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FUTURIST THEATRE AS A SYNAESTHETIC EXPERIENCE

Synaesthesia as a neurological and artistic phenomenon

Synaesthesia is a neurological phenomenon in which one sensory stimulus leads to involuntary reactions in a second sensory pathway. The term 'synesthesia' – from the Greek: *syn* ($\sigma uv =$ at the same time), and *aisthēsía* ($\alpha u \sigma \theta \eta \sigma (\alpha =$ perception, sensation or feeling) – indicates a blending of unrelated sensory impressions. An example of such an intertwining of the senses is colour-hearing, i.e. the association of sounds with colours. Here, one hears a sound and simultaneously experiences a symphony of colours, or vice versa, an image elicits reverberations that are similar to music.¹ The term was introduced by the neurologist Alfred Vulpian in his *Leçons sur la physiologie générale et comparée du système nerveux* (Lessons on the General and Comparative Physiology of the Nervous System, 1866).² Thus introduced by medicine as a pathological phenomenon, an intensive discussion about synaesthesia began, also in the arts, where it slotted into a long established discourse on the fusion of sense impressions in a *Gesamtkunstwerk*.³

¹ See Adler and Zeuch: Synästhesie: Interferenz – Transfer – Synthese der Sinne; Campen: The Hidden Sense: Synesthesia in Art and Science; Cavallaro: Synesthesia and the Arts; Cytowic: Synesthesia: A Union of the Senses; Gruß: Synästhesie als Diskurs: Eine Sehnsuchtsund Denkfigur zwischen Kunst, Medien und Wissenschaft; Pütz: Von Wagner zu Skrjabin: Synästhetische Anschauungen in Kunst und Musik des ausgehenden 19. Jahrhunderts; Simner: The Oxford Handbook of Synesthesia.

² See his 20th lecture given on 21 July 1864 at the Musée d'Histoire Naturelle: "C'est par les termes de sympathie ou de synesthésie que l'on doit désigner les phénomènes en question; ou bien, avec Müller, on peut employer l'expression: sensations associées." Vulpian: Leçons sur la physiologie générale et comparée du système nerveux, p. 465. In the mid-1800's, The German physiologist Johannes P. Müller began the first systematic and scientific studies of sensation and perception.

³ The literature on the concept of Gesamtkunstwerk is extremely wide-ranging. Particularly useful in our context is Neumann: *The Evolution of the Concept "Gesamtkunstwerk"* in *German Romanticism*; Polheim: "Die romantische Einheit der Künste"; Rummenhöller: "Romantik und Gesamtkunstwerk."

A well-known example is Kandinsky's memoir of his Moscow days in the 1890s, when he first experienced the effects of synaesthesia in an exhibition of French Impressionist paintings and in a performance of Wagner's *Lohengrin.*⁴ His fascination with colour impressions that evoke sound sensations, and of musical chords that bring colour to life, re-occurred on 2 January 1911 during a concert of Schönberg's *Klavierstücke op. 11*. It was under the impression of this musical experience that he painted *Impression 3 – Concert*.

The multi-sensory processing capacity of the human brain varies from person to person. This is why some people correlate colours and tastes, whilst others associate smell with touch. The umbrella term 'synaesthesia' has a long tradition in the history of music and theatre,⁵ where the fusing together of music, words, movement and scenic spectacle has been the topic of heated debates. However, we only hear of isolated figures who reflected upon the psychological and physiological mechanisms behind a unified or total work of art.⁶ It was only in the late eighteenth century that the relation between sound, colour, smell and taste came to be investigated and experimented with. The fusion of the arts became a popular dream of the Romantics, who for the first time in history produced a body of theoretical literature on how this utopian idea might be brought to realization.

The capacity to see sounds and hear colours was of fundamental importance for Kandinsky's breakthrough to an abstract form of art and was outlined in his treatise *Über das Geistige in der Kunst* (Concerning the Spiritual in Art, 1910). Consequently, the concept of synaesthesia served as a basis for many Modernist experiments,⁷ including those of the Italian Futurists.

Kandinsky: "Rückblicke", p. 33.

⁵ See the documentation in Kröplin: Richard Wagner – Musik aus Licht: Synästhesien von der Romantik bis zur Moderne.

