

# Outer Space, Inner Rhythms: the concurrences of Jules Verne and Jacques Offenbach

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Why are certain plays chosen for anthologies? Popularity in their own times is rarely the reason. John Fletcher, August von Kotzebue, Eugène Scribe, and Eduardo de Filippo are among the most performed playwrights in the history of European theatre. Try to find anything by them in a collection meant for classroom use. No space can be spared in textbooks for such influential works as Guarini's *Il Pastor fido*, Voltaire's *Mahomet*, or Schiller's *Die Räuber*. Aiken's dramatization of *Uncle Tom's Cabin* has just recently been admitted to the canon, primarily for sociological reasons, but not perennial audience pleasers like *Charley's Aunt* or *The Odd Couple* whose mass appeal is unsuitable to a curriculum shaped by imperatives other than the pleasure principle. Yet, the plays I have named have held the stage longer and made a greater impress on the collective consciousness of their audiences than did many of the darlings of anthologists and literary arbiters.

The *doyen* of French dramatic critics of the Third Republic, Francisque Sarcey, was well aware of this paradox. In an essay of 1884, he noted that plays which endured were seldom engendered by manifestos. Revolutions in art, he declared, were accomplished not by the fiat of ideologues and theorists, but almost accidentally by exceptional talents. To prove his point, he declared the three seminal works of nineteenth-century drama to be *Le Chapeau de paille d'Italie*, *La Dame aux camélias*, and *Orphée aux enfers*.<sup>1</sup> All three were, of course, French, for Sarcey subscribed to that school of cultural geography which holds Paris to be the umbilicus of civilization. As Sarcey explained it, Labiche's *vaudeville* introduced the style of ultra-logical, mechanistic, plot-driven farce, while Dumas *filis'* play initiated the critique of modern life. The third revolution, however, was the most radical. Offenbach's effervescent scoring and staging of a witty libretto by Crémieux, Meilhac and Halévy, established a genre – *opéra bouffe* – which absorbed all earlier forms of comedy. The ebullition of high spirits that accompanied its racy irreverence conclusively swept away any lingering vestiges of neoclassicism. The whole age, claimed Sarcey, with its governments, institutions, manners and laws, were tuned into 'a prodigious and universal saraband.'

Sarcey was not mistaken. For dramatic topographers, *opéra bouffe* altered the landscape irrevocably. A favourite image, both verbal and pictorial, was Offenbach and his violin leading the world in a feverish dance – not unlike his own ‘Dr Miracle’ in *Contes d’Hoffmann*. The effects were felt from New York to Yokohama where a production of *La Grande Duchesse* was the first Western theatre piece staged in Japan. Direct testimony to Offenbach’s liberating influence on their creative development was offered by, among others, Nietzsche, Strindberg, Chekhov and Karl Kraus. Offenbach’s diabolical rhythms and grotesque raillery were interpreted by some as an anti-bourgeois revolution, in the words of the Portuguese novelist Eça de Queiros, ‘a sung philosophy.’<sup>2</sup> It was wholly up-to-date at a time when the byword was social improvement through technical advances. Offenbach’s music was taken as the sonic equivalent of steam engines and railways, illustrations of a self-proclaimed age of progress. (Like Labiche’s *Voyage de Monsieur Perrichon*, *La Vie Parisienne* opens in a railway station.) It is no coincidence that one of the composer’s collaborators was Aurélien Scholl, the anti-reactionary champion of Zola’s naturalism.

Another of Scholl’s enthusiasms was Jules Verne, whom he extolled for purveying useful knowledge to the masses in an exciting form. Although at first sight, there would seem to be little in common between Verne’s science fiction and Offenbach’s lyrical fantasies, a reciprocal influence runs between them.<sup>3</sup> Besides a passion for Mozart and puns, they shared a basic belief in the ultimate futility of human endeavour. Verne’s protagonists, like those in so many Offenbach operas, are goal-oriented over-achievers with a will to power and knowledge. Yet their fantastic voyages are hopelessly hubristic; when their goals resist annexation, the apocalyptic situations which ensue offer no true revelation. Verne’s vaunted optimism is often specious and his doubts echo Offenbach’s fatalistic cynicism and flippancy about heroic motivations.

