

ADAPTIVE FUNCTIONS OF METER IN MULTIPART MUSICAL RHYTHM

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APPENDIX 2.1

Ensemble Performance Questionnaire (EPQ)

ENSEMBLE PERFORMANCE QUESTIONNAIRE

The following questions address the task of paying attention to *your* instrumental part versus what is occurring around you in *other* instrumental parts in the context of ensemble performance.

All responses will be kept strictly confidential.

Question 1

a) Age: _____

b) Gender: (*circle one*) MALE FEMALE

Question 2

a) What instrument(s) do you play professionally? And

b) How many years have you played each instrument?

Main instrument: _____

_____ years

second instrument: _____

_____ years

third instrument: _____

_____ years

Question 3

- a) Which of the following types of musical ensembles have you performed in regularly (i.e., at least once a week)? (*tick box(es)*)
- b) For how many years have you played in each type of ensemble?
- c) Do you still play in such an ensemble? (*tick one*)

(a)	(b)	(c)
		Still play No longer play
<input type="checkbox"/> solo recital	_____ years	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> chamber music ensemble(s)	_____ years	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> chamber orchestra(s)	_____ years	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> symphony orchestra(s)	_____ years	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> jazz ensemble(s)	_____ years	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> pop group(s)	_____ years	<input type="checkbox"/> <input type="checkbox"/>

Question 4

For approximately how many years in total have you played in ensembles?

_____ years

Question 5

a) In ensemble performance, how important would you say is the ability to simultaneously pay attention to one's own part and the parts being played by other musicians? (*tick one*)

- not very important
- quite important
- very important
- of utmost importance

b) Why? (i.e., please comment on your above response)

Question 6

Rate the level of *influence* each of the following **musical factors** has on your ability to simultaneously pay attention to your part and the parts played by others. (*circle one category on each rating scale provided*)

(a) **role of your part** (e.g., melodic vs accompanimental)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(b) **rhythmic complexity of your part**

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(c) **rhythmic complexity of other part(s)**

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(d) **rhythmic complexity of the relationship** between your part and other part(s) (e.g., syncopation; polyrhythm; hemiola)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(e) **size of pitch intervals** (e.g., “step-wise” vs “leap-wise” movement) in **your part**

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(f) **size of pitch intervals** in **other part(s)**

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(g) **melodic contour** of **your part** (e.g., “smooth” vs “jagged”)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(Question 6 continued)**(h) melodic contour of *other* part(s)**

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(i) tonality or harmonic context (e.g., diatonic; chromatic; atonal)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(j) texture (e.g., “dense” vs “transparent”)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

Other influential musical factors (please specify)

Question 7

Rate the level of *influence* each of the following **extra-musical (or general) factors** has on your ability to simultaneously pay attention to your part and the parts played by others.

(a) level of **arousal** (e.g., alert vs tired)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(b) level of **anxiety** (e.g., relaxed vs nervous)

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

(c) **mastery of technique** required to perform part

Not at all influential	Slightly influential	Moderately influential	Very influential
---------------------------	-------------------------	---------------------------	---------------------

Other influential extra-musical factors (please specify)

Question 8

- a) Describe some situations that would cause you to focus more attention on ***your*** part and less attention on the ***other*** part(s) in the ensemble.

- b) Describe some situations that would cause you to focus less attention on ***your*** part and more attention on the ***other*** part(s) in the ensemble.

Question 9

a) When performing in an ensemble, how often do you have to concentrate on thinking about simultaneously paying attention to your part and other parts?

ALWAYS

go to (b)

SOMETIMES

go to (b) & (c) overleaf

NEVER

go to (d) overleaf

b) If you ticked “ALWAYS” or “SOMETIMES” in (a), what do you specifically think about when trying to simultaneously pay attention to your part and other parts?

(Question 9 continued)

- c) If you ticked “SOMETIMES” in (a), what situations require concentration on thinking about simultaneously paying attention to your part and other parts, and what in what situations is such concentration not required?

- d) If you ticked “NEVER” in (a), did you ever have to concentrate on thinking about simultaneously paying attention to your part and other parts? (*circle one*)

YES NO

- e) If you circled “YES” in (d), ***when*** and ***under what circumstances*** did you have to concentrate on thinking about simultaneously paying attention to your part and other parts?

Question 10

a) In your experience, does ability to simultaneously pay attention to your part and other parts improve with practice? (*circle one*)

YES NO

b) If “YES”, does the practice have to be aimed specifically at improving ability to simultaneously pay attention to your part and other parts, or does ensemble playing generally lead to improvement in this skill? (*tick one*)

- specific practice
- ensemble playing generally

Thank you for taking the time to complete this questionnaire.

APPENDIX 2.2

Responses to EPQ Question 5

Importance of prioritised integrative attending ratings and comments

In the following tables, a rating of 1 = ‘not very important’, 2 = ‘quite important’, 3 = ‘very important’, and 4 = ‘of utmost importance’. Comments made by respondents in justification of their ratings are also included in the tables. Responses of professionals, amateurs, and improvisers are presented in separate tables.

Table A2.2.1: Professional orchestral musicians' ratings and comments.

Professionals	Importance of prioritised integrative attending	
Questionnaire No.	Rating	Comment
1	4	I think the whole point about ensemble playing is to have awareness about what is happening around you with pitch and rhythm as well as knowing when to follow and when to lead (and all things in between)
2	4	An ensemble does not function well unless there is constant adjustment from all players with regard to pitch, rhythm, dynamics, intonation, temp., and other factors, e.g., style, articulation (which are worked out before the performance)
3	4	The job is about playing good ensemble. I assume that I will be able to play my part and spend most of my time concentrating on other parts.
4	3	I did not choose 'of utmost importance' because although I feel I pay lots of attention beyond my part, if I paid less attention, as long as I was playing the notes in my part probably no-one would be complaining.
5	4	So that ideas (musical) such as style, phrasing, length of notes, playing together, dynamics, and rhythm etc can be suggested, argued, and accepted to make the performance one of quality.
6	4	To integrate sound, intonation, balance, attack etc with other players.
7	4	You must be able to react to what you hear in terms of intonation, tone colour, and musical ideas, and to feed this back to the group.
8	4	To maintain balance, intonation, rhythm and, hopefully, correct musical expression.
9	3	More important to blend your part in with those around you rather than just playing oblivious to what's going on elsewhere in the orchestra.
10	3	It's important to be aware of what the other musicians are doing to ensure the cohesion of ensemble and accuracy of intonation. Too much attention to other parts, however, can detract from one's own performance with regard to expression.
11	4	The word 'ensemble' (together) says it all. Without listening to other parts it would be impossible to play together and create music.
12	4	It is the whole point of playing in an ensemble - to play <i>with</i> others.
13	4	Successful ensemble performance always involves <i>listening</i> 50/50 with playing for <i>blend, balance, intonation, rhythmic precision</i> (entries, releases).
14	4	If you can't adjust to what's going on you are doomed! Will stick out and not be a good asset in the ensemble! It is necessary to listen in regards to both pitch and rhythm.
15	3	To keep a balance between ensemble concentration and own part.

**Professionals
(cont.)** Importance of prioritised integrative attending

Questionnaire No.	Rating	Comment
16	3	It is not enough to merely count, or follow a conductor when playing in a group. Must listen to others so that parts are "interpreted" consistently. Rhythmically, it is very important to be aware of other parts to fit the different parts together.
17	4	Because you are part of an overall sound.
18	4	In order to be able to play together successfully, the players have to be able to take all sorts of variables into account: rubato; intonation; stylistic elements; and the importance of his/her own part.
19	4	So you get a feel for the music, making your own part easier to understand and play.
20	4	The music will die if you don't.
21	4	Good ensemble playing will present the ensemble as a unity, rather than individuals playing (kind of) together. Also, important parts will be played out, less important parts held back dynamically is a good ensemble understanding is achieved.
22	4	If one does not listen ensemble does not occur.
23	4	The right lick in the wrong place is useless.
24	3	For reasons of tuning, rhythm, and balance it is essential to be aware of other parts around you.

Table A2.2.2: Amateur orchestral musicians' ratings and comments.

Amateurs		Importance of prioritised integrative attending	
Questionnaire No.	Rating	Comment	
1	4	If you don't pay attention to other musicians it is no longer an ensemble.	
2	2	It is important to pay attention to own part and others in order to achieve a successful performance - the ensemble to play a piece together.	
3	3	When playing bass lines in an ensemble it is extremely important to follow the beat. It is also important to listen to the other players so as to keep in time with the ensemble, and to keep the ensemble in time. Also to support solos.	
4	4	The success of the performance depends on individual parts being played correctly and well, both in themselves and in the context of the group.	
5	3		
6	3	You must listen to other parts and add in your own dynamic expression and feelings into the music.	
7	3	Depends on how 'together' you are required to sound (when playing for enjoyment, it's quite important. However, when performing, it's of utmost importance).	
8	4	To understand how the music all fits together in an ensemble one must both hear their own part as well as the rest of the ensemble. The whole idea of playing together is for the music to be a whole, not a lot of individual parts.	
9	3	For coordination, balance, phrasing, articulation, and intonation.	
10	4	To play in tune; to play in consistent style with those in your section and other sections; to blend tone colours with others on the same instrument; to imitate, echo, play in unison, and other compositional techniques effectively.	
11	4	Without hearing other parts, it would be impossible to keep the piece together (more so in a chamber ensemble than a orchestra). In orchestras, listening helps intonation, timing, counting rests, and makes it music, not just a collection of notes.	
12	4	You must be able to fit your part in stylistically and tempo-wise with other parts to have a successful ensemble.	
13	2	... aim is to sound as one, like everyone is trying to achieve the same overall result. ... it is necessary to be aware of what other people are doing and how your part fits in to the overall scheme of things.	
14	3	It increases your enjoyment of performance when you can feel how your own part fit into the whole piece. It also makes the piece sound more musical if the ensemble plays as a group rather than a collection of individual instruments.	
15	3	It is essential that you know what is going on in the parts around you. In order to play together in time, and as an ensemble, you must listen to the parts around you.	

**Amateurs
(cont.)**

Questionnaire No.	Rating	Comment
16	4	An ensemble is to be heard as if it were one instrument itself. It's like being able to coordinate the bow and fingers while playing the 'cello.
17	3	tempo; dynamics ... too much attention to other parts may result in neglect and subsequent mistakes in own part ... you should only be aware of what the other parts are generally doing - it would be far too confusing to pay attention to each part at once.
18	3	It helps you know when to come in and enables you to blend your instrument with the other instruments to fit the mood of the piece.
19	4	It is hard but you can't just follow the conductor's beat. In chamber groups esp you use your ears to make the piece work. You also play more musically when you are responding to what other people play.
20	4	Intonation; balance (these two nominated as "most important"); to play anything "musically", you must be aware of what's going on around you, and respond to each accordingly.
21	4	The ensemble is a group work. You're not the only player in it. To get the best sound quality, you must listen to others too.
22	3	For intonation, balance (dynamics), tempo, to play in a style that is coherent with the ensemble, e.g., articulation & phrasing, to get the cue to play next!, to project solo passages above the ensemble. That is, to be as one with the group.
23	2	It is of utmost importance that each musician pays attention to his/her own music keeping the correct tempo. With that the whole ensemble should fit together very well.
24	4	One must always pay attention to and be aware of ALL the parts which comprise an ensemble. ... must be aware of how each instrument blends with every other [claims benefit from being a multi-instrumentalist]
25	5	Need to "play together", i.e., be in time with each other, play with same rubato, balance between parts is important, need to know where melodic line is and how it moves.
26	4	... to keep in time and in tune with others. ... the music can only be reproduced with the most feeling when the musicians in an ensemble are fully aware of what every one else is playing.
27	3	So that I would know whether the pace I am playing is consistent with the part played by others.
28	3	For a string player, listening to others is a vital check on intonation; cues to entry after many bars rest; one must be sure to blend in with the group tonal dynamics.
29	4	Timing (rhythm) and intonation of individual players can only be considered 'correct' or 'incorrect' in relation to the rest of the ensemble; Dynamics of each player is important and must be done correctly to allow for important parts to be heard.
30	4	It is necessary to match your style into the atmosphere created by the other musicians.

**Amateurs
(cont.)**

Questionnaire No.	Rating	Comment
31	2	So that if you are playing the wrong part, you will know as it will not merge with other parts. It will also enable me to find the correct part, provided that I have played the piece before.
32	3	All different instruments, when played together, should sound like one body.
33	3	... it is generally necessary that each performer actively listens to every one else... it is possible to play a piece (and even do it well) without listening to the others, but if too many people try this, the whole thing may well fall apart.
34	4	Because it is an 'ensemble', not an individual recital. Therefore, its most important to listen to balance, tuning, tempo, and colour. Sometimes it is good to know other parts because it is easier to catch up if you are lost.
35	3	By listening to the band you stay in tune.
36	3	... must be aware of where your part fits into the overall piece. This means you know what parts should be heard, therefore whether to play louder or softer. Also important for tempo and keeping the feel/style of the piece...
37	3	So that you come in at exactly the right time (the conductor should not need to give you every cue); so that instruments in unison sound in unison rhythmically and melodically.
38	2	As a cellist, you accompany other players most of the time, you have to follow their modulation and rhythmical variance. But I often have to spend a lot of concentration on my part too.
39	4	If one does not listen to other parts it could end up a mess.
40	3	To produce a unified sound.
41	4	When I get lost I can pick up where I am from what I hear other people doing; By hearing other parts, my part seems to come into focus - everything comes together - pitch, rhythm, quality...
42	3	In making the performance as a group 'precise', you need to follow what others are doing so you can follow them, and if they do the same they can create the same precise performance.
43	3	Keep in time; respond to dynamics; fit in with overall 'structure' of composition.
44	3	... keeping in time and in tune.
45	3	
46	3	... although you have to learn your part, you have to fit in with everyone else.
47	4	If you concentrate on the sound and feeling of the 'whole', you can sense whether the music sounds 'right' and what you need to do (e.g., increase or decrease your volume, adjust your attack) to contribute your part to making it so.
48	2	Necessary to blend and harmonise (and count carefully).

**Amateurs
(cont.)**

Importance of prioritised integrative attending

Questionnaire No.	Rating	Comment
49	3	... to keep in time.
50	3	Because it is an ensemble, everything fit together (hopefully) as the composer wanted it to.
51	4	To be able to adjust one' volume to the other parts. If one doesn't know what's going on, one can't make sense of one's own part. It must be a unified whole while keeping the character of one's own part and how it fits in.
52	4	Vital for cohesion, dynamics - the music would just be a meaningful jumble of notes without being always conscious of what fellow players are doing.
53	3	Playing in isolation is the antithesis of ensemble performance. As a second violinist it is absolutely essential to listen to other musicians' parts as the 'luxury' of the melody is rarely available.

Table A2.2.3: Improvisers' ratings and comments.

Improvisers	Importance of prioritised integrative attending		
Questionnaire No.	Rating	Comment	
1	3	In jazz communication is of utmost importance, but not at the expense of all other musical factors.	
2	3	You're making music together in performances and therefore working together is essential so you must listen to each other.	
3	4	In my usual playing environment (i.e., improvisation), it is the spontaneous reaction of all ensemble members to the total ensemble sound which is the mechanism of coherence and listenability/liveliness.	
4	4	Playing in an ensemble involves presenting a piece from an ensemble to an audience - an entire event, not a collection of separate parts. Therefore it makes sense to perform with the band with the whole picture in mind.	
5	3	Depends on your ability to pay attention to others. I do it to the best of my ability without affecting my own playing.	
6	3	Make sure the group is sitting well (time/groove) and to feed off what other members in the ensemble are doing. But focusing too much on what's happening around you can stunt your own creative input and personal impact on the music.	
7	4	Being aurally aware of everyone ensures musicality in the group's dynamics: this not only concerns volume but also tempo, feel and phrasing; aids intonation in string instruments; aids in balance.	
8	4	Attention, awareness and knowledge of all involving parts is essential to a real musician's process in playing.	
9	4	The general dynamic needs to be aligned so the ensemble can breathe and evolve as one entity. A performance has a certain magic if every one listens to what is going on around them.	
10	4	Depending on the style of music - lots of improvised music is about communicating and reacting to others. Therefore, paying attention to other parts is as essential as making my own statements.	
11	4	In defining 'to play with' or 'ensemble' it is necessary in the action of music making to establish broad sensitivities that include local and extended monitoring and interaction/communication through the media of your own music and that of others.	
12	3	In order to sound like an ensemble, to blend.	
13	4	The life and joy in playing comes from interaction between performers. If there is not much interaction, the process is a bit lifeless.	
14	3	In improvisation duos, "the intensity of interaction" is enjoyable.	
15	3	So a cohesive sound can be produced.	
		The sound, when ensemble playing, is one of an overall whole, when all parts are together. Therefore being able to listen and decide what to contribute to this overall requires a high level of listening to other parts.	
16	4	You need to listen and be aware of the chords and voicings the piano and bass are playing and the rhythm of the drums is important when improvising as a singer. You get ideas from each other.	

Improvisers Importance of prioritised integrative attending
 (cont.)

Questionnaire No.	Rating	Comment
17	4	In order for a group to sound tight (together); to get ideas from others; to know where you are.
18	4	[multi-part] Music is a constant and changing dialogue between the individual part. To need to be able to apprehend the whole you are creating, know how your part fits within that and be able to change it according to demand.
19	4	Listening - reacting - listening - initiating - listening - reacting etc.
20	3	It is important to be aware of what others are playing so one can react in a creative, tasteful manner.
21	4	
22	3	Your improvisations or even ensemble parts (e.g., horn section parts) need to blend with the rest of the band. In improvising you can be inspired by others in the ensemble and achieve more energy and dynamics, etc.
23	4	To be able to perform as a group one needs to listen as a group.
24	4	Because the purpose of the group being together is to play well together. I think the best ensemble playing comes through <i>support</i> of and <i>interaction</i> with other ensemble members.
25	3	You shouldn't play in your capsule. You should try to communicate and support the overall shape of the piece by opening up to the others in the ensemble both physically and spiritually.
26	4	In order to improvise, one need input! Draw on the bad for inspiration! Pre-hearing - anticipation.
27	4	The bonding together of all the various instruments creates one unified sound, and if you're not listening to your role within this context, you cannot create this unification.
28	4	You need to be able to hear everything going on around you; you need to relate what you're playing to all other sound to make a coherent statement; the more you respond to other musicians, the more the music holds together.
29	4	Without this ability it would be impossible to play in time or in tune; it is also vital (esp. in jazz but also every other style) to play in a manner sympathetic to the general sound, for the music to be aesthetically successful.
30	4	Musical interaction is a large part of my enjoyment.
31	4	Intonation; communication; the ideal that the whole is greater than the sum of its parts.
32	4	Otherwise you're not making music.
33	4	In an ensemble situation your playing is affected by how others play. It's important to listen carefully to: (1) groove - so you can decide whether or not to sit in it; (2) melody and harmony - to make this interesting and as musical as possible.

