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STARS AND THEATRE. FROM RENAISSANCE STAGE ASTROLOGERS TO ASTRONOMY-FLAVORED SCIENCE PLAYS

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ABSTRACT

Theatre has a longstanding and surprising tradition of familiarity with the starry night and its investigators but alas, since Ariosto's *Negromante*, Della Porta's *Lo Astrologo* and the many *comedias* of the Golden Age of Spanish Theatre the adepts of the stars are almost invariably portrayed as tricksters, buffoons and greedy cheaters pretending to be experts of astrology and magic. Comedy is everywhere in modern Europe the only genre associated to such characters and to the study of the universe, at least until the 19th century, when farcical dramaturgy is complemented by some minor tragedies (e.g. Nievo's pioneering *Galilei*, Andreev's *To the Stars*, Gsantner's *Tolternicus* and Ogilvie's *Hypatia*) that slowly pave the way to 20th century dramas centered on science (the prototype is Brecht's *Life of Galileo*). I propose a voyage through the history of theatrical astrologers/astronomers tracing the evolution of the complex relationship between stars and stage and at the same time analyzing the ascent of the contemporary science-play format where the dramaturgy either inflates becoming verbose, philosophical and sometimes ironical or tends to dissolve in a multisensory experience of cosmos, history and society called Postdramatic Theatre.

KEYWORDS: Astronomy, Astrology, Modern Theatre, Post-dramatic Theatre.

1. INTRODUCTION

Is there a connection between astronomy and astrology and modern Theatre? And if the connection does exist, is it possible to trace a history, an evolution of such a relationship, beyond the usual anecdotal examples?

The Science of the Stars and its practitioners are often portrayed since the beginnings of Renaissance Theatre, but almost invariably in the category of the Comic and in the genre of Comedy. It is no coincidence: the first fiction about astronomers is a joke, the tale of Thales falling in a pit while observing the heavens, transmitted by Aesop, Plato and Diogenes Laertius, propagated along the centuries through stories like the one contained in the Italian medieval collection "Il Novellino" or through the 17th century fables of La Fontaine, up to the cinema of Georges Méliès in the first years of the 1900s (Gandolfi & Sandrelli, 2009). This demonstrates the stereotypical character of fictional observers and diviners, their funny presumption of being above human worries and pettiness but also the risk of going astray, violating laws of nature or even morality.

In the present essay I will try to explore the presence and the role of astronomers/astrologers concealed in modern farces and dramas, an operation rarely attempted on a large scale involving European stages at all latitudes and epochs. I do not pretend to reach completeness in this survey, nonetheless I hope to isolate relevant themes and tendencies, bringing to light significant episodes (often forgotten) and important moments of transformations in the perception of the world of the stars and of their adepts.

2. STAGE ASTROLOGERS

At the beginnings of European Modern Theatre, when medieval plays were leaving space to more sophisticated representations aware of the classical Greek and Latin heritage, science and wisdom were often present on the stage through the recognizable figures of physicians or astronomers, but also through magicians and necromancers. Such figures clearly overlap at the time in the popular imagination, despite the well known social differences between the academic culture, the esoteric tradition of wizards and occultist and the world of charlatans and street healers.

2.1. From Bernardo Dovizi to Ariosto and Gnaphaeus

La Calandria (1513) by Bernardo Dovizi from Bibbiena – a Tuscan erudite cardinal – is usually considered the first modern theatrical representation,

drawing themes from the ancient Roman comedy of Plautus, but also introducing vernacular and prose, in a modern context and with a modern staging (D'Amico, 1991). This essential humanistic play was produced in Renaissance Italy, during the pontificate of Leo X. It presents the character of Ruffo, the Astrologer/Necromancer, a real archetype for many future astrologers–charlatans on the stage, even if the figure has only a limited space in the comedy.

