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A 'Physics of Thought': The Modernist Materialism of James Huneker

Nature geometrizes, said Emerson, and it is interesting to note the imagery of transcendentalism through the ages. It is invariably geometrical. Spheres, planes, cones, circles, spirals, tetragrams, pentagrams, ellipses, and what-not.

This is Huneker's 'Four Dimensional Vistas' and thoroughly in line with the modernist scientism of figures such as Ezra Pound and Remy de Gourmont (the latter was pre-eminent in his pantheon of cosmopolitan thinkers). He shores up his argument by claiming these geometrical patterns as products of a discernable physiology: 'The precise patterns in our brain, like those of the ant, bee and beaver, which enable us to perceive and build the universe (otherwise called innate ideas) are geometrical' (206). His displacement of 'ideas' by the language of construction presents a challenge to the experienced world whereby matter itself is seen to be not solidly deterministic, but subject to flow and process, as he claimed in 'Creative Involution': 'Matter in the light of recent experiment is become spirit, energy, anything but gross matter'.¹ Huneker's essay on 'Remy de Gourmont: His Ideas. The Colour of His Mind' asserted baldly that '[t]hought is a physiological product; intelligence the secretion of matter' while Gourmont himself was equally as bald: 'Thought is not only a product, but a material product, measurable, ponderable' (27; 166). In short, a crucial aspect of Huneker's modernism is his supplanting of a mechanistic understanding of matter by invoking a plasticity sanctioned by current scientific thinking.

He maintained an intelligent layman's interest in such matters throughout the early years of the twentieth century,² an interest that coloured his intellectual furniture more widely and was in tune with the quasi-transcendentalist reworking of the mystical and the material that was so characteristic of modernism's negotiations with the scientific impulse (Pound being the clearest example).³ Thinking of Maurice Maeterlinck,

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he wrote that

Modern thought and literature lack this mystic element, lack the atmosphere of the spiritual. [...] The Middle Ages had it. Men stood nearer to nature, to God. They understood children, women, animals, plants, inanimate objects with greater tenderness and depth.

and from here, it was but a short step to a familiar sense of the correspondential character of the world where the 'real' Maeterlinck was one 'whose mind is imbued with the strangeness of common life, the mystic correspondences, the star in grain of wheat,' in company with Ibsen where 'The crook of a man's finger may upset a host, so interrelated is the millet-seed with the star' ('Maurice Maeterlinck,' 374, 377; 'Henrik Ibsen,' 9). Huneker thus summaries Maeterlinck as '[a] mystic – yes, and one who had adjusted his very sensitive scheme of thought to the practical work-a-day world' in much the same way as he saw Munch: 'he is a mystic, and a true mystic always sees dreams as sharp realities' ('Maeterlinck,' 367–8; 'Kubin, Munch, and Gauguin: Masters of Hallucination,' 231).⁴ It was in Ibsen that he determined the application of advocating 'the laws of biology to the moral world,' 'the evolutionary foundations' of the plays which were 'spiritual palimpsests, through which may be dimly deciphered the hieroglyphics of another soul-continent' ('Ibsen,' 16, 18). In similar vein, he noted in Pater 'a Pragmatism poetically transfigured,' finding '[t]hat once famously suppressed Conclusion to the Renaissance is quite abreast with modern notions of the plastic universe' ('Pater Reread,' 280).⁵ In Gautier he discerned parallel concerns in a figure who 'saw the secret correspondences remotely related. He was pantheistic to the marrow' and of Laforgue's 'hallucination of words,' he noted that 'he was as much a disciple of Baudelaire and Gautier in his search for the hidden affinities of things' ('Gautier the Journalist,' 270). Here, whilst maintaining the correspondential principle, Huneker added the characteristic modernist gloss in which 'he saw life in too glacial a manner to admit that his were merely hallucinations' where the 'glacial' handling of his 'magical sophisms' offered the scientific precision of handling the potentially ineffable ('The Buffoon of the New Eternities: Jules LaForgue,' 36–37).

Huneker's reading of W. H. Mallock noted his reproof of 'the golden materialism of his age,' but argued that:

Today there no longer exists the need of such polemics. In the moral world there are analogies to the physical, and particularly in geology, with its prehistoric stratifications, its vast herbarium,

its quarries and petrifications, its ossuaries, the bones of vanished forms, ranging from the shadow of a leaf to the flying crocodile, the horrid pterodactyl — now reduced to the exquisite and iridescent dragon-fly; from the monstrous mammoth to the tiny forerunner of the horse.

The contemporary world can dispense with Mallock's 'polemics' because relational scientific advances have revealed a radical re-ordering of the very nature of matter:

A new world has come into being. And what discoveries: spectral analysis, the modes of force, matter displaced by energy, the relations of atoms in molecules — a renewed geology, astronomy, paleontology, biology, embryology, wireless telegraphy, the conquest of the air, and, last but not least, the discovery of radium ('In Praise of Unicorns,' 155–56).

