production 1938.
[35] Folder 3234, "Statement by Hadley Cantril: Inadequacy of Information as Furnished by the Newspaper, the Radio and the Movies," undated but perhaps provided as part of the motivation for project funding.
[36] Ibid.

not the object of concern, but rather an overlooked yet substantial, and now accessible, form of mass media reception that would afford important insights for cultural, educational, commercial, and regulatory policy. That is, whatever the medial form, the project proceeded from the belief that commodity control negatively impacted cultural material of diverse sorts, all of which were considered loosely as "information" or at least subject to an evaluative framework that would determine appropriate and authentic "information."

Information stands as a negative evaluative criterion here, and a more specific investigation of its inadequacies make might clear, *and* ameliorate, the absence of a greater understanding of how precisely a useful concept of the mass audience was positively or negatively overlaid on the presumed given of a national or international population. This is a basic regulatory question, then, even if regulatory questions may not attempt to answer it today. Faced with the need to formulate a plan to produce this knowledge and given the broad institutional requirements for the production of such knowledge, Cantril tentatively proposed remedies including public or other alternative means of financing media ownership and production, calling for:

1) accompanying analysis of the effects such alternatives might have on programming

2) study of propagandistic and educational uses of the media

3) determination of the degree to which media programming satisfied consumer needs and desires

4) analysis of consumer attitudes of the media. In effect, what he calls for are cultural studies of a "public" understood to conflate or at perhaps collapse the identities and functions of both "audience" and "citizen," to be broken down in terms of vocation, sex, age, and regional and national identity.

This conceptual determination, as I have suggested above, takes its ground in the instrumental power attributed to the mass media to produce quasi-behavioral effects in the listening audience – "habits and attitudes" that might be corrected by proceeding towards a pedagogy of mass media, regardless of the type of content concerned. Thus, rather than asking questions specific to drama, literature, language, news, or music, all the study's research subdivisions were oriented around the problem of listening, thus unifying the applicability of the study for the radically dissimilar content of news delivery (also accomplished by print) together with the properly aesthetic (and emotional) functions of drama, narrative, and music. This emphasis, prompted by the undeniable rise of radio's influence, meant that news, literature, radio drama, and music were to be studied under a common framework that broadly placed the importance of the mass media ultimately as a question of the potency or the fragility of American democracy and its mechanisms. In a new age in which network media, audiovisual virtuality (with the impending rise of television well understood) threatened to displace the print literacy that had been considered fundamental to democratic institutions, studies of listening were to be a way of producing a new, urgently needed understanding of the voice of America.

In its final formulation, the project would carry out, according to Marshall's later summary:

1) study of the characteristics of radio stations and programs on which listener interest seemed to depend

2) studies of the characteristics of listeners attracted by programs of different types

3) study of news broadcasting

4) study of broadcast music (this portion would be assigned to Adorno for a short period)

5) studies of the varied stimuli radio offered listeners in rural areas or during a political campaign.[37]

According to the grant review, the project received $67,000 total over 2 years (although this figure would be supplemented several times for additional specific studies and preparation of meetings and documents in advance of its review), "towards a study to be made in the School of Public and International Affairs of the value of radio to listeners …." On the relation of the grant to the Foundation's interest in the Humanities, the grant action states that understanding the value of radio to listeners is "fundamental for the success of the co-operative efforts of the radio industry and non-commercial agencies that are directed towards broadening radio's range of public service." The context for the grant is cited as that of previous, smaller studies such as the National Music League work and the like, in which foundation funds had been used previously for specific inquiries into listener response. This grant thus considerably expands interests that the Foundation had placed as central previously, presumably since the 1934 directive from trustees. The premise:

> Radio has developed because it has satisfied genuine human needs. But how precisely it meets those needs is still an open question, and a very important one if the medium is to develop the greatest good for the greatest number.
>
> The proposal accordingly outlines a study designed to answer the basic question, what role does radio play in the lives of listeners? Answering this question, it points out, first involves gathering evidence not at present available on a number of subsidiary questions: who listens? Where and when does listening take place? What is listened to? Why and how people listen? And finally, what are the effects of listening? Of the four years the proposed study will require, the first two will be devoted to developing and testing techniques by which evidence needed to answer these questions can be secured. In the last two years these techniques will be put to use in gathering such evidence from a representative sample of the total population.[38]

In language reflecting Cantril's original proposal, the Foundation stated its concerns that although radio was licensed by the government in the "public interest, convenience, and necessity, the industry's research has as yet been almost exclusively concerned with the listener

[37] 200 R Radio (10 RF Projects) 1949 RG 1.1 Series 200 Box 275 Fldr 3277, "Radio: Introduction to 10 Projects in Radio to which the Rockefeller Foundation Contributed Support" 2.
[38] 200 R Radio (10 RF Projects) 1949 RG 1.1 Series 200 Box 271 Folder 3233, RF Document page 37227.

as a prospective purchaser." That is, some of the questions the study wanted to answer had been asked, but from the perspective of recruiting consumers. The radio industry was seen as – in fact admitted to being – unwilling to risk the investment of any broader inquiry. The plans for the study are noted as having been drawn up by Frank Stanton of CBS's Market Research Division and Prof. Hadley Cantril of Princeton. [39] The proposal was reviewed by an informal committee of three educators and three broadcasters representing NBC, CBS, and NAB. The project is scheduled for evaluation after the first two years to determine continuance. Findings are expected to be widely influential.[40]

The project, in any case, had already grown larger, being granted almost $20,000 over the initial amount Cantril had requested a year earlier. But Cantril, as a new faculty member at Princeton, was also occupied with research interests of his own as well as carrying out teaching responsibilities. After receiving funding for the project, Cantril, with notice to John Marshall, hired Dr. Paul Felix Lazarsfeld, an Austrian émigré specializing in social psychologies of radio, and appointed him to a research post at Princeton in order to direct the day-to-day activities and research agenda of the project. Where Cantril's initial proposal for studying the uses of radio for elementary school education suggested that outcomes would be detailed in a written report, the successfully-funded study as it evolved under Lazarsfeld would aim to produce an entire academic series of book-length reports establishing an entire toolbox of research methods for an emergent field of radio reception studies addressing all aspects of the form. Considerations developed over the course of the project ranged from studies of competition between print and radio reception (motivated by the concern that radio as an undemocratic medium would replace the more "rational" medium of print and undermine literacy more generally), to the newly

[39] ibid 37228.
[40] 200 R Radio (10 RF Projects) 1949 RG 1.1 Series 200 Box 271 Folder 3233, Rockefeller Foundation Grant #37072.

developed authority role seen to be occupied by the newscaster, to the mass hysteria surrounding Welles' broadcast of *War of the Worlds*, and important for my purposes here, Adorno's thesis of "regressive listening."

iii. The Project Under Lazarsfeld

200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234

Paul Felix Lazarsfeld was asked to take on the directorship of the study when Frank Stanton received a salary raise that was beyond competitive from CBS and so declined the position of director. A friend of Cantril, before emigration, Lazarsfeld had been posted at the University of Vienna. When he joined the radio study, Lazarsfeld was with the University of Newark in New Jersey. Both Gallup and Lynd agreed with Cantril that he would be the next likely candidate after Stanton, and his acceptance was a great relief to Cantril, who with full-time departmental duties would not be able to direct the project in its day-to-day activities.[41] In a letter dated September 22, 1937, Poole tells JM he will name Lazarsfeld a Research Associate at Princeton. He notes that with Stanton still on as an associate director, the project seems "top heavy" but that with this kind of project aimed at the development of new methodological tools, the amount of expert advice involved will be beneficial. The budget is re-aligned to allow focused study in the first quarter, and to allow for the change in staff. Lazarsfeld gets $7,500, meaning that one research assistant has been permanently cut, originally to offer Stanton more money, and finally to have him as an assistant director along with Lazarsfeld.

The project begins to take on a larger cast. Marshall suggests cooperation with Raymond Franzen, the recipient of the Foundation grant for a listener study at the National Music League. For his part, Lazarsfeld introduces psychoanalytic theory into the project on a more significant

[41]200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234, correspondence from Hadley Cantril to John Marshall, 8/27/37; correspondence from Poole to John Marshall 9/22/37.

basis than Cantril had, inviting Erich Fromm to address a research meeting of specialists in psychoanalysis to discuss the project.

> "Dear Mr. Marshall:
>
> The psycho-analysts, in accepting our invitation for Sunday, December 12, pointed out discreetly that the relation between an honorarium of twenty dollars and work all afternoon and evening is not quite what they are accustomed to. I didn't feel like spending any more money on a venture the value of which we do not yet know. Therefore, after some deliberation back and forth, we changed the plans in the following way: We will start with dinner at six o'clock at the Faculty Club of Columbia to get acquainted and the talk of Dr. Fromm and the discussion will take place all evening. We shall, therefore, expect you for dinner at six o'clock." [42]

But consultations also occurred with social psychologist Dr. Mark May,[43] director of Yale's Institute of Human Relations, and that institute's Dr. John Dollard, at work on a conceptualization of criteria for considering "life history" as the interstice between culture and personality.[44] Such qualitative concepts as "life history" perhaps would have been of interest for their potential explanatory value in the project's interpretation of quantitative survey results. Such figures as anthropologist Edward Sapir were also considered for participation in the project, but Sapir was unavailable at the time.[45] In addition to the National Music League, Marshall coordinated contacts between the Princeton researchers and the League for Political Education, whose American Town Hall broadcasters were also interested in listeners' attitudes.[46]

The project was as successful as its methodologies and orientation were confused under Lazarsfeld's leadership, which apparently pushed for a stronger psychoanalytic and psychological orientation. In an interview on 10/19/37, Lazarsfeld explains to Marshall that the central question of the project, in his view, is motivation, that is, "why do people listen." However, a letter dated the same day from George Denny of the League for Political Education

[42] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234, correspondence from P. F. Lazarsfeld to John Marshall, 12/7/37.
[43] See for example, May, Mark Arthur, and Doob, Leonard, W., *Competition and Cooperation. A report of the Sub-committee on competitive-cooperative habits, of the Committee on personality and culture, based on analyses of research achievement and opportunity by members of the Sub-committee. Sub-committee on competitive-cooperative habits,* (New York: Social Science Research Council, 1937), or, May, Mark Arthur, *A Social Psychology of War and Peace***,** (London: H. Milford, Oxford University Press, 1943), among others. Later, May would write on the ways in which film influenced behaviors, and on the behaviors of film fans.
[44] See Dollard, John, *Criteria for the Life History, with Analyses of Six Notable Documents* (New York: Peter Smith, 1949)
[45] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234, correspondence from John Marshall to Cantril, 10/1/37.
[46] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234, correspondence from John Marshall to George Denny 10/10/37.

informs Marshall that Denny has congratulated Cantril on the establishment of his "Institute for Propaganda Analysis," and while he doesn't know exactly what Cantril has in mind, he offers Cantril the use of America's Town Meeting of the Air" as a research project while it is in progress. Some months later, John Marshall refers Lazarsfeld to another Foundation-funded project on the leisure activities whose results were printed by the National Recreation Association; the grantee of that project had been chairman of a Foundation committee engaged in the study of leisure time. [47]

Nonetheless, further funding was forthcoming for smaller projects which fit easily into the loosely-oriented umbrella of Princeton Radio Research. The team, at the request of Marshall and with a total of $1400.00 in additional funding provided, undertook a confidential report on shortwave radio station WIXAL in Boston. Lazarsfeld assigned Marjorie Fleiss, who produced the questionnaire used in the listener survey that would be presented to Trustees at the April 1938 meeting as part of the report by the World Wide Broadcasting Foundation. Fleiss was a graduate of Cornell's program in undergraduate psychology, and had previous work experience with Gallup's polling organization and market research firms, among others.[48] Fleiss' questionnaire asked questions that would gather information as to technical reception of short wave radio reception versus broadcast as well as, for example, the accomplishment listeners were most proud of in their own lives, aimed at understanding the gap between aspiration and accomplishment that was used to characterize the networked audience-as-public. The questionnaires would be interpreted for motivation but only on the basis of data that identified interest group (sex, class, age, hobby, automobile ownership, most admired person, favored charitable organizations, etc.) The importance of the WIXAL study was not only in extending

[47] 200 R Radio 1949 RG 1.1 Series 200 Box 271 Folder 3234, Denny correspondence, 10/19/37; Lazarsfeld interview 10/19/37. JM to PL 1/10/38.
[48] Princeton Radio Research Project 1938 RG 1.1 Series 200 Box 271 Folder 3236, Marjorie Fleiss curriculum vitae, 2/5/38.

