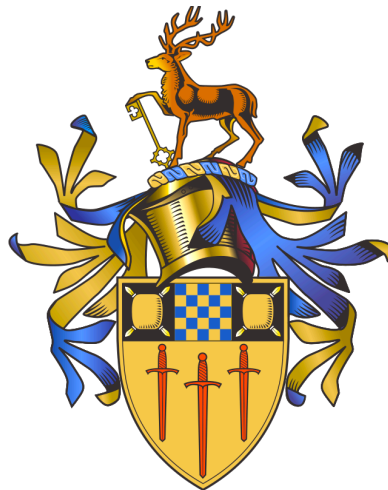


Capturing The Groove: Steely Dan's Studio Process (1970 - 2003)

Essay with Portfolio of Recordings

by

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Abstract

I endeavour to investigate Steely Dan's studio process with a focus on material released years 1975 through 2003. The term process will serve to include their system of: writing, arranging, recording methodology (including use of session musicians), overdubbing through to mix and master. The outlined 'studio process' will then be applied to my own practice during studio recording sessions that emulate Steely Dan's procedure but also pre-determined hybrid digital audio workstation based composition. Referencing existing academic appraisal¹, I've collated a diverse set of research material to contribute my own original analysis of the bands work (taking advantage of newly released stem format material). Throughout this text, I frame three original analyses of Steely Dan's work: The 'Mu Plagal' chord construction, writing strategies (both introductory and ending) and musician management detailing the 'past perfection' recording mentality.

¹*A Royal Scam: The Abstruse and Ironic Bop-Rock Harmony of Steely Dan* Everett (2004)

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-Link to Digital Appendices



-Link to Video Portfolio Playlist

1. Introduction

Through researching and analysing features of their music, I aim to define an emulative process or methodology through which Steely Dan (Walter Becker and Donald Fagen) worked with each other and with the studio engineers, session musicians and producers whom they employed.

Steely Dan's studio recording career spans years 1972 — 2003. The band has sold over 40 million albums worldwide, hold 3 grammy awards and were inducted to the 'Rock and Roll Hall of Fame' in March 2001. In research, I generally intend to focus on material released 1976 onwards as this period of their discography is praised for groove writing: with a mixture of studio precision, attractive human time feel and brilliant control of harmony²:

“That voicing, although totally flexible and creative, is kept ultra-clean to enable us to understand their message. You’ll recognise the musicianship — all of it — the tempo, punctuation, the marvellous blend of horns, voices, rhythm and guitar moving in right coordination. The result is a controlled, vibrant energy which Steely Dan emits”

Diener (1977)

The overarching goal of following this self-defined process is not with a purview of producing an emulation or pastiche of Steely Dan's work (although a certain amount of reference/quotation/similarity to their work is expected); rather the goal is to follow a self prescribed process for music creation and then reflect on the outcome after the fact (be it overly reminiscent of Steely Dan or not). If applicable, I will allow the experiences of working through the process to inform any changes or improvements that can be made whilst the project is underway.

It is worth noting: I am not intending to write music with vocals or lyrics (as much of Steely Dan's discography includes). As mentioned below, I want to focus on the aspects of the music underneath the top-line as I feel this is my area of expertise and the one I am most suited to researching and writing within.

Once the parameters/features of said process are defined (be it: writing strategies, concepts for arrangement, harmonic concepts/recurring devices, session band or musician management), I will proceed to apply it to my own practice via two methods:

²See “A Royal Scam: The Abstruse and Ironic Bop-Rock Harmony of Steely Dan” Everett (2004).

1. In person recording studio sessions: This is planned to be a more like-for-like procedure with regards to Steely Dan, involving people fulfilling the roles of: recording engineer, session musician and a producer³.

2. Digital audio workstation based work: I envisage this to be creation of idiomatically similar material as in option 1, but mostly produced 'in the box' with the potential for humanising material with later overdubs (e.g. creating a backing track to overdub drums upon).

'Groove' is understood as the synthesis of harmony, rhythm, arrangement, production and other factors. Here I take each in turn, analysing Steely Dan's work with comparison to my own original portfolio material.

³I anticipate having to play the role of musician and producer simultaneously as I do not wish to relinquish my performing role. Although not always clear when, Fagen and Becker would sometimes track their instrumental parts live with their session band.

2. Research Materials

Drawing from as wide a range of sources as I can, I've let my research help define a working process that I can follow throughout my project. The following highlighted materials have been of particular use:

- Detailed listening of bands discography from 1976 - 2003
- 5.1 surround sound mixes of *Gauche*, *Two Against Nature*, *Everything Must Go*, *The Nightfly* and *Kamakiriad*. I was able to achieve a certain level of separation by isolating rear surround and center channels (drums and bass often solely occupying center channel).
- Multitrack format recordings of "Peg", "Kid Charlemagne", "Black Friday" and "My Old School".
- 'Classic Albums: making of Aja' documentary was an invaluable resource⁴.
- Recent (2020-22) podcast interviews with Donald Fagen recounting his work with Walter Becker.

⁴I'm aware that this resource may have shifted my focus onto the Aja album specifically, but the amount of material covered in interviews with session musicians and engineers was invaluable for my research.

3. Analysis

Capturing groove: In layers

This project aims to illuminate the complex interplay of rhythm section parts and subsequent realisation of composite harmonic and rhythmic material sourced from written arrangements.

When listening to or analysing the music of Steely Dan; I've found it highly beneficial to perceive the material with a framework of layers or channels. See Figure 1.1 for a graphic portrayal of this.

