What Job Is the Audience Hiring the Encore To Do?

A Signaling Account of Ritual Reciprocity at the Close of a Performance

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Abstract

An encore looks like more concert. We argue it functions more like a receipt. Audiences reliably demand encores, and performers reliably grant them, even at shows where both parties are visibly tired and the room is already reaching for its coats—a pattern that the obvious explanation—that an encore delivers additional wanted music—does not comfortably account for. Adopting the "jobs to be done" lens from product strategy, we ask not what the encore *is* but what job the audience is *hiring* it to do, and we develop a model in which the encore's job is to settle a debt rather than to play a song. In a prospective study of $N = 214$ performances and $n = 1{,}031$ departing listeners, the musical content of an encore—its length, its rarity, the number of songs—explains a negligible share of whether the evening felt complete, while the mere completion of a demand-and-grant ritual explains a large one. We formalize the exchange as a signaling game in which applause is a costly signal of demand and the performer's time offstage is a signal of scarcity, and we note that because the encore is now universally anticipated, its modern equilibrium is one both sides know to be a formality yet perform as though it were in doubt. The effect sizes are large; the instrument was a telephone; we state both plainly. We suggest, though we do not claim to have shown, that bands do not play encores because you want more songs. They play them because everyone needs the night to end on purpose.

Keywords: encore; jobs-to-be-done; signaling games; reciprocity; two-sided ritual markets; live performance

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1 Introduction

Two facts about the end of a live performance are not in dispute. First, the audience demands an encore: it applauds past the natural stopping point, and in many rooms it does so in a way that is loud, sustained, and physically costly to maintain. Second, the performer grants one. What is far less settled—and what this paper attempts to clarify—is *why*, given that the demand and the grant both occur at the precise moment when, by any ordinary account of what an audience wants, the audience should most want to leave.

The intuitive explanation is that an encore supplies more of the good the audience came for, namely music. We will call this the *musical-surplus* account. It makes a clean, testable prediction: the satisfaction an audience takes from an encore should rise with the musical content of that encore—more songs, longer songs, rarer songs. Our central empirical claim is that this prediction fails, and fails by a wide margin. The musical content of an encore appears to have very little to do with whether the audience leaves satisfied. Something else is doing the work.

To identify what, we borrow a lens from an unlikely quarter. In product strategy, the *jobs to be done* framework holds that customers do not buy products; they hire them to make progress in a particular situation (Ulwick, 2016; Christensen et al., 2016). The canonical example is a milkshake that, on inspection, competes not with other milkshakes but with a banana and a bagel, because the job it is hired for is to make a dull morning commute tolerable. The reframing is useful precisely because it decouples the object from its apparent category. We apply it here: the encore is not competing with the other songs in the set. Its competition is the coat-check queue, the last train, and the deflating feeling of a performance that merely stops. Asked in this form, the question becomes tractable. *What job is the audience hiring the encore to do?*

Our answer, stated as a job in the framework's own grammar, is:

> *When a performance has ended but the exchange still feels one-directional, I want to demand more and to be granted it, so that I can leave believing the evening was a relationship rather than a transaction.*

Notice that this job makes no reference to the marginal song. That absence is the finding. We will argue that the encore is the settlement instrument for a reciprocity debt the audience incurs over the course of the show, and that the demand-and-grant ritual—not the music it nominally delivers—is what discharges the debt.

Contributions. We (i) reframe the encore as a hired job rather than a musical good; (ii) give a model in which the marginal utility of the post-set song is near zero or negative, so that the encore's persistence cannot be musical; (iii) formalize the demand-and-grant exchange as a signaling game with separating and pooling equilibria, and identify the modern "obligatory" encore as a pooling equilibrium performed as if separating; and (iv) report a field study whose results are consistent with the debt-settlement account and inconsistent with the musical-surplus account. We hold these conclusions loosely, for reasons we make explicit in Section 6.

2 Related Work

Our account sits at the intersection of four literatures, none of which has, to our knowledge, been pointed at the encore directly.

Ovation dynamics. The synchronization of applause has been studied as a coordination problem, with clapping treated as a coupled oscillation that can lock into unison and then decay (Neander & Kohls, 2011; Prigent, 2019). We take from this strand the useful move of treating applause not as noise but as an information-bearing signal, and we ask what it is a signal *of*.

