

Cord-Christian Casper

The Fourth Dimension and Impossible Knowledge in Edwardian Speculative Fiction

Abstract: *This essay investigates Early Modernist literary confrontations with the humanly unknowable. In Edwardian novels, short stories, or popular scientific tracts such limits of knowledge are associated with a realm of their own: the Fourth Dimension. Edwin Abbott's Flatland (1917), Charles Hinton's Scientific Romances (1886/1896) as well as Joseph Conrad's and Ford Madox Ford's 1901 novel The Inheritors each stage attempts to represent this space beyond the limits of familiar perceptual and cognitive faculties. These narratives of hyperspace, however, deprive their readers of immediate paths towards dimensional transcendence. The journey towards the Fourth Dimension stalls: in their various pursuits of impossible knowledge, these texts self-referentially mark the breakdown of their representational strategies. As a consequence, analogies falter, the unlearning of conventions stagmates, and, ultimately, literature can only register impossible 4-D knowledge as a perpetual absence. This failure is far from elegiac, however. Their marked impasses propel these speculative fictions towards a constant flight from generic constraint and cliché. The article demonstrates that it is precisely by barring easy access to 'supra-sensible' knowledge that the texts inculcate ever-renewed narrative experiments and readerly speculation alike.*

1 Introduction: Towards the Fourth Dimension

“What is the Fourth Dimension?” This question, the title of an 1880 essay by Charles Hinton, underlies a variegated field of inquiry in the late 19th and early 20th century (3). Well before the popularization of Einstein's theory of general relativity, the fourth dimension is conceived in distinctly spatial terms. While ‘*n* dimensional geometry’ (cf. Throesch, “Nonsense” 37) originates as a mathematical pursuit, accounts of 4-D space exceed disciplinary bounds from the outset. Theories of higher dimensions just out of reach of conventional perception span high and low culture, seamlessly integrating spiritualism or pseudoscience, and coalescing into veritable “hyperspace philosophy” (Henderson 120). These speculations attach a wide range of functions to the alleged higher reality, sharing the broad

outlook of a “path which leads us beyond the horizon of actual experience” by “questioning whatever seems arbitrary and irrationally limited in the domain of knowledge” (Hinton, “What is” 4) – and offering the prospect of previously impossible knowledge in the process.

Literary accounts of the fourth dimension from the mid-19th century onwards display a marked concern with ways in which the readers’ ‘horizon of experience’ may be transcended by encountering a ‘hyper-reality effect’ adequate to higher space. At the same time, however, these texts set limits for the “exploration of the facts of higher space” (Hinton, “Many Dimensions” 43). For all their rhetoric of expanding the knowable, the habitual epistemological horizon to be superseded is presented as remarkably unyielding. Accordingly, in addition to offering formal complements to higher space, early speculative fiction shows equal concern with the incapacity of textual strategies to encompass the constitutively unrepresentable features of these higher dimensions (cf. Stableford 218). This essay will argue that the *failure* of representative tactics emerges as a crucial *feature* of this emerging and heterogeneous genre. Descriptions of the fourth dimension implicitly and explicitly accentuate the degree to which they remain projections, never quite shedding the strictures of the language and the concepts developed under the conditions of 3-D space. Edwin Abbott’s *Flatland* (1884), Charles Hinton’s *Scientific Romances* (1886/1896) as well as Joseph Conrad’s and Ford Madox Ford’s 1901 novel *The Inheritors* will be shown to self-referentially mark the breakdown of their textual strategies in the pursuit of dimensional transcendence.

In the three late 19th and early 20th-century texts under consideration here, the marked failure of dimension-spanning speculative fiction is presented as the impetus for revised experiments in literature. With each breakdown of the literary “extra suprasensible dimension of space, of which our three-dimensional world might be merely a section or a boundary” (Henderson 2), the texts outline the necessity for a renewal of the formal devices bringing into view a literary account of that ‘section.’ Each collapse of external reference to hyperspace is accompanied by self-referential concern with the media on offer, and a performance of the need for a renewal of literary devices. What is more, each unraveling of a literary account of the “vast realm of possibility” (Hinton, “What is” 4) engenders a critical reassessment of the doctrines passing for unimpeachable truths in lower-dimensional space. Thus,

rather than *representing* the spatial fourth dimension, the texts in this loose sub-genre display fundamental *doubt* regarding the possibility of knowledge of higher space. Each impasse is accompanied by a renewed presentation and evaluation of attempts to overcome the gap between lower and higher realities, as well as between linear language and a hyperspace overview.

2 Knowledge as Analogy in *Flatland*

How can literature speculate about a higher sphere not only defined by but also deriving its interest from the fact that it exceeds perception? In tackling this problem, Edwin Abbott's novel *Flatland* popularizes the device of cross-dimensional, analogical reasoning. This strategy presumes that the "fourth dimension is to three-dimensional space as the third dimension is to two-dimensional space. 4-D: 3-D:: 3-D: 2-D" (Rucker 8). Analogy scales down the problems of dimensional knowledge: it confronts its readers with two-dimensional beings, living their two-dimensional lives on a horizontal plane. An immutable class system and strict gender hierarchy contingent on the conceptual constraints of 2-D space appears entirely natural to its denizens: "Our women are Straight Lines. Our Soldiers and Lowest Classes of Workmen are Triangles" (Abbott 8). This two-dimensional system of knowledge – geared towards maintaining the "Law of Nature" (9) that the symmetry and number of sides of a Flatlander's body is the primary determinant of worth and status – appears as closed and self-contained. The range of interpretations is curtailed by a set of limitations which, themselves, cannot be perceived.