**Improvisers
(cont.)**

Importance of prioritised integrative attending			
Questionnaire No.	Rating	Comment	
34	4	Equal attention needs to happen - both on individual and overall sound.; It is a communication between not only each person and the group but heightened communication by members within the group creating different colours and shapes.	
35	4	This kind of attention is what creates cohesion, it fulfils a piece of music. It knits a group together.	

APPENDIX 2.3

**Contrasts and ANOVA summary for EPQ importance
ratings**

Between groups contrasts

	Professionals	Amateurs	Improvisers
A1:	1	-1	0
A2:	1	0	-1
A3:	0	1	-1

Summary of analysis of variance

Source	SS	df	MS	F
A 1	3.317	1	3.317	9.822
A 2	0.018	1	0.018	0.054
A 3	3.585	1	3.585	10.615
Error	36.813	109	0.338	

APPENDIX 2.4

Analysis of EPQ comments about the importance of prioritised integrative attending (Question 5b)

Chi Square analyses of importance of PIA comments

Effect of status (professional, amateur, improviser) and specificity of PIA goals (general, specific)

Observed and Expected (in parentheses) frequencies for each category

	General	Specific	
Professionals	13 (10.6)	11 (13.4)	24
Amateurs	30 (22.95)	22 (29.05)	52
Improvisers	6 (15.45)	29 (19.55)	35
	62	49	111

Using the formula

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

$$\chi^2 = 15.2$$

$$(\chi^2_{(0.05)} = 5.99)$$

Effect of type of specific goals (fundamental, expressive) in professionals and amateurs

Observed frequencies for each category

		Fundamental	Expressive	
		A	B	
Professionals	A	3	10	13
	C	19	11	
		22	21	43

Using the formula

$$\chi^2 = \frac{N(AD - BC)^2}{(A + B)(C + D)(A + C)(B + D)}$$

$$\chi^2 = 5.88$$

$$(\chi^2_{(0.05)} = 3.84)$$

Comparison of the frequency with which rhythmic cohesion and coherence, versus other expressive goals (expressive timing, phrasing, articulation, style, tone, pitch stability), were mentioned by professionals.

Observed frequencies for each category

		Rhythm-related	Other	
		A	B	
Present	Present	8	2	10
	Absent	5	11	16
		13	13	43

Using the formula

$$\chi^2 = \frac{N(AD - BC)^2}{(A + B)(C + D)(A + C)(B + D)}$$

$$\chi^2 = 5.85$$

$$(\chi^2_{(0.05)} = 3.84)$$

APPENDIX 2.5

EPQ level of influence ratings for musical and extramusical factors (Questions 6 & 7)

Anateurs	Q6a	Q6b	Q6c	Q6d	Q6e	P I size own	P I size other	Q6f	Q6g	Q6h	Contour other	Tonality	Texture	Q6j	Q7a	Q7b	Anxiety	Technique	Q7c
Questionnaire no.	Role	R C own	R C other	R C relat.															
1	3	4	3	4	1	1	1	1	1	1	1	3	4	3	2	3	3	4	
2	2	4	3	2	4	2	2	2	3	3	2	2	4	4	4	3	4	4	
3	3	3	4	2	2	2	2	1	1	1	3	3	3	3	3	3	4	3	
4	4	2	3	2	4	2	1	1	1	1	3	3	3	3	3	3	3	3	
5	5	4	3	2	3	3	3	3	3	3	4	2	3	3	2	2	3	3	
6	6	3	3	3	2	3	3	2	3	2	2	2	3	3	3	3	4	4	
7	7	4	3	1	4	3	1	2	3	1	3	4	3	4	1	4	4	4	
8	8	4	4	3	4	2	2	2	2	2	2	4	4	4	3	3	4	4	
9	9	3	4	3	4	3	2	2	2	2	2	4	4	4	3	3	4	4	
10	10	3	2	3	4	3	1	1	1	1	2	3	3	3	1	1	3	3	
11	11	3	4	4	4	3	4	3	3	3	2	2	2	2	3	3	4	4	
12	12	4	4	4	4	4	4	4	3	3	1	4	4	4	3	2	3	3	
13	13	3	4	3	3	3	4	3	3	3	1	2	2	2	2	2	3	4	
14	14	3	4	4	4	2	4	3	1	1	3	2	2	2	1	1	4	4	
15	15	4	4	3	3	3	4	4	3	2	2	3	3	3	4	3	4	4	
16	16	3	3	4	4	2	3	3	4	3	1	3	3	3	3	2	3	3	
17	17	3	4	4	4	3	2	3	4	3	1	2	2	2	2	3	4	4	
18	18	4	4	4	4	3	4	3	3	3	1	2	2	2	2	2	3	4	
19	19	2	2	2	2	2	2	2	3	3	3	2	2	2	2	2	3	4	
20	20	2	2	2	2	2	2	3	4	3	2	2	3	3	3	3	4	4	
21	21	4	4	4	4	3	4	3	4	3	2	2	3	3	3	3	4	4	
22	22	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	3	4	
23	23	3	3	3	3	3	3	3	3	3	3	1	2	2	2	3	4	4	
24	24	3	4	4	4	3	3	3	3	3	2	1	3	3	3	3	4	4	
25	25	4	4	4	4	2	4	4	4	1	2	2	2	2	1	1	2	3	
26	26	4	4	4	4	4	4	4	4	3	3	2	3	3	2	3	3	4	
27	27	4	4	4	4	4	4	4	4	4	2	2	2	2	1	1	2	3	
28	28	4	4	4	4	4	4	4	4	4	2	2	3	2	4	4	4	4	
29	29	4	4	4	4	4	4	4	4	4	3	4	4	3	3	2	3	4	
30	30	3	3	3	3	2	3	3	4	3	3	3	3	3	2	2	4	3	

Amateurs (cont.)	Q6a	Q6b	Q6c	Q6d	Q6e	Q6f	Q6g	Q6h	Q6i	Q6j	Q7a	Q7b	Q7c
Questionnaire no.	Role	R C own	R C other	R C relat.	P I size own	P I size other	Contour own	Contour other	Tonality	Texture	Arousal	Anxiety	Technique
31	3	2	2	3	2	1	2	2	2	2	3	3	4
32	3	4	3	3	3	2	3	4	2	3	4	4	4
33	2	4	1	3	3	1	2	1	2	3	4	3	4
34	4	4	3	4	1	1	3	3	4	3	4	4	4
35	4	3	2	3	3	2	3	2	1	2	4	3	3
36	4	3	3	4	2	3	2	3	4	4	4	3	3
37	3	3	4	4	3	2	2	3	1	2	3	3	4
38	4	3	2	3	1	2	2	2	2	4	2	1	4
39	4	3	4	4	3	3	4	4	4	4	4	4	4
40	2	3	2	4	2	1	2	1	3	2	4	2	4
41	4	4	4	4	3	3	4	4	4	4	3	3	2
42	4	4	3	4	3	2	4	2	2	3	4	4	3
43	3	3	3	4	3	3	4	4	3	4	4	3	4
44	3	4	1	4	3	1	3	1	3	3	4	4	4
45	4	4	3	4	3	3	4	3	3	3	4	3	4
46	4	4	3	4	4	3	4	3	4	4	3	3	4
47	4	3	3	4	4	2	4	2	4	3	4	4	4
48	3	3	3	3	4	3	3	3	3	2	4	3	3
49	4	4	4	4	2	2	3	4	4	3	3	4	4
50	3	4	1	1	3	1	3	1	4	4	4	4	4
51													
52	4	3	4	4	3	3	2	4	4	3	2	4	2
53	4	3	4	4	2	4	2	3	2	3	3	2	4

Improvisers Questionnaire no.	Q6a Role	Q6b R C own	Q6c R C other	Q6d R C relat.	Q6e P I size own	Q6f P I size other	Q6g Contour own	Q6h Contour other	Q6i Tonality	Q6j Texture	Q7a Arousal	Q7b Anxiety	Q7c Technique	
1	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2	4	2	2	2	1	1	2	4	4	4	4	4	4	4
3	3	4	3	4	4	3	3	3	4	4	4	4	4	4
4	4	4	4	4	4	3	3	3	4	4	4	3	4	4
5	3	4	4	4	3	2	3	2	3	4	4	3	3	3
6	2	3	3	4	3	3	3	3	4	4	4	4	4	4
7	4	4	4	4	4	4	4	4	4	4	4	4	4	4
8	2	3	3	4	4	3	2	2	2	4	4	4	4	4
9	3	4	3	4	4	4	2	4	2	4	3	3	4	4
10	3	3	3	4	4	2	1	1	1	3	3	3	4	3
11	3	3	3	3	3	3	3	3	3	3	4	4	4	4
12	3	4	3	4	3	4	1	1	2	2	3	4	3	4
13	2	4	3	3	3	2	2	2	2	2	2	4	4	3
14	4	4	3	4	3	3	3	3	3	3	3	4	4	3
15	4	4	4	3	4	3	3	3	3	3	3	3	4	4
16	4	4	3	4	4	4	2	4	3	4	3	4	4	4
17	4	4	4	4	4	4	4	4	3	4	4	3	4	4
18	3	3	3	4	4	4	2	4	2	2	3	4	4	4
19	4	4	4	4	4	4	4	4	4	4	4	4	4	4
20	4	4	4	3	3	3	2	2	2	3	4	3	4	3
21	1	1	4	4	4	4	1	2	2	3	4	4	4	1
22	3	2	3	2	3	2	2	2	2	2	3	2	2	2
23	4	4	4	4	4	4	3	3	2	2	3	2	2	2
24	4	4	4	4	4	4	4	4	4	4	4	4	4	4
25	4	4	4	4	4	4	4	4	4	4	4	4	4	4
26	4	4	4	4	4	4	4	4	4	4	4	4	4	4
27	3	4	4	4	4	4	2	2	3	2	3	3	3	2
28	3	3	2	3	4	3	2	3	3	4	4	4	3	3

Improvisers Questionnaire no.	Q6a Role	Q6b R C own	Q6c R C other	Q6d R C relat.	Q6e P I size own	Q6f P I size other	Q6g Contour own	Q6h Contour other	Q6i Tonality	Q6j Texture	Q7a Arousal	Q7b Anxiety	Q7c Technique
29	3	3	2	2	1	1	3	1	2	2	4	2	3
30	4	4	4	4	2	1	2	2	3	3	3	4	3
31	3	3	4	4	2	3	4	3	4	4	4	3	4
32	3	4	3	4	3	2	3	2	4	4	4	4	4
33	2	3	4	2	4	1	1	4	3	2	3	2	4
34	3	4	4	4	1	1	1	3	4	4	4	4	4
35	4	4	4	3	4	2	4	2	3	3	2	4	4

APPENDIX 2.6

Contrasts and ANOVA summary for EPQ musical and extramusical factors

Between groups contrasts

	Professionals	Amateurs	Improvisers
A1:	1	-1	0
A2:	1	0	-1
A3:	0	1	-1

Within group contrasts

		EPQ Question												
		6a	6b	6c	6d	6e	6f	6g	6h	6i	6j	7a	7b	7c
B1:	Musical vs Extramusical	3	3	3	3	3	3	3	3	3	3	-10	-10	-10
B2:	Rhythmic vs Pitch-related	4	4	4	-3	-3	-3	-3	0	0	0	0	0	0
B3:	Rhythmic vs Texture	1	1	1	0	0	0	0	-1	-1	-1	0	0	0
B4:	Interval vs Contour	0	0	0	1	1	-1	-1	0	0	0	0	0	0
B5:	Interval vs Tonality	0	0	0	1	1	0	0	-2	0	0	0	0	0
B6:	Contour vs Tonality	0	0	0	0	0	1	1	-2	0	0	0	0	0
B7:	Pitch-related vs Texture	0	0	0	3	3	3	3	-4	-4	-4	0	0	0
B8:	Texture vs Role	0	0	0	0	0	0	0	0	1	-1	0	0	0
B9:	Own part vs Other parts	1	-1	0	1	-1	1	-1	0	0	0	0	0	0
B10:	Rhythmic x Own vs Other parts	1	-1	0	0	0	0	0	0	0	0	0	0	0
B11:	Rhythmic x Own part vs Relationship between parts	1	0	-1	0	0	0	0	0	0	0	0	0	0
B12:	Rhythmic x Other parts vs Relationship between parts	0	1	-1	0	0	0	0	0	0	0	0	0	0
B13:	Interbal vs Contour x Own vs Other parts	0	0	0	1	-1	-1	1	0	0	0	0	0	0
B14:	Arousal vs Anxiety	0	0	0	0	0	0	0	0	0	0	1	-1	0
B15:	Arousal vs Technique	0	0	0	0	0	0	0	0	0	0	1	0	-1
B16:	Anxiety vs Technique	0	0	0	0	0	0	0	0	0	0	1	0	-1

Summary of analysis of variance

Source	SS	df	MS	F	Source	SS	df	MS	F
Between					B 9	14.141	1	14.141	20.010
A 1	1.231	1	1.231	0.324	A 1 B 9	1.338	1	1.338	1.893
A 2	2.158	1	2.158	0.568	A 2 B 9	0.076	1	0.076	0.107
A 3	8.995	1	8.995	2.370	A 3 B 9	2.654	1	2.654	3.755
Error	394.756	104	3.796		Error	73.498	104	0.707	
Within					B10	5.490	1	5.490	12.849
B 1	42.868	1	42.868	49.303	A 1 B10	0.500	1	0.500	1.170
A 1 B 1	4.137	1	4.137	4.758	A 2 B10	1.001	1	1.001	2.343
A 2 B 1	1.046	1	1.046	1.203	A 3 B10	3.953	1	3.953	9.252
A 3 B 1	1.141	1	1.141	1.312	Error	44.438	104	0.427	
Error	90.427	104	0.869		B11	1.062	1	1.062	3.641
B 2	129.079	1	129.079	120.971	A 1 B11	0.031	1	0.031	0.107
A 1 B 2	0.298	1	0.298	0.279	A 2 B11	0.107	1	0.107	0.367
A 2 B 2	1.018	1	1.018	0.954	A 3 B11	0.037	1	0.037	0.125
A 3 B 2	0.348	1	0.348	0.326	Error	30.340	104	0.292	
Error	110.971	104	1.067		B12	11.383	1	11.383	37.548
B 3	4.567	1	4.567	7.281	A 1 B12	0.281	1	0.281	0.928
A 1 B 3	0.042	1	0.042	0.066	A 2 B12	1.763	1	1.763	5.815
A 2 B 3	0.207	1	0.207	0.330	A 3 B12	4.750	1	4.750	15.670
A 3 B 3	0.098	1	0.098	0.156	Error	31.528	104	0.303	
Error	65.237	104	0.627		B13	1.198	1	1.198	4.162
B 4	1.972	1	1.972	4.444	A 1 B13	0.007	1	0.007	0.024
A 1 B 4	2.250	1	2.250	5.070	A 2 B13	0.021	1	0.021	0.074
A 2 B 4	1.859	1	1.859	4.188	A 3 B13	0.072	1	0.072	0.249
A 3 B 4	0.004	1	0.004	0.009	Error	29.942	104	0.288	
Error	46.154	104	0.444		B14	4.661	1	4.661	10.373
B 5	28.347	1	28.347	37.207	A 1 B14	0.500	1	0.500	1.113
A 1 B 5	0.667	1	0.667	0.875	A 2 B14	0.044	1	0.044	0.098
A 2 B 5	1.560	1	1.560	2.047	A 3 B14	1.093	1	1.093	2.431
A 3 B 5	0.326	1	0.326	0.427	Error	46.736	104	0.449	
Error	79.236	104	0.762		B15	0.710	1	0.710	2.269
B 6	17.452	1	17.452	31.892	A 1 B15	0.056	1	0.056	0.178
A 1 B 6	0.167	1	0.167	0.305	A 2 B15	0.672	1	0.672	2.147
A 2 B 6	0.018	1	0.018	0.034	A 3 B15	0.507	1	0.507	1.621
A 3 B 6	0.386	1	0.386	0.705	Error	32.526	104	0.313	
Error	56.912	104	0.547		B16	9.009	1	9.009	25.250
B 7	82.386	1	82.386	93.264	A 1 B16	0.222	1	0.222	0.623
A 1 B 7	0.107	1	0.107	0.121	A 2 B16	1.059	1	1.059	2.968
A 2 B 7	0.273	1	0.273	0.310	A 3 B16	3.088	1	3.088	8.655
A 3 B 7	0.065	1	0.065	0.074	Error	37.105	104	0.357	
Error	91.870	104	0.883		<hr/>				
B 8	0.873	1	0.873	1.948					
A 1 B 8	1.681	1	1.681	3.749					
A 2 B 8	0.242	1	0.242	0.541					
A 3 B 8	4.182	1	4.182	9.330					
Error	46.622	104	0.448						

APPENDIX 2.7

Responses to EPQ Questions 7 & 8

Additional musical factors, extramusical factors, and situations that influence prioritised integrative attending

Professionals		Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
1	Dynamics - when loud I can't hear much and sort of expect people to follow me. Therefore when soft I follow much more.			Loud dynamics; a difficult passage		Softer dynamics; easier passages; off beats
2	Stability of main pitch - if there is great variance then it is very difficult to hear clearly; Dynamics - if some instruments are loud then many others are difficult to hear.		Acoustical conditions (moderately influential); Comfort of lighting and seating (slightly influential)	Technical difficulty; loud volume levels; insecurity		Technical ease; well defined role (e.g., harmonic filler); moderate volume levels
3			If my part is very difficult or if I am sight-reading.	Sometimes technical difficulties; sometimes technical challenges created by knowing I am out of shape in terms of practice; boredom or tiredness, perhaps leading to lack of concentration (relevant to focusing less outside rather than more on part).	If things sound incorrect or the ensemble is bad.	
4	In jazz - type of parts others are playing and the 'feel' being created; Sound levels - sometimes sounds that one tries to hear are obliterated by loud sections.		How many repetitions you have played of the show. You are able to listen more and more beyond even what is relevant to you (almost for 'entertainment') when you are increasingly familiar with the score of the work.	When more nervous than normal; when playing a major solo with minimal accompaniment. A more exposed (i.e., solo) part; stress/nerves would play a role if the part was particularly exposed and difficult.	Sheer repetition of how many times part played; if part easy/under control; if a new player is in the section (either to notice differences in how they play or to assist them sometimes with cues).	
5				Lead line; extremely technically difficult passage; tiredness - fear of screwing up due to fatigue.	When own part has more of an accompanying role; when resting.	
6				Parts of extreme technical difficulty; important solo passages.	An unchallenging part that does not require a high level of concentration - also if interest is in the other part, I would be more attracted to listening to that.	
7	Musical input of individuals in the group, including myself.		Pretty girls in the audience.	When I have the leading solo part; in a loud tutti section where attention to subtlety would be unnoticed.	Accompanying line; colleagues' musical integrity; familiarity with the piece.	
8				When playing held notes of an accompanying instrument's interpretive gestures; In complex rhythmic sections it is better to ignore what is going on around you and just go with the beat.	Parts requiring sensitivity to other instrumentalists, i.e., accompanying situations.	
9				If you listen too closely to the other parts, risk lateness.	When I have an accompanying part; when another part has a rhythmically intricate line.	
10	Acoustics - in some venues it is almost impossible to physically hear some of the other parts.			When playing melody and attempting to follow the conductor's interpretive gestures; In complex nature, they have to coincide with whatever the melodic instrument is doing. When taking over a melody or joining in with a harmony note it is necessary to blend in with the established pitch...		