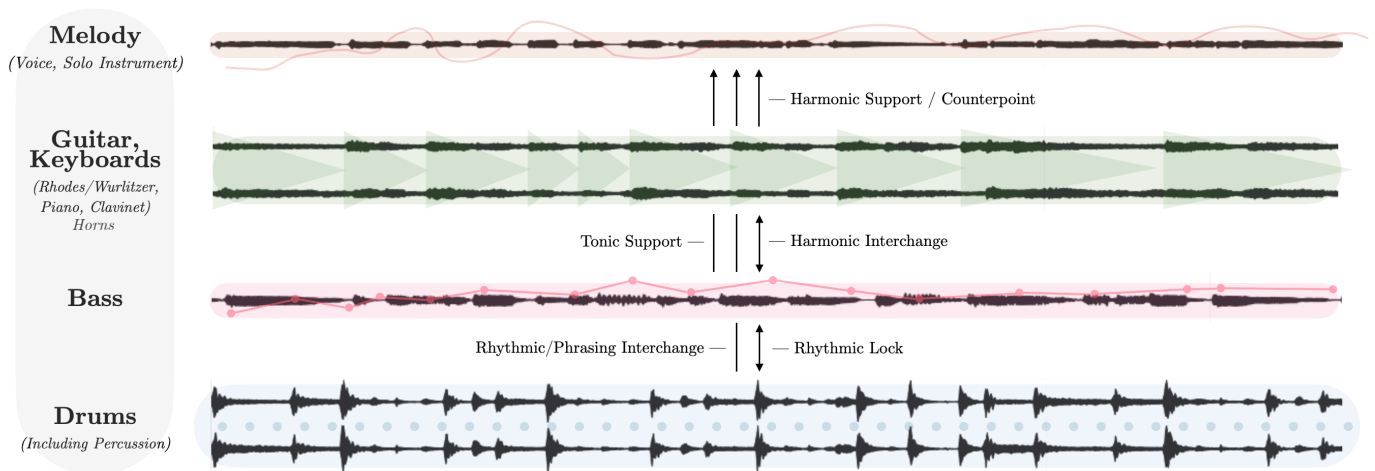


Figure 1.1: Graphic representation 'Groove in layers'
illustrative sample from Kid Charlemagne_{4:05}

Digesting the musical material in this manner (and assuming the pair of producers may have been thinking in a similar way) allows a certain level of compartmentalisation and simplicity with regards to arranging, assessing individual tracks (i.e. during live tracking) and mixing.

The rhythmic connection between drums and bass provides the basis of the groove within the music. These two instruments also have separate relationships to both Melody and Harmony (solo line, guitar, keyboards, horns).

See Appendix A & B for aural breakdowns of layers in groove from 'Kid Charlemagne' and 'Peg' respectively.

The Process (as figure)

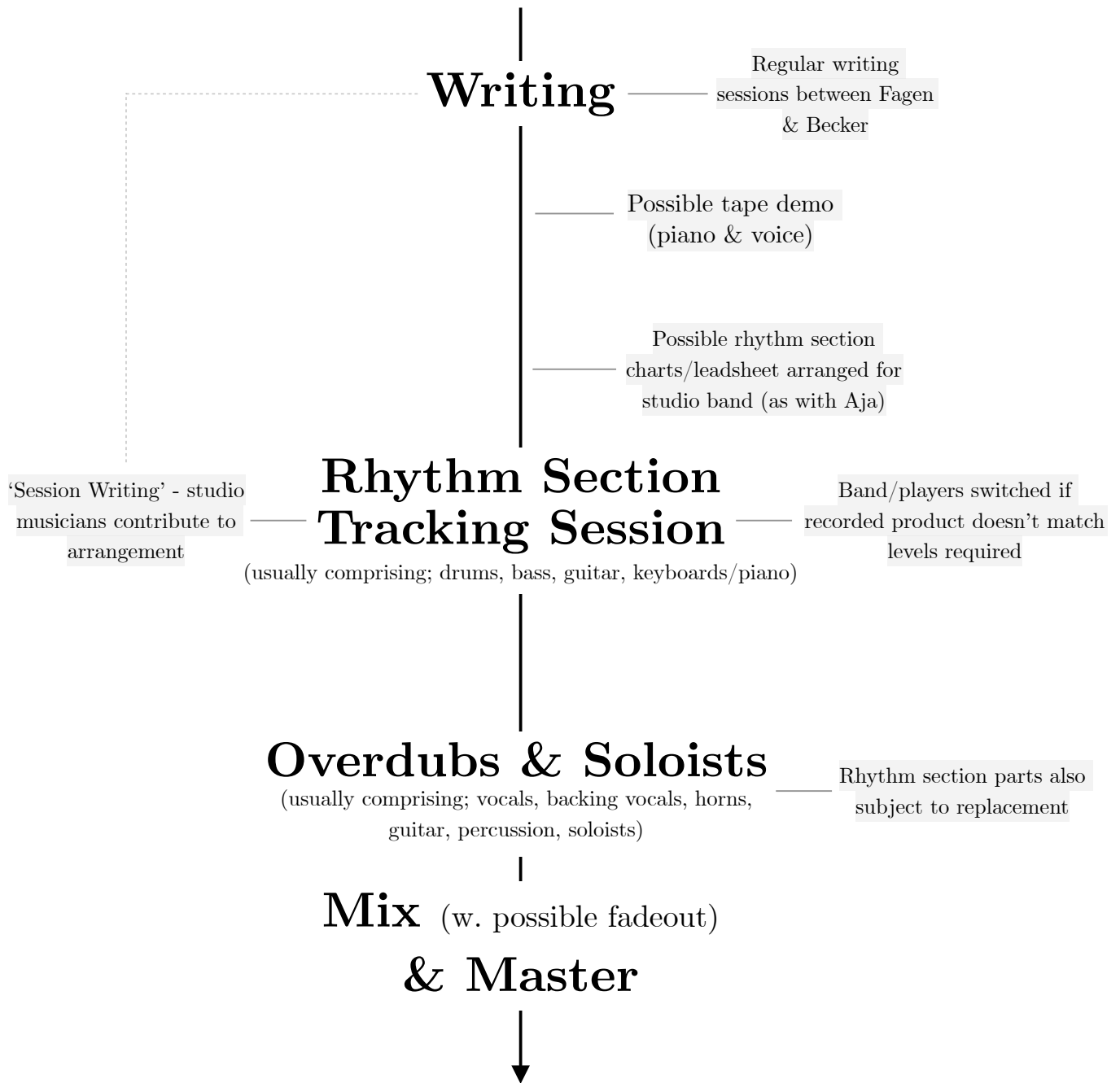


Figure 1.2: Steely Dan 'Studio Process' as timeline

μ Major: groove harmony

Through the process of transcribing and playing through Steely Dan compositions, it becomes clear the duo utilised certain reoccurring harmonic devices (The μ^5 / ‘Mu’ / ‘Moo’ major chord being one of them). See Figure 2.1 for an example of C μ Major in root position.

A common trend of similarly styled inversions and chord sonorities becomes clear, especially when analysing Donald Fagen’s keyboard parts (eg. the addition of the major 9th in whole tone dissonance with root or third is apparent as is a commonality of minor 9th⁶ in cluster).

