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Performance Hero

Craig Derksen
California State University, East Bay, craigderksen@gmail.com

Darren Hudson Hick
Bucknell University, darrenhick@hotmail.com

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Craig Derksen and Darren Hudson Hick

Abstract
The Guitar Hero series of video games and their spin-offs have provided millions with a new way to interact with music. These games are not only culturally significant but also philosophically significant. Based on the way that these games allow people to interact with music we must decide that either playing a song in one of these games can be a legitimate performance of that song or that our current accounts of performance are inadequate.

Key Words
ontology, performance, popular culture, video games

1. Introduction[1]

Jack does not know how to play the guitar. Moreover, Jack hasn't a clue how to read sheet music or even tablature. Yet every night, after work, he spends an hour or so performing classics by the likes of Stevie Ray Vaughan, The Rolling Stones, and Blue Öyster Cult. Jack plays *Guitar Hero*.

If retail sales are any indication of cultural significance, then the *Guitar Hero* video game series and its spin-off series *Rock Band* represent a cultural phenomenon. [2] Indeed, *TIME Magazine* listed the creators of *Guitar Hero* and *Rock Band* among the world's 100 most influential people of 2008. [3] So, it seems, *Rock Band* and the *Guitar Hero* series are worth discussing. Moreover, we believe, they are worth discussing philosophically.

The key issue we are seeking to address in this paper is whether the purported performance of a song in a game like *Guitar Hero* or *Rock Band* is truly a performance of the song in question. Without thinking too hard about the matter, one can come up with clear cases of performance and clear cases of non-performance. A musician playing a song perfectly, note for specified note, under ideal circumstances and on the instrument intended by the composer would constitute a clear example of a performance of that song. Conversely, merely hitting "play" on a CD player will almost certainly qualify as a non-performance of the song. Playing such games as *Guitar Hero* and *Rock Band*, however, fall neatly into neither extreme. On an obvious level, unlike the clear cases of performance, players of *Guitar Hero* do not play real guitars, but rather play non-stringed, guitar-*shaped* controller-instruments. Moreover, the music heard does not issue directly from the controllers but from the game disk and console as controlled by the player. However, unlike simply pressing "play" on a CD player, game players are involved in sustained and complex manipulation of *an* instrument (if we might be allowed to refer to the controllers as such) in order to bring about an accurate and complete rendering of the song. Although on this continuum from clear cases of performance to clear cases of non-performance, it may well be impossible to determine an absolute dividing line, it is our contention that at least some instances of playing such games as *Guitar Hero* and *Rock Band* will qualify as genuine performances of the songs in question.

We believe that the question will revolve primarily around metaphysical issues in musical performance for which the philosophical literature is extensive. In this paper, we will focus primarily on the views developed by Stephen Davies and Jerrold Levinson, which we take to be among the most robust and well developed, and generally represent the standard views on performance. In Section II, we will briefly outline the mechanics of play in such games as *Guitar Hero* and *Rock Band*. Section III outlines some ontological distinctions posed by Davies and challenged by Andrew Kania concerning the nature of rock music. Section IV addresses some of the standard issues relating to performance but which do not seem to result in issues peculiar to video games. Section V focuses on the particular issue of intentions, Section VI on issues of instrument specificity, and Section VII on Stephen Davies' problem of "music-minus-one" recordings.

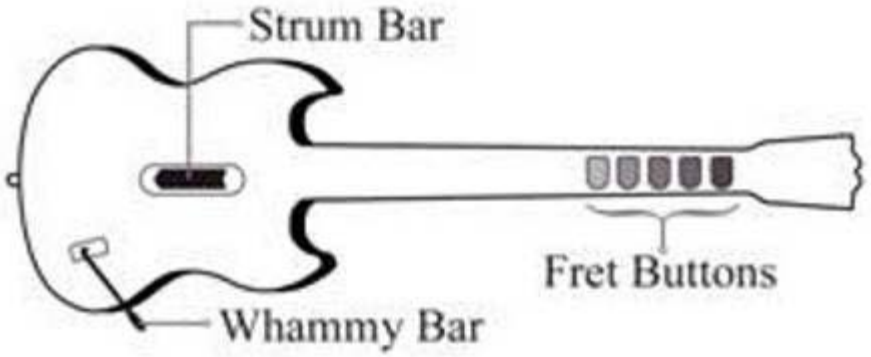

Figure 1: Schematic of Guitar Hero *game controller*

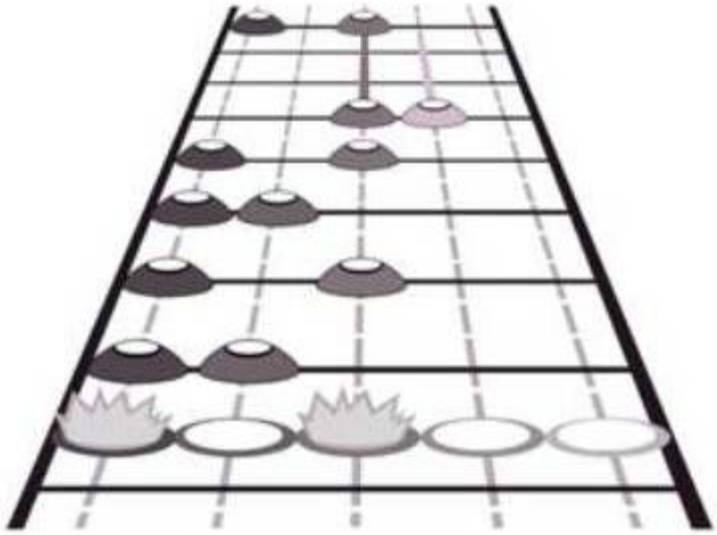

Figure 2: Schematic of Guitar Hero *graphic display*

2. Game Play

Guitar Hero is a rhythm-based video game in which players use a stylized guitar-shaped controller (see Fig. 1) in concert with dynamic on-screen display (see Fig. 2). The game approximates guitar play, with manipulation of button combinations intended to roughly simulate the fingering of notes and chords on a real guitar. From a catalog of dozens of songs, [4] players select a song for play, and key buttons on the controller according to the timing of colored markers depicted on screen as moving along the graphic representation of a guitar neck in time with the audio track for the song played by the game console. The colored markers on screen correspond to colored fret buttons on the guitar controller and to notes and chords in the song being played. Players must hold the appropriate fret buttons and hit the controller's strum bar in time with the song notes as indicated on-screen to score points. The controller's whammy bar can be used during sustained notes, allowing the player to accumulate even more points. If a player hits the incorrect button ("plays" the wrong note), or the correct button outside the window of time allowed by the game, a discordant noise sounds and no points are scored. If the player accrues too many errors, or fails to play the notes, the song ends. *Guitar Hero* has three levels; the higher the level, the more complex the chords and the faster the play.

