lades romantiques," "old romantic ballads," instead of "old narrative ballads" (15), thus reinforcing common misunderstandings of the Spanish term "romance." It might seem unduly nitpicky to list these, but as the essays are both the first (French) and the last (English) words one reads, more careful proofreading would have been helpful.

None of this detracts from the high quality of this thought-provoking, nuanced, multi-layered volume, which is a development of the author's doctoral dissertation, and was awarded the Université du Québec à Montréal's 2014 "Respatrimoni" prize. While the world of Judeo-Spanish music culture in France as evoked by Roda is fascinating in itself, the book's solid research and fieldwork, and its central concepts and ideas go well beyond this community and its old, new, and emerging traditions. Her innovative approach toward music, heritage, and identity is likely to spark productive discussions and lead to other new pathways for a long time to come.

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The interdisciplinary field of sound studies can be unwieldly due to the range of field-specific terminologies and methodologies, but cross-disciplinary dialogue makes this expansiveness productive. In Sound Objects, co-editors James A. Steintrager and Rey Chow, along with their 12 contributors, join that cross-disciplinary dialogue, placing sound studies scholars, approaches, and ideas from different fields together in a shared space of interaction, productively engaging multi-faceted approaches to the study of sound and its complexity. As literary scholars, Steintrager and Chow share a philosophically and theoretically informed engagement with the messy and unruly subject of sound; however, the co-editors do not abandon history, culture, or listeners. As they argue in their introduction, "you cannot theorize sound without thinking [about] the engagement of interior and exterior, of perceiver and environment" (12). The contributors to this volume engage with theories and philosophies of sound that are historically and culturally grounded and situated in the bodies and sensory experiences of a contextualized listener (13).

Sound Objects pushes its readers to examine sound objects and how they function relationally in the world, employing diverse frameworks to address these varied auditory experiences. These frameworks include the commodification of sound, posthumanism and nonhuman

sounds, sound and memory work, and acousmatic listening. Collectively, these approaches illustrate that the sound object is not an ephemeral, elusive thing, but rather, sound, whether it is an object, an experience, or a relation, is grounded in history, culture, mediation, and embodied perception. In their introduction to the collection, Steintrager and Chow identify the "silent baggage" of historical and institutional lineages of sound, listening, and media technologies and the sonic erasures, omissions, and deceptive amplifications that have occurred. The human voice (e.g., Barthes, Derrida) attracts a disproportionate amount of attention and study in histories and philosophies of sound (2-3). The collection's authors present alternatives, theorizing sound beyond the voice and filling knowledge gaps in order to develop a more fully realized account of how sound shapes our understanding of the world.

The 13 essays in the collection are organized into five sections: 1. Genealogies; 2. Aural Reification, Sonic Commodification; 3. Acousmatic Complications; 4. Sound Objects and Nonhuman Relations; and 5. Memory Traces. Although Sound Objects is at times philosophically dense, this carefully curated series of essays presents readers with a thoughtful genealogical tracing of the sound object, its historical and socio-cultural movement, and lineages and techniques of listening, unavoidably starting with Michel Chion's sound object and reduced listening (Chion) and Pierre Schaeffer's "objets musicaux" (Dack). The reader is guided through the fetishization of specific music technologies and the commodification of sound (Sterne); approaches to the ontology of sound that call for the examination of

historical and social forces surrounding the sound object (Kane); lineages of listening, including ventriloquial listening (Rangan) and legal and litigious listening when considering how sound functions within the law and in the courtroom (Erlmann); and diverse media as carriers of sound (Mowitt, Bull, Toop). The authors offer diversity not only of sonic encounter, but also in their philosophical approaches to their topics.

Sound Objects is also working alongside other volumes, such as Digital Sound Studies, edited by Mary Caton Lingold, Darren Mueller, Whitney Trettien (2018); Remapping Sound Studies, edited by Jim Sykes and Gavin Steingo (2019); Bangkok is Ringing by Benjamin Tausig (2019); Leonardo Cardoso's Sound-Politics in São Paulo (2019); and Audible Infrastructures: Music, Sound and Media, edited by Alexandrine Boudreault-Fournier and Kyle Devine (2021) that are doing important reparative work to broaden the kinds of sonic texts, voices, instrumentalities, technologies, and sonic geographies previously addressed in scholarship. These expansions help rectify the white Euro-American frame that defines the early canon of classic sound studies texts, which lack representation from non-white, non-Western scholars, topics, and experiences of sound.1

The essays in *Sound Objects* advance a multi-dimensional understanding of the conditions, materials, and objects used to create and experience sound (e.g., environmental sounds, sound effects and foley, musical performance, circulation, consumption, and perception) within its cultural and historical circumstances. Drawing on his research into signal processing, "new organology," and instrumentality, Jonathan Sterne explores

technologies, instruments, and other sound-making objects and how these sound sources condition what we hear and how we hear it, linking commodity fetishism to the fetishizing of musical instruments, timbres, effects, and other sonic characteristics associated with specific instrument models and recording hardware. He considers the production of digital audio software and plug-ins to replicate the "sound" of specific analog gear, instruments, and recording techniques and the recent audio technophile fashion of reissuing and refurbishing older analog recording hardware to achieve a specific sound that is in the sound object.