This 'new world' is in part a re-casting of the ancient debate about the Real and the Ideal. The essay on Mallock was reprinted in *Unicorns*, the most whimsical and idiosyncratic of Huneker's works (the volume's epigraph is from Emerson, 'I would write upon the lintels of the door-post, 'Whim') where the opening chapter, 'In Praise of Unicorns,' anticipates '[p]erhaps the day may come when [...] they may realize that they are as different sides of the same coveted shield; matter and spirit, the multitude and the individual' (4).⁶ Correspondences of all kinds are what colour Huneker's thinking where he uncovered a quite dazzling array of cosmopolitan affinities across his many subjects. A principal model here is his purposeful admiration for another polymath, Remy de Gourmont ('at base a poet; also a dramatist, novelist, raconteur, man of science, critic, moralist of erudition, and lastly, a philosopher'), and it is Gourmont's scientific interests that take up the bulk of the essay in *Unicorns* on behalf of a wider re-invocation of the 'new world' of scientific dispersals: 'Old frontiers have disappeared in science and art and literature. We have Maeterlinck, a poet writing of bees, Poincaré, a mathematician opening our eyes to the mystic gulfs of space; solid matters resolved into mist, the law of gravitation questioned' ('Remy de Gourmont' 20).

The kinds of liberation proposed here were not merely fanciful. 1909 saw the publication of *Darwin and Modern Science*, a collection of essays by practicing scientists, designed for 'the educated layman' and thus the kind of text Huneker would have read (Seward v). The concluding essay, 'The Evolution of Matter' by the chemist W. C. D. Whetham, writes about the liberations of the 'energy of radio-activity' in similar, albeit

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more neutral and narrow, terms:

we are dealing with a fundamental change in the structure of the individual atoms, which, one by one, are dissociating into simpler parts. We are watching the disintegration of the 'atoms' of the chemist, hitherto believed indestructible and eternal, and measuring the liberation of some of the long-suspected store of atomic energy. We have stumbled on the transmutation dreamed of by the alchemist, and discovered the process of a veritable evolution of matter.⁷

The confirmation of alchemy by chemistry shores up the correspondences I have been noting, and Huneke, thinking again of Gourmont, finds distinctly Emersonian expression:

to explain a blade of grass we must dismount the stars. [...] There are no isolated phenomena in time and space. [...] Man is an animal submitting to the same laws that govern crystals or brutes. He is the expression of matter in physics and chemistry.

And with Gourmont's *Physique de l'amour* in mind, he provides direct testimony to the new materialism:

Thought is a physiological product; intelligence the secretion of matter and is amenable to the laws of causality. [...] And who shall deny it all in the psychochemical laboratories? It is not the rigid old-fashioned materialism, but a return to the more plastic theories of Lamarck and the transformation of the Dutch botanist Hugo de Vries. ('Remy de Gourmont' 27–28)

Such plasticity in general was a principal weapon against the rigidity of earlier scientific thinking, but in the transformism of Vries (to whom I shall return later) will be found an especially instrumental aspect of Huneke's lexicon.

I want to approach the topic through a consideration of the idea of a Fourth Dimension and through Huneke's satirical short story, 'The Disenchanted Symphony' of 1902 where the central character, the composer Pobloff, is engaged with a new and very experimental symphonic poem that he titles 'The Fourth Dimension.'⁸ The notion of a Fourth Dimension (a dimension in space that is mathematically analysable but without experiential availability) was contemporaneously familiar to both layman and mathematician, but with the exception of this story, Huneke offered no substantial discussion of the topic until 1916.⁹ There are occasional brief references – Ibsen, the 'opposer of current political and moral values,' who thus 'discerns a Fourth Dimension of the spirit,' or,

more fancifully, from 'In Praise of Unicorns,' the 'Hippogriff, with its liberating wings, volpanning through the Fourth Dimension of Space,' and both deploying the idea as a means of resistance and liberation – but it was not until he reviewed Cora Williams' *Creative Involution* in 1916 and Claude Bragdon's *Four Dimensional Vistas* in 1917 that we find substantial prosodic engagement with the topic ('Henrik Ibsen,' 10; 'In Praise of Unicorns,' 2).¹⁰

Huneker is careful to distinguish Williams as a serious scientist:

Speculative as is her work, she is not a New-Thoughter, a Christian Scientist, or a member of any of the queer rag-tag and bobtail beliefs and superstitions [...] Cora Williams is an authority in mathematics [...] Her ideas are not verbal wind-pudding, but have a basis in mathematics and the investigations of the laboratory, where 'chemists and physicists are finding that the conduct of certain molecules and crystals is best explained as a fourth-dimensional activity'.