With *Rock Band*, players have the additional option of playing the drums and singing. Like the guitar controller, the *Rock Band* drum kit is played according to colored markers indicated on screen in time with music. Using drumsticks, the drum kit is played very much like real drums, with a few minor modifications: one drum represents an open high hat, and another a closed high hat, rather than the player using a pedal to open and

close the high hat as with real drums. Additionally, the force with which the *Rock Band* drums are played has no impact on game play.

The singing option of *Rock Band* uses a microphone allowing the game to detect pitch as well as to distinguish the player's vocalization of consonants from vowels. Although the player's singing is not amplified by the microphone, if the player does not sing in an appropriate way, the game does not play the vocal audio track for the song. [5]

3. Some Ontological Distinctions

Before moving on to particular problems of performance, let us take a moment to consider a pertinent issue concerning the ontology of rock music, given that such games as *Guitar Hero* and *Rock Band* center almost exclusively on the genre. In *Musical Works and Performances*, Stephen Davies makes an ontological distinction between works created for live performance and those created for studio performance, and a further distinction between these and works created solely for playback, and not for performance at all. Roughly, works created for live performance (as historically is the case with most classical music) involves simply the playing of instruments and/or vocalization. On the other end of the continuum, works created for playback simply tend not to be instantiable except through recorded means. For example, Throbbing Gristle's "The Second Annual Report" (1977) or Faust's eponymous recording (1971) simply could not be played live—their means of creation defy performance as such; they are electronic from the ground-up. And since we do not want to call the mere playing of a disk or MP3 file a performance, these works cannot be performed. Davies classifies most rock music as belonging to the median category of works-for-studio-performance. Works so intended tend to involve greater or lesser degrees of studio manipulation, whether this involves the use of multiple tracks, voice overlay, or other such products of technological intervention and production. As such, Davies notes, "the technology of the recording process makes an essential contribution to the work's properties, so it cannot usually be played live." [6]

It should be noted, however, that much seems to hang on the use of "usually" in the above statement. Although Davies is making an ontological distinction between works-for-live-performance and works-for-studio-performance, he is not saying that those falling into the latter category *cannot* be performed live, but that such can become a difficult matter. He notes:

> As much as possible of the technology of the studio is exported to the live venue and the signals passed to loudspeakers are mixed and filtered by technicians and producers. Extensive use is made of synthesizers and of pre-sampled sound sequences. Even then, the attempt to play works for studio performance under real-time circumstances often results in an outcome that is seriously impoverished in sound quality and detail according to the standards of the type. […] The playing is acceptable as a performance of its target piece only because it trades on its relation to the type of rendition that provides the paradigm, which is one relying on the studio's technology. [7]

Works created for studio performance tend to be, in Davies' terminology, ontologically "thick," requiring adherence to finely specified instruction communicated either via musical notation or an exemplar performance and allowing for relatively little variance compared with ontologically "thin" songs typified more in folk, jazz, and other genres.

Andrew Kania, for one, takes issue with Davies' distinction between works-for-live-performance and works-for-studio-performance as being of a genuine ontological kind. Kania notes, "Any account of rock music that makes live concerts an unusual phenomenon is surely misguided." [8] Kania notes, for instance, that many rock musicians, even today, begin by playing small venues, and as such write songs for live performance, not primarily for studio performance. However, Kania argues that live rock performances do "look to" recordings in an attempt to capture what has been polished in the studio (being in form essentially the inverse of the tradition of classical music, where recordings tend to be modeled after live performances).

Kania argues that we refer improperly to that which goes into a standard rock recording as a "performance" for, even as Davies notes, what is captured in such a recording tends to be not a performance at all but more of a Frankensteining of multiple performance-parts, smoothed-out and manipulated by sound engineers and producers. Kania chooses to instead refer to such recordings as "tracks". It is *these*, Kania contends, that are ontologically thick and form the cultural center of the rock tradition. However, they are not, Kania maintains, performances at all, but rather (following Ted Gracyk) "manifestations" of ontologically thin songs. Rejecting Davies' central dichotomy between works-for-live-performance and works-for-studio-performance, Kania contends that rock songs may be equally manifested in both tracks and performances. [9]

Manifesting a work, Kania suggests, is to be distinguished from *instantiating* the work. One can manifest a musical work without performing it, but one cannot instantiate the work without performing it. He says, "A manifestation of a work represents the work, displaying many of its properties, without necessarily being an instance of it." [10] Analogously, Kania suggests that a photograph of the *Mona Lisa* may manifest the work but will not instantiate it. To qualify as a manifestation, as such, requires substantially less than does instantiation. [11]

On Kania's view, a work of rock music may be manifested either through a recording or "track" or through live performance. In the latter case, the work may have been instantiated; in the former case, not. On Kania's view, when the piece in question is one of rock music, playing *Guitar Hero* may certainly result in a manifestation of it, but the recording itself which is sounded in playing the game was already such a manifestation (so perhaps it is a manifestation of a manifestation or an instance of a manifestation). However, as Kania does not present any new criteria for what will qualify as a performance of the work, resorting instead to standard accounts of performance, his overall distinction discussed here should make no great difference to what is discussed below.

Davies and others like Jerrold Levinson are concerned with the ontology of music, including the ontology of works and the relation of performances to the works purportedly being performed. Kania is centrally concerned with the ontology of rock as distinguished from other kinds of music but not with issues of performance *per se*. We are concerned in this paper with the nature of performance and not with the larger issue of the ontology of the works being performed. At least on the accounts being considered, the nature of the work (whether, say, it is ontologically "thin" or ontologically "thick") makes no great difference in most cases to whether some activity counts as a performance of it. How rock music is ontologically different from other kinds of music *is* an interesting question and one certainly worthy of continued discussion, but it is not the question we are seeking to answer here. The performance of some songs, such as "Happy Birthday," may require no more than singing the right words in the right order with rough adherence to an established melody, and this may be because the songs are ontologically "thin." This, however, will not be the case with most songs associated with *Guitar Hero* and *Rock Band*, which are most certainly ontologically "thick," and these are the sorts of works with which we are concerned in this paper.