Just as Offenbach can no longer be dismissed as a mere entertainer, Verne cannot be taken simply as a marginal and unproblematic transmitter of edifying messages. His recurrent themes and tensions disclose a fear of the imagination’s ambivalent potential for dislocating a stable world. His novels and plays, coming as they did after the defeat of the Second Empire at the hands of the Prussians, the bloody disruption by the Commune, and the even bloodier imposition of a seemingly stolid but deeply perturbed Republic, contribute to the central debate about the role of science, since the French defeat was widely attributed to German scientific superiority.<sup>4</sup> There is a wry irony to Verne which, in the more stolid atmosphere of the Third Republic, resembles Offenbach’s cynical celebration of the Second Empire.

Verne moved in Offenbach’s world. From his arrival in Paris in 1848 to study law, he had slipped into the claque and gained a hearing as a playwright at Dumas’ s Théâtre Historique with a mildly scabrous one-act about a *ménage à trois*. It enjoyed a sulphur-tinged success.<sup>5</sup> Verne’s first regular paid employment was as secretary to the Théâtre Lyrique, where he worked as a real Figaro-factotum. From its founding in 1852 to its conflagration during the Commune, this playhouse

dominated French musical life, staging one hundred and twenty-one premières including those of the operas *Faust*, *Roméo et Juliette*, *Les Pêcheurs de perles* and *Les Troyens*. In his capacity as secretary, Verne had a hand in some forty-nine productions, worked on thirty libretti, and co-wrote a Watteau-inspired fantasia *Le Colin-Maillard* (*Blind-man's Buff*) with music by the now-forgotten Aristide Hignard. Its lyrics exhibit Offenbachian traits in their opportunities for trills and triplets.<sup>6</sup> The first personal connection between Verne and Offenbach came in February 1858, when Verne collaborated on the one-act operetta *Monsieur de Chimpanzé* with music by Hignard: a tale of a young man who disguises himself as an ape in order to visit the daughter of a professor of natural history. Offenbach conducted these monkey-shines at his own theatre, the Bouffes-Parisiens.<sup>7</sup>

After gaining fame as a novelist, Verne devised a return to the theatre by adapting his novels in collaboration with the experienced melodramatist, Adolphe Denery. These *Voyages extraordinaires* stretch the possibilities of nineteenth-century stagecraft to the maximum to offer travelogues shot through with the excitements of the unfamiliar. The globe-trotting *Tour du Monde en 80 Jours* (1875), *Les Enfants du Capitaine Grant* (1879), sited at the Antipodes, and *Michel Strogoff* (1880) whose action hurtles across the whole Russian Empire, relocate traditional devices of melodrama and pantomime to climes newly discovered and explored. They unfold a panorama of exotic prospects which offer untried opportunities for human ingenuity. The first of these, the phenomenally successful *Tour du Monde*, ran for a record-breaking 652 nights in Paris between 1875 and 1877.<sup>8</sup> It transferred the attractions of the *féerie*, that style of musical extravaganza based on a nursery tale, to an up-to-the-minute world of empire-building and high-speed transport. As the plot motors of a fairy play, magic pills and golden eggs were supplanted by steam engines and the power of cash. *Le Tour du Monde* set the style for the *pièce à grand spectacle*, whose splendours helped distract the public in the aftermath of the Franco-Prussian war.<sup>9</sup>