“Becker and Fagen even christened one of their favourite constructions (the major-ninth chord whose ninth and tenth were always to be voiced as major-second adjacencies) variously as the “ μ major,”

Everett (2004)_{pg206}

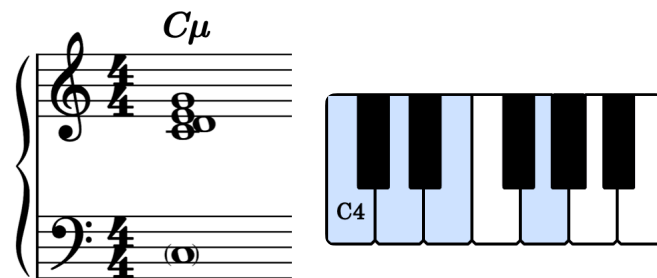


Figure 2.1: C μ Major in root position
[see Everett (2004)_{pg206}]

“Without the μ major chord it would be impossible to achieve the airy, modern, almost jazzy quality that the sensitive listener can detect in just about every Steely Dan recording”

Hal Leonard Corporation. (1995)

⁵The genesis of the duo categorising the chord in this manner is ambiguous (as is exact spelling) but it will be referred to as ‘ μ ’ or ‘Mu’ throughout this text. The original desire for use could have arisen during Becker and Fagen’s time together as staff writers at ABC Dunhill records where a major^{add9} chord was the most coloured/jazzy extension the duo could ‘get away with’ under their pop writing brief. See Appendix C for further explanations of the chord.

⁶For example: see Appendix D ‘Home at Last’ piano introduction for use of G^{min9} chord with a clustered voicing played in right hand. I’ve utilised a similar clustered minor 9th voicing during ‘The Italian’ within the organ part.

Through my research, I've uncovered an alternate usage of this chord construction. I'd like to draw attention to a particular voicing/permutation of the μ chord that is highly idiomatic of Steely Dan's music and which I've taken particular advantage of within my portfolio of recordings.

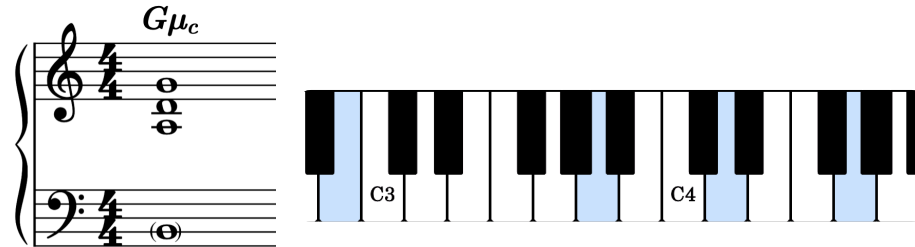


Figure 2.2: $G\mu$ Major in second inversion

The sonic characteristics of this voicing are what made it appealing for use within my portfolio. When played in isolation, the ‘stack’ of fourths⁷ (A,D,G in figure 2.2) give the chord an open and airy quality (as mentioned above); the addition of the major 3rd in the left hand adds a modernist tone to the chord. The same right hand figure played with the root (G) in the bass offers an alternative, equally interesting, quality⁸.

Being a rootless voicing, it is reminiscent of a traditional Jazz or Bebop piano texture where a pianist will play melody in the right hand and comp⁹ rootless voicings in the left. It's evidence of the appreciation the duo held for both Blues and Jazz harmony and the influence it had on their writing.

“Walter Becker and I had many interests in common: jazz, blues”

Fagen (2013)

“Donald and Walter love sophisticated harmony...”

Carlton in BBC (2002)^{37:40}

“The Dan made their knowledge and reverence for jazz explicit. “Parker’s Band” was their homage to Charlie Parker, the alto-sax pioneer who sired bebop; “East St. Louis Toodle-oo” was their faithful re-creation of Duke Ellington’s early theme song”¹⁰

Kahn (2001)

⁷The 6/9 chord, another harmonic construction used throughout the bands discography, also features a 3 ‘stack’ of fourths and therefore shares some sonic qualities.

⁸However, this chord doesn't technically qualify as a ‘ μ ’ variety due to a lack of major third although it still retains a very similar sound due to the added major 9th.

⁹short for accompany.

¹⁰See Appendix P for annotation and rationale behind usage of a Jazz standard lead sheet for “Cubano Chant” submitted as part of my recording portfolio.

I've embodied this mentality throughout my portfolio, using many of the same chord extensions (6th, 9th, 13th) found frequently throughout Steely Dan compositions.

As shown later in the text (see [Introduction Writing Strategies](#)), the duo commonly precede this inverted chord with a major 7th chord whose root note is 1 semi-tone above the 'μ'. This 'chordal move' is so common within the duos music it could be given the term 'major 7th to μc' or 'mu plagal' as abbreviation.

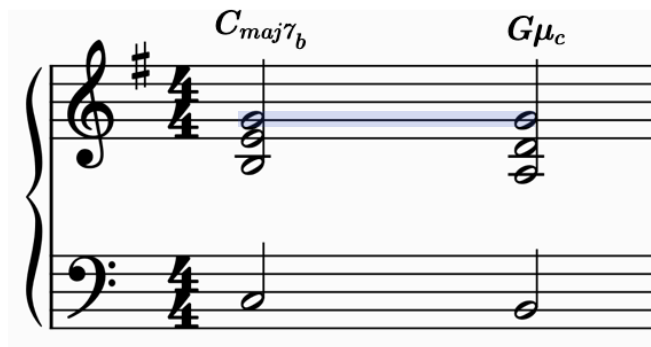


Figure 2.3: C major 7th to Gμ Major
'Mu Plagal'

The preservation of the top voice and the simple stepwise downward motion of the lower three voices results in a technically proficient and, for the listener, smooth voice leading sound¹¹.

Steely Dan utilise the 'Mu Plagal' chord device throughout "Peg". In combination with the bass (fulfilling root notes) the figure forms a plagal cadence; this cadence is subsequently transposed around the degrees of a standard 12 bar blues form¹². See Appendix E for isolated keyboards¹³ completing one revolution of the form.

¹¹When played on a piano keyboard, this pair of chords fall comfortably under your fingers.