**Professionals
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
11			Technically demanding passages which do not rely heavily on other parts for ensemble (e.g., semiquaver passage with sustained accompaniment).	Playing an accompanimental part.
12	Dynamic balance		If it is extremely rhythmically complex and doesn't appear to have any relationship to anyone else's part; if I have a 'leading' part	When supporting other players; Playing an improvised section where I'm playing an ostinato and listening to the solo part and/or listening out for a cue.
13	Style (e.g., French; German; American; Acoustic of concert hall; English); Articulation required.		Difficult solo, exposed entry; physically demanding passage; leading passage; Never really; maybe sometimes in solo recital.	Chorales, inner voicings; knowing that my part was secondary in overall texture.
14				Basically any time when something different is going on around me to what I'm doing (e.g., metric driving accompaniment in strings supporting brass passage).
15			Technical demands of part; enjoyment of part; solo interest;	Ensemble sections of music [meaning one player per part]
16	Speed of own part - the faster it is, the harder it is to notice what is going on in other parts; Instrumentation - easier to notice other parts when they are played in a prominent timbre or tessitura.	Playing conditions: i.e., lighting; temperature; ability to see other players/conductor.	Soloing	Accompanying
17				
18			When faced with a challenging solo; when correcting intonation; when faced with a very difficult rhythmic figure.	When playing a simple accompanimental figure; when following (i.e., harmony part where rhythm is identical and my part is of harmonic rather than melodic importance).
19			Difficult licks (e.g., in 20th C music); solo part	If don't have much to play or if plain out bored.
20			Being nervous or tense; having a difficult part to play; complex music (thick texture).	Simple own part; difficult colleague's part; beautiful playing by a colleague; appalling playing by a colleague; accompanimental part.
21			Technical difficulty; extreme dynamics (fff or ppp); bad acoustics.	Long sustained notes; syncopation; medium dynamic range; easy technical requirements; when another parts plays something I know that I will play later.

**Professionals
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
22	Relationship with colleagues and conductor	Uncertainty with part; being singled out by conductor.		If intonation within a section of ensemble "not working".
23		Someone fucking up/making a horrid noise. In solo situations, concentrating on sound, rhythm etc; and intense concentration on shaping of phrases.		In simpler accompaniment situations, and in playing within a section led by someone else. Constant attention is then required to sound, rhythm, intonation, and balance.
24				

Amateurs

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
1	Relative location within ensemble (moderately influential)	If my part involves a solo or the major melodic line without supporting instruments.	Playing the same pedal note for fifty bars or more.	Playing the same pedal note for fifty bars or more.
2		If I have not prepared my part or am sight reading it	If the two parts don't seem to fit - try to listen to the other part(s) to see where they are or what beat they're playing.	If the two parts don't seem to fit - try to listen to the other part(s) to see where they are or what beat they're playing.
3	When playing very loudly, I tend to shut out the other parts, or play too loudly to hear them or concentrate on them effectively.	During extremely difficult passage... In music that I find boring I don't really concentrate on my own part, let alone anyone else's. After I make bad mistakes...	When parts aren't very demanding... When the other parts are played well or are appealing to me I sit back and enjoy them while I'm playing.	When parts aren't very demanding... When the other parts are played well or are appealing to me I sit back and enjoy them while I'm playing.
4		Method of conducting; my awareness of the sounds of other instruments and responsiveness to this.	Have solo; difficult part; have melodic role.	Other instrument has solo; If another instrument has melody/solo and something goes wrong and I play their part for them and leave mine.
5			When the conductor makes eye contact with my section of the ensemble	Mostly at the endings of pieces
6			When you have a solo part to play and the others just listen	When you are not the main melody and need to listen to follow the music.
7	Which instrument I'm playing.		Difficulty of my part (esp. notes - rather than rhythm); solo in my part.	Long notes in my part; rests.
8			Playing a solo or the melody causes me to pay more attention to what I am doing than any other part. Also if the rhythm or melody is complex I tend to lose focus on the whole piece.	When I am playing accompaniment parts, or when my part is very simple. However, I focus on how my part blends into the ensemble's music.
9	Instrumentation: easier to get intonation from bowed or reed instrument than from percussion, piano, etc.	Background noise; reverberation in room.	If mine is difficult to play or a solo. If the ensemble tuning is bad and I think that my intonation is the most reliable.	If my part is easy and unimportant; If I think I'm out of tune.
10	NB Factors that decrease ability to pay attention to other parts due to complexity in own part only apply until the playing/learning of the part is consolidated. (i.e., when playing is secure, your mind is freer to hear the other parts).		When playing a solo, nervousness decreases your ability to pay attention to other parts; sometimes tend not to pay as much attention to other parts when your part is melodically more "important".	Playing accompaniment to a soloist - sometimes might become too involved in listening to what the soloist is playing (lose track of counting long rests) - easily overcome by concentrating on counting (easy to block out distracting parts)
11	Personal enjoyment of music being played	Complex passage in own part, simple, but very important role (e.g., theme/melody) of own part; first few rehearsals of a new piece.	Simple own part (e.g., bassline); when I really enjoy the music being played; rehearsals/performances of a piece which is well known.	Simple own part (e.g., bassline); when I really enjoy the music being played; rehearsals/performances of a piece which is well known.

**Amateurs
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
12	Intonation - tuning whole ensemble relative to each other.	Energy level of conductor; mood.	If part is solo; if really hard technically.	If part is only accompanimental or if blending is really important.
13			When own part requires attention to rhythm and fingering. To some extent when concentration is needed on tuning, although this usually requires attention to other parts as well.	When I'm not playing or the passage is "simple" in that it is not complex in any way or heavily ornamented.
14			A difficult passage which I haven't yet mastered; when I have the tune and most others don't; a unison passage; when I'm tired (usually only during rehearsals).	When I have a 'dull' part (e.g., held chords); When my part is echoing (or leading) another in a phrase; when syncopation occurs or when my part alternates with another; during a concert when I'm more alert; during rests.
15	Difficulty of your part - i.e., if technically difficult, less likely to listen to the other parts and concentrate on your own.	Complexity of your own part in general.	Technical difficulty; melodic role.	Accompanimental role or part that is played with another instrument and has to be played simultaneously.
16			The less well you know your part, the harder it is to focus attention on others; The more influence another part has on yours (e.g., same tune in harmony), the easier it is to remember to focus on it, while playing your own.	Where the other part is playing a striking/beautiful melody; where the other part is a soloist.
17	Expression/dynamics and tempo - very influential.	Solo passages; when sight-reading; when playing the melody.	Solo passages; when sight-reading; when playing the melody.	When accompanying a soloist; When there are large sections of rests in the music.
18		When unfamiliar with the piece; when rhythm is complex; when there are many things to take note of, e.g., expressions and other dynamics.	When familiar with piece and want to analyse how my part can blend with the whole ensemble.	When familiar with piece and want to analyse how my part can blend with the whole ensemble.
19	Articulation and attack; dynamics; balance.	Difficulty of own part; if the other part is boring.	Difficulty of own part; if the other part is boring.	If the ensemble is insecure; if the other parts are doing something really interesting; if I am playing in unison or something strongly relating to another part.
20	Solo passages - listening to my own tuning	Solo passages - listening to my own tuning in relation to others.	Solo passages - listening to my own tuning in relation to others.	
21	Melodic role; very difficult passages (rhythmic and nondiatomic passages) mostly in C20th pieces; rhythmic pieces (fast tempo).	Accompanimental role; rhythmically simple passages (crotchets or "other simple notes"); slower pieces.	Accompanimental role; rhythmically simple passages (crotchets or "other simple notes"); slower pieces.	Part is known & ensemble is not following conductor - so concentration on conductor/ensemble required. Also concentrate on fitting in with the ensemble, and am therefore concentrating on my part and how it relates to the whole - the two are bound up....
22	Overall difficulty of passage	Difficult passages.		

**Amateurs
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
23		Difficulty of my part; difficult tempo.	when my part is easy.	
24		If the other parts are very simple, e.g., if I am playing piano there is usually more to concentrate on. However, my attention would ideally be equally divided.	If my part is very simple or if I am extremely familiar with it.	
25		If my part is technically/rhythmically difficult or difficult articulation; or if my part really simple and other parts "impossible" to follow (i.e., rhythmically, melodically very complicated and lots o parts at once).	Simple accompanimental part; if other parts have a solo with lots of rubato to match.	
26		When playing a solo part, especially when few others are playing; difficult transposition (although this goes away with familiarity with the part); difficult part (goes away with familiarity).	Playing a strictly accompanimental role; when the part is easy to play.	
27		When it is my turn to play.	When it is not my turn to perform.	
28		Difficult passage work; my section has the main orchestral melody; complex dynamics, e.g., alternating loud and soft, but at irregular intervals.	Where my section accompanies the melody; where loud brass section crowds out other perceptions; where not playing.	
29		Technically very demanding passages (e.g., complicated rhythms, extreme atonality, anxiety).	Frequent rests; When other parts play in unison with my part; when 'main tune' is being played by other instruments.	
30		When facing the complex portion of the music, and that you have to solo then portion. It is as you want yourself to outshine the solo.	For example you are to rest for 20 bars and then after that all you have to do is to pitch one demisemiquaver.	
31		When playing a new piece; when playing the main melody.	When the main melody is played by other parts; when playing long held notes; when there is answer and reply music (e.g., horn section plays a few bars, trumpet section will then play a few bars, alternating).	
32		When: tempo is fast; rhythmically demanding; frequent change of time signature.	Long break before I play.	

**Amateurs
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
33	The number of parts - i.e., it's much easier to listen to the other parts in a quintet (and correspondingly more important) than in a full blown concert band.	A sudden technically difficult passage; a 'free' solo; very loud sections - one tends to pay less attention when trying to play over someone; any physical distraction.	Deliberately written atonalities and dissonances; long rests; counterpoint or mimicry (etc) between parts; quiet passages; playing harmony lines.	
34	dynamics	When sight-reading; complicated rhythm in own part; fast tempo and "my technique is not up to it"; melody in own part.	Accompanimental role; if I cannot keep the right tempo; if my part is easy (if I don't listen to others it is likely that I will speed up); Sometimes if the rhythm in my part is difficult, I try to listen to others so that I can catch the main beats.	
35		When all parts are playing in unison; when sight-reading; the better I know a piece of music and the way the rest of the band performs, it becomes more automatic (the reaction to rest of the band) and therefore less attention is needed.	During a concert when you are trying to play everything perfectly in tune and in time.	
36	Mood of piece (i.e., slow & majestic or fast and lively); speed of your/other part(s); dynamics.	If own part a solo; own part difficult or not mastered; if relationship between pitch/rhythm of own part & other parts isn't regular (e.g., polyrhythm/dissonance).	Accompanimental role; cues from other parts; long rests; if our parts are tightly related; e.g., a canon; if I am unsure whether I am playing the correct pitch.	
37		When I have not mastered playing my part and have to concentrate closely on it; when my part is high in the register and the chance of me hitting the right note is only about 2/3.	When I have only repeated notes and other boring accompaniment to play; when there are rests and I have to come in at an odd spot.	
38	Where you sit in the orchestra influences who you can hear easily!	The more often you play a piece, the better you understand how the piece works together: in the beginning you just play your part; if the celli play the melody.	If you have played the piece often; if your part is the rhythmic fundament for others; if you like the melody others play; if you find yourself sitting next to (e.g.) the clarinet and hear his/her part for the first time fully; if cues notated in part.	
39		Knowledge of the piece being played vs sight-reading.	Sight-reading	Knowledge of the piece being played.
40	All factors would make it more difficult to pay attention to other parts and in most cases I would not even be aware of them (the factors).	Changing time or key signatures in my part. Sight-reading; playing a too difficult part.	My part has long even notes.	
41			If my part is easy but others in the group are struggling	

**Amateurs
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
42	The softer the dynamic that is required, the greater the concentration required (i.e., if a piece requires me to accompany at a 'p' dynamic level, I seem to feel exposed and have to concentrate on my part more.	If there are whizzing scale passages and then large jumps in intervals, it is quite hard to sight-read; if there are varying dynamics that require great concentration; if the time signature changes, particularly from 4/4 to 2/2.	If you have simple block chords and a number of rests in the bar; if my part is quite simple and the other parts are very virtuosic; if the other instrument(s) had a familiar melody to play.	
43	Relative competence of players. If one attends to a player of a higher standard, they will be "upgraded", whereas if one listens to a player of a lesser standard, they will be "put off".	The more one gets to know the music, the greater the attention to other parts. That is why you rehearse, mainly!	If you are, for instance, playing in a concerto and the soloist is an outstanding player, one certainly tends to devote a lot of attention to that player.	
44		When having trouble pitching the right note	When a piece is well rehearsed and well known.	
45		Difficulty of own part	Interest in other music - melody etc; familiarity with own part.	
46			If a particular player or section of the orchestra is playing a passage badly; if player or section is playing a melodic passage very competently, and my part is of a background nature, I will generally concentrate less on my instrument.	
47		If passage marked 'solo'; complex passages that are not entirely "comfortable"; slow moving, quiet passages where mine is one of only a few instruments, cause me to concentrate on my tone quality, pitch, and volume.		
48	Complicated rhythms; fugues.	Conductor; overall intonation of ensemble; complexity of part; rhythms involved; change in time signature.	Concertos; soloists featured.	
49			Wrong notes; melodic interest of parts; feeling tired.	
50				
51	If part has solo.		If the cello has very little to do, one can concentrate on tuning in to the others more finely with as good a note as one can make. One has time to listen with a bit more attention to the others.	
52	Sight-reading and early run-through of music.	Difficult rhythms - syncopation - other parts mesh (particularly in modern pieces where the whole is greater than the parts).		
53	Dynamics, particularly in other parts (very influential).	Venue. Rooms or halls with poor acoustics certainly affect ability to... playing and the other parts form the bulk of the accompaniment.	Have to be familiar enough with music to widen attention.	When playing a purely background role such as repetitive accompaniment; when the soloist is playing and the other parts form the bulk of the accompaniment.

Improvisers

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
1	Cleanness of perception and intent.		Extremely technically difficult passages. Not being comfortable with my part.	Playing a funk or Latin-funk feel. Other parts solo; being comfortable with my part.
2				
3			Technically difficult part; some odd times and rhythmic complexity in general; large ensembles (improvising) seem to lead to sensory overload; i.e., withdraw into my part.	Clearly supportive role (e.g., trio with singer); listening for inspiration within the group.
4	Volume of the relative parts; position I take in playing environment; sound I am obtaining - if my sound is unsatisfactory, it can detract from my feeling and listening in the ensemble.	Familiarity with the music being played.	Sight reading a piece with no experience of the music; trying to solo or walk under complex and unfamiliar changes.	Playing under a soloist; interactive improvisation.
5			When someone is struggling.	
6			When I'm very nervous or feeling self-conscious and I tend to be self-critical; when I'm trying extra hard to please either other band members or the audience.	When key members of the band (i.e., those with roles that my part can't exist without) are incompetent; when my role is essentially a supportive one; when I'm relaxed, in a good mood and feeling confident.
7		Proximity between ensemble members; acoustics of performance/rehearsal space.	When first learning a piece of music and I am not very familiar with it; when I cannot hear the other parts (bad sound system or acoustic arrangement).	Playing a more accompanimental role than a melodic one; when having trouble pitching (both viola and voice).
8	Piece storyline or general concept.	Atmospheric conditions; group state of mind.	When either learning a new part or the existing part is difficult and needs a lot of attention; when the part I have is the pivotal of major centre piece.	When other parts are the major focus; Larger musical or other distractions cause either momentary or extended loss of focus.
9	Dynamics; words; timbres	What's going on outside ensemble (e.g., audience response - bad vibe with management of venue, etc.)	When someone else in the ensemble is not confident of their own part; when there is something really loud happening in or outside the band and I can't hear myself; when I'm improvising and want the band to come along with me.	When someone else is improvising, when we haven't rehearsed and have to communicate the form constantly; when the tune doesn't hold together rhythmically; when extremely confident of my own part and just want to listen as I sing.
10			Any situation where I have to think a lot about one or more musical factors, e.g., rhythm or harmony (that I am having difficulty with); a situation I perceive to be 'not working'	A musical situation that stimulates that stimulates me; If I'm lost rhythmically or harmonically in the music.
11	The nature of influence is highly subjective, but the 'personal interpretation of music' is highly influential.	Commitment to the 'musical factors' can influence virtually any other interactive factors - environmental, internal, random events - to become influential.	Playing in ensemble in which I absolutely detest the ensemble's music; being entirely self-conscious.	Should I be intoxicated by some particularly excellent instrumentalist.

Improvisers (cont.)

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
12			Melodically difficult parts; sight reading.	Rhythmically complex ensemble parts; fluency in my own part.
13	The degree to which others are listening - if I can hear that a performer is listening and their part makes sense, then it is easier for me to hear.	Personal differences in the group.	Where I am soloing and the other players are in an accompanimental role, not really attempting to interact.	Where I hear another player playing badly. When I hear another player playing really well, or something that grabs my interest.
14			Sight reading; difficult passages; fast tempi; groove falling apart on my behalf.	Problem with others equipment; group dynamics losing focus; loss of form.
15			When my part is particularly demanding (e.g., reading-wise; complex chord changes). This decreases my ability to extend my listening outward.	When I feel comfortable or confident with my own playing I can listen more.
16			When trying out something new.	When a new or admired player joins the group - the ensemble may play a tune differently.
17			When I'm actually soloing - more focus on my part; when comping behind somebody else.	Drum solo - I focus on their part - counting form. Sometimes if someone is really doing something inspiring I will focus on listening to them, maybe if I'm not happy about how the ensemble is.
18	Environment in which music is performed, distractions therein.		If my part is particularly technically difficult and/or I haven't quite got it down; Outdoor performances - it can be hard to hear all but your own part; certain forms of improvising/ melodies i.e., lead parts where I don't listen actively to other parts.	Most choral and acapella ensembles require more listening to other parts; democratic group improvisations where no-one leads.
19			If I'm crook; if I'm unhappy with my sound; if I'm unhappy with my stage presence and positioning; if a fellow ensemble member gives the impression they're concerned with my contribution.	If I'm at ease with my contribution; if a fellow ensemble player isn't cutting it.
20	dynamic level of group members.		Often if a drummer can't play in time, or a bass player can't swing, I must admit I'll tend to tune out to others and just listen to myself.	When backing others' improvisations (accompaniment) I try to zone in more on the soloist, and the drummer.
21			Parts that are technically difficult; parts that I have to sightread.	Music that is pure improvisation; parts that I know so well that I don't have to think about because I know them so well.

Improvisers (cont.)