Sarcey enjoyed *Le Tour du Monde* immensely. Then why didn't he name it too as a revolution in drama? His conservatism distrusted the show's imbalance of spectacle over speech, its scenic excess. 'The more we progress,' he wrote, 'the greater the taste of the public for vulgar displays of costume and scenery.' Spectators paid scant attention to the story of Phileas Fogg's wager; they simply waited for the elephant to come on stage, so they could figure out if it were real. Sarcey described the play as '...an industrial enterprise, a fantasy to which a man of wit – and we're grateful for that – lent a touch of his originality...I note in sorrow a whole company of excellent actors engaged in talking to the scenery.'<sup>10</sup> *Plus ça change...* As I write these lines, news comes of a musical version of *Ben-Hur* opening at the Orange County Convention Center: it boasts live horses and camels, 'robotic stallions' and 'a 40-foot Roman gallery' which hurls 'exploding cannonballs.' 'The show is scheduled to play for at least four years.'<sup>11</sup>

Sarcey's was very much a minority opinion. Both Verne's lavish production and his subject matter captured the public imagination in a timely fashion. 1875 heard Zola announce 'The theatre will be realistic or it will cease to exist' and saw Bizet

introduce Carmen as the first working-girl to take centre stage in an *opéra-comique*. Positivism was in vogue. Scientific vulgarization abetted colonial expansion and widespread assumptions of Western superiority. Clambering onto this bandwagon of popular science and zetetic fiction, Offenbach launched his musical version of *Le Voyage dans la lune*. Verne's novel of that name had appeared ten years earlier in the serious Parisian daily, *Le Journal des Débats*, consequent to the editor's belief that 'There is a public for works concerned with modern times, and this is the public to watch.'<sup>12</sup> Based on an actual project of the Baltimore Gun Club to launch a lunar projectile, Verne's three-man spaceship, constructed of aluminium, is shot from Florida (not far from the whereabouts of Cape Canaveral) to achieve the proper angle and eventually splashes down in the Pacific.<sup>13</sup> The idea to turn this narrative into a comic opera came from the manager of the Théâtre de la Gaîté, Albert Vizentini. *La Presse* (29 October 1875) had just announced that Verne was preparing a new play in which 'the great attraction will be a *walrus hunt amid the ice floes* based on the painting by Baird. This should trump the elephant in *Le Tour du Monde*.' Vizentini hoped to capitalize on Verne's publicity and create a blockbuster whose takings would satisfy Offenbach's numerous creditors.

In the operetta-making process, Verne's corrosive anti-militarist satire of the mid-1860s became diluted to a more generalized political and social raillery. The stage censorship also had a hand in this mollification. After all, the Commune had been suppressed only four years earlier; a Constitution had just been voted in. France was in a ticklish transitional state, no longer an Empire, but not yet a Republic.<sup>14</sup> Probing old wounds with Aristophanic lancets would have been uncongenial to audiences seeking diversion and uplift. Diversion prevailed. Instead of the serious scientific motives of Verne's heroes debated at length in the novel, the reason the earthlings in Offenbach go into space is because the Prince utters that demand of all children, 'Papa, je veux la lune!'

Nevertheless, although Offenbach's *opéra bouffe* may seem to borrow from Verne only the title and the means of locomotion – a colossal cannon which propels a customized Pullman car into the stratosphere – Verne's popular science underpins the whole enterprise. The production effectively perfected the revolutionary alteration of the *féerie* that Verne had initiated. From the gigantic and scientifically accurate moon spotlighted on the façade of the Théâtre de la Gaîté to the finale, a 'Clair de Terre' reversing the usual 'clair de lune' the audience was beguiled by attractions made more attractive by a veneer of progressive positivism. Scene two, for instance, was set in the cupola of the Paris Observatory, faithfully reproduced, although Leverrier, the astronomer who ran the establishment, had refused to allow the designer to make sketches on the spot. The forging of the giant cannon in scene three was copied from an illustration in Verne's novel,<sup>15</sup> with a chorus of blacksmiths making a deafening din: 'Imagine an immense forge equipped with a high furnace with interior rows of columns, its blast-pipes, its big hammers hitting on gigantic anvils, its burning braziers, its bellows, its rolling-mills, its chisels, all of it working, turning, living.'<sup>16</sup> These smithies are not Verdi's picturesque gypsies practicing handicrafts or Wagner's mythic demi-gods fabricating magic weapons:

Offenbach's tableau evokes his era's awe-struck affection for factories and laboratories. As the play's scientist Microscope comments, 'All the same, industry's a lovely thing, a belief which leads his friends to call him *Microskrupp*.