Princeton Radio's reach to narrow-cast short wave as well as standard broadcast, but in producing this small study for the World Wide Broadcasting Foundation as a model for a short wave study to be carried out in Britain on a larger basis by a Rockefeller Foundation staffer at the BBC, Lloyd A. Free, who would serve as review secretary for Princeton Radio in 1939, but at this time was studying at the BBC's Staff College.[49]

Within this mixture informed by various strains of market research, Freudian, Jungian, social, and behavioral psychology, and propaganda analysis, (propagandists such as Denny) the first mention of Adorno in Princeton Radio Research documents comes in a letter from Lazarsfeld to Marshall, which informs him that Adorno as "the musical expert on our staff" has been reviewing materials related to listener survey responses. Apparently the National Music League study headed by Franzen only was able to produce raw data, which was given to Princeton Radio to analyze at Marshall's request.[50] Adorno's participation in the project started, it seems, as an analyst of survey material, and his charge, under Lazarsfeld, would have been to assist in interpreting the data in terms of "listening motivation." (Max Horkheimer arranged for Adorno to come to New York to accept this position with Lazarsfeld in early 1938, according to Martin Jay, and it was not at all what he expected.)[51]

Two documents in general indicate the combination of psychoanalytically inflected social theory and Frankfurt School critical theory as applied procedure. First, in a presentation at Columbia in spring 1938, Lazarsfeld suggested that they were attempting to understand what was an admittedly very broad topic but one which became tractable from the orientation of psychological studies of listening: "You see there is a general agreement that the radio should be

[49] 200 R Radio 1938 RG 1.1 Series 200 Box 271 Folder 3234, correspondence from Marshall to Lazarsfeld, 2/4/38; Box 271 Folder 3233 (correct folder?), grant resolution approving funds, charged to RF31003: Surveys and Conferences by Others than Officers.
[50] 200 R Radio 1938 RG 1.1 Series 200 Box 271 Folder 3234 (correct folder?) correspondence from Lazarsfeld to Marshall, 4/8/38; correspondence from Marshall to Lazarsfeld, 4/21/38.
[51] Jay, Martin, *Adorno* (Cambridge: Harvard University Press, 1984) 34.

studied as it is now and that it should be studied from the listeners' angle and under psychological aspects. Perhaps one more wording taken from another document might be the most helpful one: we are supposed to study who listens to what, why, and with what effect."[52] Clearly, we are far from Cantril's much more expansive questions regarding listening first outlined in 1936; moreover, Marshall's six categories of listening had been reduced to four here, with motivation the central lever between subject, object, broadcast technology, and mass cultural effect. Reflecting the concerns of pseudo-individuation Adorno had taken up in "Fetish Character in Music and Regression in Listening," Lazarsfeld states that while progressive goals of radio education are desirable, much theoretical and conceptual work is required at the outset of any such program.

> People in big cities are isolated and radio should help them to a feeling of social participation. But if the man plays in his home with an invisible orchestra, if he carves wood according to the instructions of a radio course, might we not induce him to pseudo activities which make him drift still farther way (sic) from organized living with other people? I don't pretend to condemn those efforts without father study; I just want to show that much arm-chair thinking is necessary if we do not want to plunge good-naturedly into a stream of promotional activities which might lead to very different ends than they seemed to at the beginning.[53]

Invisible orchestras and all, radio made everything appear differently:

> As the project proceeds, we are more and more impressed by the necessity of re-examining all sorts of educational and cultural ideas just because, when confronted with the radio, these ideas exhibit unexpected facets.[54]

Some of the unexpected findings were the commercial radio industry's massive compilation of statistics on radio listening and program appeal, a comprehensive body of data of which most academics were, according to Lazarsfeld, unaware. Lazarsfeld points to an important fact about Princeton Radio: while they did gather data, much of what the project actually produced was analysis of data gathered elsewhere. As Marshall's referring of other projects' data to Lazarsfeld's team suggests, Princeton Radio's initial focus on methodology and theory was

[52] Princeton Radio Research Project 1938 RG 1.1 Series 200 Box 271 Folder 3236, Lazarsfeld, Paul Felix, text of presentation "Princeton Radio Research Project," 1.
[53] ibid, 2.
[54] Ibid 3.

partly organized so as, on the one hand, to develop theoretical tools for data that had already been collected elsewhere in addition to new data gathering techniques, or, on the other, to provide small studies when needed for the success of other projects already funded with fewer resources. The project functioned almost as a clearing house of theoretical ideas emerging from the contradictory if highly current formulation of radiophonic medium, broadcast message, and audience reception as listening according to which it had been conceived. Lazarsfeld also sketches out the breadth of importance of listening:

> It is clear, for instance, that those occupational groups which, according to general statistics, have less schooling might be more affected by a medium of information which depends on listening only; the farmer and the industrial worker are among those who require our special attention. There are also certain fields where radio has grown to more than average importance because it offered new opportunities. Just think of radio in politics, of the role of the news commentator and news bulletins and of the enormous share which music has in the total volume of programs.

Lazarsfeld mentions here also the need to develop new techniques as well as his plans for publications. Academics will be able to get up to speed on radio listening through a series of five monographs on each of the areas mentioned in his talk. Where FREC had forced Cantril to give up the notion of demonstrating lessons learned by producing new radio shows and testing the response, Lazarsfeld hopes also to provide a source of radio instruction: in the form of a textbook. Already, he has preliminary conclusions as to one medium, specifically radio, which should be addressed in order to be effective: repetition.

> What deserves our special attention is the program series, the stimulus being repeated one or more times a week for perhaps many years. To study the effect of such a phenomenon you must retain the same group of people much longer under observation than is usually done in research experiments. We concentrate the corresponding problems into special studies of radio panels.[55]

This medium, in order to promote community, democracy, and education, can not directly involve the participation of the audience, though, in determining program content. A "mechanistic" vote on what should be broadcast would be "disastrous" since the public's taste is already perverted by bad programming. Here, again, there is a point of comparison with Adorno:

[55] Ibid 5 – 6.

> […T]his taste is the perverted effect of a steady injection of bad programs which doesn't permit the development of better taste in spite of the remarkable program achievements which broadcasters can point to from time to time. But we have little actual evidence so far that if people knew about better programs, they would like them. Here is a great challenge to research. We have to develop techniques to test and, if possible, to prove the educability of the listener, his willingness to prefer better offerings if he is given a fair chance. The problem of educability of tastes will be studied in the light of special efforts of some programs and stations. In a later phase of the Princeton Project, it will come more and more to the center of our attention.[56]

Concluding, Lazarsfeld and his team

> are more impressed as we go on by how much the social problems of our times are reflected in the problems of radio research. We do not want to decide the question of whether a conservative board of education in a small town is a better program guide than a modern business company in New York, but will have to show how the problems of insecurity and lack of direction characteristic of our social life affect radio just as they do any other institution irrespective of its administration.[57]

Here, critical theory and psychoanalytic explanation are invoked to produce what was perhaps an unexpected critique of institutions and administrations which relied on a founding analytics of "corrupted taste" to resist expanding the participatory nature of the medium or the political capacity for producing social effects that the medium presumably had demonstrated; these concerns were primarily observed in terms of radio listening as a symptom, the details of its consumption derived from data collection the account of the listening public as patient, such that individual disorders could be transposed to mass ones: the mass totality of radio listening reproduced anxiety as problems of insecurity, and distraction, a lack of direction. The listener, as the overdetermined subject of distributed audience, listening consumer, and public citizen, listens passively and emotionally, in a state of alienation from her own individuation. Nonetheless, the general state of this passive condition is graspable precisely in the stasis produced in its refusal of audience participation or access to production, and can be interpreted for theoretical purposes, which will be then applied to strengthening the already demonstrable powerful aspects of radio, for example, repetition.

[56] Ibid 7.
[57] Ibid.

The result was that Lazarsfeld succeeded in identifying theoretical approaches having potential for informing practice, for instance, in seeing that repetition functioned as a long-term defining feature of the medium that made it amenable to critical analysis, much as Williams would later derive "flow" from Strindberg's drama and make "mobile flow" a dramaturgical characteristic of televisual form itself, allowing television analysis a more dynamic dimension than simply in terms of program "distribution," and so extending the analysis of the medium from commodity form, to one of cultural form part of social, psychic life.[58] The concept of radio listening in terms of "repetition," even without being able to identify any particular receiver who was listening, allowed Lazarsfeld to call for extending research far beyond the durations of consumer listening than had at that time become the norm in radio studies. Radio study meant an analysis of the medium as everyday life. It is striking how well Princeton Radio understood what would become important questions for television research in this regard, but it is also important to understand Lazarsfeld's comments in light of the work that Adorno had done prior to joining the project and during his tenure with it. "Pseudo activities," repetition, taste, cultural production of states of mass subjectivity, mass media as instrumental forms through which those states of subjectivity were deployed – these were terms and concepts that formed the nexus of dialog between psychoanalytic social theory and critical theory. As we will see, these terms point to the very different conclusions which Adorno and Lazarsfeld each would ultimately produce.

Not long after the Columbia talk, Lazarsfeld briefed his senior staff on the "role of 'deep' psychology" in the project. The project's heavy use of subjective interview material was useful, though systematic analysis of such material was difficult at best, because from these interviews could be deduced "descriptions of psychological processes." In what appears to be either a

[58] Williams, Raymond, *Television: Technology and Cultural Form* (London: Routledge, [1974] 1990) p. 53, pp. 77 – 120.

pragmatic framing or perhaps a reduction of Adorno's contributions, Lazarsfeld noted that the goal is indeed to arrive at generalizations but to be useful these statements have to be supported by interview material.

> [For example,] Dr. Wisengrund [sic, meaning Adorno] thinks that the less "emotional" a person's attitude toward music is, the more he knows about it. It is evident that even a few cases should prove or disprove such assumptions. It would be worthwhile to conduct a systematic investigation as to where this kind of statement could be found in the different sections of the project.

But this distancing of critical theoretical methods was also necessary in order to maintain a social psychological, not theoretical or clinical, method for the project, for in fact, radio listeners are never really considered as subjects under analysis in any strict sense; rather they are seen as informants in a process aiming at a different outcome altogether. The analysis of effects was to be distinguished from describing personal experiences; general effects can be described, but can not be assumed to be the same for distinct individuals. This suggests that understanding why people listen should be understood in terms of socially-based mechanisms of gratification, not intimate desires. Gratification would be analyzed in terms of understanding the distinct motives people cited for tuning in, but also in terms of the effect of gratification produced *through* listening – and different people may be receiving different pleasures. But this sort of analysis, too, soon begets another. To get at the "deep stuff," which would by definition be both social and unconscious, the interviewer needs to have a theory in place and elicit interview material that would prove or disprove such material. Even a hesitancy to answer or an inflection of the voice may corroborate such a theory of gratification. Extending this "reason analysis" would be the personality approach – situating the reasons in light of a broader account of the observed personality of the person. Understanding radio listening in relation to the person's interests in the same objects obtained through other means may lead to a typology in which different personality types relate to different attitudes towards the radio. Repetitive program

content, then, supplemented with timed data collection and personality type description, becomes the independent variable around which public psychology then fluctuates: a psycho-social production of a virtual public sphere determined in relation to program objects, in terms of which invariants the public, its orientations, and its emotional deficiencies becomes knowable.

