Italo Calvino:
between Imagination and Astronomy

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Abstract. Inspired by the recent celebration of the author's centenary, this paper delves into the captivating intersection of imagination and astronomy within the literary universe of Italo Calvino (1923–1985). Renowned for his unique narrative style and profound explorations of fantastical realms, Calvino's works often intertwine with celestial themes and cosmic perspectives. By examining select literary masterpiece excerpts and public interviews, this study unravels the intricate connections between Calvino's imaginative prowess and his fascination with the vast expanses of the cosmos. Through exploring the nuanced interplay between creativity and scientific curiosity in Calvino's writings, we aim to illuminate how the author bridges fiction and astronomy, offering readers a rich tapestry that transcends conventional boundaries, also inviting contemplation on the limitless possibilities of the human mind.

Italo Calvino (15 October 1923–19 September 1985) is one of the most influential Italian intellectuals of the second half of the twentieth century on a global scale. One of his most notable characteristics was his keen interest in science, particularly astronomy, which is a relatively uncommon aspect in Italian literary production. In this contribution, I aim to present a biographical sketch of the author, following his 'gaze to the sky' throughout his literary and cultural journey. Calvino's biography partly explains his ease with scientific concepts. He grew up in a kind of scientific community in his family villa in Sanremo, surrounded by family members—his father, mother, brother, aunts, and uncles—almost all of whom were university professors in scientific disciplines. Describing his family in 1960, Calvino said 'I am the black sheep, the only literary figure in the family'.[1]

[1] 'Io sono la pecora nera, l'unico letterato della famiglia', Italo Calvino, *Ritratto su misura*, in ID., *Eremita a Parigi. Pagine autobiografiche* (Milano: Mondadori, 1994), p.23. For a detailed discussion of Calvino's relationship with science, see Massimo Bucciantini, *Pensare l'universo: Italo Calvino e la scienza* (Roma: Donzelli Editore, 2023[2007]).

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However, he was well aware that he was indebted to his family for his intellectual curiosity about science and astronomy, to which he would often return.[2] In fact, he himself acknowledged:

> My parents were botanists [...] Perhaps I became a writer to escape from science... Then I naturally returned to it, as in a circular path. I approached science through astronomy. I had read some things as a boy, like Eddington, but the more systematic readings began around '59-'60 when I went to the United States.[3]

Calvino's parents—his father, an agronomist, and his mother, a botanist and one of the first female university lecturers in Italy—raised him in a secular environment. After his youth in Liguria, he moved to Turin to attend the Faculty of Arts and experienced the impact of World War II, during which Calvino participated in the Italian Resistance movement, joining the Garibaldi brigade. In 1947 he started working for the Einaudi publishing house and entered the Italian Communist Party.

During this period, Calvino's early works reflected a neorealistic phase, focusing on the Resistance movement with a picaresque approach, which later evolved into a critique of industrial society. In his view, these narrative projects—characterised by frequent interruptions—were the intellectual's reaction to the negativity of reality.[4] Soon, alongside these realistic subjects, a series of fantastic and allegorical motifs began to appear in his production. They were often used to express allegories of the human condition, with particular attention to the role of the intellectual in

[2] About the astronomical subjects in Calvino's work, see also Giannina Poletto, *L'astronomia di Calvino*, in Giorgio Bertone, ed., *Italo Calvino. La letteratura, la scienza, la città* (Genova: Marietti, 1988), pp.101–12.

[3] 'I miei erano botanici […] Forse sono diventato scrittore per fuggire dalla scienza… Poi ci sono tornato naturalmente, come in un percorso circolare. Mi sono avvicinato alla scienza attraverso l'astronomia. Qualcosa avevo letto da ragazzo, tipo l'Eddington, ma le letture più sistematiche sono cominciate intorno al '59-'60, quando sono andato negli Stati Uniti'. Interview with Ernesto Ferrero, *Tuttolibri*, 390, 21 January 1984. All translations are the Author's, unless otherwise noted. Where published English editions of Calvino's works exist, quotations are taken from those (see specific references in the footnotes).

[4] Interview with Maria Corti, *Autografo* II, no. 6 (1985): pp.47–53.

society, as in the *Bildungsroman* cycle represented by the 'Our Ancestors' trilogy.[5]

Fig. 1. Frontispiece of the first Italian edition of *Cosmicomics*.[6]

[5] Italo Calvino, *The Cloven Viscount* (Torino: Einaudi 1952), *The Baron in the Trees* (Torino: Einaudi 1957), and *The Nonexistent Knight* (Torino: Einaudi 1959).
[6] Italo Calvino, *Le Cosmicomiche* (Torino: Einaudi, 1965).

In the early '60s, Calvino embarked on a series of travels to the United States that were of fundamental importance to his personal life and to his literary career. Upon his return to Italy, he moved to Rome.