And the review replete with Huneker's knowledge of similar mathematicians – not only Abbot, the author of *Flatland* (the most famous literary exposition of the Fourth Dimension), but Kovalevska, Zoellner, Cayley, Newcomb, Lebathevsky and Riemann, all of whom were proponents of the non-Euclidean geometry that underwrites four-dimensional theory. Williams is offered as being sensitive to the non-materialist aspects here, citing Poincaré in support:

Man can't live on machinery alone, and the underfed soul of the past period of positivism craves a more spiritual nourishment ... The cast-iron determinism of the seventies and eighties has gone to join the materialistic ideas of Büchner and Clifford. It is a pluralistic world now.

This pluralism is one of the main characteristics of the new materialism, enabling the notion that 'the Fourth Dimension is a spiritual one. Creative Involution is to supersede the Darwinian evolution' and taking radium as an example for a familiar dispersal – 'matter, in the light of recent experiment, is become spirit, energy, anything but gross matter' – whereby 'From a macrocosmic monster our gods are become microcosmic; god may be a molecule, a cell. A god to out in a phial' ('Creative Involution,' 195–98).

It is in the discussion of Bragdon that we get to the core of the fourth-dimensional thinking: 'Helmholtz and many mathematicians employed the 'n' dimension as a working hypothesis. It is useful in some analytical problems, but it is not apprehended by the grosser senses'. One of the

most important aspects of modernist materialism lies precisely here within a notion that is material and immaterial simultaneously, real and ideal at the same time: on the idea that 'space may be curved in another dimension' for example, 'Mr. Bragdon believes that it is, though he does not attempt to prove it, as that would be impossible' where belief and proof enter a productivity entangled relationship ('Four Dimensional Vistas,' 205–06). In sort, it is a re-casting of a particular form of faith or, as Poincaré would have it for Huneke, 'the gift of direct sympathy. In a word, Intuition' ('Creative Involution,' 197). At the beginning of his review of Bragdon, Huneke invokes a 'sceptical' Hamlet, rejecting both religion and philosophy, who wishes for a 'fulcrum' on which to 'rest my lever and pry this too too solid earth up to the starry skies,' a lever that would allow 'more elbow room in the infinite' and finding 'the answer is – the Fourth Dimension in higher space' ('Four Dimensional Vistas,' 203).

It is with the aid of such thinking that the idea of the 'mystic' is reconstructed by the mathematical imperative: 'here is no trace of rambling discourse, fugitive ideation, half-stammered enigmas; on the contrary, the true mystic abhors the cloudy, and his vision pierces with crystalline clearness the veil of the visible world'. So, 'Mysticism is not all cobweb lace and opal fire' and, stylistically, it is a matter of 'sharp contours and affirmations,' characterized by 'the absence of muddy thinking' and 'a quality of precision'. Bragdon himself is recognized as his own example – one who is 'a mystic' but also 'eminently practical' and 'being both a mathematician and a poet, does not stop at three-dimensional existence'. Hence, the Fourth Dimension, in part, is defined as 'A subtle transposition of precious essences from the earthly to the spiritual plane' and this transposition is at the behest of a particular faculty, companion in Huneke's mind to Poincaré's 'intuition': 'The "n" dimension may be employed as a lever to the imagination [...] and imagination is the prime agent in the interpretation of the universe, according to the gospel of mystic mathematicians'. Thus we have the Fourth Dimension not as a state, a permanent and fixed thing to be achieved, but as a process, a procedure of disciplined speculation, and so the 'imagination' and the 'intuition' are conceived, above all and again, as liberating forces of a particular kind:

The cold fire and dark light of the mystics must not repel us by their strangeness. Not knowledge but perception is power, and the psychic is the sign-post of the future. What do all these words mean: matter, energy, spirit, cells, molecules, electrons, but the same old thing? I am a colony of cells, yet that fact does not get

me closer to the core of the soul. What will? A fourth spatial dimension, answers Claude Bragdon. Truly a poetic concept.

It is 'strangeness' that colours liberation here through the potency of dimensional speculation (and, as I shall suggest shortly, is perhaps akin to the ruptures of 'The Disenchanted Symphony'): in a world where 'we are up to our eyes in quotidian life' the Fourth Dimension offers both release from that life and promises access to the spiritual. This version of transcendentalism is not new, as Huneker acknowledges, but its application *via* mathematics is novel: 'The idea of a fourth spatial dimension may be likened to a fresh lens in the telescope or microscope of speculation'. He continues: 'For the present writer the hypothesis is just one more incursion into the fairyland of metaphysics'. We should not be misled by the characteristic whimsy here (he concludes, 'Without fairies, the heart grows old and dusty') as fairies join unicorns as emblems of imaginative freedom from the three-dimensional world, 'responsive to spiritual issues'. It is, again, very much a matter of process. Time itself he argues 'is perhaps the Fourth Dimension in the guise of a sequence of states, and not grasped simultaneously, as in the idea of Space,' and on the issue of space curvature (a pillar of four-dimensional thinking), he argues '[i]s it any wonder that 'Lewis Carroll' was a mathematician?' presenting a 'topsy-turvy world' where we find 'miracles at every step' in order to show that '[t]his world is but a point in the universe, and our mission is only one of an infinite series. There was no beginning, and there is no end. Eternity is now' ('Four Dimensional Vistas,' 204–09).