This changes with the arrival of a visitor: a three-dimensional sphere (conveniently named A Sphere) deigns to inspect lower space. While A Sphere surveys the plane in its entirety, the Flatland protagonist – 'A Square' – perceives him as a circle, varying in size as his circumference intersects the two-dimensional plane. As the visitor from 3-D space explains: "You cannot indeed see more than one of my sections, or Circles, at a time; for you have no power to raise your eye out of the plane of Flatland; but you can at least see that, as I rise in Space, so my section becomes smaller" (Abbott 71). To make his point, the didactically inclined sphere detaches A Square from his plane, opening it to a newfound panoramic gaze. This shift in perspective offers a version of the modernist "skeptical drift—from

world to self, from object to subject of perception” (Levenson 93) that is peculiar to dimensional literature. A Square experiences the disclosure of an excess of meaning, a perspectival shift that expands the range of the knowable: by making the 2-D world literally transparent and its constraints perceptible, dimensional border-crossing renders the conditions of possibility of knowledge unalterably contingent.

The comparison of the higher-dimensional vantage point with the constraints of the 2-D plane prompts expansive speculation on analogous relationships in spaces lower and higher to the ones considered: “[a]ny space can generate its next higher space by moving in a new direction, that is, a direction not contained within itself,” as Bragdon summarizes expandable spatial correspondences (9). *Flatland* narrativizes such expansive analogical leaps. As a result of higher-dimensional education, A Square is not content to accept three-dimensional space as an ultimate, transcendent reality. Analogy, instead, emboldens him to imagine the three-dimensional environment as subject to its own set of perceptual limitations. By extrapolating from the initial experience, any claim to ultimate knowledge can be exposed as partial and constrained. Once this mode of reasoning has been embarked upon, consideration of any one set of spatial parameters as conclusive resembles the translation fallacy Bergson attributes to philosophical empiricists: such certainty equals “[s]eeking for the original in the translation, where naturally it cannot be,” only to subsequently deny “the existence of the original on the ground that it is not found in the translation” (32). A Square unsettles the certainties of his three-dimensional guide by subjecting knowledge of 3-D space to the same dimensional skepticism to which his own plane has been exposed. As he points out to the increasingly perturbed Sphere:

In Three Dimensions, did not a moving Square produce—did not this eye of mine behold it—that blessed Being, a Cube, with *eight* terminal points? And in Four Dimensions shall not a moving Cube—alas, for Analogy, and alas for the Progress of Truth, if it be not so—shall not, I say, the motion of a divine Cube result in a still more divine Organization with *sixteen* terminal points? (87, emphasis in the original)

Flatland presents the estrangement from conventional knowledge as uncontainable: ‘Analogy’ (now with a capital A in A Square’s exalted monologue) dispels belief in an ‘original’ sphere, since a superior one appears just a new direction away. Any elevated dimension only ever offers a

'translation' of even higher space exceeding its own epistemological constraints, deferring any unconstrained, transcendental original in an infinite regress of dimensional realms.

Following Meillassoux, the imagined dimensional shift enables a way out of 'correlationalism,' his term for any model proceeding from the assumption that "thought cannot get *outside itself* in order to compare the world as it is 'in itself' to the world as it is 'for us'" (3). However, each thought 'outside itself' is – from successive higher vantage points – open to exposure as just another 'in itself,' making it impossible to "distinguish what is a function of our relation to the world from what belongs to the world alone" (3). It is small wonder, then, that maintenance of a given space as 'original' and the representations of its truth-claims as unquestionable fact is, in Abbot's literary treatment, the main goal of any mode of power exerted on dwellers of the same dimension. Consequently, A Sphere, unable to abide skepticism of the 'original' status of his sphere, casts A Square back down, punishing his analogical formulation of a 4-D view of 3-D space. The end of the novel sees the plane protagonist incarcerated, failing to publicly "indicate the direction which I meant when I used the words 'Upward, not Northward'" (Abbott, 98). Higher-dimensional knowledge is curtailed, with decorum and an institutional apparatus – an entire 2-D model of Victorian society – arrayed against it. The subtraction of familiar conceptual schemes from the world yields knowledge that is not only forbidden, but also becomes impossible: "'Upward, not Northward'" (100), its remaining indication, "haunts" the protagonist "like a soul-devouring Sphinx" (100), becoming a mere repetition, distinct from the "substantial realities" glimpsed before (100).

The novel's ending penalizes an inordinate focus on the expansive, utopian concept of hyperspace over and above a corresponding counter-movement that acknowledges the limits of any approach to higher knowledge. A Square turns the extrapolation of ever-higher dimensions into unquestioned dogma. Thus oriented towards transcendence with spiritual abandon, he becomes unable to offer a critique of oppressive ideologies in his misogynist, unequal, and violently eugenicist 2-D society. Most of all, his exclusive concern with 'upward' movement renders him indifferent to the "specious analogy between many-sided regularity and moral and intellectual superiority" (Smith 139). As the escalating dimensional analogies preclude a critique of

the oppressive analogies drawn in his own, limited realm, the novel presents the need for a concomitant ‘downward’ trajectory – a skeptical return to the arbitrary limits imposed on knowledge and to social critique – that complements the ‘upward’ move towards higher space.

