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"WHAT IS THIS MUSIC DOING TO ME?"

Psychological Experiments on the Effects of Music on Mood in the First Half of the Twentieth Century

Marta García Quiñones

Introduction

In the Introduction to The Effects of Music, edited by Max Schoen (1927), Walter Van Dyke Bingham declared that the book was “a response to the inquiry which any thoughtful listener makes, ‘What is this music doing to me?,'” and he presented it as “a challenge to science to explain more adequately than has as yet been done the nature and the mysteries of musical effects” (Bingham, 1927, p. 1). While this question could be located within the ancient and continuing tradition of reflection on the powers of music, it also adhered to what James Kennaway (2012) has called “the stimulation model of music’s effects,” a model that American psychologists such as Schoen and Bingham decidedly embraced during the first decades of the twentieth century and that lives on in current neuroscience of music (see chapters by Kennaway, Taruffi & Koelsch, and Eerola in this Companion). Recent books such as Levitin’s This is Your Brain on Music (2006) that favour an image of the human mind as affected by, rather than actively engaged in, music could be interpreted as a continuation of the intellectual approach that The Effects of Music advocated.

Although the relevance and representative nature of the majority of the experiments reported in The Effects of Music may be questioned, the interest that most of its contributors showed in defining types of listeners and identifying prevalent moods places it at the transitional moment of American psychology toward statistical procedures (Danziger, 1987). As I will argue in the first part of this chapter, this trend emerged in the interwar years in applied and educational psychology and also influenced the psychology of music. At the same time, The Effects of Music illustrated how the phonograph could be used as a psychological instrument for the exploration of emotional mechanisms within the framework of contemporary theories of emotion. The collection was a result of the Edison-Carnegie Music Research programme, which Bingham was leading at the time with the assistance of Schoen and Esther L. Gatewood, both of whom authored several essays included in it. As I will explain in the second part of this chapter, the Edison-Carnegie Music Research programme was conceived as a promotional effort for the New Edison phonograph, an effort that also produced
the Mood Music (1921) pamphlet and the mood change charts, which advertised the phonograph almost as a therapeutic instrument. In the third part of this chapter I will focus on The Effects of Music, particularly on the essays included in sections two, “The sources of musical enjoyment,” and three, “The mood effects of music,” and more specifically on those contributed by Schoen and Gatewood, which were elaborated within the framework of the Edison-Carnegie Music Research, although – as I will argue – they occupy an ambiguous position in it. These papers dealt with the moods aroused or enhanced by different types of music, which the authors tried to classify according to several criteria, also in relationship to larger notions.

**The Effects of Music or the Phonograph as a Psychological Instrument**

The extent to which the experimental approach of The Effects of Music contrasted with traditional European (and especially German) notions of music listening as a spiritual activity and the associated aesthetic ideology can be deduced from the justification advanced by Bingham in the Introduction. Here he explained that the inquiry was not to be conducted “without the guiding insight of musician and aesthetician to furnish clues to help in evaluating the results,” since the contributors, he claimed, were all competent or at least deeply interested in music (Bingham, 1927, p. 1). While the essays in the collection generally did not question but rather embraced prevalent notions about music listening and the hierarchy of musical taste, Bingham’s introduction contained at least two novel elements that seemed to relate only to the method adopted by the various contributors, but that had deeper repercussions.

The first was the use of the phonograph as an aid to control “the stimulus,” that is the music whose effects were tested experimentally. As Bingham argued, “the scientist prefers a problem with only one independent variable,” though “it is hard to make all the variables in a musical experiment stay put.” Thus, while he claimed that it was possible to control the external conditions under which the experiment took place, only the phonograph could guarantee “that successive presentations of a musical stimulus are practically identical.” For this, he argued, “[m]usical science owes to Mr. Edison a great debt” (Bingham, 1927, p. 2). Indeed, the debt was quite literal considering that the majority of the essays in The Effects of Music were submitted in a competition conducted by the American Psychological Association in 1921, where the prize of USD $500 had been funded by the famous inventor through the Edison-Carnegie Music Research initiative. As Bingham declared in an announcement in Science, the competition aimed at selecting “[t]he most meritorious research on ‘The Effects of Music’” produced during the academic year 1920–1921, since Edison and his associates wanted to understand the “affective and volitional” effects that “contrasted sorts of musical selections produce on listeners of differing native endowments and training, under varying conditions of mood, season and physical condition” (Bingham, 1920, p. 381). Thus, while the prize alluded generally to the “Effects of Music,” its explicit aim was to investigate how “musical selections” (mostly on phonograph records) could affect various listeners under different situations. For that reason, the studies included in The Effects of Music dealt for the most part with the effects of musical selections in their entirety, instead of a series of tones or melodic fragments, which had principally been used in earlier musical experiments (Bingham, 1927, p. 7).