4. Some Initial Performance Issues

(4a) Performances require sonic similarity

At the very least, a musical work is individuated as a sonic structure. As such, a standard claim regarding performances is that, to qualify as such, the purported performance must possess an appropriate level of sonic similarity to the composer's creation. The degree of such similarity as required is a matter of some debate, with positions ranging from that of Nelson Goodman, who requires absolute, note-for-note compliance, to those of Jerrold Levinson, Stephen Davies and others, who maintain less stringent (if fuzzier) requirements.

On Levinson's view, when a performer makes some error in playing a song, he cannot properly be said to have *instantiated* the work, as this requires strict adherence to the composer's creation. [12] However, depending on the quantity or perhaps quality of

error, we may still want to say the musician has *performed* the work. If he succeeds at instantiating the song to some "reasonable degree," we want to say he has actually performed the song, even if this performance is a flawed one. [13] What will determine the line of "reasonable degree" between poor performance and non-performance, Levinson suggests, is whether an informed and sensible listener could grasp which song was being attempted. [14] Davies agrees and contends that it is likely the informed and sensible listener will be able to identify such errors as errors. [15] He argues, "What is necessary for performance is a degree of matching; enough, that is, to allow the listener to make out the work, however dimly." [16]

The issue of sonic similarity does not thus present a special challenge for such games as *Guitar Hero* and *Rock Band*. When played without error, a *Guitar Hero* or *Rock Band* performance will be sonically identical with a recording of the song, as what the listener will hear *is* a recording of the song. Errors in playing will result in the same degree of sonic dissimilarity to the original work as would playing the song on a real guitar: when the player hits the wrong fret button at the wrong time, a discordant note is sounded. As such, wherever the dividing line is to be found between performance and non-performance on the basis of sonic similarity for performers using real guitars, there too will be the line for performers using these games.

(4b) Performances require a robust causal connection

As with any work capable of multiple instantiation, it seems it is not enough that some instance (performance or otherwise) be similar or even identical to the original artist's creation. Rather, for some thing to qualify as an instance of some work, not only must the thing possess the properties constitutive of the work; it must possess them *because* they are properties constitutive of the work. In the case of musical performance, then, for some event to qualify as a performance of some given composition, the sonic structure of the event must be (at least substantially, allowing for error) the way it is *because* this is the sonic structure constitutive of the work in question. [17] That is, over and above sonic similarity, there must exist some robust causal connection between the work and some event for that event to qualify as a performance of the work.

Davies remarks:

> The matching that is the goal of performance should not arise by a fluke. It should depend on an unbroken chain of connections that leads from the sounds made to the performer's actions and intentions, from these to the notation in front of her, and from that via accurate copying processes to the score written by the composer. This new condition requires a robust causal chain linking the work specified by the composer to the sound event produced by the performer, so the match between the two depends on their systematic and intimate connection. [18]

(Alternatively, Davies offers, the composer's instructions may be communicated by way of an exemplar or "model"—which may be a recording or itself a performance. [19]) As such, on Davies' view, not only must the sonic structure of the performance *match* the original composition (to some reasonable degree); it must *follow* it. Thus stated, the required causal connection between the structure of the composition and the sounds made in some event proves no impediment to *Guitar Hero* and *Rock Band* performances being performances of the songs in question. The recordings of songs encoded in the game are the way they are at least in part because the original compositions are the way they are. And as a correctly played instance of the game will simply result in a sounding of the recording, the causal connection is maintained. The sounds heard in such an event are the way they are (in part) because the music so recorded is the way it is, and this (in part) because the original composition is the way it is.

However, on the letter of Davies' claim, *Guitar Hero* and *Rock Band* performers face a further problem. As Davies describes it, the chain of connections in a legitimate performance should proceed downward from the performed sounds to the performer's actions and intentions, from these to the musical notation, and from this to the composer's score (or, taking the place of notation and score, a model). And this simple

chain does not describe the causal connections in *Guitar Hero* and *Rock Band* game-play. The chain of connections in a game like *Guitar Hero* is more complex than in a standard case of performance. While the sounds recorded on the game disk link downward to the studio band's actions and intentions, and these either to musical notation based upon the composer's original score or to a model, the musical notation or model also links upwards to the on-screen notation followed by the game player, and from here to the player's actions and intentions. The final result—the performed sounds—links downward to both the player's actions and intentions, and the performed/recorded sounds on the game disk.

As such, on the face of it, *Guitar Hero* violates Davies' understanding of the requisite causal chain. However, this is only the case if we take Davies to be describing a necessary chain rather than some particular sufficient one, and surely the latter is the case. We do not think, for example, that Davies believes that a musician who plays from memory (whether gained from notation or model) and not directly from sheet music has thus broken the requisite causal chain. Rather, he has merely added a link to the chain—one that nevertheless maintains the necessary overall connection from the composer's score to the performed sounds. Likewise, a musician who employs a sort of musical shorthand based on standard notation, and plays from this rather than directly from sheet music, seemingly maintains the overall requisite chain, provided the performed sounds match and are the way they are because the composer's score is the way it is. What seems critical is that there are no breaks between the first link and the last, and not how many links connect them.

The chain of connections in a *Guitar Hero* performance is certainly more complex than the standard chain Davies describes. But as it maintains the high-level link between the work specified by the composer and the sound event produced by the performer, when played without error, a *Guitar Hero* performance undoubtedly fulfills this requirement of legitimate performances. Putting the matter in counterfactual terms, had the player not hit the appropriate fret buttons with the correct timing, there would have been no performance of the song.

Of course, for an event to qualify as a performance of some given work, more is required than sonic similarity and a robust causal connection to the work. If these were all that were required of a performance, then playing a CD of the work would equally qualify.

(4c) Performances must allow for variation

It may be argued that, unlike playing a CD, performance is an essentially *creative* activity. That is, it is not the mere mechanical sonic realization of some given work but rather allows for personal input from the performer in bringing the work to life. In other words, performance must allow for *variation* on the part of the performer. In performing some work, the ordinary musical performer typically has open to him three sorts of variation from the specifications for performing the work: (1) unintentional errors; (2) intended variance from the composer's creation; and (3) interpretive variance within the bounds of the composer's creation.