That the search for a higher dimension comes to naught, for all its somber consequences in the narrated world, is a prerequisite for rather than a cancellation of the poetics of higher dimensions presented in *Flatland*. The inaccessibility of higher space is maintained to turn readers into analogical thinkers in their own right. To this end, the fourth (in our case: second) wall is broken by a final image appended to the novel, offering the viewer an inducement to perform analogy in a manner denied and punished in the lower-dimensional diegesis. The image consists of an arrangement of the words “THE END/OF/FLATLAND” (100) vertically arranged amidst an ink drawing of clouds. These clouds are, in turn, interwoven with fragments of Prospero’s speech on the dissolution of “the baseless fabric of this vision” (276) from Shakespeare’s *The Tempest*. In this rearranged version of the quote, “[t]he baseless fabric of this vision/Melted into air, into thin air/ Such stuff as dreams made of” (200). The status of ‘vision’ is ambiguous in this fragment, not least because “this’ is half-obsured by the lower cloud outline: the partial concealment raises the question whether vision generally lacks a foundation, or whether it is *this* particular vision (of *Flatland*) that emerges as ‘baseless.’ The placement of ‘vision’ in the montage compounds the ambiguity of the term: either it is ‘vision’ itself that melts, or else, if “[s]uch stuff” is understood as the object, vision can be taken to *perform* the melting. Perception and reality are folded into each other as we switch to and fro between both readings, mirroring the development of A Square’s ‘vision’ in the novel proper. A reconfigured gaze (vision in the active sense) dissolves familiar knowledge of the world – only to disintegrate upon re-reading, as lower-dimensional constraints are re-established. Once higher vision recedes, familiar ‘stuff’ is reasserted and the second interpretation of the passage gains precedence: the vision from above ‘melts’ under the conditions of limited knowledge.

This concurrence of emergence and dissolution is reiterated in the layout of the deceptively simple image-text composite. After all, the drawing of the clouds also obscures the auxiliary verb in the phrase “Such stuff as dreams [are] made of” (Abbott 200). As the image disrupts the sequence of words,

the viewer's perspective shifts: rather than granting to language the capacity of "*anchorage*" in order to "*fix* the floating chain of signifieds" (Barthes 39), the occlusion of the word emphasizes the co-existence of two spatial levels. The text is no longer affixed to the image as explanatory supplement – and the image, in turn, exceeds its bounds, destabilizing the text's linearity and re-introducing the basic spatial dimensions of 'up' and 'down' by overlaying the quote. Thus, the emblem tacitly restores the very coordinates A Square is unable to invoke in his defense: the cloud-scribbles move "Upward, not Northward" (100). The text is spatialized by the emblem, forcing the viewer to replace the distinction between text and image with a lower and a higher level of inscription. Both of these are, additionally, foregrounded in their shared "hand-drawn quality," which serves to "highlight the discursive qualities of the narrative representation, rather than emphasizing a story-level similarity to the actual world" (Horstkotte 33). The reader can switch back and forth between 'anchorage' and this shared indexical quality of the hand-drawn line. A similar oscillation between two aspects of the same sign is inculcated regarding the entirety of the image representing "THE END OF FLATLAND." It can be understood as a mere indication of the end of the narrative *about* Flatland or a pictorial representation of the 'literal' end of Flatland. On the latter view, it is the two-dimensional world of A Square that dissolves into clouds in front of us, with the flat page doubling as a material plane iconically reproducing the diegetic plane of 'Flatland' itself. Whether we see the emblem as the end of the novel or the end of the 2-D world: we cannot assume both perspectives at the same time, which makes it all the more amenable to dimensional didactics. The drawing functions in the manner of multistable images, *Kippbilder*, in which "the same image is seen under different aspects" (Holzhey 8). We can oscillate between two sets of distinctions, alternately focusing on the literal ending of the novel or a final visualization of the world of the novel – yet never quite holding both views at the same time.

In this way, Abbot's narrative, while abandoning A Square in lower-dimensional imprisonment, enacts its hero's wish that his memoirs "may find their way to the minds of humanity in Some Dimension, and may stir up a race of rebels who shall refuse to be confined to limited Dimensionality" (Abbott 100). While the innocuous emblem may appear somewhat bathetic compared to the 2-D protagonist's Promethean rhetoric, its instability

introduces a specific mode of representation characteristic of 19th- and early 20th-century dimensional speculation: it refuses closure. Just as the emblem rebuffs coalescence into a cohesive sign, the approach to higher knowledge, projected by analogy from the third unto the fourth dimension, can only be conceived as an interplay of vision and limitation, sudden heteroreference (diegetic Flatland) and self-reference (to the novel *Flatland* as well as to the drawn ‘flat land’ dissolved into ink lines). Any conclusive fusion of the clouds and the quote has to be replaced with a renewed “moment of resistance or counterdesire that occurs when we sense that the difference between the visual and verbal might collapse and the figurative, imaginary desire of ekphrasis might be realized literally and actually” (Mitchell 154). Text and image are either pried apart or, if considered together, reduced to the shared materiality of the hand-drawn line. As *Flatland* refuses the hierarchies of ‘anchorage’ and, indeed, complicates its status *as* text, any foray into the fourth dimension – extrapolating from the analogical reasoning practiced by its hero – has to be conceived as equally tenuous. If we are to read the “unstable dialectic” (Mitchell 38) of the emblem analogically, a conclusion of the negotiation between representation and breakdown is as unlikely as a final, synthesized ‘imagetext.’ The incommensurability of higher-dimensional ‘original’ and lower-dimensional ‘translation’ must be retained to inculcate ever-renewed series of failing attempts to transcend epistemological limitations.