I want to suggest that 'The Disenchanted Symphony' can be read in the context of this nexus of ideas about the Fourth Dimension. From the start we are told:

Pobloff loved mathematics more than music – and he adored music. He was fond of comparing the two, often quoting Leibnitz: 'Music is an occult exercise of the mind unconsciously performing arithmetical calculations'. For him, music was a species of sensual mathematics. ('The Disenchanted Symphony,' 325).

Pobloff is familiar with contemporary physiology, citing Fleury and Ramon Y Cajal who appeared in Huneker's 'Re-reading Mallock' and his reading amongst the theorists of the Fourth Dimension reappears in Huneker's review of *Creative Involution* ('The Disenchanted Symphony,' 329; 'Re-reading Mallock,' 156; 'The Disenchanted Symphony,' 326; 'Creative Involution,' 196). Crucially in the process of composition, Pobloff

decided to leave map and compass behind, and march out with

his music into some new country or other – he did not much care where. Could but the Fourth Dimension be traced to tone, to his tones, then would his name resound throughout the ages; for what was the feat of Columbus compared with this exploration of a vaster spiritual America! ('The Disenchanted Symphony,' 328)

Here, again is the liberation of strangeness Huneker admired in Bragdon and that of radio-activity noted by Whetham.¹¹ Pobloff is convinced that 'in music lay the solution of this particular mathematical problem' and he is concerned to see the rehearsal as above all exploratory: 'the music is experimental – in the development section I endeavor to represent the depths of starry space; one of those black abysses that are the despair of astronomer and telescope' ('The Disenchanted Symphony,' 328).

The climax of the 'free-fantasia has a particular frenzy:

As the wind sweepingly rushes to a howling apex so came the propulsive crash of the climax. The tone rapidly subsided and receded; for the composer had so cunningly scored it that groups of instruments were withdrawn without losing the thread of the musical tale. The tone, spun to a needle fineness, rushed up the fingerboard of the fiddles accompanied by the harp in a billowing glissando and then on ragged rims of wide thunder a gust of air seemed to melt the light, men, instruments into a darkness that froze the eyeballs. With a scorching whiff of sulphur and violets, a thin spiral scream, the music tapered into the spectral clang of a tam-tam. (332–33)

And so the orchestra disappears, with Pobloff complaining 'Oh, it is the Fourth Dimension they have found ... Oh, why did I not fall into it'. The orchestra disappears because the three-dimensional world would have no experience of a world of four dimensions. The frenzy of the occasion is, in part, a matter of dramatic effect, a register of strangeness, but there are other issues at play here, issues relating to a further branch of science's new materialism. Pobloff is seen as 'half-delirious' by the experience (the language of three-dimensional misunderstanding) which he refers to as 'my black abyss' (333). 'The Abyss' was Pabloff's alternative title for the symphony and in itself has a further story to tell.

The alternative belongs to a point made in Huneker's review of *Four Dimensional Vistas*:

Pascal, great thinker and mathematician, had his 'Abyss'; it was his Fourth Dimension, and he never walked aboard without the consciousness of it at his side. This illusion or obsession was the result of a severe mental shock early in his life. Many of us are

like the French Philosopher. ('Four Dimensional Vistas,' 205)

The 'shock' associated with the 'Abysm' (an intensifier of 'abyss') and an additional sense of strangeness, is reflected in Pobloff's response to the orchestra's disappearance, invoking the geometrical images of the 'whirlpool,' 'vortex' and 'gyves' to draw upon that sense of drowning that is derived from 'abyss' as a verb ('The Disenchanted Symphony,' 334). It is a 'shock' that coloured also the experience of another mathematician when 'J. K. F. Zoellner, of Leipsic, proved to his own satisfaction the existence of a Fourth Dimension when he turned an india-rubber ball inside out without tearing it. Later he became a victim to incurable melancholy,' a story that is repeated on behalf of Pobloff's reading ('Creative Involution,' 196; 'The Disenchanted Symphony,' 326).¹² Similarly, we are told of Cora Williams that she 'deals with no less a bagatelle than the Fourth Dimension of Space (what we do not know we fear, and fear of always capitalized),' and in considering the non-Euclidean geometry of variable curvature in Lebathevsky and Riemann, Huneker observes that 'at this point the earth beneath us begins to tremble and the stars to totter in their spheres. Is the age of miracles new?' ('Creative Involution,' 195, 197). The shock of the Fourth Dimension is, in a sense, something that Huneker has prepared for – 'Who knows but in this universe there may be a crevice through which filters the light of another life? ... A flight through the sky with the sun bathing in blue jolts one's conception of ordinary life' – as opposed to the 'processional rhythms' of such a life ('Four Dimensional Vistas,' 208).¹³