Il Negromante is a real Ferrarese masterpiece by Ludovico Ariosto that develops with fine insight the character of the astrologer Mastro Iachelino as a prince of the fraudsters, both in the first version of 1520 and in that of 1528 (Coluccia, 2001). The description made by Nebbio, his assistant, is revealing:

*Per certo, questa è pur gran confidenza
che mastro Iachelino ha in sé medesimo,
che mal sapendo leggere e mal scrivere
faccia professione di filosofo,
d'alchimista, di medico, di astrologo,
di mago, e di scongiurator di spiriti;
e sa di queste e de l'altre scienze
che sa l'asino e 'l bue di sonar gli organi;
benché si faccia nominar lo astrologo
per eccellenzia, sì come Virgilio
il Poeta, e Aristotele il Filosofo;
ma con un viso più che marmo immobile,
ciance, menzogne, e con altra industria
aggira et avviluppa il capo a gli uomini;
e gode, e fa godere a me (aiutandoci
la sciocchezza, che al mondo è in abbondanzia) l'altrui
ricchezza.
(Il Negromante II, 473)*

Mastro Iachelino is particularly interesting because a passage of the text shows hints of his possible connection with a real astronomer: Celio Calcagnini or even Copernicus himself, identified by a reference to the movement of the Earth¹. But the key role of the astrologer in this and other plays, beyond the identification of relevant historical figures, is certainly revealing of a large diffusion of similar practices in the Italian society of the Renaissance. The strong cultural impact of Astrology is in fact confirmed at the same time and in a nearby territory (Padua and Mantova) by the presence of a consistent number of funny practitioners described in the satirical texts of many Macarronee, vernacular poems based on an Italian–Latin pastiche, for example in

¹ Describing the feats of Mastro Iachelino to the servant Themolo the young Cinthio says "He maketh the Earth move if he wishes so" (*Il Negromante II, Second Act, First scene*).

the *Macaronea* (1488–89) by Tifi Odasi and in the *Baldus* (1517) by Teofilo Folengo.

Another important play related to the Science of the Stars in the first half of the 16th century is *Morosophus* (1541), *The Learned Moron*, an allegorical comedy in Latin by the Dutch Protestant Gulielmus Gnaphaeus (Demoed, 2008). The protagonist of the text, conceived for a university audience, may allude to Copernicus (in a mocking mood): the play is a clear exception in the “canon” of comical representations with its religious and metaphysical subtext (the fool Morophosus that pretends respect when mimicking the knowledge of astronomers, converts in the end to Divina Sophia, the spiritual wisdom) and differentiates itself from the tradition of medieval comedies and drama. Its modernity is inspired by the Erasmian *Praise of Folly* and by the *Ship of Fools* created by Sebastian Brant half a century before.

2.2. Ariosto, Della Porta and their Legacy

Lo Astrologo (first version in 1591 and second one in 1606) by the Neapolitan Giovambattista della Porta is another important prototype for the figure of the astrologer-scoundrel, soon imitated and cited everywhere in Europe (Rodda, 2016). Albumazar, the main character, is clearly based on Mastro Iachelino, but his technical jargon and his name are even more telling about the intentional parody of the world of professional astrologers, paving the way for many charlatan-heros on the stage, with funny names that range from Eclipticus and Solsticius to Stargaze and Giropolice.

Occasionally this same astrological knowledge, technical and specific, emerges in other plays as well but in general these comedies are dominated by a widespread and gross contamination of necromancy, magic and other illicit activities, together with an omnipresence of the debate about Astral Fate and Human Free Will.

The influence of Della Porta’s play was very broad and enduring, especially in Spain, where Calderon de la Barca proposes, complicating the plot, a similar swindler in the celebrated *El Astrologo Fingido* of 1624 (an Aporta is explicitly cited in the comedy as an astrologer) and in England, where Thomas Tomkis draws heavily on the Italian work for inspiration when creating his successful *Albumazzar* (1615). This last comedy is notable for its introduction on the stage of a Galilean “perspicill”, cited together with an “otacousticon,” a telescope for hearing sounds from far away consisting in a simple couple of ass’s ears.