⁶ See the examples in Wellek: "Renaissance- und Barock-Synästhesie" and Schrader: Sinne und Sinnesverknüpfungen.

⁷ See Berghaus: "Obra total de arte e teatro modernista", and "A Theatre of Image, Sound and Motion: On Synaesthesia and the Idea of a Total Work of Art"; Roberts: The Total Work of Art in European Modernism; Lista: L'Œuvre d'art totale à la naissance des avant-gardes, 1908–1914; Smith: The Total Work of Art: From Bayreuth to Cyberspace; Szeemann: Der Hang zum Gesamtkunstwerk.

Synaesthesia in Futurist manifestos

A synaesthetic basis can be found in the manifesto *La pittura dei suoni, rumori, odori* (The Painting of Sounds, Noises and Smells, 1913), in which Carlo Carrà outlined how Futurist painting could capture the full gamut of sensations "of modern life in its essential dynamism"⁸ and how the sounds, noises and smells to be found in music-halls, brothels, railway stations, hospitals and so on could be incorporated into "a polyphonic architectural whole" of a musical composition.⁹ His ultimate aim was to create a form of "total painting" that elicits many sense impressions in order to reflect the "great emotive effort, even delirium, on the part of the artist", and is not just appealing to "cold logical intellect".¹⁰

In *La cromofonia: Il colore dei suoni* (Chromophony: The Colour of Sounds, 1913), Enrico Prampolini sought to explain how all vibratory movements within the atmosphere can be perceived as chromatic stimuli. He emphasized that sound and colour should not be considered isolated phenomena but as being synaesthetically linked. All sense impressions are related to a multitude of atmospheric vibrations and are therefore interacting with each other. The artist only has to incorporate them intuitively in his creative works. *La cromofonia* contains so many similarities to Carrà's *La pittura dei suoni, rumori, odori* that one must assume that it was the result of a common debate in the circle of Giacomo Balla, where Prampolini became familiar with the aesthetic concepts of Futurist artists. Also Carrà asserts that colour, sound and smell are "none other than different forms and intensities of vibration"¹¹ What distinguishes Prampolini's from Carra's viewpoint is his pseudo-scientific reflection on the medium of the atmosphere through which the vibrations are channelled.

Prampolini postulated the existence of an "atmospheric essence" (in Apollonio's translation p. 116) that creates a multitude of vibrations which are all synaesthetically linked (e.g. "vibrations emitted by a source of sound also exist in the atmosphere and are susceptible to our optical sense" 116). These correspondences between sound, colour and smell (he does not mention the 'nonatmospheric' senses of taste and touch) are not completely fixed in their interrelations. The 'chromatic value' of an atmospheric vibration depends on many

⁸ Carrà: "The Painting of Sound, Noise and Odours", in Apollonio, p. 112.

⁹ Carrà: "The Painting of Sound, Noise and Odours", in Apollonio, p. 113.

¹⁰ Carrà: "The Painting of Sound, Noise and Odours", in Apollonio, p. 115.

¹¹ Carrà: "The Painting of Sound, Noise and Odours", in Apollonio, p. 112.

factors and is influenced by other vibrations that co-exist in the atmosphere. It can therefore create "a whole chromatic gamut" and "a myriad of chromatic scales" (116) that saturate the atmosphere and are responsible for the "violent irradiation of evolving vibrations (118)."

Gino Severini outlined in *Le analogie plastiche del dinamismo* (Plastic Analogies of Dynamism, 1913) how an artist can "enclose the universe in the work of art"¹² by unifying the different synaesthetic sensations under the umbrella of "a single architectural scheme".¹³ Following on from this, Enrico Prampolini wrote *Anche l'architettura futurista... E che è?* (Also Futurist Architecture... What Is It?, 1914). In this manifesto, architecture is not to be understood in the sense of buildings or houses but refers to all three-dimensional constructions.¹⁴ The intrinsic forces of the atmosphere – air, light, energy – form the basis of a dynamic *vita futurista*, in which the "three energetic entities are amalgamated in a unified whole".¹⁵