I confess I prefer to watch on the edge of some vast promontory the swift approach of a dark sun rushing out from the primordial depths of interstellar space to the celestial assignation made at the beginning of time for our little solar system, whose provinciality, remote from the populous path of the Milky Way, has hitherto escaped colliding with a segment of the infinite. Perhaps in that apocalyptic flare-up – surely a more cosmical and heroic death than stewing in greasy bliss – Higher Space be manifested, and Time and Tri-Dimensional Space be no more. (211)

The energy of the shock here is akin to Pobloff's mathematically inflected ideas about music: '[w]ith every sense and several more besides, going in different directions, brilliantly sputtering like wet fireworks, roaring like mighty cataracts! Ah, it was a noble, crazy art, and the only art, except poetry, that *moved*. All the rest are beautiful gestures *arrested* (my emphasis) ('The Disenchanted Symphony,' 327).

Four-dimensional shock is thus both enervating and energising, but either way is characterised not only by movement but by a sense of suddenness. We are prepared for this by the epigraph from *Macbeth*, '[t]he Earth hath bubbles'. The occasion in the sudden vanishing of the witches: Banquo queries 'The earth hath bubbles, as the water has, / And these are of them. Whither are they vanished?' and Macbeth replies 'Into the air; and what seem'd corporal, / Melted as breath into the wind' (Iiii). Such melting and the resistance to the 'corporal' is thoroughly in time with the modernist materialism I have been advancing, and from the suddenness here I want to identify a further strand of Hunecker's scientism – the mutation theory of the botanist, Hugo de Vries whom Hunecker met in 1913 (Schwab 216). In 'On Re-Reading Mallock' he makes the claim that 'The slightly war-worn evolution theory is now confronted by the Transformism of Hugo de Vries, who has shown in a most original manner that nature also proceeds by sudden leaps as well as in slow, orderly progress' ('On Re-Reading Mallock,' 56).¹⁴ The addition of 'sudden leaps' to evolution's 'slow, orderly progress' marks the temporal distance of 'mutation' from 'variation'. The notion here finds sanction in the professional scientific community. In a further essay from *Darwin and Modern Science*, '[t]he Influence of the Conception of Evolution on Modern Philosophy,' H. Höffding is interested in a re-aligning of the idealistic and the positive that is so characteristic of Hunecker's understanding of the new materialism, and he has a generalised sense of the influence ('[i]t has made idealistic thinkers revise their relation to the real world; and it has led positivistic thinkers to find a closer connection between the facts on which they base their views') and, more specifically 'it has made us all open our eyes for the new possibilities to arise through the *prima facie* inexplicable 'spontaneous' variations which are the condition of all evolution'. Höffding emphasises the 'particular interest' of this last point:

Deeper than speculative philosophy and mechanical science saw in the days of their triumph, we catch sight of new streams, whose sources and laws we have still to discover. Most sharply does this appear in the theory of mutation, which is only a stronger accentuation of a main point in Darwinism.

He concludes on a note testifying to the sharing capacity of scientific investigation that Hunecker found so compelling: '[i]t is interesting to see that an analogous problem comes into the foreground in physics through the discovery of radioactive phenomena, and in psychology through the assumption of psychical new formations' (Seward 455). Another essay in the same collection by the botanist D. H. Scott, 'The Paleontological

Record,' continues the argument for suddenness: '[a]s regards the succession of species, there are no greater authorities than Grand'Eury and Zeiller, and great weight must be attached to their opinion that the evidence from continuous deposits favours a somewhat sudden change from one specific form to another' (Seward 222).

It is such suddenness that informs the speed, noise and frenzy with which the imagined Fourth Dimension emerges in 'The Disenchanted Symphony'. Vries's own contribution to the collection, 'Variation,' in asking 'how the variations to be selected arise,' makes the point succinctly: 'They may arise slowly, from simple fluctuations, or suddenly, by mutations' (Seward 84). Hunecker himself responded to Vries in his essay on 'Little Holland':

Darwin taught that evolution is orderly, progressive, slow, without jumps — nature never leaps; there are no sudden miracles. De Vries proves the reverse — the miracle has taken place overnight in his experiments; nature strikes out swiftly, blindly, apparently without selection. The age of miracles is not past.

Despite the potential hyperbole of his stance (always committed to 'miracles' in one form or another), it was based on observation. Of his meeting with Vries at his laboratory in Amsterdam's Botanic Garden, he posited '[w]ith my own eyes I witnessed the miracle of a half dozen flowers in the world that were not in existence a year ago. That is creating life indeed' and concludes that Vries 'is the most significant figure in the history of science since Darwin' and 'a member of the most honourable profession in the world' (*New Cosmopolis: A Book of Images*, 247–49).