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
22			If own part technically difficult; In some improvisational situations I have chosen deliberately to ignore the rest of the band to create a certain effect. Also in some bands you know things are going to happen at a certain point - no need to focus. If I can't hear my part. If I don't know it.	The majority of improvisational situations I'm involved with, I concentrate a lot on the others in the group. Other times when I'm comfortable with my own part or it's a free improvisation we are doing which needs a lot of listening. Group improvisations.
23				If I know it without having to think about it; if I need a cue from another player; listening to harmony for reference over which to solo.
24	Familiarity with other players and the music being played.			Other soloist making statements you must respond to.
25		Friendships; background; trust; mood; environment; hunger.	If an admired player is listening (should not happen, but it does; when soloing. A difficult piece of music; dickheads in the audience; a new member of band sitting in!	Stuck for ideas; listening for a climax from rhythm section.
26		The music tells you what to play.	In situations where the other musicians may be playing 'free', and are relying on you to keep time.	In situations where you're being conducted either by cues or by a conductor.
27				
28	Dynamics are very influential.		If there is a lack of communication amongst the ensemble, I tend to retreat into my own world; If I am not familiar with a song or if I'm having trouble playing my part; a lack of energy - I focus on my part to try and bring some life to the sound.	If there is somebody in the ensemble who is playing well; When I play texturally.
29	Size of ensemble/number of different parts; level of dissonance.	Extra distractions (auditory or visual).	My solo; a very difficult part; aspects of other parts that clash with mine rhythmically or harmonically or create confusion in my mind; if the group is not sounding together.	Someone else's solo; a very easy part; a very clear, unified or easily comprehensive overall sound.
30			If the thing is my own composition; quiet, subtle passages.	E.g., drummer and bass not locking; if I am doing 'call and answer' with another musician.
31	Humour - mood of music; intent of composer.		Notation vs improvisation (esp. complex); sight-reading; auditioning.	Playing familiar music; playing with musicians I know well and like; playing with very good musicians.
32			When soloing; when playing with a small group.	When I'm confident of my part; when playing with less experienced musicians.

**Improvisers
(cont.)**

Questionnaire No.	Additional musical factors	Additional extramusical factors	More attention to own part	More attention to other parts
33			Technically difficult passages.	Parts I play a lot; simple lines.
34	If soloing or supporting roles communication is greater and in free improvisation of group.		Sometimes of playing a melody when is constant not requiring alteration - even then concentration and vibe of group still there.	When others are soloing.
35		confidence	know my part inside-out; drop in volume on the part of others; instrumental support of my part; lighting; being relaxed.	Loud playing - drowning me out; rhythmic ambiguity - i.e., getting lost!

APPENDIX 2.8

Responses to EPQ Question 9a - 9e

Automaticity of prioritised integrative attending

A frequency score (in response to Question 9a, asking how often the respondent must concentrate upon prioritised integrative attending) of 1 = ‘always’, 2 = ‘sometimes’, and 3 = ‘never’. See the copy of the EPQ in Appendix 2.1 for details of questions in 9b, 9c, 9d (1 = ‘yes’, 0 = ‘no’), and 9e.

Professionals	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
1	2	What happened in rehearsals	When everyone has exactly the same rhythm with slight fluctuations in tempo. However, generally, it doesn't require concentration but awareness of what is happening I believe is based on instinct.		
2	1	There has to be reference and relationship. Check for: rhythmic pulse; pitch stability; intonation relativity; dynamic relativity; articulation similarity; beginnings and endings of notes in relation to others.		0 I don't think about it really, I just do it. Thinking about whether you ought to be doing it would be disastrous. 1 Maybe when I was more of a beginner, but generally I find I don't give it much thought. (Perhaps when occasionally playing less familiar instruments).	
3	3				
4	3				
5	1	Generally have to play with principal and other members of section. Ideas about volume, articulation, phrasing, and breathing come from the principal, so it is vital to listen and react as immediately as possible.		Sometimes it's not advantageous to listen to both parts - e.g., high rhythmic complexity is sometimes easier to detach and concentrate on your part, as long as there are certain 'meeting points', where you can check that the ensemble is still together.	
6	2	Matching pitch and attack; Where my part fits into the texture and balance of the ensemble; Blending of sound.			
7	1	Try to think of as playing one instrument - esp. chamber music. Even when playing solo line, must fit within context of framework - rhythm, intonation, etc.			

Professionals (cont.)		Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN	
8	1	Intonation, rhythm/ensemble, balance; Musical expression/needs of the music at that time.				
9	2	Making sure the 'blend' is as best as it can be; thinking about how loud/soft I should be in relation to other parts; tuning; what sort of 'one colour' would best blend and suit the particular section of the music.	It is really natural thing - I don't have to concentrate on doing it. However, in a particularly exposed and/or rhythmically difficult section, extra concentration on the other parts may be required.			
10	1	It isn't a case of actively thinking or analysing. It's more a conscious 'sensing' of what the other players are about to do. This is particularly true when you have formed a rapport with other players over a number of years.				
11	2	Usually think about backing off with volume in order to hear other parts (particularly for intonation).	Exposed passages for intonation - usually soft woodwind passages; not required in easy unison passages (usually loud).			
12	1	Is the ensemble working well together?				
13	1	Rhythmic integrity; intonation; blend of sound; note lengths and degree of attack.	Rhythmic integrity; intonation; blend of sound; note lengths and degree of attack.			
14	1	Placement of my part in relation to other parts.	Placement of my part in relation to other parts.			
15	1	Fitting in harmonically; melodically; tonally; technically.	Fitting in harmonically; melodically; tonally; technically.			
16	2	Starting and finishing together; playing in a similar style/dynamic; intonation pitch and rhythm	Starting and finishing together; playing in a similar style/dynamic; intonation pitch and rhythm	Less concentration required when parts highly similar; more concentration for different parts or canons.		
17	1	How the voices fit in together rhythmically and melodically.	How the voices fit in together rhythmically and melodically.			
18	2			Concentrate when own part is of equal rhythmic importance to others. Less concentration required when playing melody and accompaniment is basic.		
19	1	Listening to rhythm and intonation.	Listening to rhythm and intonation.			

Professionals (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
20	2	as above	as above		
21	1	To make the sounds and rhythms blend as a whole.			
22	1	What others are playing with regard to articulation and tuning.			
23	1	Creating and maintaining a valid and coherent musical statement.			
24	1	It is practically impossible to have absolute dual concentration. When concentrating on my part I have to have an awareness of what's going on around me... (like a radar).			

Amateurs	Q9a Questionnaire No.	Q9b FREQUENCY	THOUGHTS	Q9c CONCENTRATE	Q9d PAST EXP	Q9e WHEN
1	2	Trying to match rhythm (I usually find that paying attention to other parts is unconscious).	Accompanying soloists requires concentration.			
2	2	Listening to see if the parts fit together musically.	If my part has a large number of rests - listening to other part(s). Concentration not required if the piece is very familiar and well rehearsed.			
3	2	Keeping in time... complementing their melody/playing.	Difficult pieces; slow pieces (so that they are kept in time); very metric pieces (e.g., marches) require less concentration.			
4	1	How they sound together - rhythm, dynamics, style, being at the right place!!!	Being at the end of a piece of music.			
5	2	Tuning; harmonisation of tones.	Being at the end of a piece of music.			
6	2	Comparing my part with the other parts to confirm where I am in the musical score.	When resting and when very familiar with the piece of music.			
7	1	I don't <u>try</u> to pay attention to my part - it just happens - but I purposefully have to concentrate to listen to other parts.	It's not so much concentration that's required, as what I happen to be doing.			
8	2	How my part blends in to become one with the rest of the ensemble. As an oboist, I also concentrate on my tone and pitch, as these are easily lost.	If I'm playing the melody with other instruments, then I listen to them and the piece as a whole. However, if it's a tricky piece, or I'm playing a solo, I may focus more on me.			
9	1	intonation; timing; phrasing.	Just sometimes have to remind yourself to not get carried away with your own part and listen to the others.	Required when your part is dominant and should be heard over the others;		
10	2			Not required when playing accompanimental parts - or slower moving parts.		

Amateurs (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
11	2	How the various other parts fit in with mine, and the piece as a whole; aural cue from other parts.	Required when sight reading difficult part.		
12	2	Blending; intonation; trying to make the whole orchestra sound like one instrument.			
13	2	Tuning; synchronisation; timing - when a passage flows through different parts but should sound as if one person is playing it.	Concentration required when playing a passage that others are playing, or part of.		
14	2	How my part "fits in" with the other part(s) - I try to pick out key phrases etc. played by other parts and relate them to my own.	Concentration required; difficult rhythmic passages, particularly when alternating with other parts; call-and-echo phrases; complex pieces of music. Concentration not required: if music is easy; ensemble in unison; simple own part that fits easily.		
15	2	Listening to the different roles of the instruments, the mixture of timbres, and the way they blend together.	When many on same part, less attention applied to listening to others and to just playing as a group on one part, when the only person on a part - much more attention applied to listening.		
16	1	It's often in the context of getting cues for your own entries. Also, just to keep with the rhythm and flow of the music. NB It's best to always concentrate on the ensemble, never just your own part, but this is also a bit of a Utopian ideal.	NB It's best to always concentrate on the ensemble, never just your own part, but this is also a bit of a Utopian ideal.		
17	2	The rhythm and tempo of other parts as a whole and the atmosphere the music creates with the combination of instruments.	Concentration required when other part playing similar notes etc to your own, or when you "echo" another part. Not required because it becomes an automatic process to play your own music and listen to other parts as if they are in the background.		

Amateurs (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
18	2	Listening to other people's parts as a cue to come in; whether I'm not too loud or too soft when blending in with other parts; whether I'm playing correctly rhythmically because percussion further enhances the rhythms of the piece.	Such concentration is required all the time, but I can't concentrate all the time. It's difficult!		
19	2	When they are difficult to coordinate or I what to hear how the parts are being phrased.	Playing parts that are in unison or involve some relations, e.g., question and answer; tempo changes; when it is insecure; [not] when it is well rehearsed; not when the parts relate but are not hard.		
20	1	Tuning & intonation are due to conscious attention. Balance, rhythmic patterns, keeping in time etc tend to be subconscious. Also, different places in the band (i.e., instrument played) lead to hearing things differently. [affected by register & location]	If I don't pay attention to other parts, it usually means that I am playing too loud, so I reduce my volume. I usually don't have a problem with my part, but sometimes i say to myself "concentrate".	Rhythm, dynamic, tempo, intonation, articulation.	At difficult tempos.
21	1			Tempo	The overall texture and dynamic of a piece. Hopefully how they are working.
22	1				Getting my part right, matching timing with other parts, intonation, articulation, balance.
23	2				Intonation, rhythm, musicality, and dynamics.
24	1				I don't concentrate on other parts when my part is especially difficult or my part is quite loud.
25	1				Don't need to concentrate when not playing
26	2				
27	2				

Amateurs (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
28	1	If a work is unfamiliar, I must decide what to listen for when not focusing on my part; the problem is to adjust my attention appropriately as the music moves along.			
29	2	Volume in relation to other parts; rhythm & tempo (i.e., keeping the tempo); intonation.	Not required' when texture of music is very dense and volume of <i>whole group</i> is loud		
30	1	To enjoy the music when they are playing their parts, and make them enjoy your parts of playing; when you share the melody with others, and when you are playing the rhythm, you have to 'measure' if you had the 'balance' with other parts.			
31	2	Does the sound merge nicely or does it clash?	When the part being played is quite exposed (i.e., only a few sections are playing it) then I need to be more aware of other parts.		
32	2	The expression; to be on the 'beat' with other instruments.	Not fixed.		
33	2	The overall sound; I try to keep an idea of what the whole should sound like and fit my part into it.	Playing in a small ensemble requires most continuous attention, except for where you can trust everyone to go with you. In general, I believe it's good to always listen to the whole, just whether I do or not is another matter.		
34	1	Balance and tuning.			
35	2	Tuning, and in slow sections, the rhythm.	When playing slowly such that tuning and rhythm inaccuracies become more obvious. Concentration isn't really required when other parts have the melody or are playing louder than you because it's very obvious what they're doing ...		

Amateurs (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
36	1	How my part fits into the piece & therefore how loud to play; What the mood of the piece is & therefore what style to play in (e.g., syncopated/accented etc); tempo.			
37	2	I have the other people's parts playing over in my head, either in unison or slightly before they play it; with this mental tune, I mentally accent certain notes in their part that make my part easier to fit in.	The need for concentration depends on how 'rhythmically nicely' your part fits in with the other parts. It also depends on how much your part can be heard in the audience (i.e., can you afford to make mistakes as they won't be heard?).		
38	2	I try to follow their line, to remember when, e.g., the flute starts to play.	I think it's always required even if you play the melody! But it doesn't mean - unfortunately - that I do it always.		
39	1	Timing: harmony			
40	1	The overall musicality of the piece.			
41	1	How my part 'fits' with others. I usually play 2nd Vln and the part is often similar to the viola or the 1st Vln - I listen for these parts -usually not very successfully!	In the former, I try once in a bar to follow the soloist. In the latter, I try to make the accompaniest follow me. In both situations, eye contact is very important.		
42	2	It depends on whether I am accompanying or playing a melody. In the former, I try once in a bar to follow the soloist. In the latter, I try to make the accompaniest follow me. In both situations, eye contact is very important.	When we both have rests in the first two beats of the bar and then a quaver to play, synchronising then becomes very hard. Therefore you must have to watch the movements of the other person(s) and be ready at any time; required in antiphonal responses.		
43	1	Assuming 'listening to music' is THINKING, then one 'listens' to the music as a whole as well as playing. But this is often difficult because of acoustics and also where a player is situated in relation to the group.			

Amateurs (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
44	2	Trying to get the volume balance correct; making sure my part fits in properly; enjoyment of the music.	Must listen carefully if rhythm is difficult; Not so much concentration required if the music is well-known and not too complex.		
45	1	rhythmic relationship			
46	2	I try to listen to the other parts, but if mine is difficult I have to concentrate on that. But it's important to TRY to listen to other parts.	When the music is difficult you have to listen to the other parts closely to fit in.		
47	1	How well does my output (volume, timbre, tempo) fit with what I'm hearing? Am I drowning out the melody? Is someone drowning me out? How would this whole thing sound to an audience?	Difficult passages and rhythms in own part.		
48	1	Time, harmony, and volume.			
49	2	Listening to the melody and keeping the beat.			
50	3				
51	1	I don't specifically think about one thing. One's mind is busy - pitch, pace, fingers... The cello part has to complement the other parts and tune in so as its part is lively and not 'dead'.			
52	2	How the hell will I play these notes?!?	Sometimes not required when cello is just plodding along playing repetitive notes and runs.		
53	2	Entries and dynamics.	Concentration is particularly necessary when various parts have different entries or rhythms; Simple repetitive accompaniment does not require the same degree of concentration.		

Improvisers	Q9a Questionnaire No.	Q9b FREQUENCY	Q9c THOUGHTS	Q9d CONCENTRATE	Q9e PAST EXP	Q9e WHEN
1	3		I try to focus on other parts first.		0	
2	1				0	
3	3					
4	1		Attempting to complement the soloist or the tune; keeping in time/sympathy with rhythm section; playing with pianists who vary and extend harmony.			
5	2		I instantly try to relax and use my ears to the best of their ability to deal with whatever situation.	Concentration only required whilst accompanying someone.		
6	2		Listen; focus	When I'm not focused or am tired, I have to force myself to concentrate on it. Otherwise on a good night it just happens naturally.		
7	1		Their relation to each other, therefore indicating an appropriate approach to my own part. Whether I am in the right place (or whether they are).	The general piece and its existing parts. All have their important roles and influence can be drawn from all.	Is required: acapella singing - for pitch, etc in bands who don't rehearse much in complicated pieces; almost always, any ensemble actually. Don't require: when improvising and completely absorbed in my own solo, although probably listen subconsciously.	
8	1			Is it gelling? (rhythmically?) Are we working dynamically? Am I sharp or flat? Are they listening to me? Is our sound balanced out front in the audience? Are we projecting our feel to the audience?	All situations require it but often paying attention to other parts comes naturally and doesn't require specific concentration.	
9	2			I simply let the information (sound) in and think about how to react to what I'm hearing.	When you play in the public service, parts are far too easy or boring.	
10	2			Integrating; relaxing; awareness.		
11	2					

Improvisers (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
12	2	About the blending/complementing of parts, of sharing a rhythmical and emotional attitude.	The concentration need not always be conscious, but more thought may be needed in difficult or bland (or over familiar) situations.		
13	2	Time; intonation; compatibility between what I am playing and others; dynamics; balance; place in the form; substitutions; variations in rhythm.	Not required when everything flowing - when the improvisation process is good and everything is OK - that indefinable quality to a good ensemble performance.		
14	1	Time (rhythm); harmonic structure; dynamics.			
15	1	Rhythm, sense of time - the group locking-in together; what to play behind a soloist - texturally, dynamic-wise.			
16	1	I just tune in to everyone and take what I can from everyone in the band (if you are drunk on a gig this is a very good time to really pay attention).			
17	1	Thinking about what each individual is doing and how that affects the band as a whole. So I'm thinking about what I can do to make the sound (piece) better.			
18	2	Listening to achieve correct balance and tuning.	Singing atonal music or very close harmonies where you have to maintain a very precise relationship to the other elements of the music; most often concentration isn't required because I tend to hear my part and other parts as a whole.		
19	2	Energy of ensemble.	Situations involving a less than favourable audience reaction/participation, always remembering the context in which I am performing.		

Improvisers (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
20	2	Voice leading chords, in a way that enhances the melody, or solo.	Almost all situations require concentration on all parts; I guess solo performance won't require concentration on other parts.		
21	3			0	
22	2	The key or harmony of the group; catching rhythms and accents etc.	When you have to blend with others, especially when playing challenging parts; occasions when it is not required are rare but probably when the music is more straightforward and simple.		
23	1	Listening.			
24	1	Both parts.			
25	1	Am I supporting this person the way they would like? Am I providing spark as inspiration to that soloist to possibly inspire them to greater heights.			
26	1	I try not to think, but only observe and respond.			
27	1	How can I enhance or help the soloists or, am I laying it down good enough so that everyone is comfortable.			
28	2	Rhythm; balance; groove.	When I am most familiar with a piece of music; when things aren't working.		
29	2	Rhythmic and intervallic (pitch) relationship between my part and others, or other times I just let the general sound flow over me whilst being aware of my contribution.	When there is confusion in the group, or the part is very hard and I must listen for a cue; otherwise when things are going well the shifts of attention happen naturally.		
30	2	Trying to see each part as a thread in a musical blanket.	Concentration is required when the ensemble is not playing well together.		
31	3			1 When in a class I am specifically asked to listen.	

Improvisers (cont.)	Q9a	Q9b	Q9c	Q9d	Q9e
Questionnaire No.	FREQUENCY	THOUGHTS	CONCENTRATE	PAST EXP	WHEN
32	1	Listening to whole sound - me and others. Groove; taste.			
33	1				
34	1	To try to communicate and create sound together to listen to others and be definite in my ideas.			
35	1	How I can enhance the overall sound; The range compared to others; rhythm; form; chord voicings; comping.			

APPENDIX 2.9

EPQ development of prioritised integrative attending (Question 10) data and analysis

In response to Question 10a, 1 = ‘yes’ and 0 = ‘no’. In response to Question 10b, 1 = ‘specific practice’ and 2 = ‘ensemble playing generally’.