Beyond the level of personality analysis lay yet another, broader, and biochronological one: that of life history (as practiced by Yale's John Dollard, as indicated above). Musical development or the development of political interests over the life of the individual became expanded indices to chart the person's interest or pleasure in listening to music or political programming. Lazarsfeld describes this biographical layer as accounting for listening not only in terms of personality but in terms of the way personality has been "molded" such as could be found relevant for a radio study. Finally, the task is to lift these observations to a more systematic level. Here, interviews should be planned to select for and anticipate the breakdown of material according to categories that explicate otherwise random patterns. Thus, the project sought to identify groups of people which otherwise could not have been isolated on the basis of the known interests used to parameterize the studies themselves. Instead of, for example, isolating an "interest" group such as class or gender interest group and proposing how such an interest would be reflected in terms of a social identity, with mechanisms of identification (with or against the subject's interests) operating in the production of gratification, here, the research was designed to produce studies which would make conclusions as to the:

1) features of the programs

2) influences brought to bear upon people

3) tendencies, needs, and desires of listeners.[59]

[59] PRR 1938 200R 1.1 Box 271 Folder 3236, Lazarsfeld, Paul F., "On the Use of Elaborate Personal Interviews for the Princeton Radio Research Project"

Demographics were therefore integrated with taste. (Today's "tagging media" take the opposite approach: objects are re-programmable; users "tag" media objects, allowing "media taste" rather than "personal desires" to become the object of exchange among media users, disentangling demographic from taste which, once formatted as program content, responding to personal needs and desires, which had remained in the radio study implied in the repetition of the program object. Now, explicit media self-publicity is entangled along with the tagged media object, producing the distinct configuration of a "participatory," virtual public sphere. Whereas in all the bioenergetic models of publics in these Rockefeller projects, unknown mass, audience "reaction" had to be somehow isolated and its meanings determined, now, a sustained turbulence of "participation" provides the bioinformatic data stream, itself meaningful in its own right regardless of whether symptoms of "distraction" or "insecurity" are the indicated "reactions".)

On the one hand, it is clear that neither the largely visually-conceived mechanism of "dream screen or mirror stage" that would find, shortly, adaptations of both Freudian and Lacanian psychoanalysis for film and literary studies is in operation here. On the other hand, it is also clear that the interview format itself is conceived as a listening activity attentive to hesitations in speech and inflections of voice, a method which can extend from superficial observation to plumb the depths of mass personality. But interviews are neither talking cures nor collections of data that will become evidence of "cognition" but rather carefully categorized theoretical templates through which program features, social influences, and listener wants can lead to analytic propositions; and listeners are not patients but rather conductors of networked effects which are not ultimately reducible to individuals. These are, after all, statistically-intensive as well as qualitative studies, not autobiographies. Rather, listeners were conceived as delayed interactors; the templates that were constructed to contain their input and indicate their

"moulding" over time would facilitate a more complete and efficient, but still, homeostatic feedback loop that was desired for the improved administration of mass broadcast media. Mid-twentieth century reception research concretized the development for "interactive media" as much as, if not more than, the two-way radio which Enzensburger (1974) believed had democratic potential for mass cultural mobilization, after Brecht's observations. In this context, though, the immediate aim of capturing input from radio listening was not participatory radio culture or any demonstration of such, so much as the output of that which was believed to be the most effective form of cultural literacy: not more efficient marketing, at least not right away, or some programmatic prototype, as would be the case in both Burris-Meyer's and Eisler's projects (and in many later software development projects), but a series of academic texts, which would shed light on the future of television as much as on the immediate broadcast needs for commercial radio with improved educational content.

In December, 1938, Hadley Cantril produced for a trustees meeting of the Foundation a draft of his study of the sensational October 30 radio broadcast that year by Orson Welles of H.G. Wells' *The War of the Worlds.* Welles' broadcast, like so many other contemporaneous developments, confirmed the Foundation's and the researchers' sense of the importance of the Princeton Radio Research Project. Not only did the mass hysteria over a wide geographic area provide additional validation for their work, but CBS, presumably through Stanton, immediately requested a listener survey. 30 homes were visited to find out "Why They Listened."[60]

Cantril's team found that eighteen out of thirty respondents had been "dragged into the situation" by excited listeners – in other words, that a majority of listeners had been convinced of the fictional drama's factuality simply by a hysterical minority. Ten listeners found the program by chance dialing after it had begun, thus justifying perhaps their frightened reaction since they

[60] PRR 1938 200R 1.1 Box 271 Folder 3236, Cantril, Hadley, "The Impact of Terror on the Radio Listener" 1.

had not heard the initial program disclaimer (although such a reaction still means that they were not paying attention to the intervening program announcements). Two listeners had heard the entire broadcast, and in spite of hearing that the program was a Mercury Theatre play, became so frightened by the program content that they simply forgot the interim program identifications which they did in fact hear. Cantril's report complicates motivation with understanding: only four out of 30 listeners thought that the invasion was from Mars. Others thought the invaders were animal monsters, German or Japanese armed forces, an attack on Jews in the manner of *Kristalnacht* in Germany, and four listeners simply understood something terrifying was happening but couldn't understand what it was. Ten listeners attempted to check the facts and on whatever basis found their fears corroborated; five listeners out of the thirty interviewed simply panicked.[61]

Cantril attributed the realism achieved by the broadcast of *War of the Worlds* to the effect of the program's dramatization of two features: the sound of authority figures reacting to the fictional crisis, and the use of regional geographic features which listeners recognized: the *sound* of authoritative voices reacting to the event of *some* invasion of familiar locales was enough to incite panic. For a distracted audience holding a range of potentially apocalyptic beliefs -- some of them well motivated, given U.S. anti-Semitism -- the program provided answers to anxieties of various stripes. Finally, Cantril concluded, "incredible things become more acceptable when the narrator himself stresses their incredibility." As a result of this survey, Cantril received a $3000 grant from the General Education Board which ultimately led to the publication of a monograph on the subject.[62]

[61] Ibid 2.
[62] Ibid 3 - 4.

The early productivity and success of Princeton Radio led to interest in a similar study on motion picture viewing audiences, interest in radio research projects focusing on propaganda, and a rising profile for the methods being developed, with possible extension being considered in service to Danish and Swiss broadcasting companies interested in reaching the American listener of their programs (presumably these studies would be addressed to Americans resident in Europe).[63] From late 1938 preparations began for the project's two-year review in early 1939. The project was seen as initiating a new research discipline in applying social psychological methods to the medium of radio broadcasting in asking the question, "What is radio doing in society"? Additional monies were appropriated to expedite a review by a panel including Lyman Bryson, Columbia Teachers College, Columbia University, who would serve as chair; Douglas Waples, University of Chicago, School of Library Service; R. L. La Piere, Stanford University, social psychologist; Harold Laswell, listed as representing the William A. Whyte Foundation, social psychologist interested in public opinion, individual psychology; Gilbert Seldes of CBS, a "long-time serious critic of the 'lively arts,' now one of CBS's top producers, and shortly to be responsible for CBS Television Service; James R. Angell, of NBC, with interests in educational broadcasting and experience in psychology; and Irvin Stewart, Committee on Scientific Aids for Learning, interested in broadcasting and former member of the FCC. After hearing an introduction to the project presented by Lazarsfeld, Stanton, and Cantril, these panelists would pose questions to the directors who would then prepare written statements to be presented at the next meeting. The committee also included Robert Lynd, Dept. of Social Sciences of Columbia; Davidson Taylor, Music Division CBS, and Lloyd A. Free, committee secretary (from the

[63] PRR 1938 200R 1.1 Box 271 Folder 3236, John Marshall telegram to David Stevens re Lazarsfeld's interests, 12/5/38.

Foundation).[64] Typically, the production of academic policy texts was predicated on the conclusions which reflected mid-twentieth century projects in what we may call, after Latour, but with a rather different set of meanings attached, an early phase of "sociotechnical" research: concentrations on sub-national focus, that is, regional rather than national identities; institution building, implying the Foundation's role in building networks of institutions nationally; and the cultivation of public taste that would incorporate the ability to make discernments between truth and fiction, and with a lack of exposure to quality programming cited as the primary obstacle; experimental methods were developed in order to support these goals through information gathering and statistical studies.[65]

With Adorno joining the project no later than May 1939, Hadley Cantril proposed a shortwave radio project that would capture and transcribe foreign broadcasts, now seen as a possible form of foreign military or political influence that might interfere with the upcoming presidential election. Adorno was charged with the "theoretical side" of the project, which gained urgency with Hitler's invasion of Poland in that year. Lazarsfeld, surprised at the invasion, having believed that Hitler would focus on economic development, suggested that Adorno's work on the radio music research was very closely aligned with Marshall's thinking on radio research, serving the need to join "general theory, speculation and developmental concepts" with outcomes. Lazarsfeld had expressed the need to better respond to political developments; not expecting war, he felt he had missed opportunities for demonstrating the utility of the techniques the researchers were developing. In a letter dated September 21, 1939, he wrote to Marshall, "Now along comes the war and I miss another chance to show the usefulness of our technique, and so the dilemma between methods and results, under which the

[64] PRR, Box 273, Folder 3245, "Reviewing Committee: Princeton Radio Research Project. Summary of the Report of the Directors of the Project to the Reviewing Committee, New York, February, 1939.

[65] 200 R Radio(10 RF Projects) 1949 RG 1.1 Series 200 Box 275 Fldr 3277, "Radio: Introduction to 10 Projects in Radio to which the Rockefeller Foundation Contributed Support"

Project is suffering, continues." Presumably Adorno's participation would help with a critical and conceptual framework to join "methods" and "results." "Listener Research Techniques" developed thereafter included:

> Methodologies: "Program-Station Audience Measurements: Mail response (in/out); telephone interviews (in/out) personal contact; questionnaires; automatic recording device (basis for Nielsen Radio Index); panel technique; special methods (i.e., measuring power consumption at central points, or polling radio editors, etc."

The documents continue with the "advantages and disadvantages" of the automatic recording device developed for the project:

> "Uses: size of audience; geographical distribution of audiences; composition of audience by socio-economic strata; audience turnover data (is the audience tuning to station or to program?); partial listening data; set usage and program exposure related to other family activities
>
> Advantages: sampling, can be controlled by age, sex, education, occupation, socio-economic group, population levels, and land area; eliminates faulty memory on part of respondents; fairly accurate economic status, sex, age, etc. observations made at time of installation; best measure of audience turnover; best measure of partial listening (separable measurements); provides information over long periods of time; includes data on programs broadcast at all hours (when researchers aren't working, for example); results are not influenced by one member of the family; interview bias doesn't exist; minimum of respondent's time used.
>
> Disadvantages: expensive initial cost (given what it returns, is economical in terms of program units); is slow; records operation, not listening; no opinions or activities recorded unless questionnaire is also used; possible interruptions of mechanism; higher chance of refusals, and so possibly unrepresentative sampling."

Additional revisions given in "Listener Research Techniques Part Two – Station Coverage Measurements" included methods for determining "station coverage" included "incoming mail [in response to prize or gift], outgoing mail [questionnaire], personal interview, automatic recorder"

The automatic recording "device" engineered for the project had the advantages of "1 regular use of the station can be defined; 2. Concept of coverage can be broadened to include not only the number of listeners to the station but also the actual amount of time each family spends

listening to the station," but disadvantages not only of cost per unit, but the inability to track actual listening, only radio set operation. [66]

The user-specificity supplied in later interactive network technologies applied to mass media use, then, was a long-noticed need stemming from the radio research project device's "automatic" operation. Meanwhile, Adorno provided John Marshall a copy of his "Husserl and the Problem of Idealism," for which Marshall thanked Adorno in January 1940, not indicating whether he actually read it, or if so, what he thought of it. Shortly afterward, through CBS, Lazarsfeld was selected for an award for his contributions to radio advertising, through his research revealing how to interpret the "educational significance" and other "social aspects of radio in terms of economic pertinence to the commercial use of the medium."[67] Plans for publication of the research, in 11 projected volumes, followed. Virgil Thompson's article in the *New York Herald Tribune* on "How Popular Music Works" was noted by the project, which Lazarsfeld moved to Columbia University in 1940. Adorno also took up interest in jitterbugging as gesture, thus, the sole explicit indicator of theoretical interests in music and racial identity among the theoretical contributors to the project, although, of course, Adorno did not analyze jitterbugging solely in terms of raced dance.