During this period, his first work with an explicit connection to astronomy was published, *Le Cosmicomiche* (*Cosmicomics*), a collection of short stories that appeared in 1965, some of which had been published in magazines in previous months. The genesis of this work is linked to the encounter with the Italian–American historian of science and philosopher Giorgio de Santillana, then teaching at the Massachusetts Institute of Technology:

> In Boston, I met Giorgio de Santillana. I remember being greatly impressed by one of his lectures that anticipated some themes of what would later become *Hamlet's Mill*. It was then that I began writing *Cosmicomics*.[7]

The contacts between Calvino and the philosopher continued, and he attended lectures given by the scholar during one of his visits to Italy. In fact, it was not the first time that astronomy had appeared in his work. Impressed by the flights of the first artificial satellites, Calvino had already written short apologues in the late 1950s in which he reflected on the significance of space and the universe for mankind.[8] However, it was only now that these themes took on the form of an organic project.

Interestingly, Calvino himself declared an emotional literary source for his astronomical suggestions, highlighting the inspirational value of the relationship between man and the sky:

> Listening to the [Santillana's] conference in 1963, I had what felt like the revelation of a knot of ideas that perhaps were already buzzing confusedly in my head but were difficult for me to express […] I mean the idea that no human story or thought can exist without situating them in relation to everything that exists independently of

[7] 'A Boston ho conosciuto Giorgio de Santillana. Ricordo che mi fece un'enorme impressione una sua conferenza che anticipava alcuni temi di quello che sarebbe poi diventato *Il mulino di Amleto*. Fu allora che cominciai a scrivere *Le Cosmicomiche*'. Ferrero*, Tuttolibri*, 1984.

[8] Italo Calvino, 'La tribù con gli occhi al cielo', now in ID., *Romanzi e racconti*, ed. C. Milanini, 3 vols (Milano: Mondadori 2004), III, pp.226–28; ID., 'Dialogo sul satellite', in *Città aperta* II, no. 6 (1958), pp.10–12, now in ID., *Romanzi e racconti*, III, pp. 229–33.

> humans; the idea of a knowledge in which the world of modern science and that of ancient wisdom reunify. Rereading the text now, I find the emotion of when Santillana came out with the unexpected example of Pierre Bezuchov in *War and Peace*, who, captured and in danger of life, looks at the stars and thinks that all this sky is in him, 'is' him.[9]

Imaginative process in *Cosmicomics*

This collection of short stories blends science with fantasy, using astronomical and other scientific concepts as a framework to explore philosophical ideas about existence, time, and human relationships, without losing a sense of lightness.

Each story begins with a scientific premise—such as the Big Bang or the extinction of the dinosaurs—written in italics, differently from the rest of the text. Calvino then introduces Qfwfq, a shape-shifting and timeless narrator who recounts these cosmic events in a personal, humorous, and whimsical tone. The stories unfold in a surreal manner, transforming scientific concepts into relatable, everyday experiences, mixing science with fantastic and metaphorical elements.

Following in the path of de Santillana, who recognised the common origins of poetry and science, in *Cosmicomics* Calvino intertwines myth—understood also as a driving force for scientific knowledge—and archaic cosmology in fascinating narratives that open up a unified vision of the universe. This raises the crucial question for a scientific literature, how to bring myth forth from rationality. Calvino constantly sought to expand the scope of literature, challenging it to capture the indescribable—from the vastness of the cosmos to the intricate division of cells. In doing so, he embraced the idea of 'narrating the universe as one great scientific-

[9] 'Ascoltando la conferenza [di de Santillana] del 1963, ne ebbi come la rivelazione d'un nodo di idee che forse già ronzavano confusamente nella mia testa, ma che mi era difficile da esprimere […] Dico l'idea che nessuna storia e nessun pensiero umani possano darsi se non situandoli in rapporto a tutto ciò che esiste indipendentemente dall'uomo; l'idea d'un sapere in cui il mondo della scienza moderna e quello della sapienza antica si riunifichino. Rileggendo ora il testo, ritrovo l'emozione di quando Santillana uscì con l'esempio inaspettato di Pierre Bezuchov in *Guerra e pace*, che fatto prigioniero e in pericolo di vita guarda le stelle e pensa che tutto questo cielo è in lui, *è* lui'. Italo Calvino, *Il cielo sono io*, in "la Repubblica", 10 July 1985, pp. 22-23, now *Fato antico e fato moderno di Giorgio de Santillana*, in ID. *Saggi 1945-1985*, ed. M. Barenghi (Milano: Mondadori, 1995), pp.2088–89.

cosmological machine', thus reversing the direction identified by de Santillana in *Hamlet's Mill*, of showing how rationality emerges from myth.[10],[11]

At first glance, *Cosmicomics* might seem to belong to the genre of science fiction, but the cosmicomic stories are actually 'reverse science fiction', as Eugenio Montale pointed out,[12] since they project modern scientific theories within the framework of cosmogonic myths.[13] Calvino himself had the opportunity to clarify this aspect on several occasions, affirming that 'the process of *Cosmicomics* is not that of classic science fiction (that is, the classical—and which I also greatly appreciate—of Jules Verne and H. G. Wells). *Cosmicomics* are primarily influenced by Leopardi and the Popeye comics.'[14]

This explains why he chose as the first title of his collection *The Distance of the Moon*, which relies on the scientific hypothesis that tidal interactions gradually pushed the Moon far away from Earth.