Professionals	Q10a	Q10b
Questionnaire No.	PRACTICE	SPECIFICITY
1	1	1
2	1	1
3	1	2
4	1	2
5	1	2
6	1	2
7	1	2
8	1	2
9	1	2
10	1	2
11	1	2
12	1	2
13	1	2
14	1	2
15	1	2
16	1	2
17	1	2
18	1	2
19	1	2
20	1	2
21	1	2
22	1	2
23	1	2
24	1	2

Amateurs	Q10a	Q10b
Questionnaire No.	PRACTICE	SPECIFICITY
1	1	2
2	1	2
3	1	1
4	1	2
5	1	2
6	1	2
7	1	2
8	1	2
9	1	2
10	1	1
11	1	2
12	1	2
13	1	2
14	1	2
15	1	2
16	1	2
17	1	2
18	1	2
19	1	2
20	1	2
21	1	2
22	1	2
23	1	2
24	1	2
25	1	2
26	1	2
27	1	1
28	1	2
29	1	2
30	1	2
31	1	2
32	1	2
33	1	2
34	1	2
35	1	2
36	1	2
37	1	2
38	1	1
39	1	2
40	1	1
41	1	2
42	1	2
43	1	2
44	1	2
45	1	1
46	1	2
47	1	2
48	1	2
49	1	2
50	1	2
51	1	2
52	1	2
53	1	2

Improvisers	Q10a	Q10b
Questionnaire No.	PRACTICE	SPECIFICITY
1	1	2
2	1	2
3	1	2
4	1	2
5	1	2
6	1	2
7	1	2
8	1	2
9	1	1
10	1	2
11	1	2
12	1	1
13	1	1
14	1	2
15	1	2
16	1	2
17	1	2
18	1	2
19	1	2
20	1	2
21	1	2
22	1	2
23	0	
24	1	2
25	1	2
26	1	2
27	1	2
28	1	2
29	1	2
30	1	2
31	1	2
32	1	2
33	1	1
34	1	2
35	1	1

Chi Square analyses of development of PIA data

Effect of status (professional, amateur, improviser) and specificity of practice (general, specific)

Observed and Expected (in parentheses) frequencies for each category

	General	Specific	
Professionals	22 (21.19)	2 (2.81)	24
Amateurs	47 (46.79)	6 (6.21)	53
Improvisers	29 (30.02)	5 (3.98)	34
	98	13	111

Using the formula

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

$$\chi^2 = 0.56$$

$$(\chi^2_{(0.05)} = 5.99)$$

Effect of specificity of practice (general, specific) only - i.e., collapsed across status

Observed and Expected (in parentheses) frequencies for each category

General	Specific	
22 (21.19)	2 (2.81)	24 (24)

Using the formula

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

$$\chi^2 = 65.1$$

$$(\chi^2_{(0.05)} = 3.84)$$

APPENDIX 2.10

Practical implications of EPQ findings

The emergence of rhythmic factors as important to prioritised integrative attending implicates meter as a potential mechanism underlying ensemble performance. This suggests that the process of metric framework generation deserves emphasis in techniques aiming to improve prioritised integrative attending skills. More specifically, discovery and use of the most appropriate, or best fitting, metric framework (which is not necessarily concordant with the notated meter - Steedman, 1977) should be encouraged. This strategy is consistent with rehearsal technique 8 in Table 2.1 (in Chapter 2). The procedure of discovering best fitting metric frameworks is presumably assisted by familiarity with a stylistic genre or a particular piece within a genre. In a fashion consistent with Jones' (1990) conception of expectancy, the degree of such familiarity may affect both the refinement, and the accessibility of the expectancy schemes underlying appropriate metric frameworks. In music characterised by frequent changes of meter, familiarity with the piece in question is possibly more germane than familiarity with the genre. Perhaps this indicates that frequent meter changes can not be reconciled by automatically generated "schematic expectancies" (Bharucha, 1987) that purportedly support metric frameworks. Rather, more knowledge-based, or "veridical expectancies", whose generation involves the deliberate retrieval of stored information about specific pieces (Bharucha, 1987; DeWitt & Samuel, 1990), may be required to anticipate the variable beat groupings. This may account for musicians' claims that such circumstances typically discourage prioritised integrative attending.

The relative importance of textural density and textural role implies that these factors also deserve to be addressed by rehearsal techniques and experimental research. First, musicians' comments about the effects of textural density indicate that, when factors contributing to the independence of parts (e.g., rhythm; balance; tessitura) are held constant, prioritised integrative attending is facilitated by reducing the size of the ensemble. Although this is consistent with rehearsal technique 4 (described in Table 2.1), the task remains for experimental research to disentangle the numerous possible explanations of this effect (see Table 2.1). Furthermore, it might be fruitful to elaborate upon rehearsal technique 4 by, after initially reducing the size of the ensemble, introducing systematic increases in ensemble

size. Alternatively, it may be advisable for an individual to participate in a number of ensembles that vary in size. Second, responses relating to the effects of textural role indicate that performing an accompanimental, rather than a lead role, is generally more conducive to prioritised integrative attending. Performing an accompanimental role is especially beneficial if the lead performer is recognised to be highly competent: many musicians commented that outstanding ensemble members attract their attention. This suggests that a mentoring scheme, where professional musicians are invited to participate in student ensembles, may be an effective method for improving prioritised integrative attending skills.

Other aspects of musicians' responses to EPQ items highlight some more general concerns relevant to realising the goals of ensemble performance. For instance, amateurs (most of whom were adults with a long history of ensemble experience) were found to recognise the importance of integrative attending to a lesser extent than professionals and improvisers. To remedy this, a component of an educational strategy aiming to improve ensemble performance could involve explaining to student musicians why prioritised integrative attending is important. These explanations should emphasise its impact upon specific goals, especially rhythmic cohesion. Perhaps rehearsal techniques that involve improvisation-based exercises may be beneficial in this regard given that, according to jazz musicians' responses, the unique demands associated with improvised, or unscripted, performance encourage prioritised integrative attending (also see Pressing, 1988).

Finally, comments regarding extramusical factors provide information about characteristics of the individual (e.g., level of anxiety), and the ensemble environment (e.g., uncomfortable performance conditions) that influence prioritised integrative attending. These comments suggest that training in techniques aimed at reducing anxiety (e.g., Fogle, 1982; Kendrick, Craig, Lawson, & Davidson, 1982; Salmon & Meyer, 1992), in addition to ensuring that seating, lighting, and temperature conditions are as comfortable as possible, may be beneficial. Furthermore, claims that personal relationships between ensemble members impact upon ability to engage in prioritised integrative attending, invite the examination of interactions within musical ensembles from a social psychological perspective (e.g., Davidson, 1997; see Hargreaves & North, 1997).

APPENDIX 4.1

Musicality Questionnaire

Instructions

- (i) Please complete Part A and Part B of this questionnaire
- (ii) Answer questions in the shaded spaces provided
- (iii) Leave space blank if ‘not applicable’

All responses will be kept strictly confidential

PART A: Personal details

1. Surname:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

2. Given names:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

3. Gender: (circle one)

FEMALE	MALE
--------	------

4. Age:

--

years

5. Do you have normal hearing?

YES	NO
-----	----

If “NO” - How is your hearing impaired?

--

PART B: Musical experience

6. Do you play, or did you ever play a musical instrument (include voice)?

YES	NO
-----	----

If “NO” - You do not have to read further. Thank you.

If “YES” - What instrument(s), and for how many years?

Main instrument	<input type="text"/>	years <input type="text"/>
Second instrument	<input type="text"/>	years <input type="text"/>

7. Do you still play:

a) your main instrument?	YES	NO
	YES	NO

If “YES” - Approximately how many hours per week do you play:

a) your main instrument?	<input type="text"/> hours
b) your second instrument?	<input type="text"/> hours

If “NO” -

(i) How long since you have played:

a) your main instrument?	<input type="text"/> years
b) your second instrument?	<input type="text"/> years

(ii) Approximately how many hours per week did you play:

a) your main instrument?	<input type="text"/> hours
b) your second instrument?	<input type="text"/> hours

8. How many years of formal training (e.g., private lessons) have you had in:

a) your main instrument?

	years
	years
	years

b) your second instrument?

c) music theory?

9. Have you ever played in a musical group or ensemble?

YES	NO
-----	----

If “YES” -**(i) What types of ensembles (e.g., pop group; amateur symphony orchestra), and on what instruments?**

Type of ensemble

Instrument

(ii) For how many years in total have you played in ensembles?

	years
--	-------

(iii) If you no longer play in ensembles, for how long have you not played in one?

	years
--	-------

APPENDIX 4.2

36 Rhythm Sets

RHYTHM SET 1

Quadruple integrant patterns

Target:	x-----xx-----x-x-----x---x--xx
Compl:	-----oooooo----o-oooo-oo-----o--o-----
Distracter(x):	x-----xx-----x-x-----x---x--xx
Compl:	-----oooooo----o-oooo-o-----o--o--o-----
Distracter(y):	x-----xx-----x-x-----x---x--xx
Compl:	-----oooo-oo----o-oooo-oo-----o--o-----
Distracter(z):	x-----xx-----x-x-----x---x--xx
Compl:	-----oooo-oo----o-oooo-o-----o--o-----

Triple integrant patterns

Target:	x-----xx-----x-x-----x-----x--xx
Compl:	-----oo-oooo----o--o-o-oo-o-----oo-----
Distracter(x):	x-----xx-----x-x-----x-----x--xx
Compl:	-----oo-oooo----ooo-oo-o-----oo-----
Distracter(y):	x-----xx-----x-x-----x-----x--xx
Compl:	-----oooooo----o--o-o-oo-o-----oo-----
Distracter(z):	x-----xx-----x-x-----x-----x--xx
Compl:	-----oooooo----ooo-oo-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x-x-----x-----x--xx
Compl:	-----oooo-oo----o-ooo--o-o-o-----o-----
Distracter(x):	x-----xx-----x-x-----x-----x--xx
Compl:	-----oooo-oo----o-o-o-oo-o-----o-----
Distracter(y):	x-----xx-----x-x-----x-----x--xx
Compl:	-----oo-oooo----o-ooo--o-o-o-----o-----
Distracter(z):	x-----xx-----x-x-----x-----x--xx
Compl:	-----oo-oooo----o-o-o-oo-o-----o-----

Aggregate patterns

Target:	x-----xxxxxxxxx---x-xxxx-xx-x---x--xx---x--xx
Distracter(x):	x-----xxxxxxxxx---x--xx---x--xx---x-xxxx-xx-x-x
Distracter(y):	x-xxxx-xx-x-x---x-----xxxxxxxxx---x--xx---x--xx
Distracter(z):	x---x--xx---x--xx---x-xxxx-xx-x-x-----xxxxxxxxx

RHYTHM SET 2

Quadruple integrant patterns

Target:	x-----xx-----x--xx-----x-----x-x
Compl:	-----oooooo---o-----ooooooo---oo-----o-----o
Distracter(x):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oooooo---o-----oooooo---o-----oo-----o-----o
Distracter(y):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oooo---oo---o-----ooooooo---oo-----o-----o
Distracter(z):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oooo---oo---o-----oooooo---oo-----o-----o

Triple integrant patterns

Target:	x-----xx-----x--xx-----x-----x-x
Compl:	-----oo---ooo---o---oo---ooooooo---oo-----o
Distracter(x):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oo---ooo---o---ooooooo---oo-----oo-----o
Distracter(y):	x-----xx-----x--xx-----x-----x-x
Compl:	-----ooo---o---oo---ooooooo---oo-----oo-----o
Distracter(z):	x-----xx-----x--xx-----x-----x-x
Compl:	-----ooo---o---oo---ooooooo---oo-----oo-----o

Nonmetrical integrant patterns

Target:	x-----xx-----x--xx-----x-----x-x
Compl:	-----oooo---oo---o---ooo---oo---ooooo---o-----o
Distracter(x):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oooo---oo---o---oo---ooooo---o-----o-----o
Distracter(y):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oo---ooo---o---ooo---oo---ooooo---o-----o-----o
Distracter(z):	x-----xx-----x--xx-----x-----x-x
Compl:	-----oo---ooo---o---oo---ooooo---o-----o-----o

Aggregate patterns

Target:	x-----xxxxxxxxx-x-----xxxxxxxxxxxxx---x--xx-----x-x
Distracter(x):	x-----xxxxxxxxx---x--xx-----x-x-x-----xxxxxxxxxxxxx
Distracter(y):	x-x-----xxxxxxxxxxxxx-----x-----xxxxxxxxxxxxx---x--xx-----x-x
Distracter(z):	x---x--xx-----x-x-x-----xxxxxxxxxxxxx-----xxxxxxxxxxxxx

RHYTHM SET 3

Quadruple integrant patterns

Target:	x-----x-x-----xx-----x--x--xx
Compl:	-----o-o-o-----oooooo--oo-----o--o-----
Distracter(x):	x-----x-x-----xx-----x--x--xx
Compl:	-----o-o-o-----oooooo--oo-----o--o-----
Distracter(y):	x-----x-x-----xx-----x--x--xx
Compl:	-----o-o-----o-----oooooo--oo-----o--o-----
Distracter(z):	x-----x-x-----xx-----x--x--xx
Compl:	-----o-o-----o-----oooooo--oo-----o--o-----

Triple integrant patterns

Target:	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-----o-o-----oo--oo--oooo-----oo-----
Distracter(x):	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-----o-o-----oooo--oooo-----oo-----
Distracter(y):	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-o-o-----oo--oo--oooo-----oo-----
Distracter(z):	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-o-o-----oooo--oooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-o-----o-----ooooo--oooo-----o--o-----
Distracter(x):	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-o-----o-----ooo--oo--oooo-----o--o-----
Distracter(y):	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-----o-o-----ooooo--oooo-----o--o-----
Distracter(z):	x-----x-x-----xx-----x-----x--xx
Compl:	-----o-----o-o-----ooo--oo--oooo-----o--o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-----xxxxxxxx-xxxx---x--xx---x--xx
Distracter(x):	x-----x-x-x-x-x---x--xx---x--xx---xxxxxxxx-xxxx
Distracter(y):	x---xxxxxxxx-xxxx---x-x-x-x-x---x--xx---x--xx
Distracter(z):	x---x--xx---x--xx---xxxxxxxx-xxxx---x-x-x-x-x

RHYTHM SET 4

Quadruple integrant patterns

Target:	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-o-o-----o-oooooooooooo-----o-----o-----
Distracter(x):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-o-o-----o-oooooooooooo-----o-----o-----
Distracter(y):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-o-----o-o-oooooooooooo-----o-----o-----
Distracter(z):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-o-----o-o-oooooooooooo-----o-----o-----

Triple integrant patterns

Target:	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-----o-o-o-----oo-----oooooooooooo-----oo-----
Distracter(x):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-----o-o-----o-oooooooooooo-----oo-----
Distracter(y):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-o-o-----oo-----oooooooooooo-----oo-----
Distracter(z):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-o-o-----o-oooooooooooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-----o-o-o-----oo-----oooooo-----o-----o-----
Distracter(x):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-----o-o-o-----oo-----oooooo-----o-----o-----
Distracter(y):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-----o-o-o-----oo-----oooooo-----o-----o-----
Distracter(z):	x-----x-x-----x-xx-----x-----xx
Compl:	-----o-----o-o-o-----oo-----oooooo-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-----xxxxxxxxxxxxxx-----x-xx-----xx
Distracter(x):	x-----x-x-x-x-x-----x-xx-----xx-x-xxxxxxxxxxxxxx
Distracter(y):	x-x-xxxxxxxxxxxxxx-----x-x-x-x-x-----x-xx-----xx
Distracter(z):	x---x-xx-----xx-x-xxxxxxxxxxxxxx-----x-x-x-x-x

RHYTHM SET 5

Quadruple integrant patterns

Target:	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oooo-o-----ooooooo-oo-----o-o-----
Distracter(x):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oooo-o-----ooooooo-oo-----o-o-----
Distracter(y):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oo-oo-----ooooooo-oo-----o-o-----
Distracter(z):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oo-oo-----ooooooo-oo-----o-o-----

Triple integrant patterns

Target:	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oooo-oo-----ooo-ooo-oooo-----oo-----
Distracter(x):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oooo-oo-----oooo-oooo-----oo-----
Distracter(y):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-ooooooo-oo-----ooo-ooo-oooo-----oo-----
Distracter(z):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-ooooooo-oo-----oooo-oooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oo-oo-----ooooo-ooo-----o-o-----
Distracter(x):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oo-oo-----ooo-oo-oooo-----o-----o-----
Distracter(y):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oooo-oo-----ooooo-ooo-----o-----o-----
Distracter(z):	x-----x--xx-----xx-----x-----x-x
Compl:	-----o-oo-oooo-oo-----ooo-oo-oooo-----o-----o-----

Aggregate patterns

Target:	x-----x-xxxxxxxxxxxxx-----xxxxxxxx-xxxx---x--xx-----x-x
Distracter(x):	x-----x-xxxxxxxxxxxxx-----x--xx-----x-x-----xxxxxxxx-xxxxx
Distracter(y):	x-----xxxxxxxx-xxxxx-----x-xxxxxxxxxxxxx-----x--xx-----x-x
Distracter(z):	x---x--xx-----x-x-----xxxxxxxxxxxxx-----x-xxxxxxxxxxxxx-----x-x

RHYTHM SET 6

Quadruple integrant patterns

Target:	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oooo-o-----o-oooo-o-----o-o-----
Distracter(x):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oooo-o-----o-oooo-o-----o-o-----o-----
Distracter(y):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oo-o-----o-oooo-o-----o-o-----
Distracter(z):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oo-o-----o-oooo-o-----o-o-----o-----

Triple integrant patterns

Target:	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oooo-----o-o-o-oo-o-----oo-----
Distracter(x):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oooo-----ooo-oo-o-----oo-----
Distracter(y):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-ooooooo-----o-o-o-oo-o-----oo-----
Distracter(z):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-ooooooo-----ooo-oo-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oo-o-----o-ooo-----o-o-----o-----
Distracter(x):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oo-o-----o-o-o-oo-o-----o-----o-----
Distracter(y):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oooo-----o-ooo-----o-o-----o-----
Distracter(z):	x-----x--xx-----x-x-----x-----xx
Compl:	-----o-oo-oooo-----o-o-o-oo-o-----o-----o-----

Aggregate patterns

Target:	x-----x-xxxxxxxxxxxxx---x-xxxx-xx-x---x--xx-----xx
Distracter(x):	x-----x-xxxxxxxxxxxxx---x--xx-----xx---x-xxxx-xx-x-x
Distracter(y):	x---x-xxxx-xx-x-----x-xxxxxxxxxxxxx---x--xx-----xx
Distracter(z):	x---x--xx-----xx---x-xxxx-xx-x-----x-xxxxxxxxxxxxx

RHYTHM SET 7

Quadruple integrant patterns

Target:	x-----xx-----x--x-----x--x--xx
Compl:	-----oooooo---o-----ooooooo---o-----o-----
Distracter(x):	x-----xx-----x--x-----x--x--xx
Compl:	-----oooooo---o-----oooooo---oo-----o-----o-----
Distracter(y):	x-----xx-----x--x-----x--x--xx
Compl:	-----oooo---oo---o-----ooooooo---o-----o-----o-----
Distracter(z):	x-----xx-----x--x-----x--x--xx
Compl:	-----oooo---oo---o-----oooooo---oo-----o-----o-----