Chapter 4
Harold Burris-Meyer's Theatres of Sound: Sound Control of Music Across Borders

After previous efforts between 1931 and 1938 in developing the "dramatic use of controlled sound" in the theatre, in 1938, theatrical designer and sound engineer Harold Burris-Meyer began a series of successful grant applications for his work in electronic sound processing for live theater. Whereas the Princeton Radio Project concentrated on broadcast listening, with

[66] 200 R Radio (10 RF Projects) 1949 RG 1.1 Box 271 Folder 3237, Folder 3240 Box 272 Folder 3241.
[67] 200 R Radio (10 RF Projects) 1949 RG 1.1 Box 271 Folder 3243.

music considered as a primary form of program content, Burris-Meyer's sound project, whose aims were to develop sound processing techniques for dramatic effects, made music much more of an explicit concern, although not in any conventional way, and always as what seems to be the most compelling means for evoking audience response, that is, as a broadly powerful notion of technicized expression. Competitors in the area of developing sound effects included Orson Welles, in his production of *Julius Caesar*, and Leopold Stokowski, in his musical radio broadcasts; in comparison, Burris-Meyer was considered by some Rockefeller Foundation reviewers as comparatively naïve in acoustic knowledge; however, his work in sound design for the "Living Newspaper" theatrical documentaries presented at the Federal Theater swayed John Marshall. (In the Soviet context, Prokofiev had earlier experimented with montage effects in musical composition, and at roughly this point in time was developing musical sound effects for *Nevsky*; earlier, Brecht and his collaborators at the Baden-Baden festival had experimented with the live, synchronized montage of wireless broadcast, separation of instrumentalists and vocalists, and cinema projection in the site of reception to depict, among other examples, Lindbergh as man-machine pilot in 1929.)[68]

Burris-Meyer's "principles of sound control" were already implemented in a theatre design at Oberlin College, as well as at the Paper Mill Playhouse in Milburn, New Jersey, with support from Bell Laboratories; he had also worked with RCA engineers on developing sound for television broadcast by the time of his first Rockefeller Foundation grant. Based on a first, successful $500 grant-in-aid, a $30,000 grant was approved on June 9, 1939 to the Hoboken, NJ, Stevens Institute of Technology (SIT) for "research in the control of sound and light for dramatic purposes during three years beginning July 1, 1939, $12,000 to be the maximum amount

[68] Thompson, Oscar, "Music for Wireless and Films," *The Musical Times* Vol. 70, No. 1039 (September 1, 1939) pp. 799 – 802.

available in any one year of the period."[69] In his thank you note of December 14, 1938, BM notes that he is "dilapidated" as a result of working on too many productions. But "I shall however be able to devote some time to bringing the sound picture into focus during the Christmas recess." Burris-Meyer's research would not only develop electronic filters to process vocal sound, but synchronize it correctly in live performance; in effect, this synchronized performance space, capable of timed, processed effects in sound and light, would later lead to sound engineering for theaters of war during World War II. Burris-Meyer's work would also benefit the Muzak Corporation, providing expertise in balancing sound levels between loudspeakers for both administrative announcements and music, and factory noise volume.

Recognized as an expert in "making up acoustical specifications for new and old auditoriums and by technical experts in producing equipment for sound control and for measuring its effects," Burris-Meyer proposed a project to allow him further research "on the physical aspects of sound production and its control," "measurement of the effect of sound upon audiences," with "repeated testing" through which "individuals and large groups will yield data on the part that sound may have in the total effect of sensory appeals." The theater had a specific value: while any successful results were projected as having uses in theaters run by institutions of higher learning for education and training of sound designers and engineers, which were then building costly theaters. Yet, more practically, given the larger project goals of understanding the impact of sound effects, it was only in such a controlled, live setting as an experimental theater that the effects of such "sensory appeals" could be observed and measured. The effects themselves were specifically, then, also projected to have applications stated as ranging from film to radio; given Burris-Meyer's experience, and the evidence of other documents in the

[69] Box 200 R Stevens Inst. Of Technology – Drama 1935 – 1939; RG 1.1 Series 200, Box 282; Fldr 3351, RA H 207; RF 39075

archive, television sound was also projected as an "eventual" application, although not specifically part of the main projected applications here; as it happened, television's anticipated development would be delayed by World War II.

Not as clearly foreseen was the applicability of sound processing, control, and synchronization for the battlefield, although "public address" systems were also part of the project's intended applications; Burris-Meyer would later work on implementing public address systems to be attached to airplane wings and broadcast battlefield messages to enemy combatants to surrender.[70]

While the "sensory appeal" of sound effects ranged across domains both known and unknown, academic advisors were also drawn widely: Yale, UCLA (this is probably Vern Knudson, American Acoustical Society president, and SIT), all of which had experts in the field of sound effects by this time, according to project grant documents. A Johansen at Stanford withdrew a request for funding, given Burris-Meyer's more well-known publication record. In any case, institutional interest was expressed across the nation, since standardization across institutions would allow cost reductions, providing "new techniques under controlled conditions of the repertory or university theatre" "while giving the artists a new, flexible mode of stage expression."[71] Westinghouse provided lab space; SIT provided additional funding and graduate student credits, allowing "a free flow of ideas between the young and older men in a special field with clear opportunity of advancement."

In 1932-33 and 1937-38, SIT averaged an amount in unpaid tuition and bills equal to the amount of average funding provided from 1938 by the Rockefeller Foundation, so these grants were significant in terms of tuition costs at the time. In addition, until receiving Rockefeller

[70] I do *not* know whether this scheme was inspired by MGM's 1939 production of *The Wizard of Oz*, in which Dorothy receives a "surrender" message from the Wicked Witch of the West, who sky-writes to Dorothy with her rocket-broom. Yet battlefield use of Burris-Meyer's expertise in airplane public address systems *was* a practical application tested some few years later.

[71] Documents 39262, 39262, 39263.

funding, Burris-Meyer was forced to use phonograph records as his control sources, because of a lack of microphones and equipment at SIT. In his work at the Paper Mill Theater, Burris-Meyer's sound design had been implemented through visual observation of standing waves in containers of water placed in scale models of the building, an effective means of finding dead spots, and resulting in widely regarded improved sound quality. Bell Labs' Fletcher, a major figure in audio science, was consulted in the granting project, without significant comment, but the general conclusion was that Burris-Meyer's expertise was not particularly advanced, but adequate. The contemporary goals of "scientific" measurement and application combined with institutional "networking," both of which framed what was essentially the electronic development of bioenergetic psychoacoustics research observed as theatrical, "dramatic effects" was thought likely to become profitable in the event of successful commercialization. The initial $500.00 grant-in-aid allowed the preparation of a digest of informational materials, as the grant was being developed, as well as the purchase of research materials: Helmholtz "Sensations of Tone," Stevens, "Hearing," Appia, "Die Musik und die Inscenierung," among other sources: this project, then, is a late addendum to the more general transposition of post-Romantic staging methods into mass media which Collier (1988) notes, but here, with Appia's interests in "light and sound" reflected throughout the project's initial formation, but aimed ostensibly at electronic sound effects. What was planned, though, as a "significant development" in the "history of the theater" was eminently practical in terms of tuition and equipment support, the continuing model of "social research," that is, applications for art-technological "bootstrapping" learning from public theater and arts projects, even while its epistemological models and modes of implementation, initially derived from sources indebted to late 19th century bioenergetics and post-Romantic aesthetics, applied "sound figures" to "sound effects" – although, now, towards

the production and possible commodification of devices inducing such effects as "mass hysteria."

Burris-Meyer and John Marshall agreed, in 1938, on three major points of interest for development: First, the "physical analysis" of sound effects in the theatre, for the application of technical methods to an artistic problem of growing significance, and "to produce an established technique which others may use in practice dependably"; second, "to establish an index of audience reaction, so as to provide a measure of control for the use of these techniques"; even without any technical capacity for psychological measurement of audience response, "one use of sound effects in the Stevens Theatre produced what was really mass hysteria"; thus, some index of the effects of sound was necessary, since properly artistic questions now include "average tolerance of sound effects of different intensities and of different frequencies, or again, the effectiveness of sound in relation to different noise levels either in the reproducing apparatus or in the theatre itself"; and third; the acoustics of theatre architectures.

But the clear interest here seems to be in the "dramatic" use emphasized in point two: bringing audiences, with the use of the "sensory appeal" of sound effects, to states of "mass hysteria." An October 6, 1938 letter from David Stevens to Frank Jewett, vice-president of ATT, clarified that the work is to "determine the effect of sound on audiences, or more literally to control the emotional response of audiences by mechanical means." Asked to recommend one of his staff members to help analyze the possible usefulness of the project, Jewett's advice, indicated in a letter of Oct. 11 1938, was to contact Harvey Fletcher, head of Bell Labs, and both are slightly concerned that there may be some "embarrassment" if Bell Labs is to advise on such a project, given its interests in the field. Still, advisors like Fletcher did point out that while theatrical public address systems were recognized to be of poor quality given what was known to

be technically capable, while this project had merits, any program that would actually succeed would have to be much larger. Thus, this project was a typical Rockefeller Foundation project, in that the goals were partially speculative, but grounded, always, in establishing institutional networks that might ultimately grow into much larger, actually feasible mass media development projects serving commercial interests but having "educational" or "dramatic" uses. Non-commercial, "social research," was an important way in building not-yet commercial mass media systems and applications; the emergence of bioinformatic epistemologies for audience interaction grew out of such efforts, well understood and studied before computers with RAM were developed in 1950. Typical of the research support circulated were articles like "Radio as an Art Form" (*Educational Broadcasting, 1937*) but concern was addressed by corporate backers about having enough technical expertise on board.

Rockefeller's support provided funds for research assistants; helped in Burris Meyer's promotion to Associate Professor rank, and brought expectations (later fulfilled) that the project would help draw further research support to SIT. Burris-Meyer's publications of project research helped to introduce the value of theater to engineering colleges, and conversely, introduced this expanded value of experimental sound in the theater in turn to the National Theater Conference, which re-printed an article by Burris-Meyer originally published in *Engineering Journal*. Foundation support also allowed Burris-Meyer to pursue support from NBC's television research unit with an appeal to Gilbert Seldes; motion picture researchers also hoped to become involved. But in 1939, telephone conversations between John Marshall and Burris-Meyer revealed Marshall's concerns about the sound designer's meeting with Seldes. Competition between NBC and CBS over television would be secretive and fierce as production went into experimental phases. Marshall was concerned about Burris-Meyer's naiveté, but after

the conversation, he concluded that in fact the theatrical sound designer had been shrewd to try to get TV corporations to sponsor his programming. Burris-Meyer wanted to measure audience response to the sound effects, and considered wiring audience members with a "psycho-galvanometer." Marshall: "This could be a tenable position on the ground that for effective response emotion involvement is required. If the psycho-galvanometer gives even a rough measure of emotional involvement, perhaps that is sufficient for Burris-Meyer's purposes." Marshall urged Burris-Meyer to seek consultation from psychologists who had consulted on the Princeton Radio Project, like Mark May or Lawrence K. Frank, although he cautioned about Frank's "characteristic eagerness to get any measure of aesthetic response that were [sic] possible." Further, Burris-Meyer worked through the American Film Center to experiment with the recording of sound effects on film. Rockefeller support, particularly through Marshall's insights and wide ranging personal network, typically and vastly expanded the human and institutional resources of any project grantee, in addition to monetary support.

The "sound control apparatus" built with Foundation funding provided for six sound sources, mastered to three channels: enabling live stereo mixing, in other words. Output included eight amplifiers and speakers, allowing environmental sound: any sound source could be reproduced as a fixed, moving, or, conversely unheard, "at any apparent distance, moving in any apparent direction, and any physiologically safe intensity with any quality and any apparent reverberation." Channel shift was accomplished by "pushy buttons rather than patch cords"; the control device was claimed to double standard capacity but massively reduce complexity.[72] In an interview on October 18, the Foundation's David Stevens learned from Burris-Meyer that he had demonstrated the system at Carnegie Hall for three weeks

[72] Folder 3352

> "with singers who are enthusiastic about his techniques. This week he has secured an arrangement with the Metropolitan [Opera] to make installations for use throughout the winter. Evidently, he has now the certainty of recognition that makes our grant seem to be entirely justified. He also is working with the people at the Lewisohn Stadium. Mrs. Simon Guggenheim is ready to make a contribution toward the installation of a new experimental public address system."

On installing his equipment in the Metropolitan Opera, Burris-Meyer claimed to find results that "may be almost revolutionary" for theories of reverberation. His backstage loudspeaker system circulated back those portions of the amplified sound important for maintaining pitch and cuing, with a delay of less than 1/10 of a second, which Paul Robeson was reported to have loved so much he called it "Cynthia." Stevens noted Burris-Meyer's claims:

> "The effect, Burris-Meyer points out, is comparable to that of bathroom singing. The singer instead of unusually straining to project his voice because of this playback gains confidence to rely on its natural projection. Robeson, after having used his 'cynthia' throughout a strenuous concert tour, reports that he feels far less fatigued from singing and that he cannot now dispense with the apparatus."