The opera was studded with technical surprises. Long before cinematic stop-action, tobacco plants and apple trees blossomed in seconds and the walls of the palace of King Cosmos were constructed of glass without iron supports. This was an advance on the famous rebuilding of the Halles Centrales completed in 1866, for which Baron Haussmann had demanded of the architect 'Du fer, du fer, rien que du fer';<sup>17</sup> and it would be years before the Samaritaine department store would be constructed along the lines of the moon king's palace. In general, Offenbach and his librettists shared with Verne brainstorming that ran far ahead of possible realization. The original script had called for a phosphorescent ballet to be performed by black-clad ballerinas provided with electric jewels and little 'Rhumkerff induction coils.' This concept had to be abandoned, but, had it been executed, it would have preceded Gilbert and Sullivan's use of electric lights in the fairy costumes of *Iolanthe* by ten years.

The extraordinary length of the four-act performance suited the positivist taste for the encyclopedic. 'You go to bed at two in the morning after the twenty-three scenes in the play,' reported one journalist. 'Two a.m. is not too long to return from such a distance, the Moon!' This armchair-tourist angle was provided by Offenbach, not Verne. Verne's space-travellers never leave their capsule, but the second half of Offenbach's opera explores the empyrean new world. The white lunar landscape spattered with hoarfrost, the design based on enlarged astronomical photographs, was described by Paul de Saint-Victor in *Le Moniteur Universel* as 'a midwinter night's dream.' It was inhabited by ballet dancers, pink larks hooded in blue predictive of Wagner's flower maidens. Perhaps, as Nietzsche would later suggest, Offenbach's was the real Music of the Future.

In a pre-Gilbertian topsy-turvydom, everything on the moon is the reverse of things on earth: the Minister of Finance pays state debts out of his own pocket; lawyers are locked up like wild beasts. Love is unknown there, so the tellurian Prince plants the moon with apple-trees. This enables him, Johnny Appleseed mutating into Adam, to present the lunar princess with one of their passion fruits in an equal-opportunity recapitulation of Original Sin. Imprisoned in a volcano for creating an epidemic of love, the space travellers are finally vomited up in an eruption. The opera ends with a chorus sung to the glory of Earth, to which the earthlings may or may not return. As in so many of Offenbach's works, there is no real resolution and certainly no moral.

Reached by a cushy railway coach, populated by chorus girls in swansdown and ermine, its practices looking-glass reflections of human behaviour, this moon hung very much in the baroque fantastic-satiric tradition: one could cite *Cyrano de Bergerac*, fairground farces about Arlequin in the moon, Baron Munchausen, and Haydn's comic opera *Il mondo della luna* as earlier interplanetary odysseys which serve as a pretext for censuring contemporary mores. Instead, reviewers, noting with favour that the authors had not depended on the worn-out fairy-tale

apparatus of pantomime extravaganza, were quick to stress the opera's scientific underpinnings. 'This is a new kind of *féerie*, removed from the enchantments of genies and talismans,' wrote Moréno in the middle-brow music magazine *Le Ménestral*:

... it has cast off all its old trappings to enter resolutely a new path, the semi-scientific path: I mean an attractive science, an amusing geography, a physics of the kind you see at Robert-Houdin's magic shows. Ah! if science were always presented under such attractive auspices, in short skirts, and the brain infiltrated with fantasy by some catchy refrain of Maestro Offenbach, our young degree candidates would not be so froward at their labours. See them in vacation time flock to the doors of the Porte Saint-Martin and the Gaité. Poor old Sorbonne, you've never known this animation or this admirable enthusiasm.<sup>18</sup>

