Introduction

Two months after the premiere of Maurice Ravel’s *Histoires naturelles* in 1908, Claude Debussy wrote to the music critic Louis Laloy, describing his fellow composer with a pair of unusual terms: “I agree with you in acknowledging that Ravel is exceptionally gifted, but what irritates me is his posture as a ‘faiseur de tours,’ or better yet, as an enchanting fakir, who can make flowers spring up around a chair. Unfortunately, a trick is always prepared, and it can only astonish once!” Neither “faiseur de tours” (performer of tricks) nor “fakir” was in common usage in the early twentieth century, though the latter term would have been known from Judith Gautier’s historical novel *La Conquête du paradis* (1890), whose title aptly captures its romanticized, colonialist perspective on eighteenth-century India. By linking him to conjurers—whether theatrical entertainers or exoticized thaumaturgists—Debussy impugned the long-term prospects of Ravel’s work. How could a trick with a looming expiration date produce music that would withstand repeat performances without unveiling its mysteries or losing its luster? Ravel’s music, for all its silvery charm, would soon tarnish; the weight of passing time would grind it to dust. To hear it once was to exhaust its secrets.

But Debussy’s criticism was rapidly turned on its head by critics, biographers, and scholars who found in the language of conjuring the words they needed to combat Ravel’s detractors. Laloy, for one, compared Ravel to a sorcerer in a 1909 review of *Gaspard de la nuit* and described him as a “magician of sounds” when

reviewing *Daphnis et Chloé* in 1912. Others linked magic and conjuring to *Ma mère l'Oye, La Valse, Boléro, L'Enfant et les Sortilèges,* and Ravel’s two piano concertos, among other pieces. In 1925, Ravel’s longtime friend and first biographer, Roland-Manuel, published “Maurice Ravel ou l’esthétique de l’imposture,” a locus classicus for the study of Ravelian artifice. For Roland-Manuel, Ravel possessed the “cunning of an illusionist” who convinces us he has nothing in his hands or pockets, nor signs of the composer’s trade visible on his desk; the movement of piano keys alone seems to trigger the music engraver’s stylus. His “paradoxical *jonglerie*” can be heard to advantage in *Le Jardin féerique* from Ravel’s fairy-tale ballet *Ma mère l’Oye,* where an anticipated trumpet fanfare is replaced by the “shadow of a trumpet evoked by the flute.” Vladimir Jankélévitch, another early Ravel biographer, found the comparison to conjurers, sorcerers, and illusionists at once fitting and mystifying: “How could [Ravel], who preached the long patience of labor through his scruples and technical probity, pass for an illusionist, a practitioner of ambiguity and *jonglerie*?”

*Magician of Sound* seeks to answer this question by examining Ravel’s music through the lens of theatrical conjuring, which remained a popular form of entertainment throughout the composer’s lifetime, sustained by renowned performers like Nevil Maskelyne and David Devant in England, Harry Kellar and Howard Thurston in the United States, Georges Méliès in France, and, of course, Harry Houdini. Yet when describing Ravel as a magician, critics would have had none of these figures in mind—or rather, they would have seen reflected in modern conjurers the most famous illusionist of the nineteenth century, Jean-Eugène Robert-Houdin, who died five years before Ravel was born. (Certainly they were not thinking of Houdini, the “Handkuff King,” whose early feats brought to mind contortionists and equilibrists, not illusionists.) Though Robert-Houdin performed in his self-styled *Soirées fantastiques* for only nine years before embarking on other pursuits, the shadow he cast over subsequent generations of conjurors was comparable to Beethoven’s in music. *Soirées fantastiques* lived on after his death through licensing agreements with magicians who leased his former theater; indeed, in Ravel’s childhood, after his family had moved to Paris, the composer might have witnessed such a show.

I use the figure of Robert-Houdin to introduce the key themes in *Magician of Sound,* including Ravel’s public image, his fascination with machines, and his compositional practices. My central focus is illusory experience. What is it like for

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2. A survey of these critical views can be found in Fillerup, “Ravel and Robert-Houdin, Magicians,” *19th-Century Music* 37 (Fall 2013): 131–32.
listeners to mistake a trumpet for a flute? Is this misattribution really a processing error, or does it reflect the shortcuts and distortions typical of perceptual experience? If composers seek to manipulate our senses as magicians do, how might our interpretive volition be affected? In what ways do musical illusions differ from imitative or metaphorical effects? Ravel’s music compellingly engages such questions because it places timbre and sonic phenomena in the musical foreground. Critics noticed and complained accordingly: *Rapsodie espagnole* (1908), for example, was said to lack melody and development, resulting in a “simple piece of effect,” and the abundant variety of sonorities and timbres in *Daphnis et Chloé* (1912), however ingenious, seemed to cancel one another out. At times, these critical appraisals even invoked the magician’s “effect” (French cognate *effet*), a term describing how spectators experience a magic trick. Roland-Manuel insisted, for instance, that “a good enchanter must never be the dupe of his own enchantments, lest he botch the spell,” adding that Ravel, with his “justifiable horror of method, attaches great importance to the effect.”