3 Knowledge as Restriction in *Scientific Romances*

Like Abbott’s presentation and evaluation of analogical approaches to higher space, Hinton’s texts function as experiments in competing modes of “Casting out the Self” (205) in favor of higher-dimensional knowledge. What is to be dismantled in the process is a constriction of knowledge according to which “[o]ne’s own particular relation to any object, or group of objects, presents itself to us as qualities affecting those objects—influencing our feeling with regard to them, and making us perceive something in them which is not really there” (“Casting” 210). To go beyond this ‘correlationism,’ the generic shifts between narratives, allegories, essays, scientific tracts, and self-exegeses that make up *Scientific Romances* present sections and boundaries of a higher space beyond the reader’s “particular relation.”

These intimations of the fourth dimension are, however, only briefly indicated before the constraints of a lower 'self' and its restricted conception of the knowable reasserts themselves. The texts negotiate a back-and-forth movement: taking A Square's cue, even those parts of Hinton's *Romances* mired in the scientific and mathematical jargon of its time require a precipitating "'revolutionary element' in relation to the world picture" enabling a foray beyond lower space (Lotman 238). Whenever the fourth dimension appears to be reached, however, the reader is reminded of its status as a textual construct, casting doubt on its own grandiloquent ambitions. Higher reality is presented as 'not really there' after all.

In the vein of *Flatland*, Hinton's "What is the Fourth Dimension?" introduces a being "confined to a plane divided by an infinite straight line" (26), which under normal conditions presents an absolute boundary. A specifically dimensional event impinging on this rudimentary differential setup consists not only in a traversal of the line, but also in a subsequent reordering of the diegesis: "if the being moves from the first plane by a motion in the third dimension, it will move into this new plane. [...] Then let it go back to the first plane. It has appeared now on the other side of the line which divides the infinite plane into two parts" (26). By crossing dimensions, the being performs a meta-event, in which, with Titzmann, not only the status of the 2-D entity has changed but also the represented order of the world itself (cf. 3081). This emplotment restates the caveat already introduced in *Flatland*: dimensional texts, by positing expandable dimensional realms, can only venture so far as to posit a temporary version of the 'Great Outdoors' – they enable a non-correlationist world to be made visible at the moment of dimensional border-crossing. A permanent representation of a plotless vision of higher space, however, would render it unduly mappable. To avoid such re-familiarization of higher spheres, Hinton's 2-D being has to *return*; the traversability of lines remains an exceptional event rather than a sustained topological possibility. Due to this focus on the successive traversal and restitution of constraints, higher space becomes only briefly presentable in narrative form; emplotment in a meta-event allows for the ephemeral possibility to "express in intelligible terms things of which we can form no image" ("What is" 31) only under the condition that this possibility is subsequently revoked.

The insistence on a return to the ‘intelligible’ serves as a self-referential reminder that it is extrapolation “from analogical reasoning rather than reality” (Throesch, “Phenomenology” 29) that marks Hinton’s writing of the fourth dimension. Any claim to a triumphant writing of higher space, an inter-dimensional *unio mystica*, is dispelled in ever-renewed interruptions of stable representation. This is encapsulated by a lengthy allegorical interlude in “An Unfinished Communication,” in which personified ‘Nature’ attempts to cast off ill-fitting categories with which she has been burdened: “I, who all the while have no part in any of these things, whose it is to move the atoms on their ceaseless wheeling” (“Unfinished” 164). The allegorical figure threatens to exceed representative capabilities as “she began to be herself, not clothed in the feigned robes she wore before, in which, because man had woven them, there was of his evil” (165). In the wake of this liberation from conceptual constraints (associated with gendered limitations imposed by men as much as ‘man’), Nature threatens to incarnate higher space. To avoid the epiphanic certainty pursuant to the liberation from limited descriptions assigned to her, the ‘evil’ of lower-dimensional categories must be reasserted. To this end, the looming simulation of external reference to “atoms in their ceaseless wheeling” is interrupted by self-referential insistence that all of this is merely text and intertext. The higher-dimensional revelation is disrupted by a seemingly unrelated vignette from the protagonist’s past, in which he is shown to relive a vaguely Faustian plot: “Why, Gretchen, don’t you know the kind of love I love you with” (170). She does not know, embroiling the protagonist in a narrative development in which she marries him “because she must get money” (170) – with conventionally narratable, non-allegorical consequences. The variation on *Faust* and a marriage-plot adduces the necessary self-referential break to the incursion of an unrepresentable higher reality. A complete presentation of 4-D space, after all, would render futile any further efforts of representation. These efforts – shifts in style, structure, and genre – are presented and dismissed in order to motivate further attempts to find an unreachable literary equivalent for higher dimensions. Although the narrator, thus, reflects that “[t]here must be a reality somewhere. But all I have ever sought has been fictitious” (134), the path towards this ‘reality’ is contingent upon detours into the *overtly* ‘fictitious.’ Even the scientific speculations Hinton appends to the stories,

on this view, present just another recoil from narrative encapsulation of the fourth dimension rather than the certainty of a stabilizing meta-language.