Noël and Stoullig's annual survey of the Parisian theatre season suggested that the operetta's innovations deliberately outstripped the hesitations of modern astronomy. 'Bolder even than mathematicians, the [librettists] pushed their investigations over a terrain where the most ingenious of novelists [Verne] have hesitated to venture.'<sup>19</sup> *Le Voyage dans la Lune* was a palpable hit, running for 185 performances, and then adapted and staged all over the Western hemisphere.<sup>20</sup> When Georges Méliès produced his hand-coloured silent film of a moon landing in 1902, it was the Offenbachian *féerie* he copied, not the source in Verne.<sup>21</sup>

Two years later, Offenbach produced the *opéra-bouffé*, *Docteur Ox*, based on Verne's short story *Une Fantaisie du Docteur Ox*, known in English as *Dr Ox's Experiment*. The tale had originally appeared in three installments in 1872 in the household magazine *Le Musée des familles*. Verne had not given it to his usual publisher Heltzel, possibly because of its premise that science may be perverted to deleterious ends. What starts as mischief ends on a menacing note, and some Verne specialists have read into it the author's growing doubts about the beneficence of scientific progress, along with his abhorrence of war and intensifying misanthropy.<sup>22</sup> Those were attitudes which Offenbach could find congenial.

Like Dionysus come to disrupt Thebes, Dr Ox, 'a regular oddity out of one of Hoffmann's volumes' (p.19)<sup>23</sup> and of no known origin, arrives in the sleepy Flemish town of Quinquendone. Deprecating its temperate and torpid citizens as creatures 'midway between sponges and coral' (p.23), he offers to light the town with oxyhydric gas, that is, oxygen and hydrogen in a direct decomposition of slightly acidulated water – unlike the more common method of carbureted hydrogen made by distilling coal. Instead, Ox and his assistant Ygène saturate first the public buildings, then the private dwellings, then the streets, with pure oxygen, speeding up the tempo of life and transforming the sluggish metabolism of the townsfolk into ardent passions. Verne's science, however, was not all that accurate. Although he rightly considered oxygen to be the 'element of life' and foresaw its use in jet propulsion, the effects of Dr Ox's experiment are impossible, partly because the buildings in the town are not hermetically sealed, partly because atmospheric oxygen has no immediate access to tissue cells.<sup>24</sup>

As usual, Verne's theme reflected contemporary concerns, for the science of thermodynamics had taken shape in the decades preceding *Ox*. In 1856, the *Compagnie parisienne de l'éclairage et du chauffage par le gaz* had built a huge factory on Boulevard Macdonald; and the Universal Exposition of 1867 was noted for its gas lighting.<sup>25</sup> Maxime du Camp was writing that brightly gas-lit streets and broad traffic arteries did more to keep down murder and burglary than all the preaching of the moralists. Central heating operated by low pressure steam became popular about 1870. This incursion of gas and steam into middle-class homes and places of resort was accompanied by anxieties about their dangers; gas absorbs oxygen to an alarming degree and the heat in nineteenth-century playhouses was intense. The popular press throughout Western Europe teemed with articles urging proper ventilation. A book on humidity, heat, stuffiness and anoxaemia by Max von Pettenkofer, Professor of Hygiene at the University of Munich, became a best-seller in several languages; it appeared in English in 1873 as *The relations of the air to the clothes we wear, the house we live in, and the soil we dwell on*.<sup>26</sup>

The black humour of Verne's treatment, not least in the concluding question 'Are virtue, courage, talent, wit, imagination, – are all these qualities or faculties only a question of oxygen?' (p.102), draws on this mixed attitude of attraction and apprehension. A sadistic streak in the satire and a certain sardonic quality are reminiscent of Poe and Villiers de l'Isle Adam. There is also an uncharacteristic eroticism in the depiction of a courting couple, whose inertia suddenly turns tumescent under the influence of oxygen. The acceleration of the Quinquendonian organisms, both social and physiological, builds on French clichés about Flemish phlegm and a distaste for neighbouring Belgium, seen at its nastiest in Baudelaire. However, at the story's climax, when the over-stimulated citizens declare war on a nearby town and march off crying 'À Virgamen!', the parody savages the French themselves howling 'À Berlin' before the debacle of Sedan.<sup>27</sup> Only an explosion at the gasworks brings things back to their normal placidity.