Triple integrant patterns

Target:	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oo---oooo---o---ooo---oooo---o-----oo-----
Distracter(x):	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oo---oooo---oo---ooooooo---o-----o-----oo-----
Distracter(y):	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oooooo---o---ooo---oooo---o-----o-----oo-----
Distracter(z):	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oooooo---oo---ooooooo---o-----o-----oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oooo---oo---o-----ooo---ooo---o-----o-----o-----
Distracter(x):	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oooo---oo---o-----ooo---ooo---o-----o-----o-----
Distracter(y):	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oo---oooo---o---ooo---ooo---o-----o-----o-----
Distracter(z):	x-----xx-----x--x-----x-----x--x--xx
Compl:	-----oo---oooo---o---ooo---ooo---o-----o-----o-----

Aggregate patterns

Target:	x-----xxxxxxxxx-x-----xxxxxxxxx-x-x---x--xx---x--xx
Distracter(x):	x-----xxxxxxxxx---x--xx---x--xx-x-----xxxxxxxxx-x-x
Distracter(y):	x-x-----xxxxxxxxx-x-x-----xxxxxxxxx---x--xx---x--xx
Distracter(z):	x---x--xx---x--xx-x-----xxxxxxxxx-x-x-----xxxxxxxxx

RHYTHM SET 8

Quadruple integrant patterns

Target:	x-----xx-----x-xx-----x---x---x
Compl:	-----oooooo---o-oooooooooo-oo-----o-o-----
Distracter(x):	x-----xx-----x-xx-----x---x---x
Compl:	-----oooooo---o-oooooooooo-oo---o-o-----
Distracter(y):	x-----xx-----x-xx-----x---x---x
Compl:	-----oooo---oo-o-oooooooooo-oo-----o-o-----
Distracter(z):	x-----xx-----x-xx-----x---x---x
Compl:	-----oooo---oo-o-oooooooooo-oo---o-o-----

Triple integrant patterns

Target:	x-----xx-----x-xx-----x-----x---x
Compl:	-----oo-oooo-o-oo-ooooooo-----oo-----
Distracter(x):	x-----xx-----x-xx-----x-----x---x
Compl:	-----oo-oooo---o-oooooooooooo-----oo-----
Distracter(y):	x-----xx-----x-xx-----x-----x---x
Compl:	-----oooooo-o-oo-oooooooooooo-----oo-----
Distracter(z):	x-----xx-----x-xx-----x-----x---x
Compl:	-----oooooo---o-oooooooooooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x-xx-----x-----x---x
Compl:	-----oooo---oo-o-ooo-oo-ooooo-----o-o-----
Distracter(x):	x-----xx-----x-xx-----x-----x---x
Compl:	-----oooo---oo-o-o-oo-ooooooo-----o-o-----
Distracter(y):	x-----xx-----x-xx-----x-----x---x
Compl:	-----oo-oooo-o-ooo-oo-ooooo-----o-o-----
Distracter(z):	x-----xx-----x-xx-----x-----x---x
Compl:	-----oo-oooo-o-o-oo-ooooooo---o-o-----

Aggregate patterns

Target:	x-----xxxxxxxxx-x-xxxxxxxxxxxxxx---x--xx---x---x
Distracter(x):	x-----xxxxxxxxx---x--xx---x---x-x-xxxxxxxxxxxxxx
Distracter(y):	x-x-xxxxxxxxxxxxxx-----xxxxxxxxx---x--xx---x---x
Distracter(z):	x---x--xx---x---x-x-xxxxxxxxxxxxxx-----xxxxxxxxx

RHYTHM SET 9

Quadruple integrant patterns

Target:	x-----x--x-----xx-----x--x--xx
Compl:	-----o--o--o---o-----ooooooo--oo-----o--o-----
Distracter(x):	x-----x--x-----xx-----x--x--xx
Compl:	-----o--o--o---o-----ooooooo--oo-----o--o-----
Distracter(y):	x-----x--x-----xx-----x--x--xx
Compl:	-----o--o--o---o-----ooooooo--oo-----o--o-----
Distracter(z):	x-----x--x-----xx-----x--x--xx
Compl:	-----o--o--o---o-----ooooooo--oo-----o--o-----

Triple integrant patterns

Target:	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---oo--ooo--oooo-----oo-----
Distracter(x):	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---oooo--oooo-----oo-----
Distracter(y):	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---oo--ooo--oooo-----oo-----
Distracter(z):	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---oooo--oooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---ooooo--oooo-----o--o-----
Distracter(x):	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---ooo--oo--oooo-----o--o-----
Distracter(y):	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---ooooo--oooo-----o--o-----
Distracter(z):	x-----x--x-----xx-----x-----x--xx
Compl:	-----o--o--o--o---ooo--oo--oooo-----o--o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-----xxxxxxxx-xxxx---x--xx---x--xx
Distracter(x):	x-----x-x-x-x-x-----x--xx---x--xx-----xxxxxxxx-xxxx
Distracter(y):	x-----xxxxxxxx-xxxx-----x-x-x-x-x-----x--xx---x--xx
Distracter(z):	x---x--xx---x--xx-----xxxxxxxx-xxxx-----x-x-x-x-x-x

RHYTHM SET 10

Quadruple integrant patterns

Target:	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o--o---o---o--oooooo----oo-----o--o-----
Distracter(x):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o--o---o---o--oooooo----oo-----o--o-----
Distracter(y):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o---o--o--oooooo----oo-----o--o-----
Distracter(z):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o---o--o--oooooo----oo-----o--o-----

Triple integrant patterns

Target:	x-----x--x-----x--xx-----x-----xx
Compl:	-----o---o---o--o--oo--oooooo----oo-----
Distracter(x):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o---o---o--o--o--oooooo----oo-----
Distracter(y):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o---o---o--o--oo--oooooo----oo-----
Distracter(z):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o---o---o--o--oooooo----oo-----

Nonmetrical integrant patterns

Target:	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o---o--o--ooo--oo--ooooo----o--o-----
Distracter(x):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o---o--o--o--oo--oooooo----o--o-----
Distracter(y):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o---o--o--ooo--oo--ooooo----o--o-----
Distracter(z):	x-----x--x-----x--xx-----x-----xx
Compl:	-----o--o---o--o--ooo--oo--oooooo----o--o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-x-----xxxxxx-----x--xx-----xx
Distracter(x):	x-----x-x-x-x-x-x-----x--xx-----xx-x-----xxxxxx-----xx
Distracter(y):	x-x-----xxxxxx-----x-x-x-x-x-----x--xx-----xx
Distracter(z):	x---x--xx-----xx-x-----xxxxxx-----x-x-x-x-x-x

RHYTHM SET 11

Quadruple integrant patterns

Target:	x-----x--xx-----xx-----x---x---x
Compl:	-----o----ooo----oooooo----oo----o----o
Distracter(x):	x-----x--xx-----xx-----x---x---x
Compl:	-----o----ooo----oooooo----oo----o----o
Distracter(y):	x-----x--xx-----xx-----x---x---x
Compl:	-----o----oo----oo----oooooo----oo----o----o
Distracter(z):	x-----x--xx-----xx-----x---x---x
Compl:	-----o----oo----oo----oooooo----oo----o----o

Triple integrant patterns

Target:	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----oo----ooo----oo----ooo----ooo----oo
Distracter(x):	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----oo----ooo----oooooo----ooo----ooo----oo
Distracter(y):	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----ooo----ooo----oo----ooo----ooo----oo
Distracter(z):	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----ooo----ooo----oooooo----ooo----ooo----oo

Nonmetrical integrant patterns

Target:	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----oo----oo----oooooo----ooo----o----o
Distracter(x):	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----oo----oo----ooo----oo----ooo----o----o
Distracter(y):	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----oo----ooo----oooooo----ooo----ooo----o----o
Distracter(z):	x-----x--xx-----xx-----x-----x---x
Compl:	-----o----oo----ooo----ooo----oo----ooo----o----o

Aggregate patterns

Target:	x-----x-----xxxxxx-----xxxxxx-----x--xx---x---x
Distracter(x):	x-----x-----xxxxxx-----x--xx---x---x-----xxxxxx-----xxxxxx
Distracter(y):	x-----xxxxxx-----xxxxxx-----x-----xxxxxx-----xxxxxx-----x--xx---x---x
Distracter(z):	x---x--xx---x---x-----xxxxxx-----xxxxxx-----x-----xxxxxx-----xxxxxx

RHYTHM SET 12

Quadruple integrant patterns

Target:	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oooo-oo---o-ooooooooo--o---o-o-----
Distracter(x):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oooo-oo---o-ooooooooo--o---o-o-----
Distracter(y):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo-oo--oo-o-ooooooooo--o---o-o-----
Distracter(z):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo-oo--oo-o-ooooooooo--o---o-o-----

Triple integrant patterns

Target:	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo--oooo-o--ooo--oooo-o-o-----oo-----
Distracter(x):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo--oooo--oo-ooooooo-o-o-----oo-----
Distracter(y):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o--oooooo-o--ooo--oooo-o-o-----oo-----
Distracter(z):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o--oooooo--oo-ooooooo-o-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo-oo--oo-o-ooo-ooo-o-o-o-----o-o-----
Distracter(x):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo-oo--oo-o-o-ooo-ooo-o-o-----o-----
Distracter(y):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o-oo--oooo-o-ooo-ooo-o-o-----o-----
Distracter(z):	x-----x--xx-----x--x-----x-----xx
Compl:	-----o--oo--oooo-o-oo-oo-ooo-o-o---o-----o-----

Aggregate patterns

Target:	x-----x-xxxxxxxxxxxx-x-xxxxxxxxxxxx-x-x---x--xx-----xx
Distracter(x):	x-----x-xxxxxxxxxxxx---x--xx-----xx-x-xxxxxxxxxxxx-x-x
Distracter(y):	x-x-xxxxxxxxxxxx-x-x---x-xxxxxxxxxxxx---x--xx-----xx
Distracter(z):	x---x--xx-----xx-x-xxxxxxxxxxxx-x-x---x-xxxxxxxxxxxx

RHYTHM SET 13

Quadruple integrant patterns

Target:	x-----xx-----x-x-----x---x-x-x
Compl:	-----oooooo----o-oooo-oo-----o--o-----
Distracter(x):	x-----xx-----x-x-----x---x-x-x
Compl:	-----oooooo----o-oooo-o-----o--o--o-----
Distracter(y):	x-----xx-----x-x-----x---x-x-x
Compl:	-----oooo-oo----o-oooo-oo-----o--o-----
Distracter(z):	x-----xx-----x-x-----x---x-x-x
Compl:	-----oooo-oo----o-oooo-o-----o--o--o-----

Triple integrant patterns

Target:	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oo-oooo----o-oo-o-oo-o-----oo-----
Distracter(x):	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oo-oooo----ooo-oo-o-----oo-----
Distracter(y):	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oooooo----o--o-o-oo-o-----oo-----
Distracter(z):	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oooooo----ooo-oo-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oooo-oo----o-ooo-o-o-----o-----o-----
Distracter(x):	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oooo-oo----o-o-o-oo-o-----o-----o-----
Distracter(y):	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oo-oooo----o-ooo-o-o-----o-----o-----
Distracter(z):	x-----xx-----x-x-----x-----x-x-x
Compl:	-----oo-oooo----o-o-o-oo-o-----o-----o-----

Aggregate patterns

Target:	x-----xxxxxxxxx---x-xxxx-xx-x---x--xx---x-x-x
Distracter(x):	x-----xxxxxxxxx---x--xx---x-x-x---x-xxxx-xx-x-x
Distracter(y):	x---x-xxxx-xx-x-x-----xxxxxxxxx---x--xx---x-x-x
Distracter(z):	x---x--xx---x-x-x---x-xxxx-xx-x-x-----xxxxxxxxx

RHYTHM SET 14

Quadruple integrant patterns

Target:	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooooo---o-ooooooooo-----o--o-----
Distracter(x):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooooo---o-ooooooooo-o---o--o-----
Distracter(y):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooo--oo-o-ooooooooo-----o--o-----
Distracter(z):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooo--oo-o-ooooooooo-o---o--o-----

Triple integrant patterns

Target:	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oo--oooo-o--o-o-oooo-o-o-----oo-----
Distracter(x):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oo--oooo---o-oooooooo-o-o-----oo-----
Distracter(y):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooooo-o--o-o-oooo-o-o-----oo-----
Distracter(z):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooooo---o-oooooooo-o-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooo--oo-o-ooo-o-o-o-o-----o-----
Distracter(x):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oooo--oo-o-o-o-o-ooo-o-o-----o-----
Distracter(y):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oo--oooo-o-ooo-o-o-o-o-----o-----
Distracter(z):	x-----xx-----x-x-x-----x-----x-x
Compl:	-----oo--oooo-o-o-o-o-ooo-o-o-----o-----

Aggregate patterns

Target:	x-----xxxxxxxxx-x-xxxxxxxxx-x-x---x--xx-----x-x
Distracter(x):	x-----xxxxxxxxx---x--xx-----x-x-x-----xxxxxxxxx-x-x
Distracter(y):	x-x-xxxxxxxxx-x-x-----xxxxxxxxx---x--xx-----x-x
Distracter(z):	x---x--xx-----x-x-x-----xxxxxxxxx-x-x-----xxxxxxxxx

RHYTHM SET 15

Quadruple integrant patterns

Target:	x-----x-x-----xx-----x---x-x-x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(x):	x-----x-x-----xx-----x---x-x-x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(y):	x-----x-x-----xx-----x---x-x-x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(z):	x-----x-x-----xx-----x---x-x-x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----

Triple integrant patterns

Target:	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-o-----oo-----ooo-----oo-----
Distracter(x):	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-o-----oooo-----ooo-----oo-----
Distracter(y):	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-o-----oo-----ooo-----ooo-----oo-----
Distracter(z):	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-o-----oooo-----ooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-----ooooo-----ooo-----o-----o-----
Distracter(x):	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-----ooo-----oo-----ooo-----o-----o-----
Distracter(y):	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-----ooooo-----ooo-----o-----o-----
Distracter(z):	x-----x-x-----xx-----x-----x-x-x
Compl:	-----o-----o-----ooo-----oo-----ooo-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-----xxxxxxxx-xxxx---x--xx---x-x-x
Distracter(x):	x-----x-x-x-x-x---x--xx---x-x-x---xxxxxxxx-xxxx
Distracter(y):	x---xxxxxxxx-xxxx---x-x-x-x-x---x--xx---x-x-x
Distracter(z):	x---x--xx---x-x-x---xxxxxxxx-xxxx---x-x-x-x-x

RHYTHM SET 16

Quadruple integrant patterns

Target:	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-o-----o-ooooooo-----o-o-----
Distracter(x):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-----o-o-ooooooo-----o-o-----
Distracter(y):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-----o-o-ooooooo-----o-o-----
Distracter(z):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-----o-o-oooooo-----o-----o-----

Triple integrant patterns

Target:	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-----o-o-o-----o-o-oooo-----o-----oo-----
Distracter(x):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-----o-o-----o-oooooo-----o-----oo-----
Distracter(y):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-o-----o-o-oooo-----o-----oo-----
Distracter(z):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-o-----o-oooooo-----o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-----o-o-ooo-----o-o-o-----o-----o-----
Distracter(x):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-o-----o-o-o-----o-ooo-----o-----o-----
Distracter(y):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-----o-o-o-----o-ooo-----o-----o-----
Distracter(z):	x-----x-x-----x-x-x-----x-----xx
Compl:	-----o-----o-o-o-----o-o-ooo-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-----xxxxxx-----x-x---x--xx-----xx
Distracter(x):	x-----x-x-x-x-x-----x---xx-----xx-x-----xxxxxx-----x-x
Distracter(y):	x-x-----xxxxxx-----x-x-----x-x-x-x-----x---xx-----xx
Distracter(z):	x---x---xx-----xx-x-----xxxxxx-----x-x-----x-x-x-x-x

RHYTHM SET 17

Quadruple integrant patterns

Target:	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(x):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(y):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-----o-----ooooooo-oo-----o-o-----
Distracter(z):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-----o-----ooooooo-oo-----o-o-----

Triple integrant patterns

Target:	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-----o-o-----oo-----ooo-----oo-----
Distracter(x):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-----o-o-----oooo-----ooo-----oo-----
Distracter(y):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-o-----oo-----ooo-----ooo-----oo-----
Distracter(z):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-o-----oooo-----ooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-----o-----ooooo-----ooo-----o-----o-----
Distracter(x):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-o-----o-----ooo-----oo-----ooo-----o-----o-----
Distracter(y):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-----o-o-----ooooo-----ooo-----o-----o-----
Distracter(z):	x-----x-x-x-----xx-----x-----x-x
Compl:	-----o-----o-o-----ooo-----oo-----ooo-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-----xxxxxxxx-xxxx---x--xx-----x-x
Distracter(x):	x-----x-x-x-x-x-----x--xx-----x-x-----xxxxxxxx-xxxx
Distracter(y):	x-----xxxxxxxx-xxxx-----x-x-x-x-x-x-----x--xx-----x-x
Distracter(z):	x---x--xx-----x-x-----xxxxxxxx-xxxx-----x-x-x-x-x-x

RHYTHM SET 18

Quadruple integrant patterns

Target:	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-----o-oooo-oo-----o-o-----
Distracter(x):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-----o-oooo-o-----o-o-o-----
Distracter(y):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-oooo-oo-----o-o-----
Distracter(z):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-oooo-o-----o-o-o-----

Triple integrant patterns

Target:	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-----o-o-oo-o-----oo-----
Distracter(x):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-----ooo-oo-o-----oo-----
Distracter(y):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-----o-o-o-oo-o-----oo-----
Distracter(z):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-----ooo-oo-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-ooo-----o-o-o-----o-----
Distracter(x):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-o-----oo-o-----o-----o-----
Distracter(y):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-----o-ooo-----o-o-o-----o-----
Distracter(z):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-----o-o-o-----oo-o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-----x-xxxx-xx-x-----x--xx-----xx
Distracter(x):	x-----x-x-x-x-x-----x--xx-----xx-----x-xxxx-xx-x-x
Distracter(y):	x---x-xxxx-xx-x-----x-x-x-x-x-----x--xx-----xx
Distracter(z):	x---x--xx-----xx-----x-xxxx-xx-x-----x-x-x-x-x-x

RHYTHM SET 19

Quadruple integrant patterns

Target:	x-----xx-----x--x-----x---x-x-x
Compl:	-----oooooo---o-----ooooooo---o-----o-----
Distracter(x):	x-----xx-----x--x-----x---x-x-x
Compl:	-----oooooo---o-----oooooo---oo-----o-----o-----
Distracter(y):	x-----xx-----x--x-----x---x-x-x
Compl:	-----oooo---oo---o-----ooooooo---o-----o-----o-----
Distracter(z):	x-----xx-----x--x-----x---x-x-x
Compl:	-----oooo---oo---o-----oooooo---oo-----o-----o-----