¹²As Fagen notes in "Concepts for Jazz-Rock Piano", the harmonic inception of the verse figure from 'Peg' was born out of a desire to write a blues with major 7th tonality (as opposed to dominant 7th), see Appendix F for further explanation — Fagen in *Homespun* (2004).

¹³Rhodes and Clavinet played by Paul Griffin & Don Grolnick respectively — *Aja*, *ABC 931* (1977).

Introduction Writing Strategies

Fagen and Becker utilise recurring harmonic structural writing devices as introductory sections for their compositions. One of these writing devices can be broadly summarised as having the following characteristics:

- Harmonic Sequence (generally a two bar, descending phrase).
- A restrained drum part providing rhythmic emphasis of beats 2 & 4 (via kick drum or hi-hat pedal) accompanied with hi-hat/cymbals marking alternate subdivisions with retention of snare backbeat until the subsequent section.
- Preceding the subsequent section with an altered dominant 7th chord.

Introduction of ‘Deacon Blues’

The image shows a musical score for the introduction of 'Deacon Blues'. It features a piano accompaniment in 4/4 time, with a key signature of one sharp (F#). The score consists of two staves: a treble clef staff and a bass clef staff. The harmonic sequence is as follows: Cmaj7, G(add2)/B, Bbmaj7, F(add2)/A, Dmaj7, A(add2)/C#, Cmaj7, G(add2)/B, Ebmaj7, and E7#9. The first seven bars are in 4/4 time, and the eighth bar is in 5/4 time. The chords are arranged in a descending sequence, with the final chord being an altered dominant 7th chord (E7#9). The bass line is simple, with notes corresponding to the root of each chord. The treble line features a melodic line that descends stepwise, with some grace notes and a final flourish.

Figure 3.1: Abstracted harmonic transcription - ‘Deacon Blues’ Introduction

Figure 3.1 shows an example of this writing technique. The harmonic transcription above features a sequence of major 7th chords descending into very idiomatically voiced versions of the self-termed ‘mu’ major chord. As mentioned previously, this chordal move (Mu plagal) is very common within Steely Dan’s writing.

The preservation of the top voice and the simple stepwise downward movement of the lower three voices results in a technically proficient and, for the listener, smooth voice leading sound. The addition of a 5/4 bar provides an unanticipated extra beat before the verse and subverts the listeners expectation as to the progression of the form.

The drums and bass form the rhythmic framework of this introductory figure. This rhythm part is simple¹⁵ but well played by drummer Rick Marotta¹⁶. An avoidance of accenting beats 2 and 4 bring more anticipation to the introduction of the snare drum backbeat moving onward from the verse.

The ornamental figure in the bass (preceding E⁷ chord) is very characteristic of player Chuck Rainey. Having the effect of temporarily bringing the electric bass to the top end of the mix (and to the listeners attention), this fill serves as a memorable lick that showcases Rainey's inventive and stylistic session pedigree¹⁷.

Figure 3.4 shows a spectrogram analysis of the first 4 bars, the aforementioned bass fill is highlighted in white and shows how the instrument enters a previously unoccupied higher frequency range.

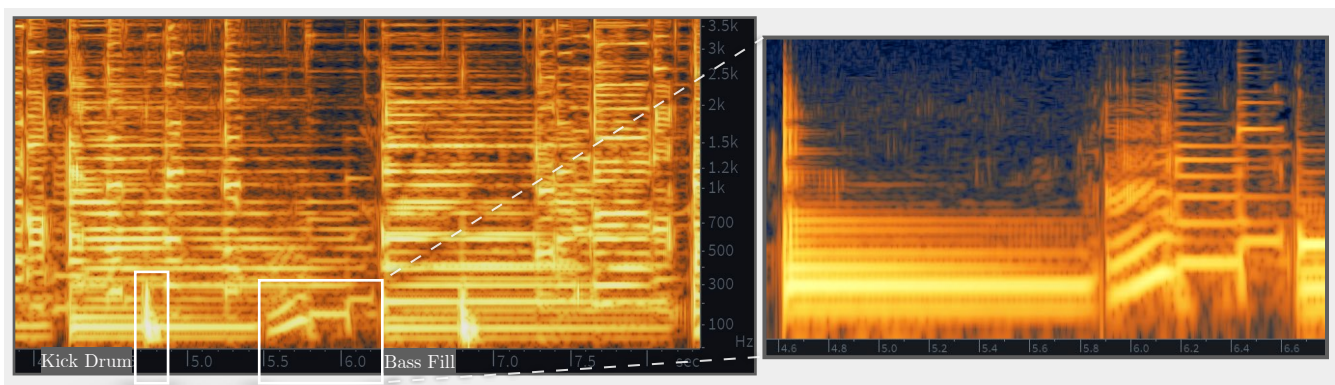


Figure 3.4: Spectrogram - Introduction to 'Peg'

¹⁵Simple in comparison to an alternate arrangement of the track featuring Bernard Purdie on drums, this version features a comparatively busier and more complex drum part during the intro with use of toms fills to punctuate space in each bar. See Appendix H for an example of this.

¹⁶Rick Marotta is one of a cast of drummers that Steely Dan evidently favoured during the latter portion of their career. He is featured on the Royal Scam, Aja and Gaucho albums (on tracks which emphasise simplicity, consistency and depth of groove within the drum track).

¹⁷Another similar example where Rainey takes advantage of the full tonal range of his instrument is present in 'Kid Charlemagne' where he outlines an A minor triad at the beginning of each verse. See Appendix I for isolated example of this.

Original Example: ‘Dear Disco’

The image shows a musical score for the introduction of 'Dear Disco'. It consists of two staves: 'Chord Changes' and 'Piano'. The 'Chord Changes' staff is in 4/4 time and shows a sequence of chords: Amin, E/A# (with a sharp sign over the A), G6, F#° (with a sharp sign over the F), Fmaj7, D9, E7sus4, and E7. The 'Piano' staff shows the corresponding piano accompaniment. The piano part is divided into sections by vertical colored bars: a purple bar under the first two chords, a green bar under the next two, and two red bars under the final two chords. The red bars correspond to the E7sus4 and E7 chords, which are also marked with 'stabs' in the chord changes staff.

Figure 3.5: Harmonic Transcription - Introduction from ‘Dear Disco’

Figure 3.5 shows a transcription of the piano/keyboard part played on ‘Dear Disco’. I’ve referenced the introduction writing framework by using chromatically descending harmony; regular intervals (minum) between chord changes and preceding the following section with a Dominant 7th chord (as on Peg, Deacon Blues).