Ravel’s musical illusions emerge most plainly in his novel combinations of instruments—the trumpeting flute fanfare that Roland-Manuel pointed out, or the calliope sound midway through *Boléro*, composed of piccolos, solo horn, and celesta moving in parallel motion and spaced to replicate notes in the harmonic series. These effects, immediately apparent to critics, furnished the basis for their characterization of Ravel’s music as magical. Though other types of illusion were less conspicuous, critics detected traces of them, linking the whirling movement of *La Valse*, for example, to phantasmagoria and *vertige* (vertigo), both of which involve the sensory confusion typical of illusory experience. Many of Ravel’s illusions conjure up impressions of motion, stasis, and directional movement, raising questions about the nature of musical perception. Why does some music seem immobile, while other music seems to move?

Evocation differs from illusion: we would not mistake the bell-like sounds in *La Vallée des cloches*, the final piece of the piano suite *Miroirs*, for real bells. (Only the rolled chords in the bass at the end of the piece—said by Ravel to suggest La Savoyard, the largest bell in Montmartre—come close to the real thing, their evenly spaced fourths alluding to inharmonic partials.) Nor would the right-hand grace note figures in “Le Grillon” from *Histoires naturelles* be confused with real cricket chirps, whether in the concert hall or the natural world. Irony is also categorically distinct from illusion, though they have an overlapping history in Ravel studies. Many of the composer’s supporters, including Roland-Manuel and Jankélévitch, offered irony and artifice (illusion’s cousin) as twin pillars upholding his musical

aesthetics. To distinguish between them, we might consider two examples from Ravel’s first opera, *L’Heure espagnole*, that convey oppositional relationships between music and text—a hallmark of dramatic irony. When Torquemada, a clockmaker, leaves his shop to regulate the municipal clocks, he declares, “L’heure officielle n’attend pas” (Official time doesn’t wait), but this pronouncement, which concludes with a ritardando, is accompanied by sustained chords in the trombone and tuba, which patiently await his cue. In Conception’s aria, “Oh! Le pitoyable aventure,” the refrain, “Le temps me dure” (Time drags), is swept along by rising chords and tremolos marked *pressez* and *au mouvement*. Both are humorous examples of irony, but neither involve illusory perception, apart from the impression of movement suggested by most forms of music.

Dramatic illusion and its relationship to theatrical magic is another matter. In some respects, conjuring mimics staged representation, and vice versa: both involve the tacit agreement that, for the duration of the performance, we accept a depicted reality (however fantastical) as real. Yet a key difference lies in the degree to which our self-conscious experience as spectators is subordinated to the reality of the staged virtual world. In plays, ballet, opera, and film—art forms tending to involve dramatized narratives—we may, for long stretches, become enthralled and seem to forget that we are watching a performance. It would be quite unusual, by contrast, to lose our self-conscious awareness of a magic show, even for a moment. Theatrical magic is not inherently less absorbing, but it tends to be situational and episodic; it involves personas instead of enacted characters. As Jean-Marc Larrue notes, magicians have more in common with stand-up comedians than with many other types of performers, both producing scripted, interactive routines with thematic connections but little overarching narrative. Conjuring advertises the artifice that dramatic storytelling conceals. In this sense, it resembles certain avant-garde forms of theater that bring to the surface an artful duplicity more typically latent.

Similarities between stage magic and dramatic representation can be seen in *L’Heure espagnole*’s overture, which simulates the sounds of a clock shop, from mechanical figures and musical automata to clocks of various sizes and types. A looping melody formed wholly of quarter notes meanders through assorted instrumental groupings, its chronometric regularity concealing the music’s frequent metrical shifts. Sounding throughout are three clocks set at different tempos: \( \text{\#} = 40, 100, \) and \( 232 \). As the music unfolds, its polyrhythmic relationships grow more complex, incorporating syncopation, conflicting metrical divisions,

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7. I shall not seek to define musical irony here, which Stephen Zank and many others have done. For a theoretical approach to irony in Ravel’s music, see Zank, *Irony and Sound: The Music of Maurice Ravel* (Rochester, NY: University of Rochester Press, 2009), especially 7–39.