Similarly, Umberto Boccioni's *Futurist Painting and Sculpture* of 1914 proclaimed the end of the traditional distinction between painting, music and poetry and envisaged a new, unifying Futurist art which exists as pure creation. This move from a synaesthetic to a synthetic theory of Futurist art had enormous consequences for Futurist theatre. In the *Futurist Playwrights' Manifesto* of 1910, Marinetti had spoken of "a synthesis of life at its most typical and most significant".¹⁶ And in the *Variety Theatre Manifesto* of 1913 he had called for "a synthesis of everything that humankind has hitherto instinctively refined to lift its spirits".¹⁷In the manifesto, *Il teatro futurista sintetico* of 1915, the term *sintetico* means both short – see the opening statement: "Sintetico, cioè brevissimo"¹⁸

- ¹⁶ Marinetti: "Manifesto of Futurist Playwrights", p. 183.
- ¹⁷ Marinetti: "The Variety Theater", p. 186.

¹² Severini: "Plastic Analogies of Dynamism", in Apollonio, p. 118.

¹³ Severini: "Plastic Analogies of Dynamism", in Apollonio, p. 125.

¹⁴ The essay was later republished with some modifications as *L'atmosfera scenica futurista: Basi per un' architettura futurista* (The Futurist Structure of Atmosphere: Basis for a New Architecture, 1918), where he speaks of "costruzioni futuriste imperniate nello spazio". Prampolini: "L'atmosfera scenica futurista: Basi per un' architettura futurista", p. 78.

¹⁵ "Essendo la vita futurista dell'aria, della luce (energie naturali) e della forza (energia artificiale), l'architettura futurista dovrà essere plasmata e esteriorizzata da queste tre entità energetiche che amalgamate tra loro creano un'unica entità astratta." Prampolini: "L'atmosfera scenica futurista: Basi per un' architettura futurista", pp. 77-78.

¹⁸ Marinetti, et al.: "Il teatro futurista sintetico" p. 98.

– and unified, i.e. it is a fusion of different scenic arts that are "perfectly in harmony with our lightning-fast yet pithy Futurist sensibilities".¹⁹

After this brief survey of how the Futurists presented the concept of synaesthesia in their manifestos, I shall now have a closer look at some of the ways in which theory was translated into artistic praxis.

The Corradini Brothers

The first Futurist experiments with a synaesthetic form of art were undertaken by the brothers Bruno and Arnaldo Ginanni-Corradini. Both were greatly interested in theosophy, occult science and spiritualism. Arnaldo's artistic credo in this period had a clearly abstractionist orientation. But he did not call his art 'abstract' but *musica cromatica* or *accordi cromatici*.

The idea of an abstract, synaesthetic art based on spiritualist principles was outlined in the brochure, *Arte dell'avvenire* (Art of the Future, 1910), in which the two brothers sought to investigate the exact parallels between the different arts and to determine their common ground. Arnaldo explored the relationship between music and painting by composing on canvas shapes and colours according to the laws of musical harmonies.²⁰ It did not take long for him to discover the fundamental difference between painting and music, namely that the former exists in a spatial, and the latter in a temporal dimension. A truly chromatic music or harmonic painting had to combine the spatial and the temporal. This led him to the creation of 'cinepaintings', i.e. a series of animated, hand-painted films.

Unfortunately, these films were destroyed in the Second World War, but we get a glimpse into what they looked like from the essay "Musica cromatica" of 1912.²¹ Bruno Corradini described how he and his brother experimented with tinted film strips to project colours in rapid succession onto a screen. The amalgamation of these colours on the retina of the human eye created complex im-

¹⁹ Marinetti: "A Futurist Theatre of Essential Brevity", p. 201.

²⁰ See, for example, Arnaldo Ginanni-Corradini's *Requiem di Mozart* (1914) and some other illustrations in Collarile, et al.: *Armonie e disarmonie degli stati d'animo: Ginna futurista*.

²¹ It was first published in 1912 in *ll pastore, il gregge e la zampogna*, reprinted in Verdone: *Cinema e letteratura del futurismo*, pp. 242-251, and Ginna and Corra: *Manifesti futuristi e scritti teorici*, pp. 155-166. Excerpts have been translated in Apollonio: *Futurist Manifestos*, pp. 66-70.

ages and amounted to what Corradini described as "extremely powerful effects of large musical orchestras".²² They improved on the fusion of colours by using more intricate tinting techniques, better projection facilities, and more reflective screens. The results were, as he wrote, perfect "colours extended in time". These animated films were meant to be projected with music specially written for this purpose by the Futurist composer Francesco Balilla Pratella.