In playing *Guitar Hero* or *Rock Band*, one can certainly make errors, resulting in the sounding of discordant noise. Opportunities for intended variance from the composer's creation, however, are more limited. A player can choose to hit some fret button or buttons other than those in line with the note or chord specified by the game notation, but this will only result in the sounding of the same discordant noise as that made in unintentional errors. Opportunities for interpretive variance are also limited. Specifically, the player can use the controller's whammy bar during play of sustained notes to alter the tone of the note. However, in a typical song, there tend to be few such opportunities.

Given the somewhat severe limitations for variance of types (2) and (3), it may be argued that *Guitar Hero* or *Rock Band* performance simply does not meet the bar requisite for musical performance *per se*. However, as intended variance from the composer's creation tends to count *against* some performance as being a performance of the work in question, it would be a very strange requirement indeed that an actual performance of the song must allow for qualities that count against it being such a

performance. Regarding interpretive variance, as noted, *Guitar Hero* and *Rock Band* performance allows for very little interpretation on the part of the player. When played without error, the *Guitar Hero* performer will always be playing according to some other performer's interpretation. As such, the performer's range of interpretation is severely limited. Of course, the same would also seem to be true for orchestral performers. A second violinist in the London Philharmonic Orchestra, for instance, is not at leisure to freely interpret her role in performing Tchaikovsky's *Eugene Onegin*. Rather, she is constrained by the interpretation of the orchestra's conductor. Although the sorts of constraint at issue differ, if the violinist's lack of freedom to interpret does not count against her performance as such, it seems less than obvious that the *Guitar Hero* performer's lack of interpretive freedom should do likewise. [20] As Davies notes, "Typically, rock pieces are conveyed through examplars, not by notations. Some musicians read the model as literally as they are able and set out to make sound-alike recordings. Though these might lack originality and interpretative appeal, they are of the same work." [21]

5. The Intentions of the Player

Although perhaps not essentially interpretive, performance is almost certainly an intentional activity, and both Levinson and Davies build intentional aspects into their accounts. According to Levinson, a performance of a musical work (to be distinguished from an *instance* of the work) is a sound event whereby the performer intends to instantiate the work and in which she succeeds to a reasonable degree. [22]

While it is conceivable that one might unintentionally *instantiate* some work—say, by accidentally bumping up against the "play" button on a CD player—it is more difficult to think of someone in the same way accidentally or unintentionally *performing* some work. This being said, Davies notes, we can imagine a trumpeter who, due to some mislabeled sheet music, thinks she is performing a piece by Henry Purcell but succeeds rather in performing one by Jeremiah Clarke. In such an instance, Davies contends, we want to say that she *has* performed Clarke's piece. And although it might be said that she has done so accidentally, her performance is not one devoid of intention. On such an account, the sort of intention required by a performer will not be particularly robust. Davies argues, "The performance intentions that are crucial to the identity of the performance are low-level (play these notes as instructed) rather than high-level (play Purcell's piece)." [23]

Playing a game like *Guitar Hero* or *Rock Band* is likewise intentional. And, at least *prima facie*, the player's intentions are not only *in line with* those that Davies requires—they are *precisely* those that Davies requires. That is, on a very simple level, to "play these notes as instructed" is the object of the game. However, it may be contended, a true performer intends to perform so that he can *perform*, while the *Guitar Hero* player intends to perform so that he can *play a game*. That is, it might be argued, while a performer can certainly have multiple intentions regarding his actions, for the event to constitute a legitimate performance of the work in question, it must be his *primary* intention (or at least among his primary intentions) that he instantiate the work. And at least in many cases of *Guitar Hero* and *Rock Band* events, this intention is arguably *secondary* to the intention of winning—or at least playing—the game. That is, the player's intention to perform a song is instrumental to his more primary intention of playing the game. However, if this is the line one wants to take with regard to *Guitar Hero* and the like, one will be led to similar conclusions regarding performances on such game shows as *American Idol* and *The X Factor*, performances in battle-of-the-bands-type events, and perhaps even performances for audition. In each of these cases, the performers' intentions to perform songs are instrumental and secondary to the more primary intention of playing a game or winning a contest. And these, we suspect, while perhaps not paradigm cases, nonetheless intuitively qualify as legitimate performances. If the intention to play a game does not in principle exclude the legitimate intention to perform a song, and thus a legitimate ensuing performance of the song, then *Guitar Hero* and *Rock Band* performances cannot be excluded for such a reason.

6. Issues of Instrumentation

Perhaps the strongest objection still to be raised is that a *Guitar Hero* player simply isn't playing a guitar. He is at best playing something that bears a superficial resemblance to a guitar. This might not be such a problem except that songs played on *Guitar Hero* are generally written to be played *on guitar*.

Levinson, for one, builds into his understanding of what it means to be a musical work that the work specifies particular performance means. [24] Although there are uncommon exceptions, the great majority of Western musical works are composed as instrument-specific ones. At least one reason to accept Levinson's requirement in general is that different instruments have different sonic ranges and may require different sorts of manipulation by the performer. What is playable on one instrument may simply not be playable on another. And even where it is possible to play some piece on an instrument other than that specified, the work may sound distinctly different: a piece written for harpsichord sounds different when played on piano, to say nothing of a piece written for violin but played on saxophone. Of course, a *Guitar Hero* performance does not sound unlike a performance of the song played on guitar; rather, it sounds *exactly* like a guitar performance.

Given that *Guitar Hero* and *Rock Band* players use controllers and not real guitars or drums, however, it might be contended that a *Guitar Hero* or *Rock Band* performance is not a performance of the purported song as such, but is rather a performance of a *transcription* of that work. Roughly, a transcription is a version of some given musical work faithful to the musical content of the original but designed for play on some instrument or instruments other than those specified for performances of the original. At least on this description, the idea that *Guitar Hero* and *Rock Band* players are performing transcriptions of the works in question, and not the original works, seems to have some possible merit.