In 1940, Burris-Meyer began to expand his activities to "music in industry," that is, beginning a period of working for the Muzak Corporation, while continuing work on a 1941 "sound show": a public demonstration "designed to test the theatrical effectiveness of the re-made human voice, subsonics, and reverberation control, by techniques developed in the course of sound research at Stevens." Guests from New York's arts, technology, and administrative elite included Iris Berry, of the Museum of Modern Art, (who helped to shape Eisler's proposal by promising archival space at MoMA for his film music experiments). A memo dated April 18, 1941 noted: "JM [John Marshall] has the clear impression that BM [Burris-Meyer] has developed a most promising instrument but that he does not know how best to play upon it." But: "Evidently BM and his collaborators are so pre-occupied with the creation of sound that they seem to have little critical judgment in estimating its effect. For example, they did create most erie [sic] voices for the witches in "Macbeth," but so erie that at least two-thirds of the lines were unintelligible."

Marshall suggested that the technology be given to a more professional educational theatre, suggesting Yale's theatrical group. Another Rockefeller commentator, in the same document, attached his views, noting promising effects using reverberation control in an organ performance: "The lower tones seemed to EA [an unidentified observer at the demonstration] to surpass in quality whatever sound system may have been used in the film "Fantasia." The treble was too metallic, though, whether by performer or sound system. "The most imaginative thing in the show, so it seemed to EA, was that created by dubbing the re-made voice to the character of Ariel in "The Tempest." Through amplifiers placed in various parts of the theatre, the voice of Ariel spoke to the characters on the stage. If worked out more smoothly, the idea would certainly seem to have possibilities for use in a number of well-known plays that come to mind." And, "The most professional moments in the evening came in scenes from the "Emperor Jones" with Paul Robeson. The use of the subsonic drum was very smoothly done in that it didn't call attention to itself but was a part of the whole effect – as it should have been."

Here, Robeson's contributions provide instances of mastery, not surprising given Robeson's long insights and practice with Burris-Meyer's equipment, and indicate the ways that sound technology and raced performance of music provided an advanced exemplar of sound technology mastery as vocal performance. But more broadly, Disney's *Fantasia* provided the general model not only for acoustic quality in exhibition, but a more general image of sound and image manipulation. In practice, then, raced musical mastery, and animated sound-image effects which could be industrialized in electronic control devices and travel across media complemented audience effects like "mass hysteria" as the conditions of verification for the projects' goals.

An April 20, 1941 article in the Bridgeport (Connecticut) *Post* compared Burris-Meyer's work, again, to Disney's *Fantasia*, pointing out the general similarity of control techniques developed for sound and image, and the broad applicability of these techniques across radio, film, and theater. *Fantasia*'s broadening of Fischinger's visual music animation in both a more pedagogical and commercial style is not surprising here; the film not only demonstrated sound-image plasticity and higher fidelity control of sound-image plasticity as communicative, pedagogical effect *as* cinema, but emphasized electronic music's production methods transmedia status as itself a type of special effect. Critics like Parker Tyler had suggested that that film's mickey-mousing stylization of visual music animation did not so much elevate but rather made fun of mass audience's musical knowledge. But here, musicality is understood not within an attempt to elucidate for a mass audience classical music's characterological effects by doubling the compositional quality, unheard by the mass audience, in the visible domain. Rather, musicality enabled a "technicolor" proof of affective public address, raising the possibility of greater audience involvement and the spectre of greater audience manipulation; the clear educational and commercial application for musicality as "control" stressed in Burris-Meyer's "sound show" with Robeson's performance and in works like Disney's *Fantasia* were as much justifications for, as much as demonstrations of, the use of advanced technologies for time-based media composition and reception in a virtual public sphere. These forms of verification were radically distinct, then, from those developed as statistical methods, consumer biography, and automatic recording devices in the Princeton Radio Project.

In 1941, Burris-Meyer went on to demonstrate the control of stereophonic effects, as his report on the "Sound Show" was distributed to the American Acoustical Society and the Society of Motion Picture Engineers. Burris-Meyer's star in academia continued to rise, being elected a

fellow of the Acoustical Society, and chairman of the fall meeting to be held in New York City. But a May 6, 1941, article in the *New York Telegraph* noted the problem of synthetic, electronic sound and aesthetics as a mismatch, in "The Stage Today: Artificially Made Stage Sounds Demonstrated at Stevens Institute." The use of electronic control was found "unaesthetic," and the article raised general doubts as to the general effectiveness of these attempts to use synthetic, electronic sound in the theatre or concert hall, noting the broad applications claimed in Burris-Meyer's article, "The Control of Acoustic Conditions on the Concert Stage" published in the *Journal of the Acoustic Society of America*. In summer, further, the Rockefeller Foundation indicated that they would not fund Burris-Meyer's proposed expansion of the study into "Music in Industry." The concerns here were not the aesthetics of electronic sound for dramatic purposes, which Rockefeller staff seemed to think, could be improved given the right context, talent, and applications. Rather, concerns had to do with the cost of further developing the project for a non-commercial institutional network without reliable standardization. Stevens Institute of Technology's theater was not considered optimally suited for the increasing complexity and quality the equipment *did* provide; but it was too expensive for other academic institutions to adopt, apart, perhaps, from Yale. While the Metropolitan Opera might accept it as a gift, Burris-Meyer would have to consult in order to maintain and optimize its use, implying additional questions of long-term funding for consulting, maintenance, and deployment, without broader commercialization, and for artistic institutions without budgets for these needs. Further, there were concerns at the Rockefeller Foundation of Burris-Meyer's conflicts of interest in combining "trade" and non-profit "research." Burris-Meyer would concentrate on publishing results and bringing the project to an end.

But the wartime economy provided the path toward even greater funding and even greater potential efficacy. In September, Burris-Meyer was approached by the Navy Sub-committee on Sound Sources of the National Defense Research Council about taking over his project for one year with a budget of $50,000. SIT "regarded this as virtually a command performance. The Institute therefore will raise no objection." Thus, even while the Rockefeller Foundation began to bow out, having done its part in creating an institutional network allowing the project's applications across cultural, factory, and military industries, uncertainty for commercial deployment in arts institutions and as yet gradual interest from factory administrations was mitigated by the even greater funding possibilities provided by the military. These were considered part of the long-term development trajectory of the sound control project; in January 1942, in a letter to Marshall, Burris-Meyer stated his beliefs that military uses would, in turn, be of use for the theater when the war ended. A February 4, 1942 article in the *Hoboken Observer* reported that Burris-Meyer, along with Lieutenant Vincent Mallory, a sound engineer who had been working with him, had been assigned to the Bureau of Ships in Washington. Their accomplishments in sound design for theater, and the implications for war, are summarized: a sound control system at Stevens; the only electronic control of sound ever used in the Metropolitan Opera; the "acoustic envelope," a widely acclaimed aid to concert singers and musicians; the "thunder screen"; and a great variety of special sound control and test apparatus.

A May 10, 1942 article in the Asbury Park [New Jersey] *Press* dramatically suggested the possible effects of this environmental, controllable sound installation equipment for motion pictures "at war," with a collage of a bomber bursting through the cinema screen, the headline emphasizing the affective, mass corporeal power being projected here for a near-future cinema: "New Theatre Sound Effects May Knock You in the Aisle." A Los Angeles company which

planned to supply "wired music" (that is, Muzak-style ambient sound installation) to a defense contractor in California inquires about the use of Burris-Meyer's equipment. And Burris-Meyer's *Sound in the Theatre* is completed for distribution. The power of sound control to create musical, corporeal synchronization across a variety of environments across the war-time economy where workers movements and visual surroundings were radically different was duly noted by the Foundation in a summary document dated March 29, 1943. Theatre companies nationwide had sent staff to war to work on camouflage and lighting; Pasadena Playhouse staff now worked part-time in industry; the Cleveland Play House was presenting plays in industries of that region, turning a profit instead of losing money as expected; Smith College was creating plays for production in some thirty factories; while Yale had lost staff expert at camouflage and lighting, Burris-Meyer at Stevens, along with his equipment, had been requisitioned by the Navy."[73] A "Guide to Industrial Sound" is published by the War Production Board, authored by Burris-Meyer and R. L. Cardinell.

"Sound control" thus worked for the Rockefeller Foundation, as "regressive listening" had for Theodor Adorno, as a general signifier of cultural, factory, and military industries, although here, not marching lock step, but rather, in a variegated set of transitions and transpositions which had to be cultivated, and their long-term implications noted in order to evaluate requests for funding, in terms of both conflicts between "trade" and "research," as well as the aesthetic and technical advances that were occurring, in order to come to conclusions about the future value for furthering the actual, non-profit status upon which the Foundations' goal of developing non-profit, educational, industrial, and military institutional networks was based. This difference is in fact the crux of Adorno and Horkheimer's argument: it actually doesn't matter in the overall commoditization of listening across educational, artistic, working,

[73] 200R, RG 1.1, Series 200, Box 282, Folder 3353.

consuming, and military environments, and the "culture industries" were the commercial arm legitimating a broader control of consciousness. But for the Rockefeller Foundation, these distinctions *were* important; on the one hand, aesthetic advances in mass media could not happen without the networks it administratively cultivated; without aesthetic advances in mass media, industry would not know what to develop, nor the aims of development; and any military uses would have to be industrially feasible in order to gain defense funding and development. Thus, what was for Adorno and Horkheimer a general condition of capital was for the Rockefeller Foundation quite the opposite: a series of overlapping and affiliated efforts whose key points of transition had to be carefully identified for evaluation, which would determine which projects to select for funding, and when to end funding. Given the value of speculative development as a key part of their operations, both non-profit arts and educational applications and commercial applications were secondary to funded projects' potential to generate institutional alliances and affiliations, such that administrative human capital would remain with the Foundation, to be re-applied in other projects coordinated within the same historical moment, and future projects to come.

After the war, as Chair of the Music Committee of the Acoustical Society of America, Burris-Meyer redefined policy around musical acoustics. "A Study by the Music Committee," with actions by the Executive Council on February 15, 1947, added additional members to the Music Committee, and implemented changes to be later reported to the Executive Council at the next Society meeting. The policy document directed that the Acoustical Society undertake "a. the development of a common terminology for all people concerned with music; b. the fixing of criteria for the measurement of music and its effect upon people; c. the establishment of a facility for the exchange of information between individuals and groups engaged in research or

developmental activities in various aspects of music, where no effective liaison exists at present." Given music's current "infinite" capacity with advancements in electronic manipulation, along with its potential for both therapeutic and industrial uses, acoustics was re-formulated as a "common meeting ground, by virtue of the breadth of the field […]." Facts were given to support this new direction of acoustics more as speculative problematization than as concretely defined discipline. First: "Music, defined physically, is an acoustic phenomenon, and acoustics embraces: the design of man-made sound generators, the understanding of the structure and operation of the mechanism of the human voice; all means of transmission of music to the hearer; the physiological mechanisms and facilities by which the auditory stimulus reaches the nervous system; so that both psycho-acoustics and technical engineering motivated a new statement of purpose: "The purpose of the Acoustical Society shall be to increase and diffuse the knowledge of acoustics and promote its practical applications." Second: "Music as an art is a medium by which emotion may be communicated." Thus, by taking up the problem of "survey[ing] the basic relation between the art of music and the science of acoustics," and "propos[ing] a conceptual framework within which the policy of the Acoustical Society Music Committee may be developed, music as an art now is understood to have effects as "medium," and "becomes an organ of acoustics, so to speak." Discussion points include technical possibilities emphasizing the potential ubiquity for synchronization given music as a medium and as an "organ" of psycho-technical acoustics, because it would allow for generating "any type of audible spectrum" for "listeners anywhere at any time"; devices (such as the ones he had developed) now make it possible to evaluate the psycho-physical effects of sound on audiences, allowing new applications such as music therapy and industrial music, increasing utilities for

musical entertainment "functionally, in the sense of creating a predetermined emotional atmosphere".

Thus redefining music as both technicized sound medium and as aesthetic, corporeal effect in reception, problems, of course, could be stated more clearly as problematics: musical terminology was indefinite and works against progress in the field; criteria for evaluating musical effects on people are too diverse to allow the correlation of a musical principle with its effect on the hearer; artists and those who create music don't understand how extensive the field of music actually is; no joint efforts to address these issues exist; facilities to support such efforts need to be developed; and therefore acoustics is the meeting ground by which these activities can be developed. Burris-Meyer's proposal was noted in a conference bulletin of "The New York Meeting of the Acoustical Society of America, May 8, 9, and 10, 1947."