The stabs on the E7 chord (highlighted red in figure) were written with the anticipation of being able to showcase a tight¹⁸ rhythm section. This musical figure is somewhat reminiscent of the snare drum fill in bar 8 of ‘Peg’ or the dramatic full band hit of beat 1 of ‘Hey Nineteen’.

I’ve more directly referenced Rick Marotta’s and Bernard Purdie’s playing on Peg and Deacon Blues respectively by placing the kick on the ‘backbeat’ and marking quaver divisions with the bells of both ride and crash cymbals (see Figure 3.6).



Figure 3.6: Drum Kit in recording session, playing area of cymbal highlighted

¹⁸When musicians are able to interpret time together in a coherent manner and align stabs/rhythmic figures with a high amount of precision.

Figures 3.7_{A,B,C}: Drum Introduction Comparison
(see Appendix N for audio)

Figure 3.7A: 'Peg' introduction drum transcription. The score is in 4/4 time with a tempo of 117. It features a consistent drum pattern across eight bars, with a note consistency from bar to bar. The snare is withheld in bar 8. The notation includes a bass drum line with 'x' marks for hits and a snare line with 'z' marks for hits.

Figure 3.7A: 'Peg' introduction drum transcription

Figure 3.7B: 'Deacon Blues' introduction drum transcription. The score is in 4/4 time with a tempo of 116. It features a consistent drum pattern across eight bars, with a 5/4 bar offsetting listener expectation. The notation includes a bass drum line with 'x' marks for hits and a snare line with 'z' marks for hits.

Figure 3.7B: 'Deacon Blues' introduction drum transcription

Figure 3.7C: 'Dear Disco' Original Composition introduction drum transcription. The score is in 4/4 time with a tempo of 125. It features a consistent drum pattern across eight bars, with a rhythm section hit in bar 8. The notation includes a bass drum line with 'x' marks for hits and a snare line with 'z' marks for hits.

Figure 3.7C: 'Dear Disco' Original Composition introduction drum transcription

Outro Writing Strategies

During their partnership, Becker and Fagen displayed an acute awareness and appreciation for the medium they were writing for (the recording studio)¹⁹. They wrote instrumental charts that excelled as studio compositions; songs that were executable by musicians reading from Jazz style lead sheets²⁰ but also had features that lent themselves to recording in that specific format.

A large majority of Steely Dan tunes feature some form of open ended chord vamp²¹ that allows the studio musicians to ‘jam’ on a single repeated section. This is useful for the following reasons:

- It creates a ‘canvas’ for a possible soloist(s) to play over.
- It allows a fadeout to be created over the repeated vamp²² (and therefore doesn’t stress a definite length/number of repeats in the moment of recording).
- It give the musicians an opportunity to ‘play out’ and increase the general complexity and variety within their parts as opposed to rest of the arrangement (often yielding the most desirable²³ playing and ‘licks’ to be captured).

‘Kid Charlemagne’

A prime example of a composition that utilises this open ended ‘outro formula’ is “Kid Charlemagne”.

The image shows a musical score for the ending vamp of 'Kid Charlemagne' in 4/4 time. The score is arranged in five staves: Drums, Electric Piano, Organ/Clavinet, Bass, and Guitar. The Drums staff shows a simple pattern of snare and cymbal hits. The Electric Piano staff features a sequence of chords: Fmaj7, Em7, Dm7, Cmaj7, Em7, and Fmaj7. The Organ/Clavinet staff has a rhythmic pattern of eighth notes. The Bass staff follows the same chord sequence as the Electric Piano. The Guitar staff is marked 'Solo (Cmaj Blues)' and contains a series of slanted lines representing a solo. A vertical pink bar highlights the final measure of the vamp.

Figure 4.1: Abstracted Transcription — Kid Charlemagne ending vamp

¹⁹ “At every stage the Dan duo were among the first to embrace the latest studio technology, and the musicianship and sonic quality of their albums has always been at the very limit of what is possible” Tingen (2003).

²⁰Musical notation format generally providing a melody and chord symbols. “A score, in manuscript or printed form, that shows only the melody, the basic harmonic structure, and the lyrics (if any) of a composition” Witmer (2003).

²¹All tracks on the ‘Aja’ album use fadeouts and some form of vamped outro.

²²See Appendix J for a chart showing usage of fadeouts in music released during my focus period of Steely Dan’s discography.

²³Desirable in terms of musical appropriateness or sensitivity to the particular texture or section.

Figure 4.1 shows an abstract transcription from the outro vamp section in “Kid Charlemagne”. This form allows the studio band to play over the two bars for any length desired. The push beat at the end of the second bar (Fmaj 7 highlighted) gives a sense of momentum progressing into the next repeat of the phrase and the rhythmic figure is outlined and stabbed by the rhythm section. See Appendix K for an isolated clip of each part (drums, bass, keyboards, guitar) during 2 bars of this section.

Without a figure like this written in to the music, there wouldn’t be as much opportunity for the session players to use fills or extenuate their parts in the manner heard on the recording. See figure 4.2 for a more detailed transcription of Bernard Purdie’s highly effective drumming during the outro.

Figure 4.2: Drum Transcription - Bernard Purdie ‘Kid Charlemagne’ ending vamp
Smith, A. (2020)

Regarding Figure 4.2: note Purdie’s extensive use of ghost notes on the snare (highlighted blue), his placement of kick drum on all 4 beats with subtle accent on 2 and 4 (highlighted red) and consistent opening of hat anticipating each backbeat (highlighted green). This is the busiest, most complex section of Purdie’s playing and is supported by the circumstances of the outro vamp writing.

Original Example: '19'

I've utilised a similar strategy in '19' to write an ending chord vamp that can be repeated as needed and that creates a suitable canvas for elaborating rhythm parts over the form during a recording session.