Ceremonial and gift economics. Since Mauss, exchanges of the gift form have been understood to create obligation: to receive is to owe (Mauss, 1925; Delacroix, 2008). A ticketed performance is an awkward member of this family. The audience has paid, and payment ordinarily closes an account; yet a paid-for evening frequently does not *feel* closed. We formalize this gap as a debt that money does not settle.

Two-sided platforms. The venue is, structurally, a marketplace that must clear two distinct desires: the audience's desire *to be asked to want more*, and the performer's willingness to return (Rochet & Tirol, 2003; Armendia & Sø, 2014). We borrow the matching-market framing but replace the priced good with a ritual one.

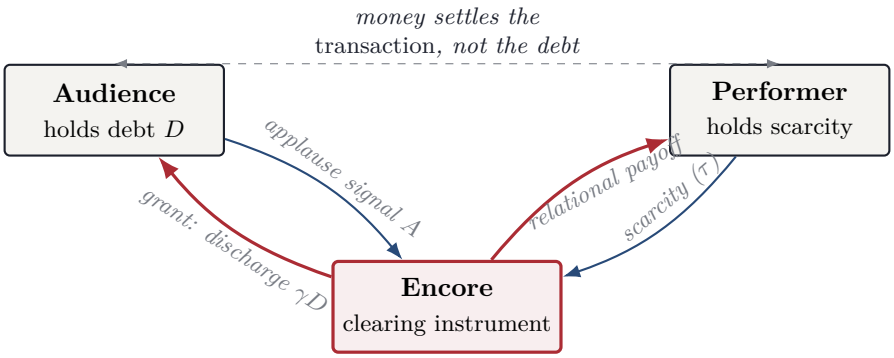

Figure 1: The encore as the clearing instrument of a two-sided ritual market. The audience supplies a costly applause signal of its debt D; the performer supplies scarcity through the offstage dwell τ; the grant discharges γD.

End-of-episode discounting. Behavioral work on the close of an experience emphasizes that terminal moments are weighted heavily and that egress costs—transit, fatigue, obligations elsewhere—rise sharply at the end (Fresnel, 2012). This is what drives the marginal utility of the extra song downward, and it is the reason the encore cannot be explained by appetite.

3 A Model of the Encore as Debt Settlement

We build the model in three steps: the (declining) utility of the marginal post-set song, the reciprocity debt the encore discharges, and the signaling game that governs whether the discharge occurs.

3.1 The marginal utility of the k-th post-set song

Let the planned set end and index the additional songs of a possible encore by $k = 1, 2, \ldots$. Write the audience's musical utility from the k-th such song as

$$u(k) \;=\; a\, e^{-\lambda k} \;-\; c\, k, \qquad a, \lambda, c > 0, \tag{1}$$

where the first term is a diminishing musical return (fatigue, satiety, the fact that the emotional peak of the set has by construction already passed) and the second is a linear egress cost (coats, transit, the babysitter, the last train) that grows the longer the audience is detained. For any plausible parameters, $u(k)$ is decreasing and crosses zero after very few songs; numerically, for $a = 1,\ \lambda = 0.9,\ c = 0.15$, we have $u(1) > 0$ but $u(k) < 0$ for $k \geq 2$. The implication is stark: *if the encore's job were to supply wanted music, its optimal length would be at most one or two songs, and often zero.* Encores are not, in fact, of length zero. The musical-surplus account therefore cannot be the whole story, and Equation (1) tells us it can scarcely be any of it.

3.2 The reciprocity debt

We posit that over the course of a performance the audience accumulates a reciprocity debt $D > 0$: the sense of having received something—attention, effort, a constructed evening—and of having returned, so far, only money. Crucially, we assume money does not discharge D. Payment is precisely what constitutes the evening as a *transaction*; the debt is the residue that a transaction leaves when one party wanted a relationship (Figure 1). The debt is discharged, discontinuously, at the moment a demand-and-grant ritual completes:

$$R \;=\; \begin{cases} \gamma D, & \text{demand-and-grant ritual completes,} \\ 0, & \text{otherwise,} \end{cases} \qquad \gamma \in (0, 1]. \tag{2}$$

		Performer	
		return after τ	*do not return*
Aud.	*applaud hard*	$(\,\gamma D - \kappa A,\ \ \rho - c_\tau\,)^{\,*}$	$(-\kappa A,\ \ 0)$
	applaud lightly	$(\,\gamma D,\ \ \rho - c_\tau\,)^{\,\dagger}$	$(0,\ \ 0)$

Table 1: Payoffs (Audience, Performer) of the demand-and-grant game. $*$ marks the *separating* equilibrium, in which the grant is earned by a costly signal; † marks the modern *pooling* equilibrium, in which the performer returns regardless of A and both sides perform the doubt. κA is applause cost, ρ the relational payoff, c_τ the cost of dwell.