Many scholars wrongly inferred from such clichés a general refusal of Astrology, while they just indicate the usual ambiguity about a dangerous topic among clerics and humanists, and the general con-

sensus even among astrologers themselves, that charlatans dominated a complex and very difficult field of research. On the other hand, as I noted earlier, parody implies a pervasive presence of the science of the stars in society and the relevance (deserved or not) of its practitioners, even during the Renaissance, all along the 17th century.

The legacy of *Il Negromante* and *Lo Astrologo* includes many Italian comedies, ever more contaminated by amorous misunderstandings in the vein of Calderon de la Barca, from *Lo Astrologo Impazzito* (1607) by Giovanni Ralli, to *Astrologia Amorosa* (1610) by Domenico Ravicio and *L’Astrologo non Astrologo e gli Amori Sturbati* (1665) by Ottone Lazzaro Scacco. The same invasion of stage astrologers happens in England, where the work of della Porta, reverberated in Tomkis’ *Albumazzar* and in *El Astrologo Fingido*, generates *An Evening Love or the Mock Astrologer* (1668) by John Dryden and *The Astrologer* (1744) by James Ralph, and even in France where Thomas Corneille, brother of the more famous poet Pierre, publishes *Le Feint Astrologue* (1651).

2.3. Astrologers in the Commedia dell’Arte

The tradition of buffoon astrologers propagates into the Commedia dell’Arte, creating a fashion for astral voyages and celestial divinations performed on the stage by the classical Italian masks. The famous actor Flaminio Scala (alias Flavio Comico) published a collection of 50 canovaccios, *Il Teatro delle Favole Rappresentative* (1611), where no less than three scenarios are dedicated to the stars: *Il Finto Negromante*, *Flavio Negromante* and *Isabella Astrologa*.

The celebrated Evaristo Gherardi, chief of the *Commediens italiens du Roi* who relocated to Paris the Italian tradition, produced at the end of 17th century another very important collection, *Le Theatre Italien* (1694) where among many texts of anonymous authors at least two comedies, *Arlequin Mercure Galant* and *Arlequin Empereur dans la Lune*, present astronomical and astrological elements and themes. The *Theatre Italien* terminated its activity at the end of the century but the Commedia dell’Arte and the astrologers remained on the stage, proposed by French artists that exploited that form of Theatre and gave birth to the Opera Comique. Still in 1785 we find on the scenes jokes and quips by *Cassandre Astrologue* (1780) by Pierre–Antoine–Augustine de Piis, a funny comédie-parade, and even in the 19th century *Le Dernier Jour d’un Astrologue* (1864) by Albert Laporte and Ernest Rigodon which is, notwithstanding its dramatic title, a comédie-vaudeville dedicated to the same old character of the cheating astrologer.

3. STARS IN EUROPEAN THEATRE

3.1. Astrology in Spanish and French Theatre

Astrologers and the Science of the Stars are very important in Spanish Theatre too. Frederick de Armas studied extensively the Siglo de Oro with an eye for the stars and their role on the stage. He not only found the usual charlatans in comedies, but also a fascinating zodiacal symbolism and a complex astrological subtext, even in serious, dramatic plays. In general, as even Robert Lima (1995) affirms: "There are countless plays in which astrology and other forms of divination are basic motifs and frequent elements".

Pedro Calderon de la Barca represents a wonderful example for both the register of Comedy (the above mentioned *El Astrologo Fingido*) and Drama (*La Vida es Sueno*, 1635), where the deterministic Astrological Fate is the evil force that generates the tragedy, but the Science of the Stars is everywhere in his operas, for example in *El Laurel de Apolo* (1658), in *Las Cadenas del Demonio* (1635), in *Los tres Afectos del Amor* (1648) and in *Fieras afeminas amor* (1670).

Other important Spanish authors dedicating works and characters to Astrology include Lope de Vega, with his *La desdichada Estefania* (1604) and *El Vellochino de Oro* (1622), Bances Candamo's *El astrólogo tunante* (1687), Andrés de Claramonte's *La Estrella de Sevilla* (1623) and the Count of Villamediana with *La Gloria de Niquea* (1622).