Balla's Complessi plastici and Feu d'artifice

Giacomo Balla offered a small-scale application of the evolving Futurist theory of synthesis and synaesthesia in his Complessi plastici (Sculptural Aggregations, 1913-15), which moved beyond the flat surface of the canvas to form threedimensional visual equivalents to the abstract and dynamic principles of sound. This 'moto-rumorism' offered a complex fusion of plastic expressions of abstraction, dynamism, transparency, gaudiness, odour, in motion. These polymaterial constructions were made from colourful strands of wire, cotton, wool, silk, glass, tissue paper, celluloid, tinfoil, etc. Springs, levers and other mechanical devices kept them in perpetual motion. Electrical devices ensured that they could be lit from inside, and various sorts of scented material produced olfactory effects. The individual elements could rotate and expand in different directions with different speeds and transform themselves into cones, pyramids, spheres, etc., while at the same time producing noise. These creations were three-dimensional kinetic objects that explored abstract 'form-lines' in space. They were threedimensional, moving and sound-emitting constructions that can no longer be classified as 'sculpture'. Balla himself described them as "actions developing in space", which means they were a semi-theatrical phenomenon.²³

The idea behind the *Plastic Complexes* was given full scenic presentation in *Feu d'artifice* (Fireworks, 1917), an actorless, abstract ballet designed to interpret Stravinsky's music of the same title.²⁴ This stage work offered a Futurist fusion of the elements that make up the universe in a large-scale synaesthetic spectacle. The three-dimensional constructions on stage possessed a

²² *Ibidem*, p. 67.

²³ See Berghaus: Italian Futurist Theatre, 1909–1944, pp. 293-297.

²⁴ For a detailed analysis of the performance see Berghaus: *Italian Futurist Theatre*, 1909– 1944, pp. 253-259.

dynamic form and a complex chromatic dimension that interacted with the music and thus depicted the universal drama of light as the prime source of energy. Balla took the theme of Stravinsky's music (fireworks = artificially created colourful light sources exploding in bundles of energy) and designed a variety of cuneiform and curved shapes that could be lit from inside and carry out simple but dynamic movements. Light as a source of energy was correlated to types of movement, forms and colours. The irregular prismatic structures were created from wood and then covered with various colourful fabrics. These solid geometric forms of varying height were crowned with brightly lit spirals, pyramids, prisms, rhomboids, etc. Balla then devised a lighting score which provided interior and exterior illumination for the structures. The fifty cues of the lighting plot foresaw bursting light beams for the transparent and mobile crowns, incandescent glowing under the opaque covers, projected rays from the side of the stage, and even light and shadow cast into the auditorium. The colour schemes of this pyrotechnical display were coordinated with the music, and together with the mobile structures produced a scintillating audiovisual spectacle. This dazzling show evoked the sensations of cosmic life and was described by the critic Margherita Sarfatti as "continuous games of light and splashings of varied shadows, colourful rays of extremely powerful electrical spotlights that bring a constantly changing dynamic to the static nature of stage architecture."25

Depero in 1915-16

Balla's disciple Fortunato Depero experimented with similar light and sound emanating constructions, for example a *Piano moto-rumoristica* (Mobile and Sound-emitting Piano, 1915). His progression from proto-theatrical to fully dramatic spectacles was outlined in some manuscript notes of 1915, called *Vestito ad apparizione* (Apparition-like Costumes).²⁶ These costumes were conceived as "magical mechanical equivalents to a complex simultaneity of forms,

²⁵ Sarfatti: "L'arte e la compagnia dei Balli Russi a Roma: Balletti di Pablo Picasso, del Balla, di Michele Larinoff e Natalia Gontcharova."