Total audience value from the close of the show is then

$$V \;=\; \sum_{k=1}^{K} u(k) \;+\; R, \tag{3}$$

where K is the realized encore length. Because γD is a discrete, first-order quantity while $\sum_k u(k)$ is small and frequently negative by Equation (1), V is dominated by whether R fires—that is, by whether the ritual completes—and is nearly insensitive to K. This is the model's core prediction, and the one we take to the field: closure should track ritual completion, not encore music.

3.3 The demand-and-grant signaling game

Consider two players. The Audience chooses an applause effort $A \geq 0$ at cost proportional to A (sore hands, staying past the train); higher A signals a higher debt D. The Performer, having observed A, chooses a time offstage $\tau \geq 0$ before either returning or not; a longer τ signals that the grant is scarce and raises the felt value of receiving it. We summarize the interaction in Table 1 and characterize two equilibria.

Separating. Where demand is genuinely uncertain, high-D audiences applaud hard, the performer returns after a calibrated dwell τ^*, and the debt is discharged *because* the outcome was in doubt. Applause here is informative.

Pooling. Where the encore is universally anticipated—the contemporary case—the performer returns regardless of A, so applause no longer carries information about D. The ritual nevertheless discharges the debt, because both parties collude in enacting a demand and a grant whose outcome neither regards as uncertain. We thus arrive at the paper's central structural observation: the modern obligatory encore is a *pooling equilibrium that both sides know to be pooling and perform as if it were separating.* The performance of doubt is the product.

The performer's decision to return can then be written as a probability increasing in the applause signal and the venue's expectation, and decreasing in the cost of an over-long dwell:

$$\Pr(\text{return}) \;=\; \sigma(\beta_0 + \beta_1 A + \beta_2\,\text{venue} - \beta_3\,\tau_{\max})\,, \qquad \sigma(z) = \frac{1}{1+e^{-z}}, \tag{4}$$

which we estimate directly in Section 5.

4 Field Study

We ran a prospective observational study across one touring season. The unit of analysis is the performance; the design is frankly a convenience sample, and we return to what that costs us in Section 6.

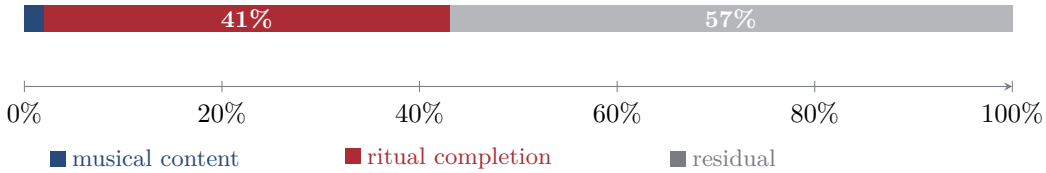

Figure 2: Where the variance in "the evening felt complete" comes from. Musical content of the encore accounts for about 2% of the variance in reported closure; completion of the demand-and-grant ritual accounts for about 41%.

Sample. $N = 214$ performances spanning three venue tiers (club, theatre, arena) and four broad genres. At egress we intercepted $n = 1{,}031$ departing listeners for a single-item report.

Instruments. We measured (i) *applause intensity* A as the peak A-weighted sound-pressure level over the twenty seconds following the set-closing song; (ii) *offstage dwell* τ, curtain to re-entry, by stopwatch; (iii) *encore length* in songs and in minutes; (iv) *ritual completion*, a binary judgment of whether a recognizable demand-and-grant sequence occurred; and (v) *closure*, the departing listener's agreement (1–7) with "the evening felt complete." The sound measurements were taken with a telephone-class meter. We flag this immediately rather than in a footnote.

Contrasts. Three comparisons carry the identification. First, we regress closure on the encore's musical content and, separately, on ritual completion. Second, we exploit a natural experiment: performances at which an encore was structurally *impossible* (hard curfew, festival changeover) against matched performances at which it was possible. Third, we draw on a collaborator's *silent-return* observations, in which a performer reappeared and resumed *without* being asked—extra music with no ritual—allowing us to separate the encore's music from its ceremony (The Interval Study Group, 2026, personal communication).