Even in its pre-Offenbach version, Verne's story abounds with operatic opportunities. Before the influx of oxygen, the local tenor takes fifty-eight minutes to sing 'Largo al factotum'; performances of pieces from the standard repertoire at the Quinquendone opera house are usually spread over three evenings on three separate weeks, so slowly are they executed. After Dr Ox puts his plan in operation, the arias in Meyerbeer's *Les Huguenots*, the supreme achievement of Second Empire grand opera, turn into jaunty airs. 'The fourth act of the "Huguenots" which formerly lasted six hours, began, on this evening, at half-past four, and ended at twelve minutes before five.

"It had only lasted eighteen minutes!"<sup>28</sup>

Verne had even referred to 'one of those rapid two-fours which have made the fame of Offenbach, whenever he sets conspirators to dancing' ('rapides 2/4 qui ont rendu Offenbach célèbre, quand il fait danser des conjurés quelconques'). In the opera, just such a 2/4 time is used to score a patter duet of the key-code to control Ox's machine, the word 'Thesaurochrysonichochrysidés.' This in turn precipitates an

explosion, which, like the eruption in *Trip to the Moon*, resolves matters rather abruptly. Here is a comic opera whose music is dictated to some degree by the pulse rate of the characters. Gas rather than the usual wine provides the high spirits – perhaps a symptom of the mood swing from the Second Empire to the Third Republic. The libretto of *Docteur Ox* by Gille and Mortier preserved and even added to Verne's satire, as in Ox's final line, 'Good thing though it be to enlighten the masses, one must never lose the key to the dimmer-switch.'<sup>29</sup>

Taken off after a mere thirty-nine performances, *Docteur Ox* did not enjoy the success of *Voyage dans la lune*, possibly because the opera echoes Verne's questions about the dubious benefits of modern technology; possibly because the librettists, true to musical comedy convention, added a ponderous love story which inflated an anecdote to an interminable three acts and six tableaux. The critic for *Le Temps* thought it a pity that oxygen hadn't been leaked into the first-night audience.<sup>30</sup> Verne's parable, however, has remained attractive to composers. An adaptation of Offenbach by Robert Reece and H. B. Farnie, *Oxygen; or Gas in Burlesque Metre*, was seen at London's Folly Theatre in 1877, and then toured around the world by Lydia Thompson and her British Blondes (is it by chance that *oxygénée* can be translated as 'peroxidized' or 'bottle blonde'?). Later Oxen to be yoked to an opera score include *Il Dottor Oss* by Annibale Bizzelli (1936) and *Dr Ox's Experiment* by Gavin Bryars, which opened at the London Coliseum a mere six years ago.<sup>31</sup>

Although they fall short of the satiric vehemence of Offenbach's masterpieces, these two Verne-inspired comic compositions enable the ambivalences of science fiction to infiltrate the opera house. For all its fantastical cosmology, *Le Voyage dans la lune* questions the creed that to disseminate knowledge is to benefit society; its musical verve and ingenuity mock the ambitious desire to colonise new worlds and plant them with the flowers of progress. Even less confident of the benefits that may accrue, the sublunary and somatic experiments of *Docteur Ox* trace our worse impulses back to our own organisms. They remind us that the 'fault, dear Brutus, lies not in our stars, but in ourselves.' It is characteristic that in both cases, Offenbach organizes his finale around a cataclysmic explosion, not champagne corks popping but disasters detonating beyond the control of presumptuous humanity.