> I started with the Moon, as an homage to the lunar poets of Italian literature, from Dante to Ariosto, to Leopardi. The Moon, once a symbol of distance, of alienation, has changed its sign: it has become close and intrinsic. Perhaps it is its original nature that is now evident to us: every astronomy book, every encyclopaedia under the entry

[10] Gaspare Polizzi, 'La letteratura italiana dinanzi al cosmo. Calvino tra. Galileo e Leopardi', *Lettere Italiane* 62, no. 1 (2010):pp.63–107. See also Bucciantini, *Pensare l'universo*, pp.76–79.

[11] 'Over many years I have searched for the point where myth and science join. It was clear to me for a long time that the origins of science had their deep roots in a particular myth, that of *invariance*'. Giorgio de Santillana and Hertha von Dechend, *Hamlet's Mill* (Boston, MA: Gambit, 1969), Preface, p.vii. 'Ordered expression, that is expression in accordance with laws or rules, comes before organized thought. After that, the spontaneous creation of fables occurs when there is a fund of direct experience to draw upon'. de Santillana and von Dechend, *Hamlet's Mill*, p.345.

[12] Eugenio Montale, *È fantascientifico ma alla rovescia. Le «Cosmicomiche» di Calvino*, in "Corriere della sera", 5 December 1965, p.11.

[13] Antonio Illiano, 'Per una definizione della vena cosmogonica di Calvino: Appunti su *Le cosmicomiche* e *Ti con zero*', *Italica* 49, no. 3 (1972): pp.291–301.

[14] 'Il procedimento delle Cosmicomiche non è quello della Science Fiction (cioè quello classico–e che pure molto apprezzo–di Jules Verne e H. G. Wells). Le Cosmicomiche hanno dietro di sé soprattutto Leopardi, i *comics* di Popeye'. Italo Calvino, *Nota*, in "Il Caffè politico e letterario", 12, no. 4 (1964): p.40.

> "Moon", first brings us the theory of the Moon once close to the Earth and slowly drifting away.[15]

A more mature reflection on his own debt to Leopardi would appear in Calvino's later works, where he stated:[16]

> These images from folk literature, along with those we have seen from more learned literature, are part of the literary repercussions of Newton's theories. When he was fifteen years old, Giacomo Leopardi wrote an amazingly erudite *History of Astronomy*,[17] in which among other things he sums up Newton's theories. The gazing at the night skies that inspires Leopardi's most beautiful lines was not simply a lyrical theme: when he spoke about the moon, Leopardi knew exactly what he was talking about. In his ceaseless discourses on the unbearable weight of living, Leopardi bestows many images of lightness on the happiness he thinks we can never attain: birds, the voice of a girl singing at a window, the clarity of the air – and, above all, the moon.
>
> As soon as the moon appears in poetry, it brings with it a sensation of lightness, suspension, a silent calm enchantment. When I began thinking about these lectures, I wanted to devote one whole talk to the moon, to trace its apparitions in the literatures of many times and places. Then I decided that the moon should be left entirely to Leopardi. For the miraculous thing about his poetry is that he simply

[15] Italo Calvino, Typescript for an anthological reading held in Zurich in 1968, cited in C. Milanini, *Cronologia cosmicomica*, in Italo Calvino, *Tutte le cosmicomiche*, ed. C. Milanini (Milano: Mondadori, 2004), p.396.

[16] On the influence of Leopardi on Calvino, see Polizzi, 'Calvino tra Galileo e Leopardi', pp.97–105; Rosanna Maggiore, 'Calvino, Leopardi e la luna, « Tra levitazione desiderata e privazione »', *Studi Novecenteschi* 43, no. 92 (2016): pp.371–98.

[17] As an example, I quote the beginning of Leopardi's text: 'La più subblime, la più nobile tra le Fisiche scienze ella è senza dubbio l'Astronomia. L'uomo s'innalza per mezzo di essa come al di sopra di sé medesimo, e giunge ad indagare la causa dei fenomeni più straordinari'. The most sublime, the noblest among the Natural Sciences, is definitely Astronomy. The man rises through it as above himself, and comes to know the cause of the most extraordinary phenomena. G. Leopardi, *History of Astronomy* (1813).

> takes the weight out of language, to the point that it resembles moonlight.[18]

In a series of interviews after the publication of *Cosmicomics*, Calvino explicitly discussed the imaginative process behind his work:

> I started like this: I had the habit of drawing the images that came to mind while reading a book, for example, on cosmogony, starting from a topic far from the mechanism of imagination that is more usual for me. And yet, even from there, sometimes images emerge as ideas for stories. It was enough for me to take note of them to find myself having a certain number of beginnings, starting points. All that remained was to develop.[19]
>
> Employing "sidereal" imagination and language, with the distance of astronomy, to narrate typically human situations, dramatic or distressing ones, and resolve them with abstract procedures as if they were mathematical problems: that's what I had to do.[20]

The first stories of *Cosmicomics* draw primarily from readings in astronomy for their scientific substrate. During this period, in many letters Calvino mentioned his sources: 'Dear Mimì, for some time now, I've only been reading books on astronomy',[21] as well as 'I am capable of finding images only in astronomy or genetics'.[22]

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[18] Italo Calvino, *Six Memos for the Next Millennium*, trans. Patrick Creagh (Cambridge, MA: Harvard University Press, 1988), pp.23–24.