French stages during the 17th and 18th centuries were equally filled with astrologers and astronomers: I have cited *Cassandre Astrologue*, but the theme was approached even by first-rate men of letters as Bernard Le Bovier de Fontenelle, who wrote in 1681 his funny comedy *La Comète* making fun of superstitions about long-haired stars. Very light comedies in the same vein did not disappear after the Revolution: *L'Eclipse Totale* (1782) by Auguste Etienne Xavier Poisson de La Chabeaussiere and *L'Eclipse de Lune* (1796), a revision of the same work by the same author, are two perfectly equivalents comédies-vaudeville, before and after the storming of the Bastille.

3.2. Elizabethan Stars and Beyond

In English Theatre Elizabethan and Jacobean playwrights display frequent interest for stars and planets, from the classic Ptolemaic voyage to the stars of Marlowe's necromancer Faust to Tomkit's charlatan Astrologer I have cited before, to Ben Jonson's explicit Galilean Masque about the telescope and the Moon-world (*News on the New World discovered on the Moon*, 1620), to the reprise of *El Astrologo Fingido* by Dryden: *An Evening Love or the Mock As-*

trologer. Sometimes the celestial bodies descend directly on the stage, as in Robert Greene's *Planetomachia* (1585) and in John Lyly's *The Woman in the Moon* (1595). On the other hand, the Commedia dell'Arte farce of *Arlequin Empereur de la Lune* is transformed by Aphra Behn in a masterpiece comedy that pays again a direct homage to della Porta and Ariosto: *The Emperor of the Moon* (1688).

Many scholars, for example Rowan Robinson (2015) noticed an abundance of astral references even in Shakespeare's works and inferred a special interest in astronomy and astrology on his part. Apart from some wild speculations about a possible Shakespearian knowledge of a pre-Galilean telescope (Usher, 2006), many clues of a proximity to British heliocentrists and more in general to the debate about world-systems are offered in his plays, as summed up in a recent New Scientist article by Dan Falk (2014). Hamlet especially, "the king of infinite space" as he defines himself, is very suggestive of the Copernican debate, with an adversary named Claudius (Ptolemy?), the citation of two families of relatives of Tycho Brahe (Rosencrans and Guildenstern) and the appearance as a ghost heralded by a westward star in the sky of Elsinore, strongly recalling the epochal supernova of 1572, again described and studied by Tycho. In this perspective astronomers highlight the probable connection of the playwright with Leonard Digges, the erudite son of Thomas, a leading Copernican in England, suggested by the fact that both lived nearby in North London and that a verse by Leonard contributed to the first published collection of Shakespeare plays.

3.3. Drammi Giocosi and Melodrammi

Carlo Goldoni, the prince of Italian Theatre in the eighteenth-century, revived the Comedy tradition and dedicated his *Il Mondo della Luna* to the old buffoon-astrologer mask. The musical component was expanded through the collaboration of maestros of the calibre of Galluppi, Haydn and Paisiello, all working on the same libretto, and in the end this and other similar operations gave birth to the new format of *Dramma Giocoso*. This theatrical genre was one of the antecedent of the classic form of 19th century melodrama, where the usual astrologers were again in the spotlight. Examples of practitioners of the Science of the Stars for music lovers are *Gli Astrologi o Amor non Può Celarsi* (1791) by Luigi Crippa and Francesco Marconi, *La Casa dell'Astrologo* (1811) by Luigi Romanelli and *Etra l'Astrologa* (1857) by Francesco Cortesi.

4. NINETEENTH AND TWENTIETH CENTURIES

During the nineteenth-century the Astrologer becomes finally a professional Astronomer and the dramatic implications of his job and life condition enter the stage with a Romantic aura. History and ideology become dominant: dramas are filled with strong emotions and prejudices (racism, sexism, classism, etc). Hero-scientists usually suffer in the wake of Inquisition and the Great Wheel of Progress promises them a bright, inextinguishable memory in the heart of their descendants. Tragedy is the main key, while the comic register of Comedy tends to attenuate.