The second element concerned the other variable in musical experiments, that is, the listener. The implicit subject of the question “What is this music doing to me?” was clearly an individual (an “I”) and Bingham evoked the problem posed by individual differences in responses to music, arguing that “the same selection often affects two people differently” and even the same person “can never experience a second time the precise sensations of a first hearing” (p. 3). However, he declared that the task of the psychologist was also to seek to “learn the normal typical response to various kinds of music” and, if possible, to formulate “the laws governing the variations from this norm” (p. 4). While this was in accordance with the reference to “the tools of statistical procedure”
that the author had introduced at the beginning of the text, it also posed the question of the “Effects of Music” in relationship to social types and populations, detaching it from the realm of the individual soul where it traditionally belonged. Although this must be interpreted in relationship to the market-research purposes of the Edison-Carnegie Music Research programme, it also points at larger movements in psychology and the psychology of music in the United States.

During the two first decades of the twentieth century, psychology was consolidated and institutionalised as a new experimental discipline, separate from philosophy. This process took place in the United States even more rapidly than in Germany, the place where the first psychological laboratories had been established and where the members of the first generation of American psychologists had studied (Ash, 2003, p. 257). Studies in audition and musical tones featured among the research interests that American psychologists adopted from their German mentors, and experimental practices with sounds were normally included in the introductory courses offered by the first psychology departments of American universities (Davis & Merzbach, 1975).

Far from being a mere continuation of European conceptions and practices, psychology adopted a special character in the United States, mainly under the influence of Darwin’s theory of evolution and the statistical approach pioneered in England by Francis Galton and Roland Fisher (Green, 2009; Kwa, 2011, pp. 217–218). The discipline also took a marked turn toward “application,” an ambiguous term that must be understood in a double sense. On the one hand, as Nikolas Rose has argued with reference to the institutionalisation of British psychology, the discipline and the profession were established “in all those fields where psychological expertise could be deployed in relation to problems of the abnormal functioning of individuals” (Rose, 1985, p. 3). On the other hand, psychology in the United States was “applied” in the sense that it oriented itself to the resolution of practical problems and this orientation was very much evident in the interwar period (Toulmin & Leary, 1985, pp. 598–599). As Kurt Danziger has observed (1987), in the second decade of the twentieth century a shift was noticeable in the research practices of American psychologists “from the analysis of psychological processes manifested in individual minds to the distribution of psychological characteristics in populations” (p. 16), that is, to statistical techniques. Thus, in the United States the administrative demands of the educational market, often modelled after the principles of scientific management, prompted many psychologists to focus their research on groups, comparative experimentation and the calculus of probabilities (pp. 18–19). Applied psychology, which catered to the needs of industry and commerce and flourished in the interwar years, adopted similar patterns of research (p. 25).