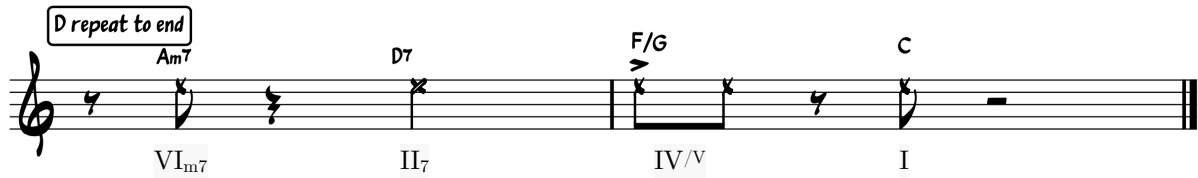


Figure 4.3: Lead sheet excerpt — ending vamp from '16'

I wrote the [VI_{m7}, II₇, IV/V, I] turnaround with the knowledge that it would provide an excellent canvas for instrumental soloing (major pentatonic scale combined with flattened 3rd being particularly effective here). See Appendix L for isolated bass showing how Maxim elaborates on the progression.

Original Example: 'Dear Disco'

'Dear' Disco features an idiomatically similar outro chordal vamp, I've written a variation on a previous section that emphasises chord changes on quaver push beats (highlighted red). This repetitive form allowed for subtle growth in playing intensity during recording.



Figure 4.4: Lead sheet excerpt — ending chord vamp from 'Dear Disco'

The alignment of the F^{add9} chord with beat 1 is as important as the pushes applied to A^{maj7}, D^{m7} and A^{m7} as it allowed a possible drum fill going into each repeat to ground and enunciate the form.

Recording Protocol & Studio Musician Management

During their time working together under the name ‘Steely Dan’; Walter Becker and Donald Fagen established a reputation amongst colleagues, employees and contemporaries as being, in general, demanding or testing to work for/with.

Takes Upon Takes

This may have been due to the relatively vast number of repeated recording takes the duo of producers would regularly demand of studio bands. As drummer Jeff Porcaro recounts here referring to his work on the ‘Katy Lied’ album:

“And what about those multitudinous takes? “Oh yes!” laughs Porcaro [...] You’re going through the track hoping for the magic take – up to thirty takes some days”

“I was always scared shitless playing for them. They were very demanding — not in a malicious way — but everyone respected them so much. You felt you were playing on something really special. When they were happy, it was great to see. It meant you’d accomplished something”

Porcaro in Micallef (1992)_{p104}

See Appendix M for an edited background recording taken in the control room during a rhythm section tracking session for ‘Time out of mind’ from the Gaucho album. As Fagen remarks to co-producer Gary Katz: *“We’ve got it, but will they please do one more round”*²⁴

With regards to my own recording sessions, given what I’d discovered about the producers mentality in my research, I would generally push for further (1-2 more in most cases) takes if possible. This yielded varied results but mostly, in my case, desirable. Generally, the takes I’ve used for submission are the final completed (I did, however, push for further recording on the ‘Dear Disco’ session and noticed that the quality of our²⁵ playing seemed to be degrading).

²⁴As you may be able to infer from the recording, this request was not to drummer Rick Marotta’s amusement. Franke (accessed 9 Oct 2020)

²⁵Maxim, Joey and I.

See Figure 5.1 for a proposed graphic representation that illustrates how the perceived quality of playing improves as number of takes increases (note this is for a band/group recording situation, not necessarily applied to overdubs or single performers). This is based on my experiences from recording and those described by musicians discovered during research.

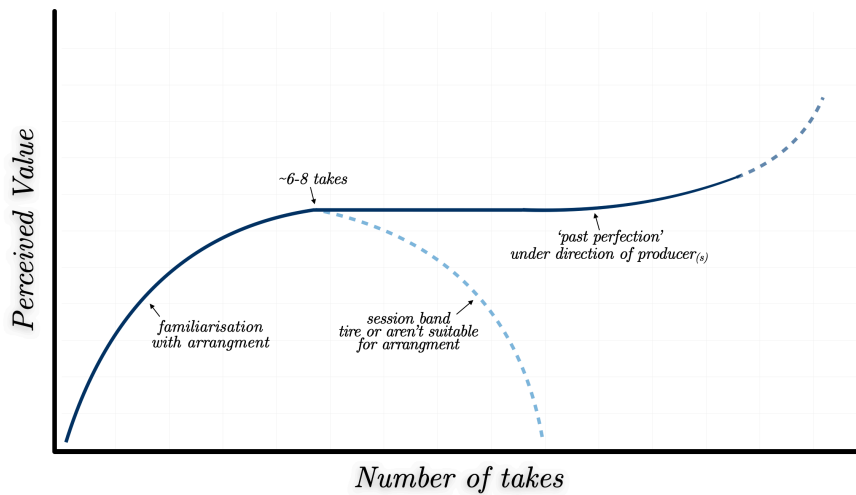


Figure 5.1: Diminishing Returns: number of recording takes v.s. perceived value to producer/artist

In an interview with Tom Scott, Donald Fagen reflects that the time taken for a session musician to become familiar with their chord changes may have been longer than normal due to the complexity of both harmony and written figures within their music²⁶.

“We had really great musicians but sometimes to get the chords under their fingers they would do four or five takes just getting the chords under their fingers, because we didn’t rehearse you know we just came in and started playing”

Fagen in Scott (2021)^{37:25}

This may have increased the total number of recording takes required of the studio musicians as, with each consecutive take, they continually improve and familiarise themselves with a challenging arrangement²⁷.

²⁶I noticed a similar occurrence with Joey (guitar), as he took a far greater amount of time to become generally familiar with the more harmonically complex and dense tunes I presented him with (i.e. his part took less time to finalise for ‘Highleigh’ as opposed to ‘Dear Disco’ due to the number of chords he was required to interpret).

²⁷I took the decision to go straight into the recording sessions without rehearsing hoping it would create a more like-for-like experience.

Past Perfection

As guitarist Dean Parks states, describing a two stage recording process on sessions for ‘Aja’:

“Perfection is not what they’re after, they’re after something that you want to listen to over and over again. So we would work then past the perfection point until it became natural, until it sounded almost improvised in a way [...] it was like a two step process, one was to get to perfection and the other is to get beyond it — to loosen it up a little bit”

Parks in BBC. (2002)^{25:10}

As Parks mentions, the duos recording process involved a relatively high number of takes as (perhaps) they endeavoured to work to a point where the studio band were able to create successively satisfactory representations of any written arrangement.

Interestingly, Parks observes that the goal was not perfection per se: instead he infers that the duo wanted to work to a point where the session musicians were comfortable enough with the tune that they could start re-introducing elements of improvisation or (faux) unpredictability into their playing.