4.1. Astronomer-heros and Anti-heros

An interesting example of the new trend is *Hypatia* (1893) by Stuart Glencairn Ogilvie, based on the novel by Charles Kingsley, a typical anti-Catholic text full of metaphysical and religious concerns. The Victorian era produces some literary texts about this exotic alexandrine astronomer and proto-scientist, who since the age of the Enlightenment assumes many dramatic and instrumental roles: last of the Hellenes, martyr of science, embryonic feminist and symbol of Christian obscurantism. Ogilvie's stage adaptation of the tragedy is particularly complex and full of prejudices.

Two late pre-modernist views of astronomers on the stage may be also cited: *To the Stars* (1905) by Leonid Andreev and *Tolternicus Astronomer of Thorn* (1915) by Otto Carl Gsantner. Andreev play portrays the typical scientist conceived as a "wise man" that doesn't mix with politics and human tragedies, looking at the stars from his isolated observatory, while the semi-unknown author Gsantner describes the last days of a fictional Copernicus (perhaps the distorted name intends to justify the countless artistic licenses) tortured and poisoned by the Inquisition (sic!).

In 1879, instead, an American comic opera parody stands out for being the first representation starring real scientists on the stage. Harvard astronomer Winslow Upton rewrote in fact Gilbert and Sullivan's *pièce H.M.S. Pinafore* of 1878 a year after and in 1929 the staff (with Harlow Shapley, Cecilia Payne and Bart Bok among others) performed it with the title *The Observatory Pinafore*.

This musical comedy recalls the legendary rewriting of *Faust* performed by quantum physicists at Niels Bohr Institute in 1932 and in a light vein represents the daily activities of director, observers and computer women in their natural settings: dome, library and computer room.

4.2. The Galileo Paradigm

One of the historical figures of astronomy most exploited by modern theatre is without doubt that of Galileo Galilei, who has become a real symbol of Science in his conflicts with Religion and Society. Galileo on stage constitutes in a sense a perfect mirror for the perception of Astronomy, a paradigm of its practitioners.

Since the Enlightenment this character has received a continuous attention, generating some indisputable masterpieces and an abundance of interpretations, sometimes divergent, from the philosophical draft of *Galilée* (1843) by Pierre-Joseph Proudhon, to the positivist, Mazzinian *Gli Ultimi Anni di Galileo Galilei* (1854) by Ippolito Nievo and to the trivial *Galilée* (1867) by François Ponsard, dominated by the romantic liaison of his daughter that prepares his final *abiura*.

After many anticlerical Galileos, invariable champions of free thought, the twentieth-century brings in more nuances and the exceedingly famous *Life of Galileo* by Bertolt Brecht in his three celebrated versions (1938, 1947, 1955). While in the initial play the Pisan astronomer represents optimistically the classical hero of Truth, in the following versions a strong criticism to the responsibility of Science creeps in, due to the new post-Hiroshima scenario. In the same years, to use the words of Shepherd-Barr (2006), "the air was thick with Galileo plays": Barrie Stavis wrote *Lamp at Midnight* (1947), in Germany Arthur Trebitsch published *Galilei, Ein Trauerspiel in fünf Akten* (1920) and Frank Zwillingern *Galileo Galilei. Schauspiel* (1953). But the process of convergence towards the complexities of the historical situation conducts to a really significant episode with *Galileo* (1970) by Tom Stoppard, a crucial play unfortunately never performed and only recently published for the first time. The new drama wittingly juxtaposes Brecht's vision, proposing an anti-ideologic humanization of the character: the scientist is no more an abstract symbol but a real person in flash and blood, immersed in a wide, multilevel storytelling. The aversion to the historical inaccuracies of Brecht's text finds his apotheosis (but also a similar ideological partiality) in an unpublished theatrical dialogue by Lewis Wolpert: *Good Evening, Galileo*, where the author interviews Galileo after assisting to a production of *Life of Galileo*.

5. THE POST-DRAMATIC SCENE

Between the end of 19th and the beginning of 20th century a deep crisis dominated the scenes of western drama. According to Peter Szondi (1956) it was a phase of transition from pure classical drama, abso-

lute and out of time², to the epic theatre championed by Bertolt Brecht, historical and well steeped in past and future.