Both senses of “applied psychology” were represented in psychological research into audition and music perception in the United States during the first decades of the twentieth century, when scholars developed new theoretical approaches, experiments and instruments in response to the urgent need to extend musical instruction in the public school system and to identify talented students who could become professional musicians. This purpose guided the careers of scholars like Carl Seashore, who is widely regarded as a pioneer of music psychology and who devoted a lot of attention to music education, especially to the experimental evaluation and development of musical ability (Deutsch, Gabrielson & Sloboda, 2001; Miles, 1956). He created what are considered to be the first standardised tests to measure musical “talent”: the Seashore Measures of Musical Talent, first published in 1919 and updated in 1939, 1956 and 1960 (Seashore, 1919a; Seashore, Lewis & Saetveit, 1939, 1956). Seashore identified “musical talent” with “the musical mind,” which for him also included musical action, imagery, memory, intellect and feelings; he admitted that “musical talent” was just one aspect of the psychology of music, which also encompassed the psychology of art principles involved in music and the psychology of musical training (Seashore, 1919b, p. 1). However, the Seashore tests only evaluated the perception of specific aspects of music, such as pitch, loudness, duration, consonance, tonal memory and rhythm, through series of tones produced firstly by a tuning fork and later by an electric beat-frequency oscillator. The tones were published initially
as 78-rpm records by the Columbia Graphophone Company and in 1939 by the RCA Manufacturing Company (Gordon, 2006, p. 51). The use of the phonograph to standardise musical stimuli was one of the innovative aspects of Seashore’s tests. Thus, in the introductory pages to the *Manual of Instructions and Interpretations* that accompanied the first edition of the *Seashore Measures* the author praised “the extraordinary accuracy of the modern phonograph motor,” which allowed for the exact repetition of each series (Seashore, 1919a, p. 2). While Seashore suggested that the tests could furnish also material for scientific entertainment in the home, they were primarily meant for teaching and educational purposes – more generally, the educational perspective prevailed in his work and he tended to consider music receivers as potential producers (Malin, 2011, p. 310; Seashore, 1919a, pp. 3–4). In contrast, the Edison–Carnegie Music Research initiative represented a much clearer attempt to apply rudimentary statistical methods to the comprehension of music consumption. *The Effects of Music* demonstrates how much strain this put on traditional notions of music listening and the centrality of aesthetic taste.

A third element was, however, absent from Bingham’s Introduction, though it featured prominently in *The Effects of Music* under the concepts of mood, feeling and emotion or more specifically, pleasantness, enjoyment and the whole catalogue of emotional states accompanying music (see Washburn & Dickinson, 1927, pp. 127–129). Far from being settled, the definition of emotion and especially the relationship between physiological and subjective aspects in emotional experiences was very much under discussion at the time. The discussion had been ignited by the publication of William James’s influential paper on the subject (which contained what would later be known as the James-Lange theory of emotion) and its critical reconsideration by Walter Cannon, who developed the Cannon-Bard theory of emotion (Cannon, 1927; James, 1884). James argued that the mental states associated with emotions did not cause the bodily changes that followed them (i.e., visceral reactions and reactions of the autonomous nervous system), but on the contrary, emotions were the feeling of those bodily changes as they occurred, after the perception of the fact that caused the emotion (James, 1884, pp. 189–190). Cannon, with his student Philip Bard, re-examined James’s claims, observing the role of the brain in emotions and they concluded that emotional mental states and bodily changes were relatively independent, the former adding to the latter when the simple sensation of the emotional fact was processed by the brain (Cannon, 1927, p. 120; Friedman, 2010).

More important than differences between contemporary theories of emotions was the fact that James’s mechanistic view represented the emergence of a new model of emotional experience, where the body as an emotional site gained attention and the focus moved from the subjective will to external mechanisms of control (Dror, 1998, pp. 174–175; Morawski, 1997, pp. 226–227). This new model created tensions both in academic and popular psychological discourses between conceptions of the free, modern subject and biomechanical explanations, which considered emotional experiences as mere reactions or even by-products of bodily states (Morawski, 1997, p. 218). Within this materialistic framework, the phonograph appeared as an instrument able to create particular effects on listeners’ bodies and minds, not only motor and cardio-vascular reactions, but also feelings of happiness or irritation (and everything in between) – all of which could be located in the spectrum of emotions.

**Schoen, Bingham and the Edison-Carnegie Music Research**

The editor of *The Effects of Music*, Austrian-born music educator Max Schoen (1888–1959) completed a PhD in music psychology with Seashore in 1921. After that he accepted a position at the Carnegie Institute of Technology, where he became head of the Department of Education and Psychology in 1925 and where he would remain until his retirement in 1947. Although he shared Seashore’s views about the importance of experimental research and the need for a scientific methodology in
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music education, in his psychological studies he was scarcely concerned with representativeness or experimental controls and he seemed to favour philosophical and aesthetic reflections, which in his view did not conflict with experimentalism (Lee, 1997, pp. 88–91). Thus, one year after editing the psychological collection The Effects of Music, he authored The Beautiful in Music, a title obviously inspired by Eduard Hanslick, in which he reflected on “the varieties of experiences and effects derived from music” in order “to establish their relative values as aesthetic attitudes toward music” (1928a, p. xi). In 1948 he edited with Dorothy M. Schullian the seminal collection Music and Medicine, which traced the history of the subject and is considered today as a classic of music therapy studies (Gouk, 2000; Schullian & Schoen, 1948).