'Miracles' along with 'unicorns' and 'fairies' may, at first sight, appear to sit uneasily with the practicalities of the science with which Hunecker was familiar, but they do register the openness and newly sanctioned transcendental possibilities presented by the modernism of his materialism that is thoroughly in keeping with wider aspects of his aesthetic. The title itself of 'The Disenchanted Symphony' anticipates Max Weber's view of European history as characterized by 'die Entzauberung der Welt,' the 'disenchantment of the world,' which Kevin T. Dann understands in its liberatory sense as the endeavor to 'rescue human beings from a deadening objectivism by celebrating the subjective, the invisible, the imaginary' (Dann vii). The very play of the story's satire displays Hunecker's control over his negotiations with language's freedoms, a control maintained also in his puckish delight with his own practices: of *Visionaries* (where the 'Hall of the Missing Footsteps,' a companion to 'The Disenchanted Symphony,' appeared) he wrote in a letter of November 1905, 'it's the last I'll ever write on fantastic, exotic, erotic,

esoteric, idiotic themes,' claiming with rather heavy irony 'for me, glorious conventionalities' and imagining, in a letter of May 1906, a readership where 'Lunatics cry for it, nervous folk yearn for it' (*Letters*, 46, 52). The 'fantastic' and the 'esoteric' here are versions of the frenzy within 'The Disenchanted Symphony' and suggest the capacity for satirizing his own satire, itself a further form of liberation. The 'Hall of the Missing Footsteps' concludes with Pobloff's performance of Chopin's 'Second Ballade' which includes, again, a specific anticipation: '[t]here was the expectation of great things coming to pass; dim rumours of an apocalyptic future, when the glory that never was on sea or land should rend the veil of the visible and make clear all that obscures and darkens'.

This hope generates further frenzy in the performance itself where Pobloff hears the footsteps: [s]till the galloping of unseen feet, horrible, naked flesh, that clattered and scraped the earth; the panting, hoarse and subdued, of a mighty pack, whose thirst for destruction, for revenge, was unslaked' and so 'he was become a maniac, pursued by deathless devils' ('Hall of the Missing Footsteps,' 186–87).¹⁵

The 'Hall of the Missing Footsteps' is lacking in the scientific elements of 'The Disenchanted Symphony' (save for a brief recollection of Pobloff's four-dimensional experience), but 'The Piper of Dreams' (published also in *Melomaniacs*) has the composer Illowski producing work 'based on the great natural laws of heat, light, gravitation, electricity' doing away with the conventionalities of 'melody, themes, harmony'. He thus produces a score 'covered with electrical and chemical formulae, not notes,' aiming at 'the science of dangerous sounds' and discovering 'sound-vibrations rule the universe' which could be 'tuned into a musical Ruentgen ray' to be presented 'in a condensed art, an electric form' ('The Piper of Dreams,' 52–54).¹⁶ As with Pabloff, Illowski 'dreamed the dreams of madmen,' a man 'for whom the visible had never existed,' but it is not at odds with his scientism (37, 34). He has a Nietzschean resistance to the seeming solidity of human behavior ('Duties, vows, beliefs fell away like snow in the sun'), his new composition is titled 'Nietzsche' (the philosopher whom Huneker held in the greatest esteem) and is performed in a disused music hall dubbed the 'Theatre du Tarnhelm,' the name of the magic hat in Wagner's *Der Ring des Nibelungen* which allows invisibility and a change in form (46, 55).¹⁷ Once again, scientific performance serves to disturb settled, received views of the world, and in common with 'The Disenchanted Symphony' and the 'Hall of the Missing Footsteps,' 'The Piper of Dreams' concludes in chaos.¹⁸

The playful seriousness of Huneker's engagements with science and its new materialism inform one of the major characteristics of his own

style. After we are told that Illowski's score is 'covered with electrical and chemical formulae, not notes,' the text continues to describe his 'theories of the decomposition of tone' as being akin to 'the old painter-impressionist' and when the question of 'what part the human voice plays in his scheme' arises, we have the following:

he doesn't care a farthing for it except as color. He uses the voice as he would any instrumental combination, and he mixes his colors so wonderfully that he sometimes polarizes them — they no longer have any hue or scent, He should have been a painter not a composer. ('The Piper of Dreams,' p 53)