Perhaps this is a key element of recording initiative and wisdom displayed by Becker and Fagen: their awareness that a perfect “squeaky clean” (Parks in BBC 2002) instrumental take wouldn’t actually make for a compelling end result (i.e. something that a listener might return to “over and over again” [Parks in BBC 2002]). Rather the product achieved just beyond that point; where each successive recording take might yield more varied yet natural playing and, for the listener, timeless results.

Reflecting on my own studio recording workflow, I felt that the most productive sections of the session occurred when Maxim, Joey and I²⁸ (in the case of sessions completed at PATS) had done at least 2-4 takes; by which time we had all become suitably familiar with the chord structure and arrangement so could therefore begin to work on finer details such as particular playing style²⁹, adjusting voicing of chords and generally tweak our invented rhythm parts to suit each other and the arrangement.

It’s worth noting that the demand for hard graft in the studio was not just dealt by Becker and Fagen; it was embodied by them throughout recording. As mix engineer Elliot Schiener describes

²⁸Bass, Guitar and Drums respectively.

²⁹Maxim (bass) playing slap, picked or thumb muted and Joey (guitar) playing with or without plectrum.

of Donald Fagen’s vocal overdubbing process: *“He³⁰ would keep singing you know — until he couldn’t sing anymore”* Scheiner in Burns (2021)_{23:10}

Style & Sound

The aforementioned reputation could also be due to a desire for a very distinct or specific sound within their music and particularly with regards to soloists, overdubs and certain playing styles or genre.

The duo displayed a determined³¹ and remorseless³² search for recorded material that matched their desired level of precision (especially in a drum track or rhythm part³³) and intended musical style. Fagen and Becker may have also been searching for some intangible “magic” (Fagen, D. 2021) quality from their hired players and found the way to achieve this was through (much) trial and error. As Fagen notes:

“If it’s a band situation or it’s session musicians, not every take has this magical beauty — it may be professional, but we were looking for something that had a real kick to it”

Fagen in Scott (2021)_{35:00}

Session Writing

It is also clear that Becker and Fagen were comfortable with the sessions musicians they employed writing and inventing structured rhythm parts that fit into their arrangements.

“Of course, the musicians would kick in with arranging ideas, bass lines, ect. once we got in the studio” Fagen in Hal Leonard. (1995)

There are examples of the studio musicians themselves contributing relatively major changes, features or parts to Steely Dan compositions. For example: in Peg, Chuck Rainey is responsible for the change from finger pick to slap bass during the chorus; even though this was in express defiance of the artist’s instructions. As he states in the Classic Albums making of Aja documentary:

³⁰Scheiner is referring to Donald Fagen.

³¹The duo tried 8 session guitarists before arriving at a soloist they approved for the guitar solo on ‘Peg’. *“We hired a couple of guitar players in order to play the solo and it wasn’t quite what we were looking for[...]/until we got through six, seven, eight players”* Fagen in BBC (2002)_{16:00}.

³²They were not afraid to fire/cancel musicians or full bands on the spot if the player(s) or musical product was not inline with their musical vision. *“[Fire this guy], and they walked out. Just from doing the exercise”* Scheiner in Burns (2021)_{42:30}

³³During production of the ‘Gaucho’ album: tired of trying to glean drum tracks in exorbitantly long recording sessions, the duo commissioned engineer Roger Nicholls to design a computerised drum machine that would sequence beyond human rhythmic precision and consistency. This machine (costing \$150,000 to build) was nicknamed “Wendel” and is credited on the album — Fagen in Tingen (2006).

“They didn’t want me to slap mainly because at that time slapping was just becoming popular and was on a lot of records. However, me being a player I think there are some songs that slapping sounds good and no matter who you are you want to keep in the fold of what’s happening. Peg, that bridge³⁴ there just seemed to be a slapping thing for me [...] They never knew it went down, except afterwards you could tell there was a difference in that bridge”

Rainey in BBC. (2002)_{13:22}

I experienced a similar musician management situation during the recording session of ‘Highleigh’. Even though I had not stated so on the lead sheet provided, Maxim began slapping his bass part during the pre-recording section of the session.

I really enjoyed the way the technique sounded in the tune and how the added transient tone of his bass interacted with my percussive piano part; however, I asked Maxim to play picked (with fingers) during the B section for some rhythmic and timbral variation.

³⁴Rainey refers to the main chorus as a bridge.

4. Critical Reflection

Circumstance & Resources

If I were to undertake a live recording based project (such as this research project) again, I may be inclined to use the experience I've gained during the execution of this work to inform further practice. Some things I'd desire to be able to do differently going forward:

- Plan longer recording sessions (6³⁵ hours as opposed to 3³⁶, preferably with a 30 minute break midway through the session): *“we would have 6 hour sessions”* Parks in BBC. (2002)_{6:44}
- Have both the ability and financial facility to:
 - a) Hire any musician I so wished: *“we could hire whoever we wanted to hire”* Fagen in Scott (2021)_{33:30}
 - b) Pay musicians a fee for recording and therefore be in a more appropriate³⁷ position to demand more³⁸ of that musician.
 - c) Book time in professional recording studios (e.g. Eastcote Studios London where 2 pieces from portfolio were recorded)³⁹ with requisite recording engineers.

Production Prowess

As mentioned in interviews with recording engineers; one thing that is consistently said of the duo is their ability to envisage or imagine a finished arrangement when only presented with the constituent parts of their recording (i.e. be able to realistically anticipate what a finished track may sound like given only the rhythm section representation). Also mentioned is the very distinct knowledge or goal of sonic product in mind and the ability to discern when that goal wasn't being met.

“I was always amazed that they pretty much heard in their heads, what it was going to be like completed”

Nicholls in BBC. (2002)_{28:10}

³⁵*“we would have 6 hour sessions”* Parks in BBC. (2002)_{6:44}

³⁶3 Hours of pure recording time, my recording sessions for this project usually had 2 hours worth of setup/pack-down time.

³⁷As I was relying on favours and other people giving up their time for my benefit; I wasn't really in a position to demand any certain number of takes from a musician or excess time from a studio engineer.

³⁸More: takes, playing accuracy in terms of rhythm and tuning, general stylistic/genre offering ect.

³⁹See Appendix Q for studio invoice.

Although somewhat of an abstract concept, I'd like to have a greater sense of the final produced product when listening back to my initial rhythm section takes (drums, bass guitar). I was, at times, unsure of how to direct my session musicians when proceeding with further takes of the same material or not always certain I'd extracted what I needed in terms of usable musical performances⁴⁰.