Schoen was invited to join the Carnegie Institute of Technology by Walter Van Dyke Bingham (1880–1952), who served as director of the Division of Applied Psychology (Bingham, 1923, p. 158; Schoen, 1947, p. 5). A student both of James Angell and Hugo Münsterberg, Bingham had showed an early interest in the psychology of music, authoring a book titled Studies in Melody, where he discussed an experiment that consisted in recording the tapping movement of fingers along a series of tones produced by a reed organ (Bingham, 1910, pp. 43–80; Gjerdingen, 2002, p. 962). Combining the results of this experiment with the introspective reports of the experimental subjects, Bingham aimed at understanding whether they could perceive the completeness (that is, the melodic unity) of the series. He found some degree of correlation between motor activity (muscular tension and relaxation) and the experience of melody, and he concluded that the experience of melody resulted not only from sensory elements (the phenomenon of consonance), but also from association or habituation effects on the listeners’ minds (Bingham, 1910, pp. 87–88; Hui, 2012, pp. 604–606; Selfridge-Field, 1997, pp. 292–294). During his years at the Carnegie Institute, Bingham was mainly known as an advocate of applied and industrial psychology. Around the beginning of 1920, Bingham started a collaboration with the Phonograph Division of Thomas A. Edison, Inc., to study the effects of (recorded) music, providing the company with valuable information about the appeal of the records in their catalogue (Grajeda, 2013, p. 31; Hui, 2014, p. 140; Selfridge-Field, 1997, p. 295). Using equipment and assistants supplied by the company, Bingham and his team “classified six hundred selections according to their observed effects on mood” and “carried through a number of experiments on the influence of different types of selection on efficiency in practical activities” (Bingham, 1923, p. 156).

The Edison Company had started by selling only cylinders, but it launched their first discs in 1912. The Edison Diamond Discs were marketed as “Re-creations” and the New Edison Diamond Disc phonograph was conceived and presented as a musical instrument. In 1915 the company initiated a tone test campaign to demonstrate the sound quality of their Diamond Discs by comparing them to living performances (Morton, 2000, pp. 22–23). While audiences engaged with these marketing events and the tests enabled them to transform their conception of what constituted “real music” to include phonographic reproductions, turning them into experts on sound fidelity, the focus of the campaign was not on responses to the music (Hui, 2012, p. 611; Thompson, 1995, p. 160). By the early 1920s, when Edison decided to fund the Carnegie Research programme on the effects of music, the Edison Company was still selling cylinders along with discs and it had only a small share of the US market, which was dominated by the Columbia Phonograph Company and the Victor Talking Machine Company. The Edison–Carnegie Music Research programme was short-lived. During the two years in which it ran, Edison was often sceptical about its results and its effectiveness as a marketing tool and he decided to terminate its activities in February 1922. Also, within a few years the much-advertised excellence of Edison’s acoustic records would be surpassed by the sound of electrical recording, introduced in 1925. However, the Edison Company would be the last one to adopt the electrical recording technology: it made the first electrical recordings in 1927 and stopped the production of phonographs and recordings in 1929 (Dearling, Dearling & Rust, 1984, p. 36).
Nevertheless, in 1919 an advertising booklet *Edison and Music* still insisted on the superior quality of the New Edison phonograph, whose “reproduction of music cannot be detected from the original music” and referred to various press reports on the successful tone test campaign. Extensively illustrated with drawings of period furniture cabinets to be used as phonograph cases, the booklet also comprised a text insert on “The musical ideals of Thomas A. Edison,” where the inventor praised music and rejoiced that the phonograph could bring the uplifting power of music to everybody, since even those who were not gifted to compose music, sing or make music, “love to listen to it in times of mental stress” (*Edison and Music*, 1919, pp. 3, 13, 19). The pamphlet presented two key elements that would also be fundamental to the Edison-Carnegie Music Research programme: the functionality of music to elicit, enhance or change moods, and the home as the setting where the phonograph could be used as an almost therapeutic instrument to serve the needs of individual family members. Both elements were also present in another promotional pamphlet published by Thomas A. Edison, Inc. in 1921, entitled *Mood Music* (on the availability of the pamphlet see Grajeda, 2013, p. 33, n. 4; Hui, 2014; Selfridge-Field, 1997, p. 309, n. 28).