There are three kinds of songs available to *Guitar Hero* and *Rock Band* players: (1) those originally recorded by the bands that popularized the songs; (2) cover-versions of such popular songs recorded specifically for use with the games; and (3) those originally written and recorded specifically for use with the games. Regardless of what those playing the works for studio recordings intended, it might be argued that as the on-screen notation employed by *Guitar Hero* and *Rock Band* are tied to the game controllers and not guitar, drums, and the like, *all* such songs employed by these games represent transcriptions. Davies argues:

> It is a necessary condition of a musical score's being a transcription that it be intended as such. So, if a musical score is a transcription of a musical work, *X*, it must be the intention of the producer of the score to write a work faithful to the musical content of *X* while writing for and in a way appropriate to a medium other than that for which *X* is written. [25]

Those who translate the musical notes of some work for *Guitar Hero* notation specify play on the game controller, and not on guitar (and similarly for *Rock Band* play). As such, *Guitar Hero* play seems in line with this condition.

However, it is likely even Davies would balk at this being sufficient for *Guitar Hero* performances representing performances of transcriptions. First, when played successfully, the sound of a *Guitar Hero* performance is not merely *faithful* to the musical content of the original; rather it is *exactly* like a performance of the original. And second, the individual responsible for translating a song's musical notation into *Guitar Hero* notation is not involved in what we would call a creative endeavor. Rather, his job involves the simple translation of notes and chords from one graphic representation to another, or else from an exemplar recording to a graphic representation. Davies contends, "A transcription must depart far enough from the original to count as a distinct piece and not merely as a *copy* of the original." [26] Moreover, Davies notes, a transcription cannot help but *comment* on the original. He argues:

> [T]ranscription is a creative activity (in a way that recording and copying are not). It is inevitable that the transcriber presents the musical contents of the original from a personal perspective, although presenting them in a

> way that is faithful given that those contents are filtered through a different medium. [27]

It would be difficult to argue that the individual responsible for representing a song's score in *Guitar Hero* notation is doing so "from a personal perspective." Once the game designers have determined how notes and chords in general shall be represented in the game, representing the notes and chords of any particular song seems a largely mechanical matter. On any apparent level, *Guitar Hero* does not allow the player to play a song *like* the original, but rather to play *the original*. Ultimately the question regarding transcriptions is a question about the work being played, not how it is being played.

If there is no transcription to concern us, then, let us return to the issue of instrumentation. Davies argues:

> Suppose for the sake of this argument that its performance means is among the work-identifying features of Bach's *Inventions* and also that the modern piano is excluded from the list of possible performance means. Knowing this, I might still choose to play the *Inventions* on my piano, and it seems reasonable to conclude that I might succeed. [28]

On Levinson's distinction between instantiations and performances of works, a piece performed on instruments other than those specified by the composer cannot qualify as an instantiation, but may still qualify as a legitimate (if flawed) performance if it would be recognized as such by a suitably informed listener.

Most commonly, such issues arise as older designs are supplanted by improvements. For example, through an evolution of design, the modern guitar eventually supplanted the lute. The electric guitar, however, has not so far supplanted its acoustic parent and does not show signs of doing so any time in the foreseeable future. The synthesizer, meanwhile, bears a similar relationship to the modern piano. They continue to exist side-by-side, with practitioners of one also playing the other. A reasonable question to ask, then, is if one can play a song written for lute on guitar, or one written for harpsichord on synthesizer keyboard, and still have it qualify as a legitimate performance, can one also legitimately play a piece written for, say, horn on synthesizer? Modern synthesizers, after all, are capable of mimicking the sound of horns or any other instrument with nearly perfect sonic similarity.

Here, Stan Godlovitch (upon whose arguments Davies heavily relies) points to a worrying slippery slope. If we allow for legitimate synthesizer performances of a work specified for horn or other instruments, why not also pre-programmed synthesizers or, for that matter, CD players? [29] And, we can ask, if a principled break is to be found, on which side of the line will *Guitar Hero* and *Rock Band* performances land?

Godlovitch proposes one such possible break, which we might consider in two parts: the first, an issue of the performer's actions, and the second an issue of his skills. First, if the line between performance and non-performance cannot be drawn on the basis of the player's instrument, perhaps it can be drawn on the basis of what the performer does *in playing* the instrument. After all, while the actions involved in playing a lute and those of playing a guitar (or those of harpsichord and synthesizer) are strikingly similar, the actions involved in playing a lute and those of playing a CD bear little to no resemblance. While this distinction describes a difference between clearly legitimate and clearly illegitimate performances, it does little on its own to help us decide more contestable cases. Being a sliding scale, similarity in actions allows for countless gradations between identity and complete dissimilarity. As such, the issue of player's actions alone does not seem to *solve* the slippery slope so much as *describe* it.

Godlovitch points to socially- and institutionally-ingrained reasons, however, for focusing on the performer's actions. What one does with one's hands in playing the piano is a matter of institutional convention. It is *tradition*, Godlovitch argues, that decides the matter. The *way* that musicians perform their instruments is every bit as much a matter of musical tradition as the instruments they play; to diverge from such traditions is to stray from legitimacy. Let us, however, consider the case of Alvin Law. Born without

arms due to his mother's use of thalidomide, and despite having been told his toes were too short, Law learned to play the piano with his feet. Certainly, this falls outside traditional convention, but do we really want to say that if he is able to play Bach's *Inventions* with his toes, no matter how well, he still cannot be said to have legitimately *performed* the piece?

The second part to Godlovitch's principled break—considered apart from the first—seems to have greater potential. In judging issues of authentic performance, Godlovitch argues, we should look to the *skills* involved in playing the instrument:

> [T]he output, the result, the sound, is not all that traditionally matters in performance. For a player to take proper credit for a performance, the performance must display the virtues of skill and expertise exacted by various works which professionally enabled players to perform what they perform. [30]

Skills developed in playing guitar, piano, or any other instrument, Godlovitch contends, give rise to proficiency, being the "target of formal education and training." [31] Beyond such minimal standards, however, a musician can with great effort rise to mastery and in exceptional cases to virtuosity. Although such ranks likely do not exhibit clear boundaries and are vulnerable to shifting, these are the rough classifications recognized by the community of musicians. And, more so than the sliding scale of similarity in action, such rankings are determined by community-established norms of professional accomplishment. The rankings are meritorious: a proficient musician should be able to play certain compositions, the master certain others, and the virtuoso still others. Godlovitch notes:

> Ceteris paribus, those who perform the more difficult works are the more accomplished players, and that position traditionally is one that is appropriately earned by means-testing. [32]

There simply is no skill involved in pressing "play" on a CD player. Playing Beethoven's *Hammerklavier* sonata, on the other hand, requires a virtuoso's hands. Given the relative amount of skill involved, programming a synthesizer to play the sonata simply cannot qualify as a performance. As Davies notes, "Instruments can be improved, but only so long as the change keeps intact the difference in skill separating the virtuoso from the person who is merely competent." [33] If some means of music-making is too democratizing of skill, employing such a means to play a musical work cannot qualify as a performance of the work.