Painterly impressionism, resisting, again, the conventionalities of 'hue or scent,' is Huneker's aesthetic mode throughout his work. It is a mode that achieves a specific kind of liberty, thoroughly congruent with the new advances in science — a liberty that is free to follow interests, speculations, passions, enthusiasms and prejudices untrammelled by anything other than personal sensibility and governed by digression and anecdote. For H. L. Mencken, '[h]e emancipated criticism in America from its old slavery to stupidity, and with it emancipated all the arts themselves' (cited in Fagg 29) or, as John Fagg puts it more precisely, 'cosmopolitanism for Huneker meant opposition to puritanism and provincialism in the arts' where the impressionistic style 'facilitates an unfettered, free-flowing exploration of modernity' and his 'intuitive, spontaneous, highly subjective approach [...] led him to distinctive insights, and beyond the blind-spots that hampered more intellectually rigorous commentators' (Fagg 35, 31, 34). Fagg is one of the few critics writing about Huneker these days, and he is particularly sharp on the process itself of impressionism as 'a mode that has to be worked through in order to achieve a new perception' (a lesson taught by explorations within the Fourth Dimension). Subjective experiences here with their attention to 'fleeting, ephemeral and visceral sensations' are a fit literary counterpart to the 'suddenness' of scientific exploration identified earlier in the discussion of Hugo de Vries (38, 39).

Huneker's 'A Note on Henry James' contains a further liberatory function as it addresses James's style in a way that is not dissimilar to his own and that of Illowski:

his supreme tact of omission has dispensed with the entire banal apparatus of fiction as commonly practiced. To use a musical example: his prose is like the complicated score of some latter-day composer, and his art, like music, is a solvent. He discards lumbering descriptions, antique melodramatics, set developments

and dénouements, mastodonic structures [...] [h]e evokes. His harmonic tissue melts into remoter harmonic perspectives. He composes in every tonality. Continuity of impression is unfailing. ('A Note on Henry James,' 65–66)

He finds the later style to be replete with 'inversions, suspensions, elisions, repetitions, echoes, transpositions, transformations, neologisms' where '[n]othing remains' in any conventional sense of novelistic practice: 'Henry James has not spoken. His dissonances cannot be resolved except in the terms of his own matchless art' and so 'more atmospheric than linear,' his 'meanings evaporate when phrased in our vernacular' (56–57, 64).

The reduction to the 'vernacular' is exactly what happens in the three stories under consideration here, the vernacular of three-dimensional misunderstanding where we have the impoverishments of 'apoplexy' in 'The Disenchanted Symphony,' 'hasheesh' in the 'Hall of the Missing Footsteps' and 'brain fever' in 'The Piper of Dreams' ('The Disenchanted Symphony,' 345; 'Hall of the Missing Footsteps,' 187; 'The Piper of Dreams,' 54). Hunecker's satire in these stories register his control over their preoccupations, sustaining the playful seriousness of his thinking about the new materialism of scientific thought and its freedoms while maintaining also an awareness of the difficulties of its translations into the world of experience. His abiding impressionism is a persuasively appropriate means of expression here where the liberations of style are invited to match those of scientific inquiry.

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NOTES

1. The issue here is the Modernist anxiety about objects and objectifications. The new science emerging at the turn of the twentieth century (and in particular, as we shall see) presents a new materialism that in both apprehendable and non-apprehendable simultaneously; an aesthetic of growth and process that neither denies the physical world nor privileges the spiritual. The whole business of solidity, of thinghood, was very much the subject of Modernism's most urgent inquiry: the dispersal of perspective and shape in the visual arts, science's reconstruction of the physical world as fields of force, fiction's unsettling relational understanding of character, the mercurial arena of desire and emotion exposed by psychoanalysis and conversely, the threat of reification within the commodifications of developing commercial practices. Where, here, could the securities of solidity and objectivity be found? By being both present (mathematically provable) and not present (invisible to the customary range of senses) at the same stroke, the new sciences provide a mechanism for transforming the world in a particular way: maintaining the necessary distance of the objective while avoiding an alienation from it. 'Creative Involution' in *Unicorns*, 198.
2. See Schwab 7, 215–16.
3. See Bell (1981, 2007, 2012), and Bell and Lland (2006) *passim*.