### Notes

- 1 Francisque Sarcey, 'Principales évolutions et révolutions de l'art dramatique' (3 mars 1884), in *Quarante ans de théâtre (feuilletons dramatiques)*, (Paris: Bibliothèque des Annales, 1900), I, pp. 189–95. All translations are the author's own, unless otherwise noted.
- 2 Quoted in Jean-Claude Yon, *Jacques Offenbach* (Paris: Gallimard, 2000), p. 418.
- 3 Siegfried Kracauer, *Jacques Offenbach and das Paris seiner Zeit*, ed. Karsten Witte (Frankfurt am Main: Suhrkamp Verlag, 1976), p. 323; Robert Pourvoyeur, *Offenbach* (Paris: Seuil, 1994), p. 172.
- 4 This view is put forward in Andrew Martin's *The Mask of the Prophet: The extraordinary fictions of Jules Verne* (Oxford: Clarendon Press, 1990), and Victor Brombert, 'Looking back to the future,' *Times Literary Supplement* (16–22 Nov. 1990), p. 1231.

- 5 *Les Pailles rompues*. 'I have always had a great liking for the stage and everything connected with theatrical art. One of my greatest joys in my life as a writer came from the success several of my novels achieved on stage...' Verne interviewed by Marie A. Belloc, *Strand Magazine* (Feb. 1895), quoted in Pierre Terrasse, 'Le Tour du Monde au théâtre,' *Revue des lettres modernes* 456–61 (1976), p. 109. His first play to be published, *Les Châteaux en Californie* (1852), was an attack on the gold fever sending men to be ruined during the gold rush of 1848. See Patrick Avrane, *Jules Verne* (Paris: Stock, 1997), pp. 41–2.
- 6 Also, in 1860 Verne supplied Hignard with a libretto for the comic opera, *L'Auberge des Ardennes*, about a bailiff made to believe he's fallen into a den of thieves. Robert Pourvoyeur, 'Le 'Théâtre-Lyrique' au temps du Jules Verne (1852–1855),' *Bulletin de la Société Jules Verne* 31 (1974), pp. 157–63; 'Théâtre et musique dans l'oeuvre de Jules Verne,' *Dossiers du CACEF* (Namur) 57 (avr. 1978), p. 17–23.
- 7 Herbert R. Lottman, *Jules Verne an exploratory biography* (New York: St Martin's Press, 1996), pp. 78–9. It looks backward to Pope, Gay and Arbuthnot's *Three Hours after Marriage* (1717) and forward to Hans-Werner Henze's *Der Junge Lord* (1965) with a libretto by the sardonic humourist, Ingeborg Bachmann.
- 8 Terrasse, 'Le Tour du Monde au théâtre,' pp. 109–22.
- 9 Robert Pourvoyeur, 'Théâtre et musique,' p.19.
- 10 Francisque Sarcey, 'Chronique théâtrale,' *Le Temps* (9 nov. 1874; 16 nov. 1874; 4 jan. 1875).
- 11 "'Ben-Hur" battles Disney empire,' *USA Today* (12 Nov.1999), section D, p.1, col. 1.
- 12 Charles Clément, *Journal des Débats* (26 nov. 1865), quoted in Lottman, pp. 112–14.
- 13 Jules Verne, *From the Earth to the Moon Direct in Ninety-seven Hours and Twenty Minutes*. The only completely rendered and annotated translation (*The Annotated Jules Verne*), updated edition, by Walter James Miller (New York: Gramercy Books, 1978).
- 14 Frédéric Robert, '1875. Voyage dans la lune avec Jacques Offenbach,' *Journal Musical Français* (avr. 1970), p. 31; Robert Pourvoyeur, *Offenbach* (Paris: Seuil, 1994), pp. 207–8.
- 15 Verne considered the borrowings from his works to be plagiarism and protested to the Composers' and Authors' Society for redress, but his complaint had no follow-up, probably because he came to some financial agreement with the management of the Gaité. See Yon, *Jacques Offenbach*, p. 529.
- 16 [Arnold Mortier], *Les Soirées parisiennes de 1875 par un Monsieur de l'Orchestre* (Paris: E. Dentu, 1876), p.265.
- 17 *The Second Empire 1852–1870. Art in rance under Napoleon III* (Philadelphia: Philadelphia Museum of Art, 1978), p. 41.
- 18 Quoted in Robert, *Voyage dans la lune*, p. 33.
- 19 Ibid.
- 20 Chekhov wrote a bemused review of the Moscow production. He found the production as 'grandiose and pompous as a wedding coach, and as creaky as a million ungreased wheels'; *Oskolki moskovskoy zhizni* 16 (1883), pp. 65, 77. Its entrepreneur Mikhail Lentovsky had already staged *Dr Ox* in 1878. For more on this subject, see Laurence Senelick, 'Offenbach and Chekhov, or La Belle Yelena,' *Theatre Journal* (Dec. 1990), pp. 455–68.
- 21 The scenario and frames from the film are reproduced in Maurice Bessy and Lo Duca, *Georges Méliès mage et 'Mes mémoires' par Méliès* (Paris: Prisma, 1945), pp. 80–88.
- 22 Lottman, *Jules Verne*, pp. 161–2; Olivier Dumas, *Jules Verne* (Paris: La Manufacture, 1988), p. 86; O. Dumas, 'Le Docteur Ox, censuré pour Heltzel,' *Bulletin de la Société Jules*