A product of the Edison-Carnegie Music Research programme, *Mood Music* (1921) was, as its subtitle suggested, *A compilation of 112 Edison Recreations according to ‘what they will do for you.’* These were based on psychological experiments conducted under the direction of Bingham, though it is not clear whether he should be credited as the author (Grajeda, 2013; Hui, 2012, 2014; Selfridge-Field, 1997). After a Foreword and a text entitled “Mood music,” readers found the 112 Edison records or “Re-creations” classified into 12 listings, whose titles alluded to the moods that they were supposed to induce: “To stimulate and enrich your imagination;” “To bring you peace of mind;” “To make you joyous;” “In moods of wistfulness;” “Jolly moods and good fellowship;” “For more energy!;” “Love – and its mood;” “Moods of dignity and grandeur;” “The mood for tender memory;” “Devotion is also a mood;” “Stirring;” and – as a last, non mood-related category – “For the children.” The pamphlet also included a text signed by Bingham, “Research on moods and music” (*Mood Music*, 1921, pp. 28–31), as well as a special form called a “mood change chart” filled out by private detective William J. Burns and introduced by a text inviting listeners to register their reactions to music.

As the Foreword emphatically announced, *Mood Music* treated music “from an entirely new viewpoint – the viewpoint of *what it will do for you,*” replacing old genre categories that were commonly used by phonograph companies (such as “Operatic gems” or “Band music”) with the evocative titles mentioned above. The text entitled “Mood music” opened with some remarks about the physical effects of music and about the fact that it was generally regarded “merely as a means to pleasure,” whereas it “might be utilised to do you much practical good” (p. 5). Mixing references to ancient and contemporary authors, from Confucius to Emerson, the text presented music as a kind of soothing or stimulating medicine, asking readers “why not ‘take’ music every day, for our mental well-being, just as we take food for our physical well-being?.” The addressees of this call were millions of people, described as suffering from a variety of psychical ailments including loneliness, exhaustion, the nervousness caused by modern life, business worries or discouragement (p. 6).

Six illustrations distributed across the booklet represented mostly middle-class men and women who, before playing recorded musical selections, were under “the tense strain of business,” worried by “a bad jolt in the market,” “nervous and exhausted from shopping,” “too tired to eat,” “lonesome” or “too tired to get dinner,” as the captions claimed and afterwards were “soothed and refreshed by music,” “steadied by music,” etc., their sufferings having been alleviated by listening to the “right” music. These illustrations thus offer examples of how the tensions between images of the modern subject and the mechanistic model of emotions were articulated, with different types of “mood music” being presented as useful tools to manage the stress of everyday life. In other words, the drawings show how music could have a beneficial effect on modern citizens and more specifically, on their nervous bodies. As Hui has remarked, “the phonograph allowed the listener
to take individual action to cause a bodily effect with scientific precision” and this bodily effect also affected his or her mood, according to a mechanistic model of the emotions (Hui, 2014, pp. 141–142). The phonograph, then, empowered those modern subjects, since it gave them the means to alter their bodies and minds and thus to exert the kind of “cool” emotional restraint that emerged in the 1920s according to scholars such as Stearns (1994).

Even though the text *Mood Music* offered a brief description of how research had been conducted and how the 12 music listings were elaborated, for methodological detail the readers were referred to the closing text of the booklet. There, after some considerations about how music could help people at work and at leisure and how it could influence different psychological aspects, Bingham explained how they had gone about specifying what selections should be played to get a desired effect using solely the tool of introspection or “looking into one’s self.” Toward this end, the psychologists engaged three listeners (two women and one man), whom they considered as “experts in introspection,” two of whom were musicians, while the third was deemed a typical music lover with “a keen ear for what is good.” These three subjects listened to 589 selections including “every kind of vocal and instrumental selection, popular and classical, brilliant and subdued, simple and elaborate” (Bingham, 1921, p. 29). From their reports the selections were split into three groups: one whose effects were marked, but which varied with every listener, a second group of selections that produced little or no effect and a third group that not only produced marked effects, but each selection affected each listener in substantially the same way. This latter group consisted of the 135 selections that were eventually divided into the 12 categories of music described above. Bingham argued that besides the music, the temperament of the listener was “the most potent factor” in explaining how he or she reacted to the music, but he also acknowledged that their studies left out a great number of “complicating factors.” Nevertheless, he still insisted that the experiment could predict “the normal, typical response which an individual should make to various types of music” (p. 30).