Burris-Meyer's "music" is treated as a site for simultaneously aestheticizing and technicizing research and development of music as mass corporeal affect, and expands acoustics to the status of a transdiscipline or super-discipline which might further develop audience response as musical effect. The demands of such a super-discipline are the converse of the concrete development, in the same period, of cybernetics as a science of human, animal, and machine control, as Wiener's (1948) formulation understood it. But more specifically, in Burris-Meyer, acoustics departs from either the more traditional concerns of analysis of either musical sound, of naturally-occurring sound, human speech, or animal communication, or of physiological or neurological problems of hearing and cognition. It sought, in essence, a scientistic version of that different series of transpositions by which serial music and electronic assemblage had redefined art music composition in the work of modernist composers like the earlier Schoenberg school or the slightly later work on concrete music by Schaeffer in France: a

version, that is, designed at technical implementation and installation across environments for work, medicine, recreation, or war.

But what Burris-Meyer means by music, then, had less to do with acoustics and more to do with music framed as a matter of synchronizing composition, exhibition and reception, without any necessary distinction between live or pre-recorded composition, and for some mass polity situated within a broadly imagined "theater" installation. Thus, the "theater," too, as a result of this definition of "musical acoustics" as theatrical super-discipline, could be generalized across specific sites of reception, from dramatic theater, to opera, to the factory, or to military theaters of war. In practice, while viewed with suspicion by acousticians, artists, or critics, these goals were understood as speculative in their conception but leading to concrete results given the proper, intersectional treatment through which they could be developed and clarified. In supporting the powerful implications of what was more a stylistics of research than a concretely rounded acoustic methodology, institutions like the Rockefeller Foundation played the role of what is called today an "incubator" organization, funding research that was as much conceptual and speculative as it was concretely programmatic and open-ended. Coordinating across such projects for maximum benefit in light of their essentially speculative nature was what the Foundation was actually supporting in many such instances.

In the process, though, music as a problem of synchronizing production, distribution, and reception allowed "the arts" to become generalized as a single "medium," and allowed sciences like acoustics to function as "meeting grounds" in Burris-Meyer's view. The "man of arts research" would direct research projects that were as much a matter of institutional intersectionality, educational and aesthetic aims, and emerging technical and economic

developments -- much as Heidegger had noted, in 1937, the functions of "the man of research" in his depiction of the objectification of things and modern human subjection to a "world picture."[74]

But here, it is not a world picture at stake, and any world subjectivity is rather deeply in question. What is at stake are musical streams of human conduct and technical operations which are increasingly understood, not as "picture" but as "media" conducted together, while allowing distinct positions to emerge: the powerful conducting of technicized affect for human artists whose insights, talents, and stature lead them to master these new effects, as Robeson did; an audience who could be brought to massive expressive effects such as "hysteria"; or, the "man of arts research" directing these innovations. All of these emergent positions depended on reconfiguring sites of reception in a diagrammatic, temporal streaming of conduct and technicized affect. In the mid-20th century U.S. context, then, "acoustics as meeting ground" was in part formed institutionally on the basis of post-Romantic staging theories like that of Appia, much like Appia's work had helped to inform Eisenstein's early theatrical work developing Meyerhold's biomechanics for the montage cinema. But in this context, the mass audience's roles and functions rather seem to have gained that "universal" reception which Metz bemoaned in his caricature of Eisenstein as proto-cybernetic "idealist," but which Metz celebrated in the universal reception of the singular expressivity of Rossellini's neo-Realist cinema, a human "world picture" marrying arts, language, and cinema in Metz's "open-systems language" resisting the delivery of the audience to an excessive, commoditized stream of technicized idealization (in the essays collected and translated into English, 1974). If cinema continued, for critics like Metz, to be considered as a "world picture" framed in terms of a linguistic semiotics of syntax and semantics rather than in terms of complex streams of temporal relation where the

[74] Heidegger, Martin, "Age of the World Picture" [1938], in William Lovitt, trans. & ed., *The Question Concerning Technology and Other Essays*, Harper Torchbooks, 1977, 115-154; p. 126.

shifts in framing technologies themselves are implicated in the sense of the sound and image that is exhibited, in the Rockefeller Foundation's projects, the very utility of the effects of synchronized streaming media were understood as being incapable of being stabilized within cinema's virtual framing devices. Cinema or radio could not simply misinform audiences, but even more, the effects of streaming media were not containable within cinema or radio, and were thought to already have been distributed and become productive across theaters of factory labor, consumption, art, and war. The understanding of mass media characterizing the Foundation's approaches was, essentially, temporal, if only because it had to coordinate its own administrative production processes in time – in the circulation of memos, telephone or written correspondence, funding procedures, exhibition of results achieved, testing and evaluation processes, publishing of the results, and the archiving of all of these processes with reference to the dates and deadlines relevant to them.

Still, if there was a "world picture" at work here, the subject of its revelation in the Heideggerian sense, the "man of science" who coordinates, attends meetings and consultations, who in effect manages the world picture, would have to be John Marshall, whose careful selection, coordination, and support of theoretical and practical projects across the arts, sciences, and media industries at the Foundation were processed through those characteristic templates aggregating and archiving the data of Foundation participants' comments and memos. In those memos, each project's progress was tracked, and Marshall's own contributions inscribed with the signatorial convention of typed initials: "JM." In Eisenstein's world, it was the state party as metastable organization from whose "world picture" Eisenstein's cinema diverged. In Eisler's case, a distinct type of modal cinema would claim as its rationale a (mistaken) interpretation of Eisenstein's entangling of immanence and information as a parametrical claim of technical

progress. Eisler and Adorno's misinterpretation of Eisenstein's graphical score as an impossible parametrical pairing of sound and image is, then, in spite of its errors, illustrative: if their critique of Eisenstein has little to do with Eisenstein's cinema, nonetheless it reveals the ways in which Adorno and Eisler mounted their own critique of the U.S. culture industries. Concretely, Eisler's modal cinema, in which the site of reception itself becomes a divisive "meeting ground" wherein "advanced" musical composition, working film music as score, sound effect, *and* affective, gestural response against the streaming cinematic image, was more concretely a mediation of two models of cultural production brought to bear on one another: one, the research approach he originated within the context of the Rockefeller Foundation's support of the Princeton Radio Project, Burris-Meyer's theatrical sound control project, and his own film music project; and the other, Hollywood's industrial organizational style which subordinated musical composition to rational procedures based on intensifying divisions of creative labor, and which separated the composer from arrangement, recording, and sound mixing functions, thus allowing technical advancement to go hand in hand with what Eisler felt was the factory reproduction of outdated musical clichés and the atomization of cinema audiences into false individuality and conformism. Still, it is important to note that this approach, bringing cultural administration to bear on cultural industrialization, has little place for the overtly political work in Weimar, under National Socialism, or in the rapidly shrinking sites of left European cinema production in the 1930s.

After the war and his de-commission from the U.S. military, Burris-Meyer ended his work on industrial uses of music and, clearing his conflicts of interest, returned to the Rockefeller Foundation with a funding request, sending a letter to David Stevens on July 15, 1946, stating his aim of "achieving control of emotion through the medium of the arts." Burris-

Meyer believed that his theatrical sound control equipment might be built into the architecture of an opera house he had heard that Nelson Rockefeller planned to build at Rockefeller Center. Marshall responded on July 17, 1946 with a statement that he knew nothing of such plans, but offered to have visitors from the Theatre Section of the Dutch Ministry of Education meet with Burris-Meyer on an upcoming visit in fall of that year for National Theatre Conference. Preparing a draft proposal of a research program given to David Stevens January 24, 1947, Burris-Meyer continued to advance proposals outlining facilities to "increase the effectiveness of the arts," that is, for enhancing audience control through musical affect, in "theatre arts standard and non-standard," medicine, industry, and so forth. He believed necessary for these goals:

a) "precise definition and measurement of arts forms

b) mass reaction of subjects unencumbered by apparatus

c) development of a scale of affective intensity."

Stevens' response was that Burris-Meyer seems to have learned much during his time in the military, but that the goals of the proposed project were remote from what the Foundation was supporting in drama at the time. On February 3, 1947, Burris-Meyer alerted Stevens in a letter that his group's work at Muzak has been completed, while other projects have been deferred. He had quit his work as Vice-President of the Muzak Corporation, and would concentrate on his educational activities at SIT. This concession was intended to reassure people at the Foundation who worried about conflicts of interest in "trade" and "art," so, henceforth Burris-Meyer would only serve as a consultant to Muzak. Marshall responded, in an interview on March 28, 1947, with the suggestion that if publication of prior results looked likely, Burris-Meyer might receive a grant-in-aid from the RF. Subsequently, Harvey Davis of SIT submitted Burris-Meyer's draft reports on two military projects, showing that Foundation support led to

successful major military funding, and that in turn the Foundation's support could now help return Burris-Meyer's efforts to "channels useful in peace":

> "I like to think that the various research ramifications that have grown out of your former grant have more than justified it, although the direction which the research finally took was quite different from the foreseen one. I am told that some of the later work that grew out of the original Rockefeller investigation led to an expenditure by the armed services of between fifty and one hundred million dollars in production contracts for material actually used in the war and that, in at least one case, the tide of an important battle was turned in the Allies' favor, at least in part, by equipment of this sort."[75]

Burris-Meyer more grandiosely claimed broader effects for his efforts with a survey of the contemporary field. He notes in his own report that approximately five million people in America now "work" to music. By time of this report, he had received a lightened teaching load and secretarial assistance for correlating all of the various project reports (SIT, War Department, and Muzak); a director of the Stevens Theatre was appointed to further relieve him of directing duties; and SIT provided funds to repair the now run-down equipment. He asks the Foundation for additional funds to complete the task of returning to his research, restoring and renovating the equipment, and publishing the results. To clarify the concrete fruits of his research as applied during the war, he includes a print version of a talk delivered on radio April 30, 1947 on General Electric's *Science Forum* program (broadcast weekly from Schenectady, NY over WGY), entitled "Shouting from the Sky."

The talk concerned several iterations of the "talking airplane" project, in which form his "sound in the theater" research had been deployed by the War Department. He notes that the idea originated as a way of projecting advertising messages from the sky, like banner planes. For the military, the problem was that the flying public address system had to be close enough to be heard, but distant enough not to be shot down. Thus, the project tackled not only broadcasting at high volume, but also comprehension of speech at high volume through turbulent air, from a plane travelling at high speed, and potentially facing enemy fire. The project was called "Project

[75] Letter from Harvey Davis, SIT, to Dr. David H. Stevens, RF, May 23, 1947.

Polly," presumably a reference to the high-fidelity "parroting" desired for the messages to be broadcast. Fidelity, again, was not simply a matter of technical measures or the effective clarity of the message heard but a matter of synchronizing audience response with the intentions of the broadcaster of the message: in the best of circumstances, surrender. "Polly" was authorized by the Navy Bureau of Aeronautics and built by Bell Telephone Laboratories and Western Electric Company. Two such devices were built and passed testing on Armistice Day in 1943 at Cherry Point Marine Airfield in North Carolina.

The first model consisted of a 500-watt amplifying system, mounted in a Navy Ventura bomber, understandable over an area of "several hundred acres." It was used in 1944 in campaigns for Wotje Atoll, Saipan, Iwo Jima, and Okinawa. The attempt was to "give the first real news" concerning the state of the war and to encourage the Japanese to surrender. "The first programs resulted in only a few surrenders, but this number increased rapidly as the programs were repeated." Polly experienced increasing fire as the Japanese realized her effectiveness, he says. Damaged by flak fire, more distance was needed from the field, resulting next in a 2000-watt system being deployed, with two speakers each containing 36 speaker units mounted in the plane, creating a sound intensity level of 130 decibels 30 feet in front of the loudspeakers. Polly used either live address or recorded material. The recordings were made on magnetized wire; speakers were mounted behind movable panels in the side of Navy PB- 4Y- 2 (the Navy's version of the B-24). For long messages, the airplane circled. Messages were audible from 10,000 feet in the air. Polly was used to tell enemy troops remaining in occupied islands that the war was over and gave directions for surrender, reducing remaining fighting, he says. Peacetime emergency uses are obvious, although so were the problems. Commercial uses would be likely

to ignite anti-noise legislation. "A lot of people don't even like to have an airplane flying overhead, let alone an airplane that insists on shouting at them." [76]

The Foundation responded with RF Grant #47110 on October 17, 1947 providing $9,600 for personnel and evaluative equipment design and construction, towards a modular sound control system and a manual for its use, as had been outlined in the "Sound in the Theatre" Report #7. Not too surprisingly, the projects snowballed into numerous dimensions. In a February 10, 1948 telephone conversation, the Foundation's Charles B Fahs heard that equipment specs had been completed, and engineering meeting would shortly finalize plans for the next stage. But Burris-Meyer also needed data for these next stages; thus, the analysis of theatrical plays was proceeding as well, including over 100 scripts including previous SIT productions and plays currently in production in New York. These don't seem to have been directly funded by Rockefeller funds, so these analyses were not filed in their archives. But the Rockefeller portions of the funding supported progress on the equipment Manual, and two graduate research assistants, one of whom, John Beaumont, was on loan from Yale, where he was studying technical control of light with George Izenour. In a letter to David Stevens from SIT's Harvey Davis, dated September 29, 1948, the results of the funded work over the long-term period of Rockefeller support were summarized: course teaching and research ongoing before the war has now been jump-started, thanks to the recent grant. Audio engineering classes were now over-enrolled. He also mentions ongoing conversations about installing the "Stevens Sound Control System" in a new opera house planned for Los Angeles and in the Yale Theatre, and the possible formation of a new commercial organization to realize these projects. According to Davis' letter, Burris-Meyer had also received an additional grant from a group

[76] Folder 3354; and, see Burris-Meyer's project report.

called the "Research Corporation" for "instrumentation for determining the effect on individuals and on audiences of controlled sound." Together with the Rockefeller Foundation monies, these funds would help extend the potential of music therapy.