4. Similarly, in 'Maeterlinck's Macbeth,' we have '[n]or does Maeterlinck revel in transcendental ecstasies. If he is the poet in dealing with Shakespeare, he is also the cool-headed man of the theatre' (*The Pathos of Distance*, 275).
5. The chapter on Leonardo in *The Renaissance* has *La Gioconda* as 'the embodiment of the old fancy, the symbol of the modern idea,' that is 'the idea of humanity as wrought upon by, and summing up in itself, all modes of thought and life' and where 'It is a beauty wrought out from within upon the flesh, the deposit, little cell by cell'. The 'Conclusion' itself incorporates a striking testimony to impressionistic style, so characteristic of Huneker himself (Pater, 125–26, 235).
6. The serious playfulness of Huneker is seen in a letter of Frida Ashforth of 12 December 1917 where he describes *Unicorns* as 'truly a book of gossip' (*Letters*, 236).
7. Whetham in Seward 573.
8. 'The Disenchanted Symphony' in *Melomaniacs*, 325.
9. Magisterial discussion may be found in Linda Dalrymple Henderson.
10. See Schwab 216. In a letter of 30 December, 1916, he wrote to Cora Williams 'I read 'Creative Involution' through twice the same day ... I hadn't read 4th dimensional literature for years and you simply made my hair stand, my scalp freeze. You sent me back to Claude Bragdon, who had always intrigued me,' and continued '[s]o interested was I in Abbot's 'Flatland' and James Hinton, that I wrote a Fourth Dimensional romance'. This was 'The Disenchanted Symphony' itself where 'I felt that music (which I once named as 'an order of mystic, sensuous mathematics') was in an extra-Terrestrial dimension' (*Letters*, 225–26).
11. It is an idea of liberation that has a more neutral colour in Nietzsche from whom Huneker takes the epigraph for *The Pathos of Distance* – 'Convictions are prisons ... New ears for new music ... New eyes for the most remote things' – and in the title essay that interests itself in Nietzsche's writings on the theatre, he quotes Emerson: 'Only fools are consistent' (340).
12. Schwab, who tends to read Huneker's stories about musicians in largely biographical terms, notes of the opening tale in *Melomaniacs*, 'The Lord's Prayer in B,' that it was prompted 'during a neuralgic attack he suffered in 1896' (125).
13. In the only other story featuring Pobloff, 'Hall of the Missing Footsteps,' he recalls the 'crevice' of his four dimensional experience: 'He believed that once upon a time he had peered into strange crevices of space' (in *Visionaries*, 185).
14. For Vries himself, mutations 'appear at once, without intermediaries and without any previous indication' where they are 'the real source of progress in the whole realm of the organic world' ('Variation' in Seward 73–74). Mutability here is innovative, providing 'new characters and new elementary species' and, by comparison with the slowness and 'simple fluctuations' within the variations of natural selection, it belongs again to those special forms of liberation promised by the new science: 'Mutability seems to be free, and not restricted to previously determined lines' (84, 77).
15. Chopin came high on the list of Huneker's favourite composers. In a letter of 8 April, 1907 to Edward Mitchell, we find a not dissimilar response to Chopin's first 'Etude': 'The irregular, black, ascending and descending staircases of notes strike the neophyte with terror' (*Letters*, 59). A letter to Ariens Kappers on 8 October, 1913 on 'The Lord's Prayer in B' (again included in *Melomaniacs*) has a more immediate physiological claim: '[i]t is a study, the outcome of a neurological attack in 1896, when I heard one tone, B (the middle of the piano) and the idea came to me that a person could be tortured to death' (*Letters*, 162–63).
16. Here, Illowski's compositional practice anticipates that of a later composer, George

Antheil (also noted for his extreme experimentalism), mediated by Ezra Pound in an essay of 1924. Pound discerned a 'new quasi-sculptural solidity' in 'The Golden Bird,' a quantitative rather than qualitative procedure where '[b]y solid object 'musically,' I suppose we mean a construction or better a 'mechanism' working in time-space, in which all the joints are close knit, the tones fit each other at set distances, it can't simply slide about' where, quoting Antheil himself, 'Sound vibrations are the strongest and most fluid space vibrations capable of a tangible mathematic'. Antheil's sense of 'music in time-space' is that of the 'fourth dimension,' a means of 'conceiving the factor time as affecting space relations' where non-Euclidean forms foster an analogy with Wyndham Lewis, Picasso and Chopin: 'The x, y, and z axes of analytics would appear to me to provide for what Antheil calls the fourth dimension of music, the "oblique"' (in Schafer, 261–65).

17. The setting of the performance, in company with that in the 'Hall of the Missing Footsteps,' is coloured 'ebon,' an appropriately dark lustre.
18. The chaos here is of a specific kind, orchestrated by 'Lingword Evans,' a poet from whom the story takes its epigraph and to which Illowski gives 'symphonic setting' (48, 51). Evans is invoked as embodying a 'philosophy of anarchy' for a 'social, aesthetic, ethical regeneration of the world' (35) on behalf of Illowski's ambition for 'A new art ... an art for the twentieth century' (36), aimed at 'nothing less than the disequilibrium of existing social conditions' and a liberation 'from the tyranny of laws and beliefs and commandments'. (38–39). All this is consistent with Huneker's cosmopolitan notions of freedom, but, along with Huneker's capacity for satirizing his own satire, Evans is in fact a hoax, perpetrated by Huneker's friend, Vance Thompson: 'To show up the naivete of so-called critics, Thompson ... wrote 'symbolistic' poems solemnly attributed to one Lingwood Evans, Australian 'anarchist, libertine, mystic' (Schwab 97, drawing upon Huneker's autobiography *Steeplejack*. cf. Weir, 47). The story thus plays a hoax upon a hoax, demonstrating again the agility of Huneker's control over his preoccupations.

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