²⁶ Printed in Passamani: Depero e la scena, p. 59. An English translation can be found in Kirby, Futurist Performance, p. 211 and Taylor, Futurism: Politics, Painting, and Performance, p. 62.

colours, onomatopoeic sounds and noises"²⁷ and were subsequently explored in *Mimismagia* (Magic Mime, 1916). Colourful, transparent drapes were attached to wires and poles, and furnished with coloured light bulbs. In order to baffle and surprise the audience, the actor could operate some hidden devices which transformed the costumes and produced rhythmic noises. The performer in this mime had the sole function of animating a costume which resembled the earlier *Plastic Complexes* because of their transformability, polymaterialism, chromaticism and noisiness. But here, they served a dramatic purpose and conveyed a story within a stage set.

Depero did not see the kinesphere of the robot/dancer in isolation from the surrounding scenic space. This becomes apparent in some *Appunti sul teatro* (Notes on the Theatre), which he wrote around 1916. Here, he imagined the dancer's transformations taking place within a simultaneously changing stage environment.²⁸ Depero wanted to abolish fixed scenic architecture and to replace it with a multi-level, multi-perspective, changeable stage set. Depero wanted to fit the scenic space with highly advanced mechanical contraptions that allowed all sorts of trickery and surprise elements: "Everything turns, disappears, reappears, multiplies and breaks, pulverizes and overturns, trembles and transforms into a cosmic machine that is life."²⁹

Depero also wrote a play, *Colori* (Colours),³⁰ that illustrated his concept of an "abstract theatrical synthesis". The stage direction calls for a light-blue room where we find four chromo-plastic figures attached to fine, invisible strings. They are moving around and are uttering sounds in accordance with their shape and colour. The play is entirely abstract and without plot. The theatrical action is created by means of sounds, colours and forms moving in time and space. One could describe them as *complessi plastici* placed in a theatrical framework. But whereas the *Plastic Complexes* operated with mechanical sounds, these marionettes move in harmony with human voices, presumably produced by actors behind the wings.

²⁷ Passamani: *Depero e la scena*, p. 59.

²⁸ See for example the *Progetto di scena mobile*, in Passamani: *Depero e la scena*, p. 84.

²⁹ Depero: "Notes on the Theatre", p. 208.

³⁰ The play was published in the second volume of the collection, *Teatro sintetico futurista* (supplement to *Gli avvenimenti*, 2-9 April 1916), p. 26. A facsimile of the text was re-issued in *Depero: Magic Theatre*, s.p., and in a normal typographical fashion in Passamani: *Depero e la scena*, p. 73. For an English translation see Kirby: *Futurist Performance*, pp. 278-79.

The abstract, synaesthetic quality of *Colori* owes a great deal to Kandinsky's theory of stage composition (which Depero may have learned about through Prampolini³¹). But whereas Kandinsky's *Der gelbe Klang* (The Yellow Sound, 1912) was performed by human beings in a representational setting, *Colori* was a much more radical application of the idea of an abstract, synaesthetic stage composition. The play of pure colour, form and sound, devoid of any narrative content or symbolic meaning, relied entirely on an emotive quality inherent in the material aesthetics of artistic means. The concept of an abstract stage composition, which Kandinsky had pronounced in the *Blue Rider Almanac* of 1912,³² found its true application in Depero's *Colori*. None of the other plays written for the Futurist Theatre of Essential Brevity was anything as daring as *Colori*, and it is not astonishing that it was never performed.

Enrico Prampolini

Balla's most important disciple was Enrico Prampolini, whose initial interest in the correspondences between the sense impressions was derived from Wagner, Kandinsky and the Symbolists. He developed a complex theory of synaesthetic correspondences between sound, colour, form and motion and how these could be explored in "dynamic constructions of a polyphonic architectural whole" (he also called them "Absolute Constructions of Noise in Motion"). Prampolini explored the correspondences between sense impressions in a range of sketches executed in the years 1914-15.

In *Costume motorumorista* (Mobile and Sound-emitting Costume, 1914), he intended to furnish his actors with devices that produced light and noise. At the end of 1914, he executed a series designs for *Cappuccetto rosso* (Little Red Riding Hood), a marionette version of Charles Perrault's tale to be performed

³¹ On Prampolini's reception of Kandinsky's theories see Fornari: "Prampolini e Kandinsky: Alle origini dell'astrattismo'." Prampolini appears to have received the *Blue Rider Almanac* and other information about Kandinsky before the latter's work began to be translated into Italian (starting with "La pittura arte pura" in *La rassegna contemporanea* 7:18 [25 September 1914]). Of course, there may have been other influences, such as the experiments in kinetic and chromatic music carried out by the Corradini brothers in 1910.