Highlighting the methodological and theoretical breadth of Sound Objects, Brian Kane takes another approach to understanding how, and what, we know through sonic experience. As Kane argues in his chapter, the sound object's instability leads him to reject ungrounded studies of the ontology of sound. Sound is experienced in the world around us and in context, and thus analyses of the nature of sound and sonic experience must be grounded in their historical and cultural circumstances. These circumstances also include sonic afterlives, as Michael Bull uncovers by tracing the rise, demise, and afterlife of air-raid sirens. In "Listening to Sirens," Bull explores the complex range of associations ascribed at different times and places to air-raid sirens and their relationship with other sound-producing defensive technologies during times of wartime, alarm, and natural disaster, and their legacy as a soundmark that triggers somatic memory.

The authors in this volume offer exciting considerations of sound that push the field of sound studies out of

its realm of topical comfort where it addresses issues of meaning, communication, and information, instead asking scholars and practitioners of sound to linger in the sticky spaces of sonic experience to expand how we think, communicate, and listen with sound. What can be a sound object? How do we listen to sound with more than just our ears? What does a relational sound studies sound like when a multispecies perspective on musicking, sounding, and auditory experience is explored? Sound is complicated, generates numerous ensnarled questions concerning perceiver and environment, and, as the co-editors argue, the "temptation to avoid complications and paradoxes by explicitly or implicitly opting for one side or the other is great, but what truly calls for a theory of sound objects, we contend, is the ineluctable noncoincidence of emission and reception and the entanglement of subjectivity and objectivity" (12). What readers assemble from this collection is that we should not be concerned with whether sound can provide an equivalent or a stand-in for the visual. Rather, it is more productive to consider what sound can do differently in communicating and representing ideas, experiences, and worldviews to contribute to the dimensionalities of the world we live in.

The most productive contributions to the interdisciplinary and intermedial encounter with sound are in Georgina Born's "On Nonhuman Sound — Sound as Relation" and "The Alluring Objecthood of the Heartbeat" co-authored by Jairo Moreno and Gavin Steingo. When I listen to these encaustic spaces of sonic meaning while reading the essays and voices of *Sound Objects*, I hear generous readings of sonic encounter and diverse

positionalities, but I find myself still straining to hear other voices. Born attends to listening and sounding across nonhuman soundscapes and Moreno and Steingo take embodied listening inside the body to listen for the assemblage of blood, organs, and flesh involved in the "audile efforts" of the heartbeat (167) and bodies within bodies in listening to fetal growth and life. Born argues for a relational approach to the sound object that considers the messy entanglement of human and nonhuman sounds in our quotidian sonic environments; she considers how human and nonhuman sounds become entangled in social, affective human relations, as she invites us in her autoethnography to listen with her to the medicalized soundscape of the hospital during her mother's final days. Although marginalized and unconventional approaches to the study of sound objects are explored by Born, Moreno, and Steingo in particular, I am left listening to voices this collection does not sound, such as those beyond humanity's sensory range that require amplification (for example, see Roosth 2009 on the sounds and subjectivities of cellular listening). I am also left listening for the feminist, non-binary, and queer modes of perceiving and contextualizing sound objects that would complete this collection.

Sound Objects provides readers with a deepened exploration of the sonic field while maintaining cross-disciplinary conversations to help sound studies further congeal as an integrated field rather than a network of scholars dedicated to sonic research in separate disciplines. Although the wide range of topics and philosophical approaches in Sound Objects positions the volume as a challenging read, the collection will also resonate with a wide

readership through the range of represented experiences of sound with which readers will identify (e.g., the sound of a fetal heartbeat, the medicalized sound-scape, film music and sound effects, aggressive forms of acoustic communication as experienced in sounds of alarm and warning). The volume succeeds in the co-editors' objective to "make a multi-faceted case for thinking the topic of sound objects theoretically" (1) with this collection of sonic mediations and writings through sound.

NOTES

1. See, for example, the critique of the white racial frame of sound studies in Chattopadhyay (2018) (https://soundstudiesblog.com/2018/08/06/canonization-and-the-color-of-sound-studies/). Gus Stadler also made this argument in support of more diverse experiences of sonic phenomena and auditory environments earlier in On Whiteness and Sound Studies (2015) (https://soundstudiesblog.com/2015/07/06/on-whiteness-and-sound-studies/).

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Again and again across the 2016 collection *Voicing Girlhood in Popular Music: Performance, Authority, Authenticity,* the volume's authors refer to girlhood as a state or site of "in-between-ness" — girlhood is liminality, becoming, a dynamic and malleable flashpoint for an aggrega-

tion of anxieties around development, sexuality, identity, and agency. As the volume's pre-colon title suggests, the study of girlhood is here united with the study of voice — another in-between. Voice exists in and as mediation between self and other, freighted with its own connotations of identity, subjectivity, authority, and audibility. The collection's dozen chapters (plus an introduction and afterword) make use of this doubled in-between-ness, thematizing it in prose arguments and realizing it in practice through contributions that form articulations, links, and a network — rather than a linear trajectory. In content, method, and form, this collection is enthusiastically multi-faceted and, as such, presents a valuable contribution to the emergent and robust scholarly literature around voice.

Voicing Girlhood in Popular Music is divided into four sections: "Voice and Agency," "Voice and Vocality," "Voice and Authenticity," and "Voice and Narrative." These sections roughly correspond to individual methodologies and research disciplines: ethnography and field/industry studies; vocal pedagogy, physiology, and close readings of voices themselves; cultural and media studies; and close formal readings of audiovisual texts. The authors of the volume come from a range of disciplines, backgrounds, and occupations, and this breadth of perspective is one of the volume's strengths.

Contributions from these authors move from the bodily to the hermeneutic, amateur to celebrity, the lived and literal to the theoretical. Barbara Fox DeMaio's chapter comes most clearly out of music pedagogy. It foregrounds physiology to demonstrate how historical attention to training male voices has