Thus, dimensional knowledge cannot simply be imparted but, in *Scientific Romances*, emerges from the reader's confrontation with the limitations of the media by means of which it is transmitted. In "Many Dimensions," this strategy is taken further by foregrounding the materiality of the printed page itself. The speaker observes "lads and errand boys bend over the scraps of badly printed paper, reading fearful tales" (33). This brings out the dimensional teacher in Hinton's literary persona, who reflects "how much better it would be if they were doing that which I may call 'communing with space.' 'Twould be of infinite delight, romance, and interest" (33). A closer look at the printed papers, however, puts an end to the narrator's vision of higher-dimensional didactics. It is not by inducing intimations of higher space that the fourth dimension comes into view. Instead, as in the case of the lower-dimensional oscillation exemplified by the final emblem in *Flatland*, it is by reorienting attention to the limitations of the 'low' medium that higher knowledge can be momentarily indicated:

And yet, looking at the same printed papers, being curious, and looking deeper and deeper into them with a microscope, I have seen that in splodgy ink stroke and dull fibrous texture, each part was definite, exact, absolutely so far and no farther, punctiliously correct; and deeper and deeper lying a wealth of form, a rich variety and amplitude of shapes, that in a moment leapt higher than my wildest dreams could conceive. (33)

To "pass beyond the knowledge of the things about us in the world" (34), the observer, once more, cannot move 'upwards' to present the higher sphere in its entirety. Instead, words in familiar media are dislodged from signification by reorienting attention towards the unmarked possibilities furnished by the materiality of the medium. If mass-media emerge as the stand-in for the epistemological restrictions of lower space, what is required is a reorientation of attention in order to decompose the tight coupling of medial substrate and the forms constituted in it (cf. Luhmann 104). This makes available new, possible forms, the "splodgy ink strokes" and "fibrous texture" made visible by an estrangement of their familiar meaning (cf. Wilde 30). These do not offer reproducible 'tight coupling': the new, possible 'forms' are "punctiliously correct," yet we cannot be sure according to which criteria the "variety and amplitude of shapes" is judged. What

is more, the precise nature of the medial substrate as “the source from which articulate forms emerge and the pool of disarticulation into which they return” (Denson 314) is obscured by the microscopic movement ‘deeper and deeper’: does each lower dimension furnish a new distinction of medial substrate and form, or does the downward trajectory merely specify the initial distinction between ink and texture? Reconstituting “infinite delight, romance, and interest” emerges as the task of the observer, who is called upon to de-couple the automatic reconstruction of signs and, instead, draw counter-intuitive distinctions. In dimensional terms, the passage presents a medial analogue to the search for conventionally impossible directions, be it A Square’s ‘Upward, not Northward,’ or the directions of *ana* and *kata* (Greek: ‘along’ and ‘against’) that Hinton invents for the added directions of 4-D space (cf. Rucker 28). Re-materialization as ink and texture and the movement downwards into the text furnish an analogue to impossible directions: the literary incarnation of higher knowledge is once more presented as a generative, yet transitory effort to leave behind the constraints of lower space.

4 Knowledge as Determination in *The Inheritors*

The speaker in “What is the Fourth Dimension” ultimately settles on an ambiguous image of dimensional relations. In this setup, curved threads pass through a plane: “We can imagine these threads as weaving together to form connected shapes, each complete in itself, and these shapes as they pass through the fluid plane give rise to a series of moving points” (*Romances* 1, 22). The relationship between the three-dimensional form and its two-dimensional expression in this image is uncertain: if consciousness is attributed to the threads, after all, their expression on the intersected plane appears to lack freedom, the points of intersection moving in accordance with the preordained undulations of the strand as it passes through. Hinton’s speaker offers the interpretation that “the moving figures share this consciousness, only that in their case it is limited to those parts of the shapes that simultaneously pass through the plane” (23). This view offers a momentary solution, granting epistemological autonomy to lower beings, while offering – as evidenced by “An Unfinished Communication” – the assurance that “we ourselves are larger than the limited life we think is all”

(176). The same story, however, presents relegation to a lower-dimensional state as fundamentally limiting. The protagonist relives sequences of his life, yet, as he laments, “an oppressive bond is on me, I do exactly the same things I did before; I say the same things, I cannot get out of the chain of events” (174). The confrontation with impossible knowledge veers into dimensional horror: the presentation of lower-space processes as mere epiphenomena yields metaphors of determination as much as liberation.