Reflecting on the writing style of my compositions. I generally could have added more rhythmic figures/stabs within the lead sheets to give more a greater sense of variety or punctuation to the arrangements.

However, reflecting on my submission, I feel very proud of aspects within the portfolio. For example: the arc of performance in 'The Italian', the texture achieved in solo section of 'Split' and rhythmic tightness captured in 'Cubano Chant' and 'Kensal Town' are all areas I find personally engaging and have brought my work closer to the human groove precision heard on Steely Dan's seminal recordings.

⁴⁰Surprisingly for me, I sometimes found it difficult to discern if the groove within the music felt 'good' or if my aural judgement was being swayed by the adrenalin produced during recording.

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6. Appendix

A — ‘Kid Charlemagne’ Groove Layering

B — ‘Peg’ Groove Layering

C — Mu Major Resources

D — Home at Last Intro

E — ‘Peg’ Keyboards 1 Verse

F — ‘Concepts for Jazz/Rock Piano’ Peg harmonic explanation

G — ‘Peg’ Intro Isolated

H — ‘Peg’ alternate version

I — ‘Kid Charlemagne’ A minor bass fill

J — Fadeouts in Steely Dan Discography 1976 - 2003

The Royal Scam	fade†	Aja	fade	Gaucho	fade	Two Against Nature	fade	Everything Must Go	fade
Kid Charlemagne	•	Black Cow	•	Babylon Sisters	•	Gaslighting Abbie		The Last Mall	
The Caves of Altimara	•	Aja	•	Hey Nineteen	•	What a Shame About Me	•	Things I Miss the Most	
Don't Take Me Alive		Deacon Blues	•	Glamour Profession	•	Two Against Nature	•	Blues Beach	•
Sign In Stranger	•	Peg	•	Gaucho		Janie Runaway		Godwacker	•
The Fez	•	Home at Last	•	Time Out Of Mind	•	Almost Gothic		Slang of Ages	•
Green Earrings	•	I Got The News	•	My Rival	•	Jack of Speed	•	Green Book	
Haitian Divorce	•	Josie	•	Third World Man	•	Cousin Dupree	•	Pixeleen	
Everything You Did						Negative Girl	•	Lunch with Gina	•
The Royal Scam	•					West of Hollywood		Everything Must Go	•

† *Meaning fade as recording continues*

K — ‘Kid Charlemagne’ outro parts

L — Bass line elaboration outro of ’19’

M — ‘Time out of mind’ control room recording

N — Isolated Drum Introductions

O — Live tracking & overdubs

	Track	Initial Live Rhythm Take	Overdubbed Parts
Eastcote London 13 th /03	Cubano Chant	Drums, Piano, Tenor Sax, Trumpet	Bass, Percussion
	Kensal Town	Drums, Rhodes, Tenor Sax, Flugal Horn, Bass	Congas, Shaker, Bass _(B section) , Tenor Sax _(solo) , Mark Tree
PATS 2 nd /04	Dear Disco	Drums, Bass, Guitar	Conga, Shaker, Grand Piano, Rhodes, Vibraphone, Group Clap,
PATS 6 th /04	19	Drum, Bass, Guitar	Organ, Wurlitzer, Rhodes, Synth
	The Italian	Drum, Bass, Guitar	Organ, Wurlitzer, Guitar
	Higleigh	Piano, Bass, Guitar	Drums, Organ, Wurlitzer
	Initial Produced Backing		Overdubbed Parts
PATS 8 th /04	Split	Rhodes, Piano, Bass, Synths	Drums
PATS 9 th /05	Port Douglas	Rhodes, Bass, Synths	Drums, Guitar

P — “Cubano Chant” lead sheet: rationale & annotation

When planning the recording session at Eastcote, I knew beforehand that I wanted to try recording a Jazz standard cover using a pre written lead sheet. My motives for this were:

- a) The knowledge that the players I planned to work with would be acutely familiar and well versed working from this style of chord chart as they were studying Jazz performance based courses at conservatoire (they had also expressed a strong desire to work with this format in pre session communication). As Fagen remarks, the duo would match musicians/soloists to arrangements they thought would be most suitable for the particular player(s).

“This guy’s a great soloist, what would he be good on[...]what would suit his style”

Fagen in BBC (2002)^{15:30}

With this in mind, I knew this arrangement would suit the playing style of both horn players I planned to employ.

- b) Take the opportunity to relinquish writing for 1 track in the portfolio allowing me to focus on aspects of arrangement, rhythmic interpretation (what groove feel to apply to the music), distinct playing style (piano comping, horn phrasing/harmonic voice splitting) and working through the recording process with my musicians (as covered in Musician Management).
- c) Contribute to the Jazz canon in the same way Becker and Fagen did with their cover of “East St. Louis Toodle-Oo” and show my own reverence and love of the genre.

Annotated lead sheet:

Cubano Chant

Latin Feel
Ray Bryant © 1957

Latin Feel
♩ = 204

Rhythm Section accents stabs every 2 bars.

Drums move to a more consistent meter. 'Mozambique' pattern on ride bell.

Cubano Chant p.2

Move to swing feel

(Solo)

Piano, Drums: Comp
Horns: 1 solo around form with some prefigured playing

After solos, D.C. al Coda
*8 Bar Drum Solo Break

ABC, [DEF]x2, ABC, Coda

Q — Eastcote Studio Fees Invoice

eastcote studios limited
249 kennal road london w10 5db
07768520540
www.eastcotestudios.co.uk

Invoice to:
Thomas McLaughlin
ONE WATFORD LANE
CHALFONTS BRIDGE
CHALFONTS
W12 8RL

Invoice Date: 21st March 2022

Invoice Number: 222049
PO No:

Re: Recording Studio One 13/3/2022 Chloe Mercadal -
Nominal charge

Studio One costs	62.50
VAT @ 20%	12.50
Total now due	£ 75.00

Bank Details
Branch: [REDACTED]
Sort Code: [REDACTED]
Account No: [REDACTED]
Swift Code: [REDACTED]
IBAN GB85: [REDACTED]

vat no: 539 0661 35 registration no: 02233803
registered office: 107 Rindes Rd Harrow HA1 1RU

R — [Link to Video Playlist](#)

(I highly encourage you watch the in session videos as they give valuable context to each recording)

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