[19] 'Ho cominciato così: avevo preso l'abitudine di segnarmi le immagini che mi venivano in mente leggendo un libro per esempio di cosmogonia, cioè partendo da un discorso lontano dal meccanismo di immaginazione che mi è più consueto. E invece anche di lì ogni tanto vengono fuori delle immagini, delle proposte di racconto. Mi è bastato prenderne nota per trovarmi ad avere un certo numero di inizi, di motivi di partenza. Non restava che svilupparli'. Interview with Alfredo Barberis, *Il Giorno*, 22 December 1965, p.7.

[20] 'Impiegare un'immaginazione e un linguaggio siderali, col distacco dell'astronomia, per raccontare situazioni tipicamente umane, situazioni drammatiche o angosciose, e risolverle con procedimenti d'astrazione come se si trattasse di problemi matematici: ecco cosa dovevo fare'. Interview with Mauro Lami, *Messaggero Veneto*, 22 November 1967, p.3.

[21] 'Caro Mimì, da un po' di tempo leggo solo libri di astronomia'. Letter to Domenico Rea, 13 May 1964.

[22] 'Io sono capace di trovare immagini solo nell'astronomia o nella genetica'.

Calvino observed that contemporary science no longer provides clear images to represent, the world it reveals is beyond what we can picture. Nevertheless, when reading scientific texts, sometimes a sentence will spark an image that the writer tries to capture and develop into a story. He has been shown to take some elements for his stories from encyclopaedic entries, such as 'Cosmogony' in the Encyclopaedia Britannica, or from the volumes on astronomy in the *Encyclopédie de la Pléiade*, edited by Raymond Queneau.[23] The interplay between imagination and scientific concepts, particularly those of astronomy, was consciously recognised by Calvino, who addressed this question in the afterword to a late edition of *Cosmicomics* dedicated to young readers:

> Cosmology (the study of possible "models" of the universe) and cosmogony (the branch of cosmology that studies the universe in becoming, its origin and evolution, its history) are absolutely modern sciences, which took their first steps in our century, especially from Einstein onwards. Before them, we find only primitive or classical mythologies, the great religions, the illuminations of mystics and visionaries scattered in every age and civilization, who proposed their cosmologies and cosmogonies, their "models of the universe".
>
> Modern cosmology, compared to the imagination of the ancients, is much more abstract: concepts like "four-dimensional space", "space-time", "curvature of space" escape any visualization, can only be conceived through mathematical calculation and theory.
>
> Italo Calvino's gambled with drawing from this invisible and almost unthinkable universe stories capable of evoking elementary suggestions like the cosmogonic myths of ancient peoples. The ancients started from myths to approach and understand the phenomena of the earth and the sky; the contemporary writer takes inspiration from current science to rediscover the pleasure of storytelling, and of thinking while telling.[24]

Letter to Hans M. Enzensberger, 28 October 1965.

[23] See Silvia Mezzanzani, 'Italo Calvino, all'origine della dimensione cosmicomica', (MSc dissertation, Università di Milano, 1995–96); Monica Ciotti, 'Dall'infinitamente piccolo all'infinitamente grande. Le fonti scientifiche delle Cosmicomiche di Italo Calvino' (PhD dissertation, Sapienza Università di Roma, 2022–23).

[24] 'Cosmologia (lo studio di possibili "modelli" di universo) e cosmogonia (quella branca della cosmologia che studia l'universo in divenire, la sua origine

Calvino himself would later reflect on such an inspirational mechanism in his famous essay *Six Memos for the Next Millennium*:

> In devising a story, therefore, the first thing that comes to my mind is an image that for some reason strikes me as charged with meaning, even if I cannot formulate this meaning in discursive or conceptual terms. As soon as the image has become sufficiently clear in my mind, I set about developing it into a story; or better yet, it is the images themselves that develop their own implicit potentialities.[25]
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> [In *The Cosmicomics*], my aim was to show that writing using images typical of myth can grow from any soil, even from language farthest away from any visual image, as the language of science is today.[26]
>
> The first cosmicomic I wrote, "The Distance of the Moon", is possibly the most "surrealistic", in the sense that the impulse, derived from gravitational physics, leaves the door open to a dreamlike fantasy. In other cosmicomics the plot is guided by an idea more in keeping with the scientific point of departure, but always clad in a shell of imagination and feeling, […] In short, my

ed evoluzione, la sua storia) sono scienze assolutamente moderne, che hanno mosso i loro primi passi nel nostro secolo, soprattutto da Einstein in poi. Prima di loro, troviamo solamente le mitologie primitive o classiche, le grandi religioni, le illuminazioni dei mistici e dei visionari sparsi in ogni epoca e civiltà, che hanno proposto le loro cosmologie e cosmogonie, i loro "modelli d'universo". La cosmologia moderna, in confronto alla immaginazione degli antichi, è molto più astratta: concetti come "lo spazio quadrimensionale", lo "spazio-tempo", la "curvatura dello spazio" sfuggono a ogni visualizzazione, possono essere concepiti solo attraverso il calcolo matematico e la teoria. La scommessa di Italo Calvino è stata quella di far scaturire da questo universo invisibile e quasi impensabile delle storie capaci di evocare suggestioni elementari come i miti cosmogonici dei popoli dell'antichità. Gli antichi partivano dai miti per avvicinare e comprendere i fenomeni della terra e del cielo; lo scrittore contemporaneo prende spunto dalla scienza attuale per ritrovare il piacere di raccontare, e di pensare raccontando'. Italo Calvino, Afterword for the edition *La memoria del mondo e altre storie cosmicomiche* (Torino: Einaudi, 1975), Biblioteca Giovani 50.