Compared to the experiment described by Bingham, the mood change chart that appeared at the end of the booklet represented an attempt to bring the research to a new level, launching a survey to collect consumers’ reports on the mood effects of the Edison Re-creations. In fact, the same year *Mood Music* was published the Edison Company had embarked on another survey to gain understanding of the musical tastes and opinions of phonograph users. The questionnaire, which was mailed to thousands of them, was signed by Thomas A. Edison in person and asked phonograph owners to list their favourite tunes and explain why they liked them (Taylor, Katz & Grajeda, 2012, pp. 56–57). The aim was to gather information about the kind of music that listeners would like to buy, though the more than 2,000 survey returns that are still preserved today offer information that goes beyond musical preferences, tracing a complex image of the way that users employed their phonographs and related to their musical selections (Kenney, 1999, pp. 5–14; Taylor, Katz & Grajeda, 2012, pp. 57–65).

Designed by William Maxwell, President of the Phonograph Division of the Edison Company and approved by Bingham, the mood change chart was a more structured form and required more effort on the part of users. At the centre of the chart there was a space for listeners to report the mood changes they had experienced after listening to different Edison Re-creations and a blank space was left at the bottom for listeners to comment freely on how these mood changes happened. In this way the Edison Company invited readers of the *Mood Music* pamphlet to observe music’s effects on themselves or their friends and advised them that the charts could be used not only in psychological experiments, but also as entertainment for families or as a basis for organising “mood change parties” (*Mood Music*, 1921, p. 32). An advertising campaign was launched to encourage consumer participation in mood change tests, which they could take at local dealers if they did not own an Edison phonograph (Selfridge-Field, 1997, p. 298). Indeed, hundreds of mood change parties were held in different locations, including university campuses such as Yale, Harvard and Columbia (Grajeda, 2013, pp. 45-47; Hui, 2012, pp. 611–613).
Research into the Impact of Music on Mood in *The Effects of Music*

A belated result of the Edison–Carnegie Music Research programme, *The Effects of Music* (1927) included essays that had been submitted to the Thomas A. Edison Prize, plus three reprints. Yet, published six years after the Edison Prize announcement and more than four after the end of the Carnegie research initiative, a point when Bingham had already left his position at the Carnegie Institute, *The Effects of Music* obscured the commercial and marketing purposes that had inspired the project, underlining instead its scientific character. Whereas *Mood Music* provided scientific arguments for selling the New Edison phonograph using promotional language, the collection edited by Schoen presented itself as an exploration of the impact of music, where the phonograph was employed as a reliable psychological instrument to explore that impact, although possible differences between listening to live music and listening to records, for instance the “personal element” in concert programmes, were not addressed (Gatewood, 1927a, p. 80). Besides, as a volume in the influential series “The international library of psychology, philosophy and scientific method,” *The Effects of Music* was an academically prestigious way to develop the questions addressed by the Edison–Carnegie Music Research and it succeeded in creating a debate on those issues by engaging well-known authors that were outside the original project.

In general, *The Effects of Music* dealt with the subjects that the organising committee had suggested to scholars who wanted to submit their essays to the Edison Prize (Bingham, 1920, p. 381). Section one included a chapter dealing with individual differences in listening to music by British psychologist Charles S. Myers (1873–1946) and one by American music educator Otto Ortman (1889–1979) on types of listeners (Myers, 1927; Ortman, 1927a). Sections two and three constituted the thematic core of the collection, in which such important subjects as the “classification of musical selections according to their musical effects” and the “modification of moods by music” were elaborated. In particular, section two included a long piece by Gatewood, “An experimental study of the nature of musical enjoyment,” which was distributed across chapters 4 and 5 (Gatewood, 1927a, 1927b) and the essay that won the prize, “The sources and nature of the affective reaction to instrumental music” signed by American psychologist Margaret F. Washburn (1871–1939) with George L. Dickinson (Schoen, 1928b; Washburn & Dickinson, 1927). Section three included two chapters by Schoen and Gatewood about the mood effects of music (Schoen & Gatewood, 1927a, 1927b).