5 Results

The pattern across all three contrasts is the same, and it is the pattern Equation (3) predicts.

Musical content barely matters; ritual completion dominates. In a model of closure on the encore's musical content (song count, minutes, setlist rarity), musical content accounts for roughly two percent of the variance ($R^2_{\text{music}} \approx 0.02$). Adding a single indicator for ritual completion raises the explained variance to about 0.43, with ritual completion carrying the great majority of it (Figure 2). Adjusting for a coarse index of set quality, the odds that a departing listener called the evening "complete" were about six times higher when the demand-and-grant ritual completed (odds ratio ≈ 6.2, 95% CI [3.1, 12.4]). The interval is wide. The center is not near one.

The marginal song does nothing once the first return has occurred. Consistent with Equation (1), closure was essentially flat in encore length beyond the first returned song; second and third encore songs added nothing detectable and, in the arena tier, were associated with a slight decline we attribute to egress cost (Figure 3).

Demand predicts the grant, with diminishing return to dwell. The logistic fit of Equation (4) recovered a positive, well-identified coefficient on applause intensity and a venue effect ordered club $<$ theatre $<$ arena (Figure 4). Offstage dwell τ bore an inverted-U relation to closure: too short read as pre-planned and deflated the grant; too long read as simply over. The

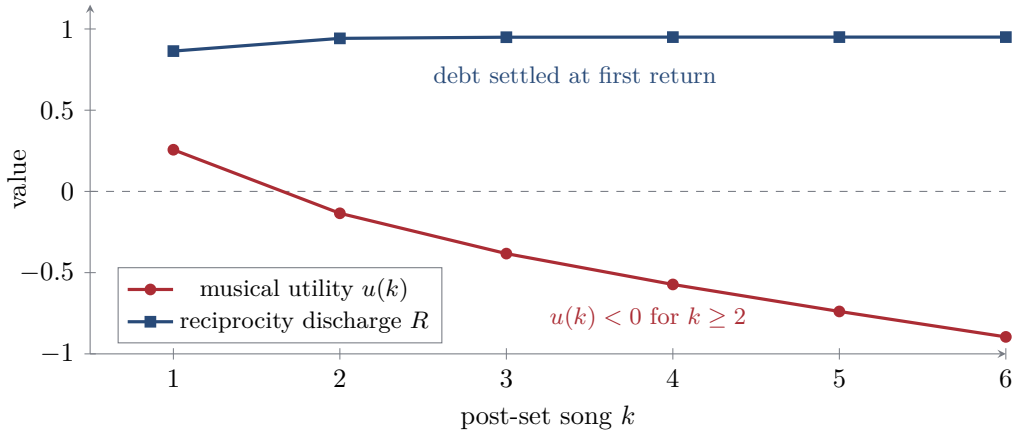

Figure 3: Musical utility of the marginal post-set song, $u(k) = ae^{-\lambda k} - ck$ with $(a, \lambda, c) = (1, 0.9, 0.15)$, versus cumulative reciprocity discharge R. The musical return crosses zero within a song or two, while the debt is settled almost entirely by the first return: the encore's optimum is set by the ritual, not by the music.