A similar loss of autonomy in the face of dimensions beyond and outside familiar knowledge also concludes *The Inheritors*. Conrad and Ford present the fourth dimension as an enforced and disorienting imposition, a gap in its narrator’s understanding of the world. A view of higher space is imposed upon this hapless homodiegetic narrator, who becomes involved in the schemes of fourth-dimensional beings. His main interlocutor appears as a young woman who proceeds to inform him that she belongs to a ‘race’ in the process of taking over the world – inheriting the world, more specifically, in sharp contrast to the narrator’s floundering attempts to circumscribe what precisely might constitute his own cultural (and genealogical) inheritance. As far as the plot can be reconstructed from the narrator’s limited scope, the takeover from hyperspace involves two steps. Firstly, bankers, financiers, and politicians are lured into participation in a colonial venture in Greenland, couched in the rhetoric of “[p]rogress, improvement, civilisation, a little less evil in the world” yet amounting to a violent “corporate exploitation of unhappy Esquimaux” (60). Secondly, however, the failure of this scheme is to be exposed in the media. The ensuing public outrage over the colonial venture and its “cruelty to the miserable, helpless, and defenceless” (136) is to precipitate a financial crisis and to drive any supporter of the Greenland project to ruin or suicide. The Dimensionists create a redoubled colonial scheme, in which Britain is placed in the position of the colonized by eroding its own self-image, replacing any ideology of superiority with the “sudden perception that all the traditional ideals of honour, glory, conscience, had been committed to the upholding of a gigantic and atrocious fraud” (136). This plot orchestrated by the 4-D beings is barely stated outright, but has to be inferred from halting, elliptical conversations. What becomes certain is the levelling of political antagonisms effected by the higher being: she does not distinguish between those involved in what is grudgingly termed the “Old morality business”

(41) and those masking exploitative colonial violence behind philanthropic rhetoric. Both positions are “pieces” (41) arranged according to an absent, fourth-dimensional plan.

Against the inter-dimensional takeover, the narrator proceeds to mount a defense of the value of the lower dimension, focusing on a notion of great literature and connoisseurship that resembles the Victorian demand for “the best which has been thought and said in the world” (Arnold 5). Despite this valorization of ‘Culture,’ however, Granger’s own art and language is presented as depleted. His obsolete illustrative images spell out their relationship of similarity: when he remarks that the “rush-bottom of his chair resembled a wind-torn thatch” (107) the *tertium comparationis* is minuscule, the transfer of characteristics barely maintaining a residual reality effect. Compared to this malaise of vanishing tropes, the incursion of higher space may be catastrophic for the protagonist – yet, the novel is at its most formally experimental once it turns away from barely metaphorical evocations of forgotten traditions and, instead, endeavors to represent the higher plane in the manner of Hinton and Abbott.

The literary evocation of higher-dimensional knowledge is at first a matter of rendering a shift of visual perception. The novel opens with Granger’s halting attempts to connect his individual visual impressions with cohesive, shared knowledge: “the associations—the ideas—the historical ideas—” (1). The view of a cathedral is to furnish proof of shared tradition; it “was a vision, the last word of a great art. I looked at her. I was moved, and I knew that the glory of it must have moved her” (8). His inter-dimensional travelling companion, however, swiftly disabuses him of any such notions of a shared response. In an imperative reformulation of Hinton’s strategies of ‘casting out the self,’ she makes the protagonist see the scenery anew:

She was smiling. “Look!” she repeated. I looked.

There was the purple and the red, and the golden tower, the vision, the last word. She said something—uttered some sound.

What had happened? I don’t know. It all looked contemptible. One seemed to see something beyond, something vaster—vaster than cathedrals, vaster than the conception of the gods to whom cathedrals were raised. The tower reeled out of the perpendicular. One saw beyond it, not roofs, or smoke, or hills, but an unrealised, an unrealisable infinity of space.

It was merely momentary. The tower filled its place again and I looked at her. (8)

As the tower ‘reels out of the perpendicular,’ such that angles disobey rules of three-dimensional space, its function of imparting coherence is equally effaced. The collapse of the ‘soaring’ structuring principle and the metonymical chain guaranteed by it – “tower,” “vision,” “last word” – opens up one of the few directly epiphanic renderings of the fourth dimension as an “unrealisable infinity.” It is in the wake of this “merely momentary” glimpse of higher space that *The Inheritors* reiterates Abbott’s and Hinton’s impasse: knowledge of higher space resists stable representation. Accordingly, the rest of the novel is dedicated to failing attempts to find an appropriate realization for the “unrealisable infinity” of a higher reality, of encoding the view “beyond” the protagonist’s perspective in language. Rather than motivating salutary striving for the fourth dimension in the manner of its predecessor texts, however, *The Inheritors* exhibits a more fundamental skepticism regarding the possibility of going beyond halting, inconsistent approximations. 4-D knowledge is subjected to unremitting skepticism, without the hopes of transcendence sustained even by Abbott’s incarcerated Square. If ‘dimensional fiction’ displays a double strategy – striving for higher knowledge and self-referential indications of its inaccessibility in equal measure – Conrad and Ford veer toward the latter, restrictive mode.

As a result, the novel reads as an inventory of the limitations of knowledge. One such constraint is posed by the relationship between Granger and the Dimensionist, characterized as it is by the insight that there is “no bridge—no bridge at all. We *can’t* meet ...” (192, emphasis in the original). Traversing this impassable gap becomes the narrator’s main goal, without, however, ever yielding a commensurate visual epiphany. Although his attempts are unsuccessful – gaps multiply instead of being bridged, leading to a surfeit of typographical ellipses as the plot lurches towards its inevitable anti-climax – they are nonetheless shown to be preferable to minute adjustments of perspective in the lower dimension of receding British culture. The “thatch” and the “rush-bottom,” an abortive attempt to write a biography of Cromwell, and mutual appreciation of half-forgotten cultural artefacts alike fail to measure up to the “contemptible” yet compelling vastness of a higher reality out of reach. The tower may re-align in accordance with familiar spatial confines, yet neither the novel nor its protagonist can commit to the series of values it upholds. As in the predecessor texts, hierarchies

rooted in three dimensions are gone for good, rendered inadequate after a momentary glimpse of “something beyond.”