[25] Calvino, *Six Memos*, pp.88–89.

[26] Calvino, *Six Memos*, p.89.

> procedure aims at uniting the spontaneous generation of images and the intentionality of discursive thought.[27]

The twelve stories published in *Cosmicomics* were followed in 1967 by another collection, consisting of eleven cosmicomic stories: *Ti con zero* (*t zero*). While still blending scientific concepts with narrative, the tone of these stories differs from that of the previous collection, being more introspective and philosophical, with a focus on concepts such as probability, causality and the passage of time, including death.

By the end of the '60s, however, Calvino was facing new challenges. In the preface to the 1968 edition, which included the two collections and five other stories that had since appeared in newspapers, he writes:

> The experience of *Cosmicomics* is over: a new one begins, in which it will no longer be an occasional inspiration found in a scientific book that sets the story in motion, but a lesson of more essential and severe rigor […]
> Where the developments of this path will lead me, I do not yet know: I enjoy discovering my way as I walk it, and at every turn I expect a surprise, a different landscape, and also a new difficulty, a new obstacle to overcome.[28]

The season of the *Cosmicomics* did not really end. Over the years, Calvino would work on several new editions, including the one mentioned above, dedicated to young people, and finally published *Cosmicomiche vecchie e nuove* (1984), with a few new additions. In the end, there will be 33 cosmicomic stories.

It remains a fact that the experience of the *Cosmicomics* was a milestone in Calvino's literary production, as is evidenced by a note found among his papers after his sudden death. In this note, Calvino outlined three prospective projects, each of which was intended to build from earlier lines

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[27] Calvino, *Six Memos*, p.90.

[28] 'L'esperienza delle *Cosmicomiche* è esaurita: ne comincia un'altra, in cui non sarà più uno spunto occasionale trovato in un libro scientifico a mettere in moto il racconto, ma una lezione di rigore più essenziale e severa […] Dove mi porteranno gli sviluppi di questa via, non lo so ancora: mi piace scoprire la mia strada mentre la percorro, e a ogni svolta mi aspetto una sorpresa, un paesaggio diverso, e anche una nuova difficoltà, un ostacolo da superare'. Italo Calvino, Preface for the edition *La memoria del mondo e altre storie cosmicomiche* (Milano: Club degli Editori, 1968), pp.5–8.

of his work. Notably, one of these projects involved the composition of new cosmicomic stories.[29]

The structuralist phase and *Invisible Cities*

Following the death of Elio Vittorini in 1966, with whom Calvino had shared the role of co-editor of the literary magazine *Il Menabò*, Calvino's activities came to a temporary halt.

He then began spending time in Paris, where he became involved with several significant cultural circles, including the *Oulipo (Ouvroir de littérature potentielle)*. This group, initiated by Raymond Queneau—whose works significantly influenced Calvino's later oeuvre—aimed to create literary works using constrained writing techniques. A characteristic of this period was the exploration of 'the potential multiplicity of what may be narrated', guided by the lessons of Claude Lévi-Strauss and his structuralist theory.[30] Intertextuality and metanarrativity are constantly present in the works of this period.

In this cultural climate, *Le città invisibili* (*Invisible Cities*) was published in 1972, becoming one of Calvino's most famous frame narratives. The novel portrays the cities visited by Marco Polo—not real physical places, but creations of his imagination—which he then reports to the emperor Kublai Khan.[31]

Built upon a masterful combinatorial structure, the book features a section devoted to the 'Cities and the sky'. Among them, two cities stand out for their astronomical references: *Perinthia* and *Andria*.

In *Perinthia*, Calvino describes a city designed to reflect the ideal order of the heavens, with structures aligned to celestial patterns. However, the outcome is grim and disturbing: instead of a thriving city, *Perinthia* becomes an eerie landscape of disorder and misfortune, where the inhabitants experience strange anxieties and unsettling events.[32] Calvino uses this dark portrayal to suggest that humanity's attempt to mirror cosmic ideals can lead to chaos rather than perfection, and serves as a cautionary tale about the limits of human understanding.

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[29] Milanini, *Cronologia cosmicomica*, pp.415–16.
[30] Calvino, *Six Memos*, p.120.
[31] See also Sophia Psarra, 'Story-craft: The imagination as combinatorial machine in Italo Calvino's Invisible Cities', in *The Venice Variations: Tracing the Architectural Imagination* (London: UCL Press, 2018), pp.139–73.
[32] Italo Calvino, *Invisible Cities*, trans. William Weaver (New York: Harcourt Brace, 1974), pp.144–45.