Of course, recognized degrees of skill are found in all genres of music, with rock music being no exception. While Creedence Clearwater Revival's "Bad Moon Rising" is a relatively simple composition to play on guitar, Joe Satriani's "Satch Boogie" requires nothing short of guitar mastery, and probably virtuosity. What, then, of *Guitar Hero*? As noted above, *Guitar Hero*, ironically, does not require the player to play the guitar, nor even to know *how* to play the guitar. [34] While it would thus perhaps be inaccurate to call a *Guitar Hero* player a "guitarist," given the arguments above, playing guitar or even knowing how seems unnecessary to legitimately performing a song written for guitar. And while bearing a passing resemblance to the fingering of a real guitar, *Guitar Hero* playing involves a substantially different skill-set. Nevertheless, it *is* a skill-set, and we might accurately classify players as proficient, masters, and virtuosi, with those on the low end of the scale perhaps being able to play simpler songs on the "easy" level of the game, and those on the high end being able to play the most difficult songs on the "expert" level without error. "Satch Boogie" became available in 2008 for *Guitar Hero World Tour* and is generally considered one of the most difficult songs to play. [35] As new editions of the games are released and as the catalog of songs available for play continues to expand, there is nothing to stop the makers of the games from releasing more and more difficult tracks. Just as with any instrument, as more players become more proficient, the bar for virtuosity will rise. After all, many classical compositions once considered by virtuosi to be unplayable have since become performance standards and even pedagogical tools. And so, while calling a *Guitar Hero* player a "guitarist" or perhaps even a "musician" may be inaccurate, it remains unclear why they should not at

least in some cases be called "performers," and performers of the songs in question, at that.

7. Music Minus One

One final route is open to the skeptic regarding *Guitar Hero* and *Rock Band* performances qualifying as performances of the songs as such: it may be argued that purported *Guitar Hero* and *Rock Band* performances may be dealt with in the same way that Davies deals with karaoke and Music-Minus-One recordings. [36] A karaoke recording contains essentially a studio recording for which the lead vocal track has been omitted or removed, and has been replaced with a visual prompter for the singer. Following the prompts, the singer sings along with the karaoke recording. A Music-Minus-One recording works essentially the same way, but rather than removing a vocal track, the recording omits the input of some particular instrument. With accompanying sheet music, the budding musician can as such play the oboe part in Stamitz's *Quartet in F Minor* or the bluegrass mandolin part for "The Ballad of Jed Clampett." The essential problem with such an act qualifying as a legitimate performance of some work, according to Davies, is that in each case there are in fact two disconnected acts which, because of their distinct ontologies,cannot be fused together as would be required of a single performance. According to Davies, the conditions necessary for legitimate studio performances diverge from those necessary for legitimate live performances. Allowing as they do for multiple takes, mixing, and sound manipulation, Davies contends, studio performances are completed "when the master version is 'in the can,' ready for printing and issue." [37] As such, what counts against the individual playing or singing along with a disk qualifying as a performer is that the recorded performance is already complete, and it as such cannot form a part of *another* performance, specifically a live one. It's too late to perform with the Beatles: John and George are dead. As Davies puts it, "Singing along with a karaoke disc fosters the illusion that one is a co-performer, without making it the case that one is." [38] You might still perform the song but you won't do it with a karaoke or Music-Minus-One disk, Davies argues. You'll need to start from scratch. Naturally, if this presents a critical problem for the karaoke singer or Music-Minus-One performer, the situation is all the much worse for the *Guitar Hero* or *Rock Band* player. However, Davies' analysis is not without its own problems.

To see the central problem, let us consider the case of pop star Justin Timberlake. Timberlake's studio recordings are created in the same manner as other studio rock recordings, with separate tracks recorded for each instrument and each vocal input, often at different times. The tracks are then mastered after the fact for the completed performance. Although he plays keyboards and guitar, it should be noted, Timberlake does not typically perform an instrument in live performances but rather provides only the lead vocals for his songs. Moreover, like many such pop stars, in his live performances Timberlake does not always employ a live band. Rather, he sometimes employs something akin to a karaoke disk, the studio recording minus his lead vocals, which he then supplies live. If Davies is correct, however, such performances cannot qualify as true performances of the songs. This much seems highly counterintuitive. Rather, it seems clear, Timberlake is very much performing his own songs in such cases. Likewise, if Timberlake walks into a bar on karaoke night, selects the tracks of one of his own songs and sings along with the disk, given the lack of difference between this and many of his other live performances, it would seem strange to say he has not in fact performed the song in this case. And if *this* is the case, then it seems equally strange to say that some other singer performing the same act has failed to legitimately perform the song.

Although we believe Davies is correct in his claim that the published recording constitutes a finished work, [39] this does not seem to exclude the possibility of the musical tracks *also* constituting parts of *another* distinct work, one which is not yet finished. Certainly, parts of existing works are incorporated into new works all the time and in all media. The difference in this case is that we are concerned primarily not with works *per se*, but with performances of particular works. As discussed above, performance is almost certainly an intentional activity. And, as Davies argues extensively, when performing a particular song as a member of a particular group, be it a studio band or orchestra, that each

member intends to perform with the others is arguably essential to that performance as such. [40]It may thus be contended that, in the example above, the studio band intends to perform with Justin Timberlake, and even if Timberlake provides his live vocals to an otherwise completed recording of the studio performance, they constitute parts of the same performance. However, this would not seem to get us around the issue that Timberlake is accompanied by what Davies considers a finished work. A more plausible explanation is that, in recording their studio tracks, the studio musicians (and the producer, who in some cases will constitute a performer) intend *two* things: (1) that their recorded parts will constitute aspects of the studio performance, and (2) that their recorded parts will *also* constitute aspects of a live performance, with vocals to be filled in later. In this way, the same acts by the studio musicians will constitute parts of at least two different and distinct performances.