Again, evaluations on the event of another request for $5000 raised questions about the technical rigor of the work, and the lack of publication in engineering journals. Yale's Izenour was unimpressed with Burris-Meyer; an audio consultant, Robert Darrell, was sent to SIT to check out Burris-Meyer's work. Darrell saw that peer-reviewed publications in engineering journals were disturbingly absent, and would have to be arranged in order for technical specifications, and so, standardization and commoditization, to be feasible. But he felt that the system had advantages, and showed potential. Still, on the basis of these mixed evaluations, the Foundation turned down the request for funding a portable, modular unit. The project was concluded in December of 1948, with the final financial statements submitted in January 1949.

This history of musicality's expansion across all conceivable "theaters" of technicized sound and listening conduct in everyday post-war life takes a strange turn as the Foundation's support ended. On May 16, 1949, Rockefeller Foundation's Charles B. Fahs ran into Burris-Meyer on the train platform at Penn Station in Newark, and rode with him to Philadelphia. Burris-Meyer was in uniform as a naval officer, heading to Washington for further military research work. They arranged to meet again on the 19th, after Burris-Meyer outlined his longer range plan for work on "the problem of the control of human emotion as a determinant of action."

> "B-M points out that it was realization that we were moving into an era when such control of human emotion would be technically possible which led to the development of Nazism in Germany. It is clearly indicated in "Mein Kampf" and in the work of Goebbels. According to B-M, his wartime work demonstrated that means to control emotion with sufficient precision to determine the action of from two to eight percent of a given population are within sight. While this percentage of a population is small, it is perhaps quite adequate to be decisive. There is no use ignoring the possibility of such techniques and hoping that the disturbing visions of what the effects in politics might be will go away. The question is rather, as in the case of the atom bomb, whether the techniques will be mastered and utilized for democratic

> purposes before they are exploited for totalitarian purposes. This is the background of B-M's conviction that this work is important and urgent in the United States." [77]

That lunch conversation on October 19, 1949 produced puzzlement over Burris-Meyer's claims about relieving "neurotic tension" through music, a Foundation memo notes: "He seems to belong in the undefined borderland which may include scientists, geniuses and crackpots. Much good can occasionally come out of this area but it certainly strains the pathfinding abilities of foundation officers. CBF and I agree tentatively to visit B-M at his laboratory for a further look at the blazes on the trees." A golden age of institutional support for audience listening, sound, and film music, a nexus for research into audience uplift, critical theoretical speculation, and late Romantic inspirations for generalized sound theaters, had reached the end of the line.

Chapter 5
Eisler's Film Music Project: Critical Theory For Hollywood

In a Grant Resolution dated January 19, 1940, Hans Eisler was awarded $20,160 for "experimental demonstrations of Music In Film Production over the two-year period beginning February 1, 1940." Eisler's pioneering biography in modern music and cinema was a large part of the trust the Foundation placed in him, and he was one of the few artists granted such a sizable grant: a student of Schoenberg, known as one of the foremost film music composers, selected as the composer for the first sound film issued by the German film company Tobis. Eisler projected four experimental demonstrations:

1) utilizing new types of musical material (that is, serial composition technique) in film production
2) problems of instrumentation
3) problems of blending music and sound-effect

[77] 200R Stevens Institute of Technology Drama 1948 – 1949; RG 1.1 Series 200 Box 282 Fldr 3355.

4) music in film specifically related to film content, that is, research towards a "rudimentary" aesthetics of film and music.

Eisler was to deposit negatives of the completed material (not specified: were these to be scores, soundtracks, or films composited with his completed soundtracks?) in the Film Library of MoMA (where the materials were never deposited), to make them available to students and filmmakers at a nominal charge; additionally, full reports were to be produced about the project, and made available without charge; and Eisler would publish a book on the subject depending on the results.[78]

As in the Princeton Radio and Sound in the Theater projects, but in only a nominal amount ($500), funds were directed towards the "measurement of audience reaction." The project was conceived to complement the Burris-Meyer work:

> "In general, Dr. Eisler's belief is that the use of music in film production has become conventional to a degree that neglects many of the more promising possibilities for utilizing it to best effect. A considerable number of musicians engaged in film making are alive to such possibilities and capable of realizing them in their work. The need, then, is not for greater skill in composition but rather for an exposition of methods which the composer can use to his/her advantage. The Foundation by its grant to Stevens Institute of Technology for research in the control of sound for dramatic purposes is contributing to work on the problem of making sound a more effective medium of dramatic production. The present recommendation recognizes the importance of a similar study of music in film."[79]

That the Foundation describes Eisler's Film Music Project as "similar" to that of Burris-Meyer's should not be interpreted as a vague justification. Rather, radio, sound effects, and serial music composition could all be conceived as shedding light on problems of media composition and reception, where music was understood to inform the necessary, if forced, problematic of "reactive," corporeal effects and a mass media aesthetics, motivated both by the diffusion of sound reproduction technologies through factories, schools, cultural institutions, cinema, and military operations, but shaped within the mission of institutional uplift which

[78] 200R New School for Social Research Music Filming 1939 – 1941; RG 1.1 Series 200 Box 259 Folder 3095

[79] 1/19/40 RF 40013; 40030 – 40031.

typified Rockefeller projects. For instance, part of the rationale provided by Alvin Johnson, Director of the New School for Social Research which would support and situate Eisler's efforts, was the Foundation's support for "scores of refugee scholars" like Adorno through their period of adjustment; another was the acknowledgement that mass media cultural industries were in fact just that: purveyors of mass culture, whose quality, however, was suspect. Johnson thus described Eisler's combative reputation as an asset:

> "The Rockefeller Foundation has done a wonderful work in making it possible for scores of refugee scholars to live through the period of adjustment. When the history of American culture is written fifty years from now the historian will point to many new impulses given to the sciences by this work of the Foundation. The arts, particularly in their creative aspects, are more difficult to deal with. It would be hard to hold a man like Eisler within the framework of an ordinary educational institution. Necessarily he will develop relations with industry. But it is with an industry which plays or ought to play a tremendously important part in our culture; and any contribution that tends to raise its level of merit deserves support."[80]

Eisler's program is ambitious: he includes, for example, possible uses for synthetic sound, which he never actually was able to implement, and which he doesn't address in his book with Adorno of 1947. Marshall was impressed with the proposal, and had Jones vet Eisler about any possible connection with the "communists or more particularly the Stalin-Trotzky [sic] row." Apparently, Eisler's friendship with Joseph Losey, whose film *A Child Goes Forth* Eisler scored in the course of his Rockefeller project, was mentioned as politically suspect, and according to Johnson, "has set out to storm your heaven to prove that he belongs to no communist tribe at all. I'm glad to have him prove it." (Johnson letter to Marshall, 11/16/39). Eisler clarified the project goals, emphasizing that re-scoring extant films would allow a demonstration of *better* methods of composition, not necessarily superior composition; serial composition would inform a methodology of film music scoring that might be taken up broadly.

[80] Letter to John Marshall from Alvin Johnson, November 1, 1939.

Iris Barry at MoMA provided a list of Eisler's film works to Marshall, surprised at the small number, apparently, and expecting to find more.[81] Lazarsfeld expressed support also, saying that Eisler came from a "liberal" family, his work was "some of the best mass art of the post-war republican period," Eisler was "far above the average" both as pianist and as theoretician, and felt that while "he hasn't quite the deep intellectual sincerity and great freshness of approach which Dr. Adorno has, but that his interests lie in the same direction and that from a practical point of view he might be easier to handle."[82] Consultations and coordination continued in interviews dated January 3, 1940: Eisler met with Harry Robin, who worked as assistant to Burris-Meyer; Robin seems to have had a Rockefeller Fellowship from before the time Burris-Meyer's project was awarded, and the Foundation seemed to be placing him in these various projects, probably both to help foment collaboration and to provide additional observations about the actual progress in each case. Costs were pared; audience evaluation and measurement techniques were discussed, but Marshall didn't believe that any psychological test existed that could measure the results in this case, and suggested not a lay audience but collection of statements characterizing and describing the effects in question by articulate receivers aware of their emotional reactions. He also mentions Lazarsfeld's device developed at Princeton, which consists of a small box with two buttons, one pressed for favorable response, one pressed for a negative response. These responses are thus noted on a moving tape which can be synchronized with movements of a musical score. Eisler was eager, and Lazarsfeld had already indicated willingness to cooperate, so the $500 budget item for evaluation was projected for tests using both qualitative feedback and Lazarsfeld's device.

[81] Dated 12/12/39. the list of films included: Opus 3, Walter Ruttman, 1927; Das Lied Vom Leben (Song of Life) Alexis Granowsky, 1930; *Niemandsland* (Hell on Earth) Victor Trivas, 1931; *Kuhle Wampe*, Hans Dudow (1932); *Song of Heroes*, Joris Ivens (1932); *Le Grand Jeu*, Jacques Feyder (1933); *New Earth*, Ivens (1934); *Dans Les Rues* (Song of the Streets), Victor Trivas (1934); *Abdul the Damned*, Karl Grune (1935); *Pagliacci*, Karl Grune (1936); *The 400,000,000*, Ivens (1939); *Pete Roleum and his Cousins*, Losey (1939).

[82] Letter from Paul Lazarsfeld to John Marshall, January 2, 1940, filed Jan 20.

Other responses to the proposal were positive; MoMA would act as archival custodian of the results; Ivens, then President of the Association of Documentary Film Producers, wanted to see this kind of work deployed in the experimental program his Association hoped to begin. Eisler's proposal was able to propose both short-term and long-term outcomes warranted by figures of considerable stature. Eisler had also been in touch with Burris-Meyer, with whom Robin had been working for some time. Where non-musical sound effects are involved, Eisler is reported to have expressed interest in collaborating; thus, Eisler's film music project was understood as dovetailing with Rockefeller projects already underway with significant funding. His proposal was granted for a two-year period; Eisler began with Johnson's hosting the project at the New School.

With these projects in place, a synthetic, sound-on-film project proposed by a Moskowitz, given Eisler's negative appraisal of the proposal as derivative of others' work, that proposal was turned down in February 1940. Synthetic sound on film projects, as Moritz (2004) notes, had been attempted by animator Oskar Fischinger and director Ruben Mamoulian; articles proposing such effects or translation devices to achieve them appeared in *Hollywood Quarterly* (Becker, 1945; Potter, 1947). The notion was current in the Soviet context as well, resulting in the slightly later development of the "ANS" device for the graphical scoring of synthetic sound, as Galeyev (1988) reports, although it is not clear as to the prior work which Eisler had in mind. Historically, "visual music" theorists have attributed such attempts at writing sound in magnetic, electrical, electronic, or digital media as indebted to a larger history of "color organs," alchemy, or Pythagorean or neo-Pythagorean epistemologies. Here, though, we see the tensions in clear detail: at stake is a historical transition between essentially bioenergetic epistemologies after Helmholtz and bioinformatic epistemologies emerging with Turing, Wiener, or Shannon. In the

course of this large-scale historical transition in which bioinformatic epistemologies drew from and displaced bioenergetic ones, the production of machine tools for synchronizing sound and image for scientific, recreational, or educational purposes manifested these tensions in visions of speculative machines for writing sound as music. But Eisler's project was a musically literate, critically informed attempt, grounded in materialist epistemologies and ontologies (rather than speculative ones), at diagramming a musical ethics of industrial sound-image synchronization. Clearly, the Rockefeller Foundation's careful project management and coordination, concerns with social effects of contemporary radio broadcasting (as in the Princeton Radio Project), and interests in supporting the practical development of electronic technologies for sound synthesis and modulation (as in Burris-Meyer's work) contributed in great part to Eisler's ability to introduce a materialist critique into the problematic of transitioning sound-image synchronization methods where contemporaries relied on proposals of new art forms, speculative philosophy, or the possible production potential of powerful, but ultimately largely speculative or impractical, machine tools. The dancing soundtrack of Disney's *Fantasia* was the narrativized form of the imagined potential of the technical, affective, and cultural power imagined for visualized musical sound in the midst of the transition from bioenergetic to bioinformatic models of matter, knowledge, and action; Eisler's variable scores designed to test the resources of new music after Schoenberg[83] for their applicability in cinema were the critical, administrative corollary.