and phase-shifting rhythmic patterns. For Manuel Rosenthal, one of Ravel’s former students, it was all too much, an “opulent demonstration” encumbered by effects.\textsuperscript{9} Despite its complexity, Ravel’s simulation of a clock shop would not be mistaken for the real article, partly for the same reasons that \textit{La Vallée des cloches} evokes but does not feign actual bell sounds. Yet his use of three clocks as instruments reveals a hidden affinity between drama and stage conjuring: the fusion of real and representational elements in ways that deepen illusory experience. Unlike hallucinations or dreams, illusions involve sensory input and offer a degree of authentic knowledge about the world. A conjurer who saws his assistant in half may be using a real saw and is almost certainly assisted by at least two real people (usually women) on stage. Not everything about the conjurer’s routine is fact, but not everything is false either. The same may be said of Ravel’s overture, which conjures up a clock shop by combining imitative and evocative clock sounds with the ticking of real clocks, whose presence reminds us that we are hearing a representation. We might extend this line of thought to the pantomime scene in \textit{Daphnis et Chloé}, where the title characters become actors themselves, miming the myth of Pan and Syrinx. The founding illusion of dramatic enactment is here made transparent: Daphnis and Chloé are at once dancers playing characters and characters playing dancers, their reciprocal enactment straining our sense of what (or who) is real versus representational.

My approach to Ravel’s music rests on a groundswell of scholarship, produced over the past ten years by Gurminder Bhogal, Peter Kaminsky, Barbara Kelly, Steven Huebner, Deborah Mawer, Roger Nichols, Michael Puri, and many others. Yet I also draw on philosophers, psychologists, historians of magic, and music theorists, connecting Ravel to interdisciplinary research on magic, technology, spectacle, and mass entertainment.\textsuperscript{10} By focusing on Ravel’s vivid, distinctive timbres and sounds, I am also foregrounding sensation, technology, and sonic effects, an approach seen recently in the work of Francesca Brittan, Emily Dolan, Alexandra Kieffer, and Deirdre Loughridge.\textsuperscript{11} Combining an attention to musical sound with


\textsuperscript{10} Two research consortiums that have taken up these themes are Les Arts trompeurs, an international network of scholars, magicians, archives, and institutions focused on magic, technology, and spectacle, and B-Magic, which convened a network of researchers and institutions to examine the magic lantern as a mass medium in Belgium.

interdisciplinary perspectives on spectacle and perception yields abundant insights into the processes that generate musical illusions.

In many ways, illusory experience confounds researchers, irrespective of discipline. Psychologists can produce experimental measures of attention and misdirection, but their explanations for such complex processes have yet to be refined. Philosophers struggle to classify illusions, which are neither hallucinations (occurring without corresponding sensory input) nor wholly authentic representations of veridical experience. Conjurers are more willing to reveal their methods than one might think—many have done so in print after their retirement—but old habits die hard: they remain professional pretenders, onstage and off, and their writings must be treated with caution. In music cognition, the study of illusory effects tends to be limited to specific auditory phenomena like the Shepard scale, an electronically generated sequence of notes that seems perpetually to rise. Yet if the limitations of discipline-specific explanations mean that no field has been able to tell a coherent story about musical illusion on its own, each possesses singular insights that could be assembled into an eclectic, harmonious mosaic. I have sought to identify the most compatible of these fragments to present an integrated (if selective) account of music and illusion.

To do this, I have established categories of Ravelian effects, including illusions of perpetual ascent, transformational ascent, mechanization, and apparent motion and stasis. I arrived at these groupings by combining theoretical views of illusion with three types of historical evidence: (1) reviews pertaining to conjuring, illusion, phantasmagoria, and specific sensory effects; (2) nineteenth-century ballet, opera, and orchestral scores featuring “magical” effects; and (3) memoirs and handbooks on magic written by magicians—particularly those of Robert-Houdin, the conjuring touchstone of this study. I have also turned to a corpus of theater and media history that has helped me link Ravel’s music to the popular entertainment of his youth. Phantasmagoria, for example, had evolved from the apparitional horror theater of the late eighteenth and early nineteenth centuries to the mid-century ghost shows of fairgrounds and theatrical dramas; its spectral imagery still lingered in fin-de-siècle motion-picture advertisements and the trick films of Georges Méliès.12 Phantoms persisted in written accounts, too: in Du côté de chez Swann (1913), the first volume of Proust’s À la recherche du temps perdu, the narrator’s toy magic lantern projects wondrous colors and shapes onto the familiar objects in his room, creating an effect of ghostly doubling. Introducing this media heritage reveals thematic ties to pieces like La Valse, described by critics in language evoking the ghost shows of centuries past.