While music recorded prior to the invention of AudioSynTrac recordings and the rise in popularity of karaoke could not reasonably have been recorded with this second intention in mind, as karaoke gained popularity and record studios began to see it as a viable practice, such an intention would reasonably have been on the minds of studio musicians and producers. The same would seem to be true for Music-Minus-One recordings, many of which are originally recorded specifically for this use. Such being the case, at least *some* karaoke and Music-Minus-One performances would seem to have the potential to qualify as legitimate performances of the songs.

Although paralleling karaoke and Music-Minus-One in many respects, the additional problem for *Guitar Hero* and *Rock Band* cases is that the recordings used are not missing any instrument or vocal tracks. However, as discussed earlier, there are three kinds of songs available for play on *Guitar Hero* and *Rock Band*: (1) those originally recorded by the bands that popularized the songs; (2) cover-versions of such popular songs recorded specifically for use with the games; and (3) those originally written and recorded specifically for use with the games. In at least types (2) and (3), the musicians recording the tracks intended them for use with the games. And while Davies still might present an argument that the tracks, once mixed, mastered, and released constitute complete works, this does not necessarily exclude the tracks' use as parts of other performances, specifically *Guitar Hero* and *Rock Band* performances, provided such are among the intentions of the studio bands and producers. And, as the games continue to rise in popularity, the intention that the recordings be used in this way may also be on the minds of popular bands and producers recording their new songs.

8. Conclusion

At least in cases where studio recordings are made with the non-exclusive intention that the recordings be used in *Guitar Hero* or *Rock Band* performances, and the *Guitar Hero* or *Rock Band* player performs at expert level with minimal error, it seems, the player can indeed be said to be legitimately performing the song in question. Naturally, we expect that many—including Davies and Levinson—will find this conclusion unpalatable. However, there seem then to be two possibilities: either the standard philosophical accounts of performance are largely correct and some *Guitar Hero* and *Rock Band* performances will qualify as true performances of the songs in question, or else the conclusion reached in this paper points to something seriously lacking in the standard accepted accounts of performance. If the latter, then there remains much work to be done in building an understanding of musical performance.

The possibility of *Guitar Hero* and *Rock Band* performances qualifying as legitimate performances of the songs in question represents a potential wedge in how we—philosophers, musicians, and the general public—view musical performance in general. The arts are continually evolving. More often than not, it is a relatively slow process, as one tradition gives way to others. At times, however, the arts offer more dramatic prospects—revolutions. Nearly a century ago, Marcel Duchamp purchased a urinal, upended it, and signed it with a pseudonym—and forever changed how we look at the plastic arts. Whether something represents a revolution in the arts or an artistic dead end depends on whether it gains the sustained attention of the artistic and critical communities, and of society at large. In this regard, the fate of such games as *Guitar Hero* and *Rock Band* remains to be seen. In the case of Duchamp's *Fountain*, it was the

attention of the artistic and critical communities that served to change how the general public viewed art, though even now this is ongoing. If *Guitar Hero* and *Rock Band* represent a revolution in musical performance, however, it seems that the attention of the general public will serve to hammer the initial wedge, opening the way for the artistic and critical communities to follow suit.

Already, *Guitar Hero* and *Rock Band* competitions are widespread. This year, MTV Games and Harrah's Entertainment organized a nationwide *Rock Band* tournament. The winners, "The Gurnkillers," won the opportunity to open for The B-52s at Atlantic City's House of Blues. [41] Is it conceivable that music students could one day be taking classes in *Guitar Hero* and *Rock Band*? Could we one day see the release of *Mozart Hero*? Would "simulated" symphonies be entitled to the same funding as "real" symphonies? Would video game developers become viable contenders for arts funding, grants, and awards? All of this seems to depend on whether purported performances of the type we have been considering come to be accepted as legitimate performances on a par with conventional means of performance.

Craig Derksen and Darren Hudson Hick
craigderksen@gmail.com
darrenhick@hotmail.com Dr. Craig Derksen is a member of the Philosophy Department at California State University, East Bay. Dr. Darren Hudson Hick is a member of the Philosophy Department at Bucknell University.

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Endnotes

[1] Our thanks to Jerrold Levinson, two anonymous reviewers, and the California State University East Bay Philosophy Society for comments on various drafts of this paper.

[2] Steven Levy of *Newsweek* uses this very term to refer to *Guitar Hero* in Steven Levy, "The Low Cost of (Guitar) Heroism" in *Newsweek*, January 29, 2007, archived online: www.newsweek.com/id/70181; accessed June 10, 2009. All told, in its first 26 months on the market, the *Guitar Hero* series sold in excess of one billion U.S. dollars in North America alone (see Pulkit Chandna, "Guitar Hero rocks $1 billion sales mark," in *Gamertell*, January 23, 2008, archived online: www.gamertell.com/gaming/comment/guitar-hero-rocks-1-billion-sales-mark/; accessed June 10, 2009.) *Rock Band*, meanwhile, shipped more than 3 million units at $160 to $170 per unit in its first six months (see Michael Lermonth, "Viacom: Viewers Fleeing Broadcast TV Didn't Come to MTV" in *The Business Insider*, May 2, 2008, archived online: www.alleyinsider.com/2008/5/live_viacom_q1_earnings_call; accessed June 10, 2009.)

[3] Steven Van Zandt, "Alex Rigopulos & Eran Egozy" in *TIME*, May 12, 2008, archived online: www.time.com/time/specials/2007/article/0,28804,1733748_1733752_1735901,00.html; accessed June 10, 2009.

[4] The inaugural *Guitar Hero* features 47 songs for play, *Guitar Hero II* includes 62 songs, and *Guitar Hero III* includes 71 songs. *Guitar Hero Encore: Rocks the 80s* (titled *Guitar Hero: Rocks the 80s* in its European release) features 30 songs, and editions of Rock Band include between 58 and 63 songs, depending on gaming platform. Some editions of *Rock Band* and the *Guitar Hero* series allow the player to download from an online catalog of hundreds of songs. Most of the original tracks are cover versions of famous songs, while more classic recordings have been added to later versions. Some editions also include songs original to—and created specifically for—the games.

[5] Rhythm-based video games are certainly not new, dating back to Atari's 1958 game

"Tennis for Two." Video games began combing rhythmic play with music with games like *Dance Dance Revolution*, which requires players to step on appropriate pads on a mat in time with the music. Games such as *Quest for Fame* predate *Guitar Hero* and incorporate guitar play to music but track *only* player rhythm and not note play. As well, games such as *Karaoke Revolution* and *SingStar*, like the vocal option in *Rock Band*, track the singer's pitch but cannot distinguish consonants from vowels.