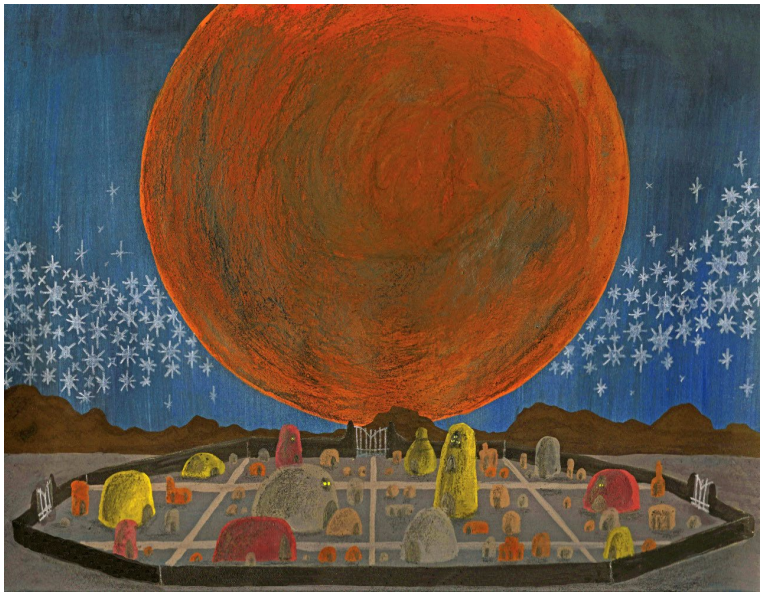

Fig. 2. *Perinthia*, image courtesy of artist Joe Kuth. This drawing was created in 2014 as part of the *Seeing Calvino* project, where Kuth and collaborators Matt Kish and Leighton Connor illustrated each of the 55 imaginary cities from *Invisible Cities*, bringing Calvino's visions to life.

Andria is also a city built in perfect harmony with the sky, where every building, every street, and every courtyard is precisely aligned with the positions and movements of the stars. The citizens of *Andria* live with a sense of connection to the cosmos.

> Andria was built so artfully that its every street follows a planet's orbit, and the buildings and the places of community life repeat the order of the constellations and the position of the most luminous stars: Antares, Alpheratz, Capricorn, the Cepheids. The city's calendar is so regulated that jobs and offices and ceremonies are arranged in a map corresponding to the firmament on that date.[33]

This alignment with the stars may impose a sense of distance and isolation, as if the people of Andria might be forever bound by cosmic rules beyond their control. Calvino explores the tension between cosmic aspiration and earthly reality, suggesting that the quest for celestial perfection may

[33] Calvino, *Invisible Cities*, p.150.

ultimately create a city—and a society—defined by restraint rather than freedom.

In *Andria*, however, the alignment with the cosmos takes on a different meaning. Praised for their prudence, the inhabitants act with such balance and restraint that they seem to guide the sky rather than merely follow it.

> "Innovations do not disturb your city's astral rhythm?" I asked. "Our city and the sky correspond so perfectly," they answered, "that any change in Andria involves some novelty among the stars." The astronomers, after each change takes place in Andria, peer into their telescopes and report a nova's explosion, or a remote point in the firmament's change of color from orange to yellow, the expansion of a nebula, the bending of a spiral of the Milky Way. Each change implies a sequence of other changes, in Andria as among the stars: the city and the sky never remain the same.
> As for the character of Andria's inhabitants, two virtues are worth mentioning: self-confidence and prudence. Convinced that every innovation in the city influences the sky's pattern, before taking any decision they calculate the risks and advantages for themselves and for the city and for all worlds.[34]

Here, Calvino presents a more optimistic vision than in *Perinthia*: *Andria*'s harmony with the stars is not a source of unease but a testament to human wisdom. The relationship with the heavens reflects not a rigid adherence to cosmic ideals, but a collaborative concord in which human foresight becomes a guiding force, subtly shaping the celestial order itself. In this comparison, I suggest that one should not overlook the implicit connection between the classical literary models to which the names of the two cities refer: Menander's *Perinthia* and its adaptation in Terence's *Andria*.[35]

Yet even in the astronomical references—mentioned with exactitude, a cornerstone of Calvino's creative work[36] —we can sense the deep fascination and inspirational value that the sky held for him. Calvino's meticulous attention to cosmic detail does not merely serve to structure his narratives, rather, the stars, constellations, and celestial alignments become symbols of imagination and exploration.

These elements also emerge in one of his lectures, delivered to the students of the *Graduate Writing Division* at Columbia University. Here,

[34] Calvino, *Invisible Cities*, p.151.
[35] Terence, *Andria*, ll.9–14.
[36] Calvino, *Six Memos*, pp.55–80.

Calvino delves into the intricate dynamics of writing and storytelling in *Invisible Cities*, following up varying inspirations:

> This is how I carried on the *Invisible Cities* book over the years, writing a piece every now and then, passing through a number of different phases. At one stage I could only write about sad cities, and at another only about happy ones. There was one period when I compared the cities to the starry sky, to the signs of the zodiac; and another when I kept writing about the garbage which spreads outside the city day by day.
> In short, what emerged was a sort of diary which kept closely to my moods and reflections: everything ended up being transformed into images of cities—the books I read, the art exhibitions I visited, and discussions with friends.[37]

Overall, Calvino's tone in *Invisible Cities* is markedly different from the humour and lightness of *Cosmicomics*. The cities in *Invisible Cities* often have a dark, ambiguous undertone. Each city embodies an unresolved tension between ideals and reality, between the dream of perfection and the unease of human limitations. Where *Cosmicomics* delights in the mysteries of the universe with a sense of wonder, *Invisible Cities* offers a meditation on the weight of those mysteries.