The *New York Herald Tribune* announced the project to the public on February 23, 1940: "Rockefeller Fund Grants $20,000 for Film Study." According to this article, Eisler would have the support of RCA and members of the Philharmonic-Symphony Orchestra for his investigation of the "relationship between music and dialogue, use of sounds and noises, and the problem of

[83] In fact, Adorno would later describe Schoenberg as the Einstein, or classicist, of serial music, in comparison to the burgeoning numbers of serial composers whom Adorno compared to the younger generation of physicists working in quantum mechanics; [1953] 2002, 155.

orchestration and dramaturgy, and materials of instrumentation." "The musical scores will be recorded with the help of the best musicians and conductors and performed before a group of artistic and scientific specialists," the article noted. It also mentioned Eisler's theater work on Gorki's *Mother* and Odets' *Night Music* which had opened the previous night.

But problems in securing films for re-scoring surfaced. Disney provided a Donald Duck film, but not with separated image, score, vocal, and foley tracks. Eisler was put in touch with both the American Film Center and MoMA to secure film material, in addition to the documentary material on glaciers that he was scoring for Frontier Films at the same time. The problem was that documentary material was easily obtained, but getting hold of dramatic, feature film or animated material, intended as part of the project, proved difficult. Background checks on Eisler continued well into the summer of 1940, coordinated for Marshall by Johnson at the New School. As the project proceeded, Eisler's background in political, agitative uses of music always provided his increasing networks of connections with Hollywood distributors, producers, and artistic figures.

Eisler was put in touch that summer with both the Hays Office and studio officials in Hollywood, also involved in Foundation projects, in hopes of facilitating access to films. Meanwhile, the project's innovative goals continued to make headlines in then Palestine. But a budget statement provided to the Foundation by Eisler and the New School in March of 1941, a note written on the budget indicates continued difficulties obtaining films to use, despite considerable efforts by the Foundation. Meanwhile, Eisler had fired his assistant, Harry Robin, who had earlier worked for Burris-Meyer. "The difficulty in obtaining film material from the industry even with the help of the Hays office has delayed some recordings. These recordings

will now be made in the second year instead. The total budget as originally submitted is unchanged." Another year of funding was requested, but denied.

A request was granted, however, to extend the duration of the project without additional funds, in early 1942, with the project scheduled for completion by November 1 1942.[84] By that time, Eisler had been living in Los Angeles for seven months, and planned to return to New York, and still reported his plans to deposit the entire archive of material at the Museum of Modern Art in half a year. In Los Angeles, as Eisler showed the materials to film industry gatherings, he made headway in Hollywood circles, and began to work as a film composer. The materials functioned as a kind of calling card, and he was able to make a living. The *Los Angeles Times* mentioned Eisler's work in an article published in March 1943, in an article by Isabel Morse Jones, "Music World to Study Awards by Academy: Solution Sought for Eternal Question of Relationship between Film and Score." But by 1946 Marshall still hadn't received the final description of the project's results. Eisler responded from his Pacific Palisades home, stating on July 27, 1946 that late in 1942, he and Adorno had decided to "pool our theoretical ideas and practical experiences and to write the book together. The German manuscript was finished in the summer of 1944. Publication was held up by the difficulties of translation. Now, however, the English manuscript is ready to go into print as soon as a few minor changes have been agreed upon between the Oxford University Press and us. The book should be out not later than sometime in fall or winter. We should gladly let you have a copy of the English manuscript but unfortunately we have none. We are certain that Mr. Philip Vaudrin of the Oxford University Press will give you any further information about the publication." He clarifies that a separate appendix of *Composing for the Films* would be devoted to a detailed account of the Film Music Project, including the analysis of one of the sequences of the "Rain" score, scored

[84] Folder 3096

for Ivens' film of the same name. In fact, the book provides little analytical discussion of Eisler's methodologies during composition at all. However, the "Rain" scores are important, but, before turning to a discussion of Eisler's results, rain began to fall on Eisler himself.

On October 17, 1946, The *New York World Telegram* identified, on the basis of claims by a writer for a U.S. Communist newspaper, a "Hans Berger" as the secret Kremlin agent directing "all Communist activities in the US"; a woman named Ruth Fischer confirmed the identification. "Hans Berger" was in fact Gerhard Eisler, Hans Eisler's brother; Ruth Fischer was his sister. Gerhard had long continued his pro-Soviet stance, working for the Communist Party in the U.S.; Ruth had been expelled from the German Communist movement, supposedly on order from Moscow, in 1925. Ruth, now vehemently anti-communist, confirmed the information about Gerhard (if she hadn't originated it) and at the same time began a smear campaign against Hans. Gerhard was a "key agent" of the Communists and one of the "key figures" in the American Communist Party. The report alarmingly reported that the two brothers of this family deeply divided between Gerhard's Stalinist sympathies, Ruth's Trotskyite resentment, and Hans' deep depression at German politics were somehow functioning as a cell in Hollywood. The report noted that "[Gerhard] is also the brother of Hanns Eisler, noted exiled German composer, who writes music for the movies in Hollywood. In 1940, the composer received a $20,000 experimental grant from the Rockefeller Foundation to score sound tracks "in his own style of music." One of them was the Donald Duck short "His Better Self." Mr. Eisler's latest screen credit was for the Cary Grant-Ethel Barrymore film, "None but the Lonely Heart." The report was syndicated, and other newspapers reprinted it. With news claims about Gerhard, actually a journalist, blown up into unproven accusations of his full directorship of Communist attempts at destabilizing the U.S. government, and circulated nationally, Hans Eisler became the subject of

the federal House Un-American Activities Committee (HUAC). Meanwhile, the *New York Journal American* reported on October 23, 1946: "Films Enrich Hanns Eisler, Bard of Reds." He had been subpoenaed to appear before the House Committee on Un-American Activities at St. Louis, on November 23, 1946.

The claims reported were mostly false, and were falsely supported. In addition, there appear to be confusion in the press reports about the brothers' identities, so that the Communist activities of one were confused with the film scoring activities of the other – probably much to the delight of Ruth Fischer. Protests were mailed to the Rockefeller Foundation. One handwritten note filed October 30, 1946, accompanying a report in the *Los Angeles Examiner* read, "Not surprised at communist [Oscar] Levant, but do you scatter your funds this way? Let the press know where you stand!" Oscar Levant, of course, was the classical pianist/film comedian; but the hysterics of the letter are clear: the war was over, and the Red Scare was on.

The *Los Angeles Examiner* reported in October 1946 that Eisler had been located in Hollywood. He hadn't been trying to hide, and in fact, had been trying to get publicity for his film music work! But the *Examiner* published a text to one of the proletarian march songs he had composed, in spite of the fact that he hadn't written them. Confusions over divisions of musical labor allowed Eisler, then, to be further smeared. Since Eleanor Roosevelt had written a letter in support of admitting him into the country, by this time, this association also functioned as evidence against him. Virgil Thompson wrote in support in the *New York Herald Tribune*, in his "From the Left" column. He reviewed Eisler (and Adorno, who wasn't credited at the time), and pithily accused Eisler of writing poorly in English (even though the book had been translated from German by Oxford). Nonetheless, agreeing with the charge that Eisenstein's practice was essentially that of Hollywood, then, regarding Eisler's attempt to demonstrate that serial

composition's ability to provide neutral compositional material that the film industry has needed for "twenty years," Thomson says "I believe every word of it." Finally:

> "Mr. Eisler is now under Federal arrest and in danger of deportation, the charge being, according to his lawyer he is an undesirable alien, since he once, in 1926, applied for membership in the German Communist party. Whatever the law may decide as to the right of Mr. Eisler to remain in this country, there can be no question that he is a good composer and a musical intelligence of high quality. American music would be the poorer if he left us."

Composing for the Films had been published in late summer of that year. But if it garnered support form leftist critics, with its New York institutional pedigree and its insider's knowledge of Hollywood, a *New York Times* article of September 26, 1947 seemed to imply that Eisler had had too much access to elite institutions and media circles; he knew too much. The article implies, with its statements that Alvin Johnson didn't know that Eisler had once applied for membership in the German Communist Party, that Eisler had been, in effect, a spy. Iris Barry responded to David Stevens' request for comment on the book. In Barry's typically to-the-point way, she says that didn't fully understand the serial compositional techniques discussed, but she found the book useful for learning something about them. Alvin Johnson fired a letter directly to the Rockefeller Foundation on December 6, 1948:

> "I am writing to you as one educator to another, not as an applicant to the Rockefeller Foundation, where I am probably blacklisted on account of Hanns Eisler, who worked under the New School on a Rockefeller grant, and did a damn good job on music for the movies, but had the rotten taste to choose the wrong womb to come out of, a womb that produced a brother, who for all I know was a spy, and a total bitch of a sister, Trotzkyite [sic], who could not forgive Gerhard for turning Stalinist and repudiating the ideal of a world revolution. Hanns was non-political but did tunes the revolutionars (sic) sung, as you and I sing the melody of "God Save the King" [sic] and call it 'America'."

Eisler, after a fiery testimony before HUAC railed at the committee for destroying his ability to make a living in Hollywood, (available in the UCLA film archive) underwent voluntary deportation after the hearing to avoid forced deportation. A photo of Eisler applauding at a meeting of the Kulturbund (Cultural Society) of the Communist GDR after his deportation to Austria, showed him seated with other socialist artistic luminaries, thus implying "proof" of the "criminal" behavior Eisler was supposed to have "lied" about, but which was in effect the

outcome of a series of transformations in U.S. political culture in the wake of World War II. Later scholars would attribute this cultural arm, manifested here in Eisler's HUAC hearing, to political tactics aimed at diminishing the perceived influence of Eleanor Roosevelt.

The caption under a photo of Eisler run in the *New York Times* on October 29, 1948 read, "Hanns Eisler appears at Communist Meeting in Berlin." Burris-Meyer's project ended with a sense of the "blazes in the trees" of his musical imagination, as he speculated about the musical effects that he thought both the politics of Fascism necessitated and the new sciences of electronic acoustics would make possible. Today this seems like a mixture of historical tendencies toward deploying *musica practica* (useful music) for "music therapy" and the overall musical atmospherics for mass cultural listening. After deportation Eisler would go on to work with Brecht once again at the Berliner Ensemble in Berlin, where in 1959 he would witness a long delayed presentation of the *Deutsches Requiem*, which he composed between 1930 and 1957. There, as a member of the East German intellectual establishment, he would defend, in an interview given in 1958, East German youth who were under attack in the GDR for indulging in what he agreed was the false ecstasy of "boogie-woogie" and the "stupid" fashion of American-style jeans. Eisler commented, "We have good young people. Let's have a strong politics, not a strong aesthetics. We can't achieve a strong aesthetic because the American culture industries have a monumental influence over the entire world."[85] Perhaps the GDR state culture industries responded, in their fashion, with their sanctioning of "the Lipsi," a more decorous form of couples dancing, designed to mediate the influence of the strongly raced and gendered U.S. dance craze, the Twist. After returning to the GDR, Eisler divided his time between Berlin and Austria. He died in 1962. Other sources have reported that neither he nor Brecht ever gave up their Austrian passports.

[85] Eisler, Hanns, *Gespräch mit Hans Bunge: Fragen Sie mehr über Brecht* (Munich: Rogner and Bernhard, 1976) 157.