[6] Davies, Stephen, *Musical Works and Performances: A Philosophical Exploration*. (Oxford: Oxford University Press, 2009), p. 190.

[7] *Ibid.*, p. 36.

[8] Kania, Andrew, "Making Tracks: The Ontology of Rock Music," *Journal of Aesthetics and Art Criticism*, 64, 4 (2006), 401-414; ref. on 402.

[9] *Ibid.*, pp. 404-405.

[10] *Ibid.*, p. 405.

[11] This is a strange analogy, indeed, and certainly worth much greater discussion. However, as the matter is only tangential to the topic of this paper, it will have to wait for another time.

[12] Kania, for one, might argue that one who has failed to instantiate the work in a performance may still have succeeded in "manifesting" the work (see Section III above). However, as this makes no great impact upon the central arguments in this paper, we shall generally forego discussion of the manifestation relation.

[13] As Levinson and others have noted, the vast majority of performances are likely to be flawed to some degree or another. See Levinson, Jerrold, "What a Musical Work Is," *Journal of Philosophy*, 77, 1 (1980), 5-28; ref on 26-27; Levinson, Jerrold, "Evaluating Musical Performance," *Journal of Aesthetic Education*, 21, 1 (1987), 75-88; ref. on 76;. Davies, *Musical Works and Performances*, pp. 159-160; Davies, David, *Art as Performance*. (Oxford: Blackwell, 2004), pp. 210-219.

[14] Levinson, "What a Musical Work Is," n. 33.

[15] Davies, *Musical Works and Performances*, p. 161.

[16] *Ibid.*

[17] Nelson Goodman, famously, would disagree. According to his stated view, if one were to today compose a musical work that—entirely coincidentally—is note-for-note identical with Beethoven's *Piano Sonata No. 2 in A Major*, one have would not have created some new work, but rather instantiated the same work that Beethoven instantiated. See Goodman, Nelson, *Languages of Art* (Indianapolis: Hackett, 1976), pp. 99-123. This aspect of Goodman's view has been the subject of much critique. For example, see Pearce, David, "Intensionality and the Nature of a Musical Work," *British Journal of Aesthetics*, 28 (1988), 105-118; Margolis, Joseph, "Music as Ordered Sound: Some Complications Affecting Description and Interpretation" in Michael Krausz (ed.), *The Interpretation of Music: Philosophical Essays* (Oxford: Clarendon Press, 1993); Davies, *Musical Works and Performances*, pp. 152-159.

[18] Davies, *Musical Works and Performances*, pp. 166-7. The issue of performer's intentions, raised here, will be further explored below.

[19] *Ibid.*, p. 14.

[20] Indeed, it seems that the second violinist's constraints may count *toward* her performance as such. See Davies, Stephen, "So, You Want to Sing with The Beatles? Too Late!" *Journal of Aesthetics and Art Criticism* 55, 2 (1997), 129-137.

[21] Davies, *Musical Works and Performances*, p. 35.

[22] Levinson, "What a Musical Work Is," p. 26

[23] Davies, Stephen, "Music," in Jerrold Levinson (ed.) *The Oxford Handbook of Aesthetics*> (Oxford: OUP, 2003), 489-515; ref. on 499. See also Davies, *Musical Works and Performances*, p. 165.

[24] Levinson, "What a Musical Work Is," p. 19.

[25] Davies, Stephen, "Transcription, Authenticity, and Performance." in *Themes in the Philosophy of Music* (Oxford: OUP, 1988/2003), 47-59; ref. on 47.

[26] Davies, "Transcription, Authenticity, and Performance," p. 48.

[27] Davies, "Transcription, Authenticity, and Performance," p. 53.

[28] Davies, Musical Works and Performances, pp. 165-6. Davies' supposition is probably correct in this case. Although the piano was invented about a quarter of a century before Bach composed the *Inventions*, Bach himself apparently did not voice approval of the instrument's design until he saw an improved version more than two decades after his composition. Notably, however, instructions on his autograph copy of the score specify its use as an instructional exercise for "keyboard," which could have included harpsichord, organ, clavichord, and his own creation, the lautenwerk.

[29] Godlovich, Stan, "The Integrity of Musical Performance," *Journal of Aesthetics and Art Criticism*, 51, 4 (1993), 573-587. See also Godlovitch, Stan, "Innovation and Conservatism in Performance Practice," *Journal of Aesthetics and Art Criticism*, 55, 2 (1997), 151-168.

[30] Godlovich, "The Integrity of Musical Performance," p. 582.

[31] Godlovitch, "Innovation and Conservatism in Performance Practice," p. 164.

[32] Godlovich, "The Integrity of Musical Performance," p. 582.

[33] Davies, *Musical Works and Performances*, p. 189.

[34] A separate note should be made, here, for drum playing in *Rock Band*. Unlike the guitar controller, the actions and skill levels required of *Rock Band* drummers are virtually identical to those required in actually playing the drums.

[35] See *WikiHero*, "Satch Boogie," archived online: guitarhero.wikia.com/wiki/Satch_Boogie; accessed June 10, 2009.

[36] See Davies, "So, You Want to Sing with The Beatles? Too Late!" and Davies, *Musical Works and Performances*, pp. 194-196.

[37] Davies, "So, You Want to Sing with The Beatles? Too Late!" p. 130.

[38] Davies, *Musical Works and Performances*, p. 194.

[39] See Hick, Darren Hudson "When Is a Work of Art Finished?" *Journal of Aesthetics and Art Criticism*, 66, 1 (2008), 67-76; and Hick, Darren Hudson, "A Reply to Paisley Livingston," *Journal of Aesthetics and Art Criticism*, 66, 4 (2008), 395-398.

[40] This is a running line of argument in Davies, *Musical Works and Performances*.

[41] See *PR Newswire*, "Harrah's Entertainment and MTV Games' Crowns The Gurnkillers as the Winner of The Total Rock, Total Rewards Rock Band(R) Competition," archived online: news.prnewswire.com/DisplayReleaseContent.aspx?ACCT=ind_focus.story&STORY=/www/story/05-12-2009/0005024135&EDATE=; accessed June 10, 2009.