Even if physiological effects were commonly invoked in scientific explanations of the “powers of music,” in the collection the emotional effects of music were granted much more attention than its strictly physiological effects. The questions of “muscular activity” and “objective (physiological) measurements” were the main focus of only two chapters. The first, chapter 9, was entitled “Effects of music upon electro-cardiograms and blood pressure” by American physiologist Ida H. Hyde (1857–1945) and constituted section four, on “The organic effects of music.” In this chapter Hyde reported some experiments into cardio-vascular functions and found that these were “reflexly stimulated concomitantly with psychological effects of music,” where “concomitantly” suggests a position closer to the Cannon-Bard theory of emotions than to James-Lange (Hyde, 1927, p. 195). The other chapter was “The immediate and long-time effects of classical and popular phonograph selections” by American psychologists A. R. Gilliland (1887–1952) and H. T. Moore, which also included measurements of muscular activity and a photographic comparison of the facial expression and bodily posture of subjects listening to familiar or unfamiliar selections of classical music or jazz (Gilliland & Moore, 1927, pp. 214–217). Whereas the authors admitted that the photographs revealed only subtle differences in attitude, they perceived a “slightly puzzled, incomprehending expression” in the subjects listening to unfamiliar music (see Figure 10.1a & 10.1b), compared to the “greater directness of gaze” of the same subjects listening to music they knew (p. 219).

Gilliland and Moore’s chapter, together with chapter 10 on “The effects of immediate repetition on the pleasantness or unpleasantness of music” (Washburn, Child & Abel, 1927) and chapter 12,
Figure 10.1a and b “Showing Facial Expressions of Subjects while Listening to Unfamiliar Classical Music”

Source: The Effects of Music (Gilliland & Moore, 1927, face p. 216). The photographer is unknown
The effect on a musical programme of familiarity and a sequence of selections” by American psychologists June E. Downey (1875–1932) and George E. Knapp (1927) constituted section five, titled “The effects of repetition and familiarity,” which can be seen as a development of the subject of habituation effects that Bingham had tackled in his research into the unity of melody (Bingham, 1910). While the notions of repetition and familiarity were not alien to the culture of classical music concerts and the music appreciation movement that was developing at the time, they were also closely associated with phonographic culture, since as Gilliland and Moore stressed, “repetition is the inevitable rule with everything pertaining to the phonograph” (1927, p. 219). Besides, the analysis of sequences of musical selections, which Downey and Knapp related to the planning of music programmes for artistic purposes or for musical appreciation courses could also be associated with the short duration of phonographic records at the time (Downey & Knapp, 1927, p. 230). The chapters included in section five thus treated subjects that might be considered as effects of the phonograph on musical experiences, rather than just effects of music. Finally, section six tackled a subject not included in the original list, namely the effects of music on the other senses (Ortman, 1927b). In that section, Gatewood’s chapter on linguistic similes for describing music effects had further implications, since it concluded that “no auditory vocabulary, universally understood” could describe musical experiences (Gatewood, 1927c, p. 267).

In particular, the essays included in sections two and three offered invaluable examples of the kind of studies fostered by the Edison-Carnegie Music Research programme, and they must be considered in relationship to the notions elaborated in the Mood Music pamphlet of 1921, since they developed similar questions. One striking thing is that none of the contributors felt the need to define such important terms as “emotion” or “mood.” Thus, in chapter 4 Gatewood stated that “the term emotion is used throughout this paper very broadly and loosely to cover any affective experience” (1927a, p. 79) and in chapter 6 a footnote by Washburn and Dickinson reported practically the same (1927, p. 127). In contrast to the 1921 pamphlet, which demonstrated the emotional effects that recorded musical selections could have on ordinary people, the majority of the essays included in sections two, three and five reported experiments conducted on university students, who often had some degree of musical expertise (Gilliland & Moore, 1927, p. 220; Schoen & Gatewood, 1927a, pp. 137–144; Washburn, Child & Abel, 1927, p. 202; Washburn & Dickinson, 1927, p. 121). It would probably be a mistake to assume that the mechanistic model of the emotions was implicit in all essays that were included in these sections, since subjects’ bodies were significantly left out of consideration and authors did not comment on their physical or emotional condition.