Finally, it is worth mentioning that a brief reference to the observation of the sky and the work of the astronomer is also present in *Se una notte d'inverno un viaggiatore* (*If on a winter's night a traveler*), the other masterpiece from his 'combinatorial' period, published in 1979. This avant-garde narrative, too, takes the form of a frame story, presenting ten beginnings of ten possible novels, each characterised by its own genre. In the fourth chapter, the two protagonists exchange the following dialogue:

> "Feeling better?" I ask her.
> "It's nothing. I have dizzy spells when I least expect them, even if there is no danger in sight… Altitude or depth makes no difference… If I gaze at the sky at night, and I think of the distance of the stars… Or even in the daytime… If I were to be down here, for example, with my eyes facing up, my head would swim…" And she points to the clouds that are passing swiftly, driven by the wind.

[37] Italo Calvino, 'Italo Calvino on "Invisible Cities"', *Columbia: A Journal of Literature and Art*, no. 8 (1983), pp.37–38.

> She speaks of her head swimming as of a temptation that somehow attracts her.
> I am a bit disappointed that she hasn't said a word of thanks. I remark, 'This isn't a good place to lie down and look at the sky, by day or by night. You can take it from me: I know about it.' […]
> 'You know about looking at the sky? Why? Are you an astronomer?'
> 'No, another kind of observer.' And I point out to her on the collar of my uniform the insignia of the artillery. 'Days under bombardments, watching the shrapnel fly.'[38]

The late production: *Mr. Palomar*

Back in Rome with his family at the beginning of the 1980s, from his terrace that opens onto the rooftops Calvino wrote his final works. He became a major literary figure, celebrated for his imaginative works, continuing to explore themes of modernity, technology, and the complexity of human existence. He was very active in Italian cultural life, writing essays and articles that reflected his critical and curious mind.

The collection of stories *Palomar* (*Mr. Palomar*), published in 1983, had a long gestation period, like other compositions. In August 1975, Calvino began publishing a series of reflections in the Italian newspaper *Corriere della Sera*, in a column entitled *The Observatory of Mr. Palomar*,[39] introducing a new character—an *alter ego* of the author—named after the famous astronomical observatory in California. This project continued in the pages of *la Repubblica* between 1980 and 1982. *Mr. Palomar* collected twenty-seven of these pieces.

Mr. Palomar, quiet and reserved, observes daily life, as well as contemporary reality, nature, and human behaviour from a contemplative, almost scientific perspective, as if examining the world through a distant telescope. Calvino acknowledged that the creation of this book took a long time, partly because he hoped Mr. Palomar's way of observing would extend to the human world, eventually reaching some universal conclusion. As he progressed, however, Calvino realised the story could be summed up in two sentences: 'A man sets out to reach wisdom, step by step. He hasn't arrived yet'.[40]

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[38] Italo Calvino, *If on a winter's night a traveler*, trans. William Weaver (New York: Harcourt Brace Jovanovich, 1981), p.83.
[39] 'Osservatorio del signor Palomar'. *Corriere della Sera*, 1 August 1975, p. 3.
[40] 'Un uomo si mette in marcia per raggiungere, passo a passo, la saggezza. Non è ancora arrivato'. Italo Calvino, Typescript for a preface to *Palomar*, cited in ID., *Romanzi e racconti*, II, pp. 1402–05.

In Mr. Palomar, apart from the name of the protagonist, astronomy goes straight into the section entitled 'Mr. Palomar and the sky', which consists of three short chapters: *Moon in the afternoon*, *The eye and the planets*, and *The contemplation of the stars*.

> When it is a beautiful starry night Mr. Palomar says: "I *must* go and look at the stars." That is exactly what he says—"I *must*"—because he hates waste and believes it is wrong to waste that great quantity of stars that is put at his disposal. He says "I *must*" also because he has little practical knowledge of how you look at the stars, and this simple action always costs him a certain effort.[41]

In fact—the story continues—the activity of skygazing involves a certain effort, depending on whether one chooses to look at the sky with the naked eye, with glasses, or through a telescope, aided by celestial charts. It has been noted that Calvino captured how observational techniques and representational practices advanced the shared historical ability of art and science to depict the observable world.[42]

With regard to Calvino's suggestions for the story *The eye and the planets*, first published in 1982 under the name *Giove con la sciarpa* (*Jupiter in a scarf*), in the preparatory notes we read:

> Planets have been making the headlines recently, for a bogus reason—the 'alignment' with the Sun—which is meaningless to astronomers and to a mere onlooker like me, who always hopes to see something he has never seen before, gives nothing away.
> Anyway, when I heard about the planets, I thought that it had been a while since I had had a chance to look at the sky, and I hurried to do so, having consulted the magazine *Astronomia* [...] It turns out that, alignment or not, 1982 is indeed a year of the soul for looking at the planets, and April is one of the best months, because the three outer planets visible to the naked eye (even to a myopic and astigmatic person like me), Mars, Jupiter and Saturn, can be seen throughout the night for the entire month.[43]

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[41] Italo Calvino, *Mr. Palomar*, trans. William Weaver (New York: Harcourt Brace Jovanovich, 1985), p.43.
[42] Elio Attilio Baldi, 'Art and Science in Calvino's Palomar: Techniques of Observation and Their History', *Italian Studies* 74, no. 1 (2019): pp.71–86.
[43] 'I pianeti hanno fatto notizia sui giornali di recente, per una ragione fasulla–l'"allineamento" rispetto al sole–che agli astronomi risulta priva di senso e a un

In this story, Mr. Palomar, looking through a telescope, establishes a personal relationship with each planet. Of Mars he says:

> It seems to him if Mars is the planet about which, ever since the days of Schiaparelli, so many things have been said, causing alternate illusions and disappointments, this fact coincides with the difficulty of establishing relations with the planet, as with a person of difficult character.[44]

This is an autobiographical episode. In his notes, we read that at that time Giorgio Buonvino had offered Calvino the 15-centimetre telescope of the Monte Mario observatory in Rome, with which he was able to observe the red planet.[45] He commented that 'Mars is a most perplexing planet'.[46]

> Quite the opposite is the relationship he establishes with Saturn, the most exciting planet to the person viewing it through a telescope: there it is, very sharp, white, the outlines of the sphere precise and of the ring. […]
> It is cheering to think that an object so different from all others, a form that achieves the maximum strangeness with the maximum simplicity and regularity and harmony, is rotating in the sky.[47]

Through Mr. Palomar's reflections, Calvino once again conveys the idea of astronomy not only as a scientific discipline, but as a field that inspires awe and wonder, inviting a dialogue with the universe itself. For Mr. Palomar, looking at the stars is not merely an act of observation but a form

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semplice spettatore come me, che spera sempre di poter vedere qualcosa che non ha mai visto, non dà nulla di quanto poteva sperare. Comunque sia, a sentir parlare di pianeti, ho pensato che da un pezzo non m'era capitato di guardare il cielo, e mi sono affrettato a farlo, dopo aver consultato la rivista *Astronomia* […] Risulta che, allineamento o meno, il l982 per guardare i pianeti è proprio un'ottima annata, e aprile uno dei mesi migliori, perché i tre pianeti esterni visibili a occhio nudo (anche da un miope e astigmatico come me), Marte, Giove e Saturno, si possono vedere durante tutta la notte per tutto il mese'. Italo Calvino, Typescript for a preface to *Palomar*, p.1418.

[44] Calvino, *Mr. Palomar*, p.38.

[45] See also Italo Calvino, *Giove con la sciarpa*, in "la Repubblica", 15 April 1982, p. 19.

[46] Calvino, Typescript for a preface to *Palomar*, p.1419.

[47] Calvino, *Mr. Palomar*, pp.38–39.

of communion with the infinite—a way of placing oneself in relation to the vastness of existence.

However, Mr. Palomar—like Calvino—must confront the limitations of language. As he gazes at the stars, he realises that words, however powerful, cannot fully express the expanse, beauty and existential wonder of the experience. In these moments, his imagination steps in where language falls short, filling the silence of the cosmos with personal meaning and thus becoming an essential partner to knowledge.[48]

Fig. 3. The edge of a gaseous cavity in NGC 3324, in the Carina Nebula. Captured in 2022 in infrared light by NASA's new James Webb Space Telescope, this image reveals previously obscured areas of star formation.

Concluding remarks

In a final commentary on the publication of *Cosmicomiche vecchie e nuove*, Calvino returned one last time to the interplay between imagination and modern science, which is often sparing with images:

> *Cosmicomics* belong to the seeing of imagination. I wrote them twenty years ago, starting from the observation that modern science, physics, cosmology, molecular biology, do not offer visual images and can only be understood conceptually, abstractly. Literature builds bridges between the models of scientific logic and everyday

[48] Italo Calvino, *Mr. Palomar*, p.47.

> experience and language: the further science advances, the more work there is for literature.[49]

Remembering that, for Calvino, 'the opening gambit is played by the visual imagination', [50] one wonders what he would have thought upon seeing the latest astronomical images provided by today's cutting-edge instruments, designed to explore the frontiers of the universe.

[49] '*Le Cosmicomiche* appartengono al vedere dell'immaginazione. Ho scritto le prime vent'anni fa partendo dalla constatazione che la scienza moderna, la fisica, la cosmologia, la biologia molecolare, non offrono immagini visive e possono essere comprese solo concettualmente, astrattamente. La letteratura costruisce i ponti tra i modelli della logica scientifica e l'esperienza e il linguaggio quotidiani: più la scienza va avanti, più c'è lavoro per la letteratura'. Interview with Giulio Nascimbeni, *Corriere della Sera* 109, 284 (5 dicembre 1984): p.3.
[50] Calvino, *Six Memos*, p. 90.