³² Kandinsky: "On Stage Composition."

in Vittorio Podrecca's Teatro dei Piccoli.³³ The costumes were meant to produce dynamic and sonorous effects, which intervene in the development of the scenic action. Here, again, the costume was not just meant to clothe an actor but, like the mobile stage set, it was intended to perform an independent action. Another attempt to create acoustic equivalents to the dynamism of motion was the Costume fono-dinamico (Phono-dynamic Costume, 1915) which enhances its vertical, diagonal and elliptical force lines by the cymbals the dancer holds in the left hand and by noise-producing beads attached to the right hand and left leg. Prampolini also designed an Architettura dinamica: Scenografia (Dynamic Stage Architecture, 1915), in which a mobile scenic construction is given dynamic vitality through coloured light and modern noise music. The design owes a great deal to Balla's Feu d'artifice, but Prampolini's sceno-plastic construction had a more regular pyramid structure. The principle of interior illumination was repeated as in Balla's design, and the translucent body of the construction was complemented by light beams bursting through an opening at its apex into the upper area of the stage.

Prampolini's concept of a dynamic and mobile stage was given a practical demonstration at the end of the theatrical season of 1918/19, when he produced Pierre Albert-Birot's marionette play, *Matoum et Tévibar*. The script called for abstract, colourful scenery, illuminated from both within and without. The backdrop and the flats were to be made of paper and brought to life through strong back-lighting in primary colours. The wings were to be mounted on swivelling pivots. The heads of the marionettes were made of transparent material so that they could be illuminated from the inside. Germaine Albert-Birot was meant to perform bruitist music in para-Futurist fashion, using an orchestra of percussion instruments, toy pipes, hand-bells and a piano.³⁴

Albert-Birot's idea of an illuminating rather than illuminated scenery was intended to overcome the dichotomy of actor and stage set, and therefore resembled Prampolini's concept of Futurist scenography. The mobile, luminous scenery which Prampolini had previously been experimenting with in his studio was now given a full-scale scenic realization at the Teatro dei Piccoli in Rome.

³³ Prampolini used a script by Alpinolo Porcella, based on the dramatization by Charles Perrault and François Boieldieu. It was premièred on 21 June 1917 and taken up again on 14 January 1922. One of Prampolini's scenic designs is reproduced in Lista, *Lo spettacolo futurista*, no. 65.

³⁴ For a detailed analysis of the production see Berghaus: *Italian Futurist Theatre*, 1909–1944, pp. 280-284.

A magical illumination inundated the stage, the mobile scenic architecture enhanced the dynamic aspects of the play, and colourful incandescences emanating from the transparent heads suggested the protagonists' states of mind.

Prampolini's manifestos suggested a path towards a form of theatre in which the temporal media of sound and motion could be integrated into the spatial media of colour, form and plasticity. All stage elements were joined together in a composition ordered in accordance with the logical rules of scenic construction. Each unit was able to speak its own, media-specific language; but acting in unison with the others they could create a dynamic ensemble which offered unsurpassed sensual appeal to the audience. Prampolini's scenic architecture was mobile and noise-producing, whilst the actor took on a chromatic and spatial dimension. The reviewers were unanimous in their praise of Prampolini's startling devices and inventive stage design. Matoum et Tévibar put Prampolini on the map as a reputable and innovative theatre designer who, in the course of the 1920s, became a key figure in the history of Modernist theatre. Needless to say, he continued to produce theatre shows in which synaesthesia played a major rôle. As did other Futurists, for example Marinetti in his Total Theatre project. But in this second phase, Futurism also moved, aesthetically, into new territory, which needs to be investigated in the context other avant-garde movements. Such an analysis would therefore have to be the topic of another essay.³⁵

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³⁵ I can refer the reader to three essays I dedicated to this period: Berghaus: "Futurist Tactile Theatre"; "From Avant-garde to Mainstream: Futurist Theatre in the 1920s"; "Avanguardia e fascismo: Teatro futurista tra le due guerre."

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