Triple integrant patterns

Target:	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oo---oooo---o---ooo---oooo---o-----oo-----
Distracter(x):	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oo---oooo---oo---ooooooo---o-----o-----oo-----
Distracter(y):	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oooooo---o---ooo---oooo---o-----o-----oo-----
Distracter(z):	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oooooo---oo---ooooooo---o-----o-----oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oooo---oo---o---ooo---ooo---o-----o-----o-----
Distracter(x):	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oooo---oo---o---ooo---ooo---o-----o-----o-----
Distracter(y):	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oo---oooo---o---ooo---ooo---o-----o-----o-----
Distracter(z):	x-----xx-----x--x-----x-----x-x-x
Compl:	-----oo---oooo---o---ooo---ooo---o-----o-----o-----

Aggregate patterns

Target:	x-----xxxxxxxxx-x-----xxxxxxxxx-x-x---x--xx---x-x-x
Distracter(x):	x-----xxxxxxxxx---x--xx---x-x-x-x-----xxxxxxxxx-x-x
Distracter(y):	x-x-----xxxxxxxxx-x-x-----x-----xxxxxxxxx---x--xx---x-x-x
Distracter(z):	x---x--xx---x-x-x-x-----xxxxxxxxx-x-x-----xxxxxxxxx

RHYTHM SET 20

Quadruple integrant patterns

Target:	x-----xx-----x-x-x-----x---x---x
Compl:	-----oooooo---o-ooooooooo-----o---o-----
Distracter(x):	x-----xx-----x-x-x-----x---x---x
Compl:	-----oooooo---o-ooooooooo-o---o---o-----
Distracter(y):	x-----xx-----x-x-x-----x---x---x
Compl:	-----oooo---oo-o-ooooooooo-----o---o-----
Distracter(z):	x-----xx-----x-x-x-----x---x---x
Compl:	-----oooo---oo-o-ooooooooo-o---o---o-----

Triple integrant patterns

Target:	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oo---oooo---o---o---oooo---o---oo-----
Distracter(x):	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oo---oooo---o---o---oooo---o---oo-----
Distracter(y):	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oooooo---o---o---oooo---o---oo-----
Distracter(z):	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oooooo---o---oooooo---o---oo-----

Nonmetrical integrant patterns

Target:	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oooo---oo---ooo---o---o---o---o-----
Distracter(x):	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oooo---oo---o---o---ooo---o---o-----
Distracter(y):	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oo---oooo---o---ooo---o---o---o-----
Distracter(z):	x-----xx-----x-x-x-----x-----x---x
Compl:	-----oo---oooo---o---o---o---ooo---o---o-----

Aggregate patterns

Target:	x-----xxxxxxxxx-x-xxxxxxxxx-x-x---x--xx---x---x
Distracter(x):	x-----xxxxxxxxx---x--xx---x---x-x-xxxxxxxxx-x-x
Distracter(y):	x-x-xxxxxxxxx-x-x-----xxxxxxxxx---x--xx---x-x-x
Distracter(z):	x---x--xx---x---x-x-xxxxxxxxx-x-x-----xxxxxxxxx

RHYTHM SET 21

Quadruple integrant patterns

Target:	x-----x--x-----xx-----x--x-x-x
Compl:	-----o-o-o---o-----ooooooo-oo-----o-o-----
Distracter(x):	x-----x--x-----xx-----x--x-x-x
Compl:	-----o-o-o---o-----ooooooo-oo-----o-o-----
Distracter(y):	x-----x--x-----xx-----x--x-x-x
Compl:	-----o-o---o---o-----ooooooo-oo-----o-o-----
Distracter(z):	x-----x--x-----xx-----x--x-x-x
Compl:	-----o-o---o---o-----ooooooo-oo-----o-o-----

Triple integrant patterns

Target:	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o---o---o---o-----oo---ooo-oooo-----oo-----
Distracter(x):	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o---o---o---o-----oooo-oooo-----oo-----
Distracter(y):	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o---o---o---o-----oo---ooo-oooo-----oo-----
Distracter(z):	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o---o---o---o-----oooo-oooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o-o---o---o-----ooooo-ooo-----o-o-----
Distracter(x):	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o-o---o---o-----ooo-oo-oooo-----o-----o
Distracter(y):	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o---o---o---o-----ooooo-ooo-----o-----o
Distracter(z):	x-----x--x-----xx-----x-----x-x-x
Compl:	-----o---o---o---o-----ooo-oo-oooo-----o-----o

Aggregate patterns

Target:	x-----x-x-x-x-x-----xxxxxxx-xxxx---x--xx---x-x-x
Distracter(x):	x-----x-x-x-x-x-----x--xx---x-x-x-----xxxxxxx-xxxx
Distracter(y):	x-----xxxxxxx-xxxx-----x-x-x-x-x-----x--xx---x-x-x
Distracter(z):	x---x--xx---x-x-x-----xxxxxxx-xxxx-----x-x-x-x-x-x

RHYTHM SET 22

Quadruple integrant patterns

Target:	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o-o-o---o---o-oooooo---o---o---
Distracter(x):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o-o-o---o---o-oooooo---o---o---
Distracter(y):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o-o---o---o-o-ooooooo---o---o---
Distracter(z):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o-o---o---o-o-oooooo---o---o---

Triple integrant patterns

Target:	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o---o---o-o-o---o-o-oooo---o---
Distracter(x):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o---o---o-o---o-oooooo---o---
Distracter(y):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o---o---o-o---o-ooooo---o---
Distracter(z):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o---o---o-o---o-oooooo---o---

Nonmetrical integrant patterns

Target:	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o-o---o---o-o-ooo---o-o-o---
Distracter(x):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o-o---o---o-o-ooooooo---o---
Distracter(y):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o---o---o-o---o-ooo---o-o-o---
Distracter(z):	x-----x--x-----x-x-x-----x-----xx
Compl:	-----o---o---o-o---o-o-ooo---o---

Aggregate patterns

Target:	x-----x-x-x-x-x-x-x-xxxxxx---x-x---x--xx-----xx
Distracter(x):	x-----x-x-x-x-x-x-x-x-x-x-----xxx-x-xxxxxx---x-
Distracter(y):	x-x-xxxxxx---x-x-x-x-x-x-x-x-x-x-----xx-----xx
Distracter(z):	x---x---xx-----xx-x-xxxxxx---x-x-x-x-x-x-x-x-x

RHYTHM SET 23

Quadruple integrant patterns

Target:	x-----x-x-x-----xx-----x---x---x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(x):	x-----x-x-x-----xx-----x---x---x
Compl:	-----o-o-o-----ooooooo-oo-----o-o-----
Distracter(y):	x-----x-x-x-----xx-----x---x---x
Compl:	-----o-o-----o-----ooooooo-oo-----o-o-----
Distracter(z):	x-----x-x-x-----xx-----x---x---x
Compl:	-----o-o-----o-----ooooooo-oo-----o-o-----

Triple integrant patterns

Target:	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-----o-o-----oo-----ooo-----ooo-----
Distracter(x):	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-----o-o-----oooo-----ooo-----oo-----
Distracter(y):	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-o-o-----oo-----ooo-----ooo-----oo-----
Distracter(z):	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-o-o-----oooo-----ooo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-o-----o-----ooooo-----ooo-----o-----o
Distracter(x):	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-o-----o-----ooo-----oo-----ooo-----o-----o
Distracter(y):	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-----o-o-----ooooo-----ooo-----o-----o
Distracter(z):	x-----x-x-x-----xx-----x-----x---x
Compl:	-----o-----o-o-----ooo-----oo-----ooo-----o-----o

Aggregate patterns

Target:	x-----x-x-x-x-x-----xxxxxxxx-xxxxx---x--xx---x---x
Distracter(x):	x-----x-x-x-x-x-----x--xx---x---x-----xxxxxxxx-xxxxx
Distracter(y):	x-----xxxxxxxx-xxxxx-----x-x-x-x-x-x-----x--xx---x---x
Distracter(z):	x---x--xx---x---x-----xxxxxxxx-xxxxx-----x-x-x-x-x-x

RHYTHM SET 24

Quadruple integrant patterns

Target:	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-----o-ooooooooooooo-----o-----o-----
Distracter(x):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-----o-ooooooooooooo-----o-----o-----
Distracter(y):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-ooooooooooooo-----o-----o-----
Distracter(z):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-ooooooooooooo-----o-----o-----

Triple integrant patterns

Target:	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-o-ooo-ooooo-----o-----oo-----
Distracter(x):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-oo-ooooo-----o-----oo-----
Distracter(y):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-o-ooo-ooooo-----o-----oo-----
Distracter(z):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-o-oo-ooooo-----o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-ooo-ooo-----o-----o-----o-----
Distracter(x):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-o-----o-o-o-ooo-----o-----o-----o-----
Distracter(y):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-o-ooo-ooo-----o-----o-----o-----
Distracter(z):	x-----x-x-x-----x-x-----x-----xx
Compl:	-----o-----o-o-o-o-ooo-ooo-----o-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-x-----xxxxxx-----x-x---x--xx-----xx
Distracter(x):	x-----x-x-x-x-x-x-----x-x-----xx-----x-x-----xxxxxx-----x-x
Distracter(y):	x-x-----xxxxxx-----x-x-----x-x-x-x-x-----x-x-----xx-----xx
Distracter(z):	x---x---xx-----xx-x-x-----xxxxxx-----x-x-----x-x-x-x-x-x

RHYTHM SET 25

Quadruple integrant patterns

Target:	x-----x-x-----x--x-----x--x--xx
Compl:	-----o-o-o-----o-oooooo----o-----o-----
Distracter(x):	x-----x-x-----x--x-----x--x--xx
Compl:	-----o-o-o-----o-oooooo----o-----o-----
Distracter(y):	x-----x-x-----x--x-----x--x--xx
Compl:	-----o-o-----o-o-oooooo----o-----o-----
Distracter(z):	x-----x-x-----x--x-----x--x--xx
Compl:	-----o-o-----o-o-oooooo----o-----o-----

Triple integrant patterns

Target:	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-----o-o-o-ooo-oooo-o-----oo-----
Distracter(x):	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-----o-o-ooo-oooo-o-----o-----oo-----
Distracter(y):	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-o-o-o-ooo-oooo-o-----o-----oo-----
Distracter(z):	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-o-o-ooo-oooo-o-----o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-----o-o-ooo-ooo-o-----o-----o-----
Distracter(x):	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-----o-o-ooo-ooo-o-----o-----o-----
Distracter(y):	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-----o-o-ooo-ooo-o-----o-----o-----
Distracter(z):	x-----x-x-----x--x-----x-----x--xx
Compl:	-----o-----o-o-ooo-ooo-o-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-xxxxxxxxxxxx-x-x---x--xx---x--xx
Distracter(x):	x-----x-x-x-x-x---x--xx---x--xx-x-xxxxxxxxxxxx-x-x
Distracter(y):	x-x-xxxxxxxxxxxx-x-x---x-x-x-x-x---x--xx---x--xx
Distracter(z):	x---x--xx---x--xx-x-xxxxxxxxxxxx-x-x---x-x-x-x-x

RHYTHM SET 26

Quadruple integrant patterns

Target:	$x-----x-x-----x-xx-----x-x-x-x$
Compl:	$-----o-o-o-----o-ooooooooooooo-----o-o-----$
Distracter(x):	$x-----x-x-----x-xx-----x-x-x-x$
Compl:	$-----o-o-o-----o-ooooooooooooo-----o-o-----$
Distracter(y):	$x-----x-x-----x-xx-----x-x-x-x$
Compl:	$-----o-o-----o-o-ooooooooooooo-----o-o-----$
Distracter(z):	$x-----x-x-----x-xx-----x-x-x-x$
Compl:	$-----o-o-----o-o-ooooooooooooo-----o-o-----$

Triple integrant patterns

Target:	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-----o-o-o-oo-----ooooooooooooo-----oo-----$
Distracter(x):	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-----o-o-o-oo-----ooooooooooooo-----oo-----$
Distracter(y):	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-o-o-o-oo-----ooooooooooooo-----oo-----$
Distracter(z):	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-o-o-o-oo-----ooooooooooooo-----oo-----$

Nonmetrical integrant patterns

Target:	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-o-----o-o-ooo-oo-----ooooo-----o-o-----$
Distracter(x):	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-o-----o-o-o-oo-----ooooo-----o-----o-----$
Distracter(y):	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-----o-o-o-ooo-oo-----ooooo-----o-----o-----$
Distracter(z):	$x-----x-x-----x-xx-----x-----x-x-x$
Compl:	$-----o-----o-o-o-o-oo-----ooooo-----o-----o-----$

Aggregate patterns

Target:	$x-----x-x-x-x-x-x-xxxxxx-----x-xx-----x-x-x$
Distracter(x):	$x-----x-x-x-x-x-x-xx-----x-x-x-x-x-xxxxxx-----x-x-x$
Distracter(y):	$x-x-xxxxxx-----x-x-x-x-x-x-xx-----x-x-x$
Distracter(z):	$x---x-xx-----x-x-x-xxxxxx-----x-x-x-x-x$

RHYTHM SET 27

Quadruple integrant patterns

Target:	x-----x--x-----x-x-----x--x--xx
Compl:	-----o--o--o---o-----o--oooo--oo-----o--o-----
Distracter(x):	x-----x--x-----x-x-----x--x--xx
Compl:	-----o--o--o---o-----o--oooo--o-----o--o-----
Distracter(y):	x-----x--x-----x-x-----x--x--xx
Compl:	-----o--o--o---o-----o--oooo--oo-----o--o-----
Distracter(z):	x-----x--x-----x-x-----x--x--xx
Compl:	-----o--o--o---o-----o--oooo--o-----o--o-----

Triple integrant patterns

Target:	x-----x--x-----x-x-----x-----x--xx
Compl:	-----o--o--o---o-----o--o--o--oo--o-----oo-----
Distracter(x):	x-----x--x-----x-x-----x-----x--x--xx
Compl:	-----o--o--o---o-----ooo--oo--o-----oo-----
Distracter(y):	x-----x--x-----x-x-----x-----x--x--xx
Compl:	-----o--o--o---o-----o--o--o--oo--o-----oo-----
Distracter(z):	x-----x--x-----x-x-----x-----x--x--xx
Compl:	-----o--o--o---o-----ooo--oo--o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--x-----x-x-----x-----x--xx
Compl:	-----o--o--o---o-----o--ooo--o--o--o-----o-----
Distracter(x):	x-----x--x-----x-x-----x-----x--x--xx
Compl:	-----o--o--o---o-----o--o--o--oo--o-----o-----
Distracter(y):	x-----x--x-----x-x-----x-----x--x--xx
Compl:	-----o--o--o---o-----o--ooo--o--o--o-----o-----
Distracter(z):	x-----x--x-----x-x-----x-----x--x--xx
Compl:	-----o--o--o---o-----o--o--o--oo--o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x---x-xxxx-xx-x---x--xx---x--xx
Distracter(x):	x-----x-x-x-x-x-x---x--xx---x--xx---x-xxxx-xx-x-x
Distracter(y):	x---x-xxxx-xx-x-x---x-x-x-x-x-x---x--xx---x--xx
Distracter(z):	x---x--xx---x--xx---x-xxxx-xx-x-x---x-x-x-x-x-x

RHYTHM SET 28

Quadruple integrant patterns

Target:	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o-o-o---o---o-ooooooo---oo-----o-o-----
Distracter(x):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o-o-o---o---o-ooooooo---oo-----o-o-----
Distracter(y):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o-o---o---o-o-ooooooo---oo-----o-o-----
Distracter(z):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o-o---o---o-o-ooooooo---oo-----o-o-----

Triple integrant patterns

Target:	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o---o---o-o-o---oo---ooooooo---oo-----
Distracter(x):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o---o---o-o---o-ooooooo---oo-----oo-----
Distracter(y):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o---o---o-o-o---oo---ooooooo---oo-----oo-----
Distracter(z):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o---o---o-o---o-ooooooo---oo-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o-o---o---o-o-ooo---oo---ooooo---o-o-----
Distracter(x):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o-o---o---o-o-o---oo---ooooo---o-o-----
Distracter(y):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o---o---o-o-o-ooo---oo---ooooo---o-o-----
Distracter(z):	x-----x--x-----x--xx-----x-----x-x
Compl:	-----o---o---o-o-o-ooo---oo---ooooo---o-o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-x-xxxxxxxxxxxxxx---x--xx-----x-x
Distracter(x):	x-----x-x-x-x-x-x---x--xx-----x-x-x-xxxxxxxxxxxxxx
Distracter(y):	x-x-xxxxxxxxxxxxxx---x-x-x-x-x-x---x--xx-----x-x
Distracter(z):	x---x--xx-----x-x-x-xxxxxxxxxxxxxx---x-x-x-x-x-x-x

RHYTHM SET 29

Quadruple integrant patterns

Target:	$x-----x--xx-----x-x-----x---x---$
Compl:	$-----o-oooo-oo-----o-oooo-oo-----o-o-----$
Distracter(x):	$x-----x--xx-----x-x-----x---x---$
Compl:	$-----o-oooo-oo-----o-oooo-o-----o---o-o-----$
Distracter(y):	$x-----x--xx-----x-x-----x---x---$
Compl:	$-----o-oo-oo-oo-----o-oooo-oo-----o-o-----$
Distracter(z):	$x-----x--xx-----x-x-----x---x---$
Compl:	$-----o-oo-oo-oo-----o-oooo-o-----o---o-o-----$

Triple integrant patterns

Target:	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-oo-oooo-----o-o-o-oo-o-----oo-----$
Distracter(x):	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-oo-oooo-----ooo-oo-o-----oo-----$
Distracter(y):	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-ooooooo-----o-o-o-oo-o-----oo-----$
Distracter(z):	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-ooooooo-----ooo-oo-o-----oo-----$

Nonmetrical integrant patterns

Target:	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-oo-oo-oo-----o-ooo-----o-o-o-----o-----$
Distracter(x):	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-oo-oo-oo-----o-o-o-oo-o-----o-----$
Distracter(y):	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-oo-oooo-----o-ooo-----o-o-o-----o-----$
Distracter(z):	$x-----x--xx-----x-x-----x-----x---$
Compl:	$-----o-oo-oooo-----o-o-o-oo-o-----o-----$

Aggregate patterns

Target:	$x-----x-xxxxxxxxxxxxx---x-xxxx-xx-x---x--xx---x---$
Distracter(x):	$x-----x-xxxxxxxxxxxxx---x--xx---x---x-----x-xxxx-xx-x-x$
Distracter(y):	$x---x-xxxxx-xx-x-x-----x-xxxxxxxxxxxxx---x--xx---x---$
Distracter(z):	$x---x--xx---x---x---x-xxxxx-xx-x-x-----x-xxxxxxxxxxxxx$

RHYTHM SET 30

Quadruple integrant patterns

Target:	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OOOO-OO---O-OOOOOOOO---O---O-O-----
Distracter(x):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OOOO-OO---O-OOOOOO-OO---O---O-O-----
Distracter(y):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO-OO---OO-O-OOOOOOOO---O---O-O-----
Distracter(z):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO-OO---OO-O-OOOOOO-OO---O---O-O-----