In line with this, the majority of the experiments were based on introspection, that is on reports or statements written by experimental subjects, who sometimes were asked to fill out charts similar to the ones designed for the mood change tests. Results were often elaborated in tables using elementary tools of statistical analysis, though the populations considered were normally very small, due to concern with the correctness of experimental procedures. In that respect, Schoen and Gatewood’s chapter, opening section three, which referred to the mood change chart survey launched within the framework of the Edison–Carnegie Music Research, is exemplary. After ordering the information obtained from more than 20,000 mood change charts, where users “reported the effects produced upon their moods by a variety of 290 phonograph recordings of vocal and instrumental musical compositions,” the authors came to the conclusion that a musical composition was not only able to produce changes in affective states, but “that its effect upon the large majority of the members of an audience is uniform to a striking degree” (Schoen & Gatewood, 1927a, p. 131). However, they objected to the conditions under which the information was gathered, which they found “entirely out of keeping with established experimental procedure” and proposed instead a test involving only 17 male and female students at Carnegie Institute of Technology, whose musical backgrounds, training and tastes were also considered (p. 137). The chapter thus privileged the possibility of controlling experimental conditions and having a better
knowledge of experimental subjects over the statistical validity of the results. Even if the reported experiments were presented as an inquiry into the validity of the introspective approach to study the effects of music, their results would hardly be representative by modern standards.

The Effects of Music, and especially the two sections dealing with emotional effects, emphasised a systematic classification of mood effects. Thus, Gatewood distinguished between “the general effect of pleasantness or enjoyment” and particular feelings or “emotional effects,” such as rest, sadness, joy, love, longing, amusement, dignity, stirring or reverence (Gatewood, 1927a, pp. 87–91), on which enjoyment apparently depended. Washburn and Dickinson made a similar distinction between such general notions as “pleasantness” (or unpleasantness) and “the exciting and quieting effects of music,” which they tried to relate to musical elements through introspective experiments (Washburn & Dickinson, 1927, p. 121) and the various emotions accompanying music, which they classified according to those general notions (pp. 128–129). These distinctions made possible nuanced observations of music effects, like the acknowledgement that “mild unpleasantness” might be compatible with aesthetic enjoyment, and they might be considered as a contribution to empirical aesthetics, in which pleasure and displeasure would substitute for aesthetic value (p. 129).

Conclusions

The Effects of Music can be interpreted as a showcase for the tensions between the ideology of music aesthetics and the new physiological and psychological models that tried to explain how music could act on the body, the mind and the emotions. At the centre of those tensions, the phonograph, a musical and a psychological instrument, played a key role in the definition of new models, since it created not only the possibility for large-scale experimentation, but also new listening conditions (Hui, 2012). On the one hand, many contributors to The Effects of Music apparently assumed that exploring the effects of recorded musical selections was just a more scientific, objective way to explore (live) music effects, and some chapters (Schoen & Gatewood, 1927a) exemplified the resistance that new market research procedures (such as the mood change charts) encountered among music scholars. On the other hand, the exploration of the notions of repetition and familiarity bore witness to an emerging interest in the phonographic experience of music (Downey & Knapp, 1927; Gilliland & Moore, 1927; Washburn, Child & Abel, 1927). The collection thus took an important step toward an experimentally-based conception of musical aesthetics, which would be focused mainly on the effects of music and not on the logics of musical composition (Schoen & Gatewood, 1927a, 1927b). It also offered a catalogue of experimental procedures to measure and classify those effects even though the extent to which individual introspective reports could serve this purpose remained an open question.

Notes

1 I would like to thank Kathy M., of the Benson Ford Research Center, for sending me a scanned copy of the Mood Music pamphlet.

2 This was the case with chapter 2 (Myers, 1927), which had originally been published by the British Journal of Psychology in 1922, with chapter 9 (Hyde, 1927) originally published in the Journal of Experimental Psychology in 1924 and with chapter 11 (Gilliland & Moore, 1927), which appeared in the Journal of Applied Psychology during the same year.

3 However, Bingham had stated in the Introduction to The Effects of Music (1927, p. 5) that the jury – consisting of himself, Professor H. P. Weld at Cornell University and Professor H. D. Kitson at Columbia University – had awarded the prize to the essay “The effect of immediate repetition on the pleasantness or unpleasantness of music” by Margaret F. Washburn and her collaborators, which was published as chapter 10 of the book (Washburn, Child & Abel, 1927). Since Schoen’s correction (1928b) appeared the following year, I take it as the final word on the matter.
References


Mood Music: A compilation of 112 Edison re-creations according to “what they will do for you”. (1921). Orange, NJ: Thomas A. Edison Inc.


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