- Verne 71 (1984), pp. 98–103. The tale was later revised for inclusion in a collection published by Heltzel.
- 23 All quotations and page references are to Jules Verne, *Dr Ox's Experiment and other stories*. Translated from the French. (Boston: James S. Osgood, 1875).
- 24 For a biochemical critique of Verne's postulations, see Hubertus Strughold, 'Epilogue, Jules Verne, physiologist,' in Jules Verne, *Dr Ox's Experiment* (London: Collier-Macmillan, 1963), pp. 81–7.
- 25 Pierre-André Touttain, 'Une cruelle fantaisie "Le Docteur Ox"', *Revue des lettres modernes*, 523–63 (avr.-juin 1978), p. 156.
- 26 There is a considerable literature on this subject. See, *inter alia*, Edward Smith, 'Experimental inquiries into the chemical and other phenomena of respiration, and their modifications by various physical agencies,' *Philosophical Transactions of the Royal Society of London*, 159 (London: W. Bowyer & J. Nichols for Lockyer Davis, 1859); C. K., 'Dangers of Gas,' *Times* (London) (2 June 1860), p. 5, col. 6; 'Fresh Air,' 'Ventilation in schools,' *Times* (14 June 1860), p. 12, col. 3; Max von Pettenkofer, 'Ueber die Respiration,' *Annalen der Chemie und Pharmacie*, II. Supplementbd. 1 Heft (1861), pp. 1–70; W. Bridges Adams, 'The gas poisons of our dwellings,' *Once a Week* (7 Oct. 1865), pp. 433–4; Pettenkofer, *The relations of the air to the clothes we wear, the house we live in, and the soil we dwell on*, abridged and translated by Augustus Hess (London: N. Trübner, 1873); F. H. Garrison, 'The history of heating, ventilation and lighting,' *New York Academy of Medicine* 3, 2 (Feb. 1927), pp. 57–67; J. Burnby, 'Pharmacists and the introduction of gas lighting,' *Pharmaceutical Historian* 26, 4 (Dec. 1996), pp. 44–7.
- 27 Pierre-André Touttain, 'Une cruelle fantaisie "Le Docteur Ox"', *Revue des lettres modernes* 523–63 (avr.-juin 1978), pp. 155, 161.
- 28 Verne, *Dr Ox's Experiment*, p. 52.
- 29 Quoted in Robert Pourvoyeur, 'Verne et Offenbach,' *Bulletin de la Société Jules Verne* 20 (1971), p. 96.
- 30 *Le Temps* (28 jan. 1877). Also see Édouard Noël and Edmond Stoullig, *Les Annales du théâtre et de la musique, 1877* (Paris: G. Charpentier, 1878), pp. 398–406.
- 31 For a critique of Bryar's opera see Andrew Porter, 'With a movement so slow,' *Times Literary Supplement* (26 June 1998), p. 22.