In a text replete with failed authors and hack writers, literature does not offer an alternative to the inexplicable incursion of the Dimensionists. However, *The Inheritors* does feature attempts at deriving formal correlatives to a fourth-dimensional perspective that align it with its predecessors' literary experiments. First and foremost, similarly to the analogical thought of *Flatland*, the text induces its readers to occupy experimentally a higher vantage point vis-à-vis the represented world, considering it as words on the page. To this end, the I-narrator, rather than a psychologically complex representation of a unique consciousness, is reduced to a mere quotation. When Granger is invited to a club by his editor, the request to “come and dine with me at the Paragraph round the corner” (57) is followed up by a description of this meeting in what is literally the next paragraph, located in the text in front of the reader. The protagonist may assert his personhood, but, as the higher dimension establishes itself, he is already a mere distribution of information on a page. The inheritors' perspective renders him “only a detail, like all the others, [...] set in place like all the others. [...] It was in your character” as the Dimensionist explains (316), conflating ‘character’ as personality, his status as a ‘character’ in the narrative, as well as a printed ‘character’ in a text he cannot survey: a succession of ‘I’s’ on the page, seen from above. He appears “as if I were the picture of a man. Well, that was it; I was a picture, she a statue” (315). Reduced in dimensional extension, Granger ends up as a set of two-dimensional signs dispersed throughout the text, a ‘Flatlander’ confronted with a three-dimensional, sculptural analogue of unrepresentable four-dimensional beings.

In a similar vein, the presentation of events in the novel emerges as a means of briefly inducing a higher perspective in the reader, unconstrained from linear reading and narrated time. To this end, what counts as an eventful crossing of a differential border is, from a higher-dimensional point of view, denied its status as revolutionary change. It is the enactment of this dimensional re-evaluation of semantic spaces that renders *The Inheritors* a “curiously bland nightmare” (Green 19). The novel consistently indicates that nothing of note has taken place, despite the narrator's insistence that the fate of the world depends on his decisions: “It rested

with me now to stretch out my hand to that button in the wall or to let the whole world—the ... the probity ... that sort of thing,' she had said—fall to pieces" (283). In contrast to such self-aggrandizement, the reader can turn back to an earlier pronouncement by the Dimensionist, tersely laying out the succeeding plot: "There will be friendships—and desertions" (93), she proclaims with a proleptic accuracy that makes the narrator's action a foregone conclusion. In accordance with this preordained progression, Granger is informed that he has not, in fact, been responsible for an eventful change of state at all:

"You have done nothing at all," she said. "Nothing."

"And yet," I said, "I was at the heart of it all."

"Nothing at all," she repeated. "You were at the heart, yes; but at the heart of a machine." (316)

As a part of a fourth-dimensional 'machine,' Granger performs his mandated function, but does not qualify as a hero precipitating an eventful change. The Dimensionists, like the readers once they have completed the novel, are placed out-side of the time of the represented world: the narrator resigns himself to the fact that he had "given up to her my past and my future" (317). In the terms of Hinton's hyperspace metaphor, the four-dimensional beings have rearranged the higher-dimensional 'threads,' generating and animating the 'point' of Granger's consciousness in a pre-determined fashion. Readers confronted with this constellation are rendered arbiters of 'spatial time,' reading the work "spatially, in a moment of time, rather than as a sequence" (Frank 46). The liberating replacement of stultifying conventions induced by spatial form, however, is offset by its diegetic representatives, for whom the formal devices recur as amoral arbiters of destruction in the narrated world. To a greater degree than the dimensional poetics of Hinton and Abbott, *The Inheritors*, thus, features a critical evaluation of the limits of literature and the knowledge it can encode. Instead of reiterating the search for innovative means of representing the fourth dimension, the novel displays "superseder's contempt" (4) of its own means of expression. The fourth dimension, rather than a means to transcend what can be known, is redeployed to mark the limits of literature.

5 Conclusion

In speculative fiction engaging with the fourth dimension of space, the sought-after higher reality is both held up as a repository of knowledge and as a stark reminder that literature cannot offer adequate representations of a reality unconstrained by convention. The texts share a reckoning with the perennial absence of “*the immobile angles and curves of the fourth dimension*” (Ouspensky 115), with every textual strategy falling short. As a result, analogies falter, unlearning stalls, and, in the case of *The Inheritors*, literature can only register impossible 4-D knowledge as a perpetual absence. As much as it shares a dimensional theme, the sub-genre gains its coherence from this self-referential exhibition of its medial limitations in confrontation with impossible knowledge outside its scope.

Although they mark and re-mark the limits of their own strategies of representation, these texts, however, are far from elegiac. The presentation of both the possibilities and the restrictions of the transcendence of narrow horizons of knowledge emerges as a productive feature of the speculative literary approach. The process motivates a constant flight from generic constraint and cliché, undercutting any simple path to the ‘great outdoors’ of higher space. If stable ‘suprasensible’ knowledge and a representation of hyperspace were reached, after all, there would be no inducement to further speculation. Thus, the more expansive the characteristics these texts ascribe to higher space, the more explicitly do they present the countervailing necessity for a breakdown of representation.