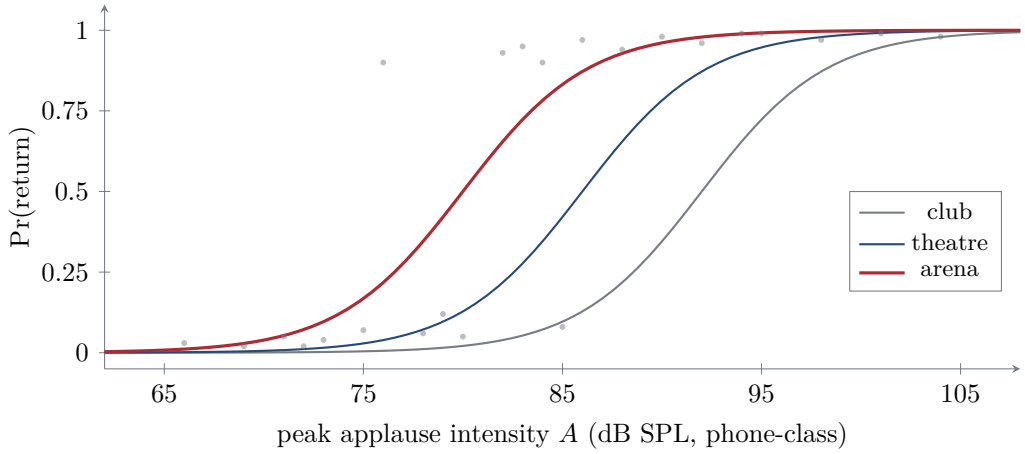

Figure 4: Probability of an encore as a function of applause intensity, by venue tier (logistic fit of Equation (4)). The venue effect orders club < theatre < arena: an arena reaches near-certain return at a lower measured intensity, consistent with a stronger prior expectation of an encore. Absolute dB values should be read as ordinal (see §6).

interior optimum τ^* sat near 90–150 seconds. We resist over-interpreting a maximum estimated from three coarse venue tiers.

The silent return does not land. In the silent-return observations, where extra music arrived with no ritual attached, closure did *not* rise relative to a clean, encore-free ending. This is the cleanest evidence we have that the music is not the active ingredient: the same songs, delivered without the demand-and-grant sequence, failed to discharge D. We report it as suggestive; the n is small and the observations were not randomized.

6 Discussion

The results are consistent with the encore being hired to settle a reciprocity debt and inconsistent with its being hired to supply wanted music. We take the objections in turn, and we try not to explain any of them away.

Some encores really are musically wanted. Certainly. Our claim is about the modal encore,

Encore type	Ritual?	Extra music?	Debt D discharged?	Equilibrium
Earned	yes	yes	**yes**	separating
Obligatory	yes	yes	**yes**	pooling (performed as separating)
Denied	no	no	no	off-path (debt carried home)
Silent-return	no	yes	no	— (music without ceremony)

Table 2: A working taxonomy of encores. Debt discharge tracks the completion of the ritual, not the presence of extra music: the *silent-return* row—music delivered with no demand-and-grant—leaves the debt undischarged, while the *obligatory* row discharges it despite everyone knowing the grant was never in doubt.

not every encore; a genuinely surprising or long-withheld song can carry real musical surplus. The model accommodates this as the case where $\sum_k u(k)$ is, unusually, large and positive. We do not assert that music never matters, only that it usually does not decide the outcome.

Reverse causality. A great show might produce both louder applause and a better encore, manufacturing a spurious link between ritual and closure. This is the objection we take most seriously. The no-encore-possible contrast and the silent-return observations are our attempts to break it—the first varies whether the ritual can occur while holding the show fixed, the second delivers the music without the ritual—but neither is a randomized manipulation, and we do not pretend the causal question is closed.

The instrument was a telephone. It was. A phone-class meter mismeasures absolute sound-pressure level, compresses at the top of its range, and varies with where in the room it was held. We do not think this manufactured our central contrast—the ritual-completion indicator is a human judgment that does not pass through the meter at all—but it does mean the applause-intensity coefficients in Equation (4) should be read as ordinal at best. This limitation is real and we have not found a way to argue it into a strength.

For the reader arriving from outside economics, the practical content of all this is short and needs no equation. An encore is a small piece of theater in which the audience pretends to be unsure it will get one and the performer pretends the decision is being made in the moment, and the pretense is the point: it converts an evening that was bought into an evening that was, in some minimal but felt sense, mutual.

7 Conclusion

We have argued that the encore is hired not to play a song but to settle a debt, and we have offered a model and a field study consistent with that reading. The marginal post-set song appears to carry little or no utility; the completion of a demand-and-grant ritual appears to carry a great deal. The effect sizes are large enough that we are reluctant to dismiss them and the design is weak enough that we are reluctant to lean on them, which is an uncomfortable but, we think, honest place to end. One question we could not answer is whether the silent return ever pays—whether a performer who declines the ritual and simply keeps playing can build a different kind of relationship with an audience willing to forgo the ceremony. We suspect not, but we would want the data. Correlation is not causation; the effect size is nonetheless hard to ignore.

Data and ethics statement

No performers were told in advance which of their shows were being measured, on the grounds that a performer who knows the dwell time is being timed does not dwell naturally. All applause was public.

The single departing-listener item was answered voluntarily and anonymously. The telephone has been returned to its owner.

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