But Szondi didn't perceive a more profound change, questioning the relevance of the text and opening to a radical redefinition of stage conventions, formats and languages: beyond Ibsenian drama, Brecht Epos and the Theatre of Absurd, stands the Post-dramatic Theatre, a Theatre no more *fabula*-centred, for the Postmodern Age (Lehmann, 2006).

Astrology evaporates from the scene, but Science, Astronomy and the world of stars become frequent inspirations for plays, installations and happenings. Celestial bodies and their investigators shine among dumbshows, ballets, music, digital and video performances, even circus, in addition to classical text-driven dramaturgy, while real and fictional scientists enter the stage in their everyday activities and not only in epochal paradigm shifts (as in the premonitory *Observatory Pinafore*).

5.1. Theatrical Biographies

Dramaturgy, however, survives in this new scenario up to the present 21st century, and playwrights abound, concentrating on topics, themes and points of view rarely considered in depth in modern Theatre. Among them Science is especially appreciated and explored mainly through theatrical biographies. English language stages are particularly rich of historical characters whose life is condensed and exemplified in a few acts and scenes, where philosophy dominates verbose scenarios and postmodernism seeds irony and citations. One may cite the classical confrontation of Johannes Kepler and Tycho Brahe, represented by *A Short History of Night* (1990) by John Mighton, *The Stargazers* (1998) by Joseph Cowley and *Reading the Mind of God* (1994) by Patrick Gabridge, or the relationship between Halley and Flamsteed, finely told by Gavin Hood in his *The Astronomer's Garden* (1991), or still the unlucky story of Guillaume Le Gentil in Maureen Hunter's *The Transit of Venus* (1992). A fascinating feminine figure like that of Caroline Herschel has been portrayed at least twice, by Chiori Miyagawa's *Comet Hunter* (2003) and by Siobhan Nicholas in her *Stella: A Play about Women, their Men and Astronomy* (2013), but even contemporary astrophysical superstars have their multiple place on stage: it is the case of Stephen

Hawking, honored by the couple of ironical plays *Hawking's Dream* (1995) by Erwin Riess and *God and Stephen Hawking* (2000) by Robin Hawdon.

Celebrated astronomers and science-writers joined the company of playwrights with *Eccentric Planet* (1980–2013) by John Barrow, an exploration of George Joachim Reticus science and homosexuality, and *And the Sun Stood Still* (2011) by Dava Sobel, a delicate reenactment of Copernicus' last years.

The fashion of theatrical biographies of scientists has produced even a best-selling author, a real queen of Science Plays: Lauren Gunderson, an American award-winning writer who was rated USA's most produced living playwright in 2017. Gunderson, whose interests oscillate between the role of women and the impact of science on society, wrote at least four astronomy-related *pièces*: *Background* (2001), in memory of Ralph Alpher and his contribution to the discovery of the Cosmic Background Radiation, *Leap* (2004), a comedy about Isaac Newton and the law of Gravitation, *Emilie, la Marquise du Chatelet Defends Herself Tonight* (2008), a memorable feminine portrait in the Age of Enlightenment, and *Silent Sky* (2011), the life of Henrietta Leavitt, pioneer of the measurement of cosmological distances during the difficult era of the computer women of nineteenth-century.

5.2. Post-dramatic Stars

But Post-dramatic Theatre has a more experimental side, where narration dilutes and leaves space to other sensorial experiences. An exceptional example of such tendency is the show *Infinites* (2002) by the director Luca Ronconi and the astrophysicist John Barrow, whose first representation was staged in the Spazio Bovisa in Milan, a highly unconventional space. Barrow's mini-essays and theatrical suggestions about infinity were read and represented with high impact visuals during a promenade through this vast, post industrial structure, resulting in a seminal "manifesto" for post-dramatic science theatre.

Sette Variazioni sul Cielo was another interesting post-dramatic play in Italy, a country that became a real epicentre for such a type of productions in the first decade of the new millennium. The work explored the fascination for astronomy and cosmology on the main Italian stages in 2005, again with videos and images. The late popular astrophysicist Margherita Hack wrote the script and appeared as an actor in the *pièce* together with a dancer and some musicians.