“How can we talk productively about something that is almost impossible to visualize?” (Rucker 8). One cannot, according to Edwardian speculative fiction – yet literature should, according to its implicit poetics, use this impossibility as a spur to self-reflexive consideration of the limits of knowledge. The search for the fourth dimension requires the “supposing away” of “certain limitations of the fundamental conditions of existence as we know it” (Hinton, “What is” 4) – an endeavor that finds its complement in the recursive, faltering attempt to ‘suppose away’ the limits of literary knowledge.

Works Cited

- Abbott, Edwin A. *Flatland: A Romance of Many Dimensions*. London: Seeley, 1884.
- Arnold, Matthew. *Culture and Anarchy*. Ed. Jane Garnett. Oxford: Oxford University Press, 2009.
- Barthes, Roland. "The Rhetoric of the Image." *Image – Music – Text*. Sel. and trans. Stephen Heath. London: Fontana, 1977. 32–52.
- Bergson, Henri. *An Introduction to Metaphysics*. Trans. T.E. Hulme. New York: G. P. Putnam's Sons, 1912.
- Bragdon, Claude. *A Primer of Higher Space: The Fourth Dimension*. Rochester: Mana, 1913.
- Conrad, Joseph, and Ford Madox Ford. *The Inheritors: An Extravagant Story*. New York: McClure, Phillips & Co, 1901.
- Denson, Shane. *Postnaturalism: Frankenstein, Film, and the Anthropotechnical Interface*. Bielefeld: transcript, 2014.
- Frank, Joseph. *The Idea of Spatial Form*. New Brunswick: Rutgers University Press, 1991.
- Green, Robert. *Ford Madox Ford: Prose and Politics*. New York: Cambridge University Press, 1981.
- Hinton, Charles Howard. "What is the Fourth Dimension?" *Scientific Romances*. Vol. 1. London: Swan Sonnenschein, 1886. 3–31.
- . "Casting Out the Self." *Scientific Romances*. Vol. 1. London: Swan Sonnenschein, 1886. 205–28.
- . "Many Dimensions." *Scientific Romances*. Vol. 2. London: Swan Sonnenschein, 1896. 27–44.
- . "An Unfinished Communication." *Scientific Romances*. Vol. 2. London: Swan Sonnenschein, 1896. 109–77.
- Henderson, Linda Dalrymple. *The Fourth Dimension and Non-Euclidean Geometry in Modern Art*. Cambridge: MIT Press, 2013.
- Holzhey, Christoph F. E. "Introduction." *Multistable Figures: On the Critical Potentials of Ir/Reversible Aspect-Seeing*. Ed. Christoph F.E. Holzhey. Wien: Turia + Kant, 2014. 7–21.
- Horstkotte, Silke. "Zooming In and Out: Panels, Frames, Sequences and the Building of Graphic Storyworlds." *From Comic Strips to Graphic*

- Novels: Contributions to the Theory and History of Graphic Narrative.* Ed. Daniel Stein and Jan-Noël Thon. Berlin: De Gruyter, 2013. 27–48.
- Levenson, Michael. *Modernism*. New Haven: Yale University Press, 2011.
- Lotman, Jurij. *The Structure of the Artistic Text*. Trans. Ronald Vroon. Ann Arbor: University of Michigan Press, 1977.
- Luhmann, Niklas. *Art as a Social System*. Trans. Eva M. Knodt. Stanford: Stanford University Press, 2000.
- Meillassoux, Quentin. *After Finitude: An Essay on the Necessity of Contingency*. London: Continuum, 2009.
- Mitchell, W William John Thomas. *Picture Theory: Essays on Verbal and Visual Representation*. Chicago: University of Chicago Press, 1994.
- Ouspensky, Pyotr. *Tertium Organum: The Third Canon of Thought. A Key to the Enigmas of the World*. Trans. Nicholas Bessaraboff and Claude Bragdon. New York: Alfred A. Knopf, 1922.
- Rucker, Rudy. *The Fourth Dimension: Toward a Geometry of Higher Reality*. Boston: Houghton Mifflin, 1984.
- Shakespeare, William. *The Tempest*. Ed. Virginia Mason Vaughan and Alden T. Vaughan. London: A & C Black, 1999. Arden Shakespeare.
- Smith, Jonathan, Lawrence I. Berkove, and Gerald A. Baker. “A Grammar of Dissent: *Flatland*, Newman, and the Theology of Probability.” *Victorian Studies* 39 (1996): 129–50.
- Throesch, Elizabeth. “Charles Howard Hinton’s Fourth Dimension and the Phenomenology of the Scientific Romances (1884–1886).” *Foundation* 99 (2007): 29–49.
- . “Nonsense in the Fourth Dimension of Literature: Hyperspace Philosophy, the ‘New’ Mathematics, and the Alice Books.” *Alice beyond Wonderland: Essays for the Twenty-First Century*. Ed. Christopher Hollingsworth. Iowa City: University of Iowa Press, 2009. 37–52.
- Titzmann, Michael. “Semiotische Aspekte der Literaturwissenschaft: Literatursemiotik.” *Semiotik: Ein Handbuch zu den zeichentheoretischen Grundlagen von Natur und Kultur*. Vol. 3. Ed. Roland Posner, Klaus Robering, and Thomas A. Sebeok. Berlin: de Gruyter, 2003. 3028–118.
- Wilde, Lukas. “Was unterscheiden Comic-Medien?” *Closure* 1 (2014). 25–50.