Ravel’s effects can consume an entire piece, as they do in *La Valse*, or appear as fleeting phenomena, like the fusion of distinct timbres into a composite sound, as heard in the opening passages of his Sonata for Violin and Cello. Throughout *Magician of Sound*, I examine both Ravel’s scenes of enchantment—drawn, directly or obliquely, from fairy tales, myths, literature, and theatrical spectacle—and his large-scale illusions, which pervade whole pieces or movements. At times, music with apparently unambiguous effects requires closer scrutiny. Critics described the Concerto for the Left Hand, for example, as compositional legerdemain displaying, as Roland-Manuel put it, a *main enchantée*—a virtual right hand that amplified the piano’s sound, leaving an impression of two hands playing. But relating the piece to various models of pianistic virtuosity suggests that the virtual hand is a method, not an effect, a means of hybridizing the organic and the mechanical. Indeed, many of Ravel’s illusions suggest metamorphosis, often signaled by an ascending passage that seems to transport the music to a different time or place—from the Nymph’s grotto to the pirate camp in *Daphnis et Chloé*, or from twilight to nightfall in *L’Enfant et les Sortilèges*. In *Daphnis*, this ascent is a function of stagecraft, bridging a change of scenery that unfolds in darkness; it also signifies a shift of perspective if we view the scene in the pirate camp as a manifestation of Daphnis’s dream, glimpsed through his metaphysical, disembodied vision.¹³ The ascent in *L’Enfant*, by contrast, has a misdirectional quality: unlike the parallel sequence in *Daphnis*, there are no signs of dreaming or magic, perhaps because the protagonist of the opera, the Child, possesses vision already assumed to be enchanted.

Often the illusions can be linked to specific orchestral effects, particularly those interpreted by critics as novel, curious, or *recherché* (a term frequently encountered in Ravel criticism). The orchestral harp glissando—one of Ravel’s most evocative gestures, closely allied to the transformational ascent—entered the semiotic vocabulary of the late nineteenth century, its thematic pairing with enchantment and metamorphosis especially apparent in Tchaikovsky’s ballets and Nikolai Rimsky-Korsakov’s operas. Ravel’s harp *glissés*, which reflect his well-documented interest in the music of Russian composers, serve a range of expressive and mimetic functions, though their emblematic character emerges most distinctly in temporal shifts, transportive effects, and transformations. Other signs of Ravelian enchantment include strings playing *sur la touche*, bowed and fingered tremolos, harmonics, and novel combinations of timbres—the “instrumental mystification” described by Jankélévitch.¹⁴ If these techniques serve as signposts to an enchanted realm, they can also function as misdirectional diversions, justified solely by their capacity to tantalize the ear.

Behind every effect is a method—or more precisely, a multitude of them. Sometimes conjurers develop several ways of achieving the same effect, swapping them in and out to prevent spectators from guessing how a trick is done. Ravel did likewise, offering a heterogeneous menu of methods and effects that he could mix and match. Sources in conjuring, psychology, and music theory will help us identify some of his tactics, which include priming, “inattentional” blindness, misdirection, and the application of gestalt principles. If percepts—the sensory impression of objects—are filtered and distorted by our sensory apparatus, as empirical studies demonstrate, perception can be manipulated, leading us to make false inferences, apply grouping schemata to neutral phenomena, and train our attentional spotlight on certain percepts while ignoring others. The pioneering work of Susana Martinez-Conde, Gustav Kuhn, and Stephen Macknik, among others, has shown how magic tricks performed in experimental settings can answer psychological and neuroscientific questions about perception. Their empirical accounts should be taken as suggestive, not conclusive: most studies involving magic tricks are less than ten years old, and many have yet to be replicated. But combined with other forms of evidence, they help explain potential links between method and effect in Ravel’s music.

We might illustrate one such link by listening to the pair of phrases that opens the String Quartet in F Major (1903), completed early in Ravel’s career, but already exhibiting some keystone techniques in his musical masonry. The first violin carries the melody in antecedent and consequent phrases through mostly serpentine motion, interspersing coiled figures of seconds and thirds with leaps of fourths and fifths (example 0.1). Listening to the first violin alone, we hear a melodic rise and fall divided symmetrically over two four-bar phrases, though we also recognize disjunct motion within the melody, its fluidity achieved with bowed slurs and sustained tones. (Play the tune on a piano, an instrument afflicted with sonic decay, and appreciate the difference.) Yet hearing the pair of phrases played by the full quartet produces a wholly different effect—a composite wave of sound that steadily climbs, crests, and falls by similar gradations. In this context the melody appears more conjunct than it really is, because the second violin and cello play ascending two-octave scales spaced a tenth apart, aiding the impression of a smoothly rising contour. The effect works thanks to a gestalt principle known as “grouping by common fate”: the motion of the climbing serpentine melody seems to merge with that of the ascending scales, presenting a single, sweeping impression. Though the same effect occurs in the consequent phrase, its method differs. The descending wave in the second violin and cello is neither scalar nor smooth; it hesitates, skips, doubles back. But because the corresponding ascent in the first