Again in Italy a fascinating treatment of the old unforgotten character of Galileo should be cited: *I.T.I.S. Galileo* (2010) by Marco Paolini. Paolini is a

² In the words of Peter Hoyng (2009): "derived from Aristotelian poetics in its opposition to epic elements, Szondi's absolute Drama consists of the following three requisites: a) the *dramatis personae* represent autonomous individuals who are motivated b) to resolve their interpersonal conflicts by speaking to one another. The dialogues unfold c) in a linear time sequence in front of the spectator who watches the actors".

pioneer of *Teatro di Narrazione*, a style of representation based on non-fiction monologues about social issues, akin to *Documentary Theatre*, and in this case the monologue revolves around the figure of the Pisan and its modernity, his first telescopic observations, the impact of his scientific endeavours on society. But the expansion of scopes and means of Post-dramatic Theatre is testified in Galileo's test case by productions like the opera *Galileo Galilei* (2002) by Philip Glass and Mary Zimmermann and the acrobatic scenario of *Galileo. An Astronomical Story* (2016) by the French company Deus Ex-Machina Cirque.

In general sciences as astronomy and astrophysics are rapidly becoming on international stages the focus of many vital metaphors, conditioning sometimes the entire structure of the plays, while mathematics mixes with psychology and emotions and different genres collide to produce innovative experiences, even in text-driven, literary dramaturgy. Among these works stand out dramas like *Constellations* (2012) by Nick Payne, with its vertiginous cascade of possible quantum universes, *Observatory* (1999) by Daragh Carville, a strange hybrid of science, gothic tale and political spy-story located in Dublin between 1799 and 1999, and productions like *Birth of Stars* (2014) by Michael Chemers and Joan Raspo, exploring the inspiration of astronomy and its impact on the life of two very different individuals, or *The Blue Ball* (1995) by Paul Godfrey, a witty enquiry about the magic and awe of space exploration.

5.3. A bright future for Storytelling

Finally, it is worth mentioning a recent British production, innovative and very significant. Space and human exploration of Mars are the main topics of *Pioneer* (2014), a gripping work by Curious Directive, a multi-awards winning Theatre Company that indicates new and fresh paths for exploring the contemporary world of Science and in this particular case of the stars. Its promising technique of multi-layered and intricate narrative brings again with decision the text at the centre of theatrical experience,

beyond conventional biopics and with a twist of digital age complexity and Netflix storytelling. *Pioneer* adopts global thinking between Europe, Russia and Mars and presents a number of interconnected themes and mythologies that weave together politics, history and the possible space future of our race, while exploiting simple but stunning visuals.

6. CONCLUSIONS

As I have shown, a long and noble history of connections between stars and Theatre may be traced back from the Renaissance, but until recently almost all plays were centered on the people that study and investigate the celestial bodies more than on the cosmos itself (with an obvious penchant for the most direct of the disciplines interested in their influences on humans: astral divination). Since the Enlightenment Astrology faded away and the dialogue between astronomy and dramaturgy flourished, especially in the era of Positivism and Neopositivism, a dialogue which is still alive and well in this beginning of the XXI century, in the context of what has been termed Science Theatre.

Science in general and astronomy in particular are also often associated with Post-dramatic Theatre, with its productions dominated by directors and actors rather than by the traditional playwright. Such theatrical productions (and more in general the so called "Science Plays", including biographies on stage) have known a "peak" of popularity in the first decade of the new century, but they continue to be highly appreciated in recent years even if staged a bit less frequently.

There is still a lack of detailed comparative studies on style and content of this new works, but with a few notable exceptions: Kirsten Shepherd-Barr (2006), Eva-Sabine Zehelein (2009) and Liliane Campos (2012), all three analyze Science on stage, hence even astronomy and cosmology. Their efforts, together with those of a new inchoate generation of scholars, will help to draw a map of the vast and complex connections between Stars and Theatre in the third millennium.

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