Triple integrant patterns

Target:	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO---OOOO-O---OOO-OOOO-O-O-----OO-----
Distracter(x):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO---OOOO---OO-OOOOOO-O-O-----OO-----
Distracter(y):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O---OOOOOO-O---OOO-OOOO-O-O-----OO-----
Distracter(z):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O---OOOOOO---OO-OOOOOO-O-O-----OO-----

Nonmetrical integrant patterns

Target:	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO-OO---OO-O-OOO-OOO-O-O-O-----O-O-----
Distracter(x):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO-OO---OO-O-O-OOO-OOO-O-O-O-----O-----
Distracter(y):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O-OO---OOOO-O-OOO-OOO-O-O-O-----O-----O-----
Distracter(z):	X-----X--XX-----X---X-----X-----X-X
Compl:	-----O---OO---OOOO-O-O-OOO-OOO-O-O---O-----O-----

Aggregate patterns

Target:	X-----X-XXXXXXXXXXXX-X-XXXXXXXXXXXX-X-X---X--XX-----X-X
Distracter(x):	X-----X-XXXXXXXXXXXX---X--XX-----X-X-X-XXXXXXXXXXXX-X-X
Distracter(y):	X-X-XXXXXXXXXXXX-X-X---X-XXXXXXXXXXXX---X--XX-----X-X
Distracter(z):	X---X--XX-----X-X-X-XXXXXXXXXXXX-X-X---X-X-XXXXXXXXXXXX

RHYTHM SET 31

Quadruple integrant patterns

Target:	x-----x-x-----x--x-----x--x-x-x
Compl:	-----o-o-o-----o-oooooo---o-----o-o-----
Distracter(x):	x-----x-x-----x--x-----x--x-x-x
Compl:	-----o-o-o-----o-oooooo---oo-----o-o-----
Distracter(y):	x-----x-x-----x--x-----x--x-x-x
Compl:	-----o-o-----o-o-ooooooo---o-----o-o-----
Distracter(z):	x-----x-x-----x--x-----x--x-x-x
Compl:	-----o-o-----o-o-oooooo---oo-----o-----o-----

Triple integrant patterns

Target:	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-----o-o-o-ooo-oooo-o-o-----oo-----
Distracter(x):	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-----o-o-oo-oooooo-o-o-----oo-----
Distracter(y):	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-o-o-o-ooo-oooo-o-o-----oo-----
Distracter(z):	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-o-o-oo-oooooo-o-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-o-----o-o-ooo-ooo-o-o-----o-----o-----
Distracter(x):	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-o-----o-o-o-ooo-ooo-o-o-----o-----o-----
Distracter(y):	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-----o-o-o-ooo-ooo-o-o-----o-----o-----
Distracter(z):	x-----x-x-----x--x-----x-----x-x-x
Compl:	-----o-----o-o-o-ooo-ooo-o-o-----o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x-xxxxxx---x-x---x--xx---x-x-x
Distracter(x):	x-----x-x-x-x-x---x--xx---x-x-x-x-xxxxxx---x-x
Distracter(y):	x-x-xxxxxx---x-x---x-x-x-x-x-xx---x-x-x
Distracter(z):	x---x--xx---x-x-x-x-xxxxxx---x-x-----x-x-x-x

RHYTHM SET 32

Quadruple integrant patterns

Target:	$x-----x-x-----x-x-x-----x-x-x-----x-x-x-----x$
Compl:	$-----o-o-o-----o-o-o-o-o-o-----o-o-----o$
Distracter(x):	$x-----x-x-----x-x-x-----x-x-x-----x-x-x-----x$
Compl:	$-----o-o-o-----o-o-o-o-o-----o-----o-----o$
Distracter(y):	$x-----x-x-----x-x-x-----x-x-x-----x-x-x-----x$
Compl:	$-----o-o-----o-o-o-o-o-o-o-----o-----o-----o$
Distracter(z):	$x-----x-x-----x-x-x-----x-x-x-----x-x-x-----x$
Compl:	$-----o-o-----o-o-o-o-o-----o-----o-----o-----o$

Triple integrant patterns

Target:	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-----o-o-o-----o-o-o-----o-----oo-----o$
Distracter(x):	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-----o-o-----o-o-o-----o-----o-----oo-----o$
Distracter(y):	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-o-o-----o-o-o-----o-----o-----oo-----o$
Distracter(z):	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-o-o-----o-o-o-----o-----o-----oo-----o$

Nonmetrical integrant patterns

Target:	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-----o-o-o-----o-o-o-----o-----o-----o$
Distracter(x):	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-----o-o-o-----o-o-o-----o-----o-----o$
Distracter(y):	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-----o-o-o-----o-o-o-----o-----o-----o$
Distracter(z):	$x-----x-x-----x-x-x-----x-----x-x-----x$
Compl:	$-----o-----o-o-o-----o-o-o-----o-----o-----o$

Aggregate patterns

Target:	$x-----x-x-x-x-x-x-x-----xxx-----x-x-----x-x-----x$
Distracter(x):	$x-----x-x-x-x-x-----x-----xx-----x-----x-x-----xxx-----x-x$
Distracter(y):	$x-x-----xxx-----x-x-----x-----x-x-x-x-----x-----xx-----x-x$
Distracter(z):	$x---x-----xx-----x-----x-x-----xxx-----x-x-----x-----x-x-x-x$

RHYTHM SET 33

Quadruple integrant patterns

Target:	x-----x--x-----x-x-----x--x-x-x
Compl:	-----o-o-o---o---o-oooo-oo-----o-o-----
Distracter(x):	x-----x--x-----x-x-----x--x-x-x
Compl:	-----o-o-o---o---o-oooo-oo-----o-o-----
Distracter(y):	x-----x--x-----x-x-----x--x-x-x
Compl:	-----o-o---o---o-oooo-oo-----o-o-----
Distracter(z):	x-----x--x-----x-x-----x--x-x-x
Compl:	-----o-o---o---o-oooo-oo-----o-o-----

Triple integrant patterns

Target:	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o---o---o---o---o-oo-o-----oo-----
Distracter(x):	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o---o---o---o---o-oo-o-----oo-----
Distracter(y):	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o---o---o---o---o-oo-o-----oo-----
Distracter(z):	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o---o---o---o---o-oo-o-----oo-----

Nonmetrical integrant patterns

Target:	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o-o---o---o---o-ooo---o-o-o-----o-----
Distracter(x):	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o-o---o---o---o-o-o---oo-o-----o-----
Distracter(y):	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o---o---o---o---o-ooo---o-o-o-----o-----
Distracter(z):	x-----x--x-----x-x-----x-----x-x-x
Compl:	-----o---o---o---o---o-o-o---oo-o-----o-----

Aggregate patterns

Target:	x-----x-x-x-x-x-x---x-xxxx-xx-x-x---x--xx---x-x-x
Distracter(x):	x-----x-x-x-x-x-x---x--xx---x-x-x---x-xxxx-xx-x-x
Distracter(y):	x---x-xxxx-xx-x-x---x-x-x-x-x-x---x--xx---x-x-x
Distracter(z):	x---x--xx---x-x-x---x-xxxx-xx-x-x---x-x-x-x-x-x

RHYTHM SET 34

Quadruple integrant patterns

Target:	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o-o-o---o---o-oooooo---o---o-----$
Distracter(x):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o-o-o---o---o-oooooo---o---o-----o-----$
Distracter(y):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o-o---o---o-o-ooooooo---o-----o-----$
Distracter(z):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o-o---o---o-o-oooooo---o-----o-----o-----$

Triple integrant patterns

Target:	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o---o---o-o-o---o-o-oooo---o-----oo-----$
Distracter(x):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o---o---o-o---o-oooooo---o-----oo-----$
Distracter(y):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o---o---o-o---o-o-oooo---o-----oo-----$
Distracter(z):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o---o---o-o---o-oooooo---o-----oo-----$

Nonmetrical integrant patterns

Target:	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o-o---o---o-o-ooo---o-o-o-o---o-----o-----$
Distracter(x):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o-o---o---o-o-o-o-ooo---o-----o-----o-----$
Distracter(y):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o---o---o-o---o-o-ooo---o-o-o-o---o-----o-----$
Distracter(z):	$x-----x--x-----x-x-x-----x-----x-x$
Compl:	$-----o---o---o-o---o-o-o-o-ooo---o-----o-----o-----$

Aggregate patterns

Target:	$x-----x-x-x-x-x-x-x-xxxxxx---x-x---x--xx-----x-x$
Distracter(x):	$x-----x-x-x-x-x-x-x-x-x-x-x-x-xxxxxx---x-x$
Distracter(y):	$x-x-xxxxxx---x-x-x-x-x-x-x-x-x-x-x-x-x-x$
Distracter(z):	$x---x--xx-----x-x-x-x-xxxxxx---x-x-----x-x-x-x-x-x$

RHYTHM SET 35

Quadruple integrant patterns

Target:	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-o-----o-oooo-oo-----o-o-----$
Distracter(x):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-o-----o-oooo-o-----o-o-o-----$
Distracter(y):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-----o-o-oooo-oo-----o-o-----$
Distracter(z):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-----o-o-oooo-o-----o-o-o-----$

Triple integrant patterns

Target:	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-----o-o-----o-o-oo-o-----oo-----$
Distracter(x):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-----o-o-----ooo-oo-o-----oo-----$
Distracter(y):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-o-----o-o-o-oo-o-----oo-----$
Distracter(z):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-o-----ooo-oo-o-----oo-----$

Nonmetrical integrant patterns

Target:	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-----o-o-ooo-----o-o-o-----o-----$
Distracter(x):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-o-----o-o-o-o-oo-o-----o-----o-----$
Distracter(y):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-----o-o-----o-ooo-----o-o-o-----o-----$
Distracter(z):	$x-----x-x-x-----x-x-----x-x-x-x$
Compl:	$-----o-----o-o-----o-o-o-oo-o-----o-----o-----$

Aggregate patterns

Target:	$x-----x-x-x-x-x-x-----x-xxxx-xx-x-----x--xx-----x-x-x$
Distracter(x):	$x-----x-x-x-x-x-x-----x--xx-----x-----x-xxxx-xx-x-x$
Distracter(y):	$x---x-xxxx-xx-x-x-----x-x-x-x-x-----x--xx-----x-x-x$
Distracter(z):	$x---x--xx-----x-----x-xxxx-xx-x-x-----x-x-x-x-x-x$

RHYTHM SET 36

Quadruple integrant patterns

Target:	$x-----x-x-x-----x-x-----x-x-----x-x$
Compl:	$-----o-o-o-----o-ooooooooooooo-----o-----o-----o$
Distracter(x):	$x-----x-x-x-----x-x-----x-x-----x-x$
Compl:	$-----o-o-o-----o-ooooooooooooo-----o-----o-----o$
Distracter(y):	$x-----x-x-x-----x-x-----x-x-----x-x$
Compl:	$-----o-o-----o-o-ooooooooooooo-----o-----o-----o$
Distracter(z):	$x-----x-x-x-----x-x-----x-x-----x-x$
Compl:	$-----o-o-----o-o-ooooooooooooo-----o-----o-----o$

Triple integrant patterns

Target:	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-----o-o-o-ooo-ooooo-----o-----oo-----o$
Distracter(x):	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-----o-o-oo-ooooooooooooo-----o-----oo-----o$
Distracter(y):	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-o-o-o-ooo-ooooo-----o-----o-----oo-----o$
Distracter(z):	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-o-o-oo-ooooooooooooo-----o-----o-----oo-----o$

Nonmetrical integrant patterns

Target:	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-o-----o-o-ooo-ooo-----o-----o-----o-----o$
Distracter(x):	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-o-----o-o-o-ooo-ooo-----o-----o-----o-----o$
Distracter(y):	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-----o-o-o-ooo-ooo-----o-----o-----o-----o$
Distracter(z):	$x-----x-x-x-----x-x-----x-----x-x$
Compl:	$-----o-----o-o-o-ooo-ooo-----o-----o-----o-----o$

Aggregate patterns

Target:	$x-----x-x-x-x-x-x-x-xxxxxx-----x-x-----x-x-----x-x$
Distracter(x):	$x-----x-x-x-x-x-x-x-x-----x-x-----x-x-----x-x-----x-x$
Distracter(y):	$x-x-xxxxxx-----x-x-----x-x-x-x-x-x-----x-x-----x-x$
Distracter(z):	$x---x---xx-----x-x-x-x-xxxxxx-----x-x-----x-x-x-x-x$

APPENDIX 4.3

Rhythmic Figures

The permutations of rhythmic figures [a] to [f] that feature in each of the 36 rhythm sets are listed below. Each permutation consists of a series of five rhythmic figures. Positions one and four in the series are fixed in the sense that they are always occupied by rhythmic figure [a]. The remaining three positions in each series are variable: they may be occupied by any two of rhythmic figures [b], [c], and [d], and either one of rhythmic figure [e] or [f]. See Figure 4.2 in the body of the dissertation for notations of each rhythmic figure.

Rhythm set	<i>Rhythmic figures</i>	Rhythm set	<i>Rhythmic figures</i>
1	a b c a e	19	a b d a f
2	a b e a c	20	a b f a d
3	a c b a e	21	a d b a f
4	a c e a b	22	a d f a b
5	a e b a c	23	a f b a d
6	a e c a b	24	a f d a b
7	a b d a e	25	a c d a e
8	a b e a d	26	a c e a d
9	a d b a e	27	a d c a e
10	a d e a b	28	a d e a c
11	a e b a d	29	a e c a d
12	a e d a b	30	a e d a c
13	a b c a f	31	a c d a f
14	a b f a c	32	a c f a d
15	a c b a f	33	a d c a f
16	a c f a b	34	a d f a c
17	a f b a c	35	a f c a d
18	a f c a b	36	a f d a c

APPENDIX 4.4

Empty Time Units In Aggregate Patterns

Number of empty time units following pattern elements that coincide with hypothetical quadruple and triple bar-level pulses in target aggregate patterns are listed below. The difference between number of empty time units following elements marking quadruple and triple bar-level pulses ($Q_d - T_r$) are given in the rightmost column.

RS	Quadruple	Triple	$Q_d - T_r$
1	3.00	0.67	2.33
2	2.00	0.67	1.33
3	3.50	1.00	2.50
4	2.00	1.00	1.00
5	3.50	0.67	2.83
6	3.00	0.67	2.33
7	2.00	0.67	1.33
8	2.00	0.67	1.33
9	3.50	1.00	2.50
10	2.00	1.00	1.00
11	3.50	0.67	2.83
12	2.00	0.67	1.33
13	3.00	0.67	2.33
14	2.00	0.67	1.33
15	3.50	1.00	2.50
16	2.00	1.00	1.00
17	3.50	1.00	2.50
18	3.00	1.00	2.00
19	2.00	0.67	1.33
20	2.00	0.67	1.33
21	3.50	1.00	2.50
22	2.00	1.00	1.00
23	3.50	1.00	2.50
24	2.00	1.00	1.00
25	2.00	1.00	1.00
26	2.00	1.00	1.00
27	3.00	1.00	2.00
28	2.00	1.00	1.00
29	3.00	0.67	2.33
30	2.00	0.67	1.33
31	2.00	1.00	1.00
32	2.00	1.00	1.00
33	3.00	1.00	2.00
34	2.00	1.00	1.00
35	3.00	1.00	2.00
36	2.00	1.00	1.00
Average	2.56	0.87	1.69
min.	2.00	0.67	1.00
max.	3.50	1.00	2.83

APPENDIX 4.5

Rate Discrimination

Introduction

Metricity carryover effects plague experimental investigations of rhythmic behaviour. It has been observed that metrical contexts may establish a sort of momentum, whereby the pulse sensations associated with a particular meter may be carried across experimental trials or blocks of trials (Jones, 1985; Povel & Essens, 1985; Yee, Holleran, & Jones, 1994). Thus, under some circumstances, stimulus patterns within an experimental block may be interpreted according to the meter that best fits patterns in an earlier block, rather than their own meter of best fit. In such situations, instead of generating a metric framework in response to the current pattern, the attender bases their interpretation upon a previously activated metric framework.

For metricity carryover effects to occur, beat-level and bar-level pulsations must be preserved across successive experimental blocks. Therefore, these effects rely upon maintenance of a constant presentation rate, or tempo, between blocks. As a corollary, it is assumed that meter carryover effects do not occur when a change in presentation rate is detected. Specifically, when beat-level pulsations (which determine tempo - Radocy & Boyle, 1988) can not be preserved from one block to the next, the process of metrical generation is re-initiated. This is consistent with Brown's (1979, p. 30) claim that "each metre generates a different series of possible tempi covering the complete range from the slowest possible to the fastest possible musical speeds". If different meters have a tendency to be associated with different tempi, it seems likely that meter will be re-evaluated when a sudden change in tempo is encountered. Noticeable variations in presentation rate should, therefore, control metricity carryover effects.

To avoid metricity carryover effects in the singlepart and multipart experiments reported in the body of the dissertation, presentation rate is varied from block to block. The magnitude of change necessary in order to produce noticeable variations in presentation rate is an issue relating to the threshold of rate discrimination. Some previous research has addressed this threshold issue.

The work of Madsen and his colleagues (e.g., Duke, Madsen, & Geringer, 1986; Madsen, Duke, & Geringer, 1986) suggests that rate change generally must be in the order of 12% of the original rate to produce "significant changes in felt beat" (Geringer, Madsen, &

Duke, 1994, p. 50). Interestingly, however, most investigations of rate perception have identified an asymmetry in rate discrimination ability. Generally, rate decreases are easier to detect than rate increases (e.g., Kuhn, 1974; Geringer et al., 1994; Wang, 1984). Nevertheless, rate increases are detected more readily under some circumstances. Yarbrough (1987) and Ellis (1991) have reported that, whereas listeners are more accurate at discriminating rate decreases than increases when the original rate is slow to moderate (e.g., beat periods ranging from 1250 ms to 714 ms), they become more accurate at discriminating rate increases when the original rate is very fast (e.g., beat periods of 263.2 and ms 312.5 ms in the Ellis, 1991, study). Furthermore, Wang (1983) argues that the type of rate change – whether it is sudden or gradual - as well as other features of the musical context (or the experimental task), affects whether discrimination accuracy is greater for rate decreases or increases. (See Ellis, 1991, for a brief review of conflicting findings regarding the rate discrimination threshold).

Given the multiple factors found to affect listeners' rate discrimination thresholds, a pilot rate discrimination experiment was run to determine the discriminability of rate changes with the stimulus patterns employed in the experiments in the body of this dissertation. The pilot experiment examined the magnitude of change required to reliably detect increases and decreases in presentation rate relative to a central, or 'standard', rate where implicit beat-level pulses (in metrical patterns) occur at 600 ms periods. (A 600 ms pulse period was chosen as the central rate because there is consensus in the literature that it corresponds to the most salient pulse sensation – see Parncutt, 1994). Metrical and nonmetrical patterns, randomly selected from the 36 rhythm sets described in the General Method (section 4.4.4), were presented as standard/comparison pairs, where the standard and comparison items were separated by a 4 s silent interval. Participants, all of whom had moderate levels of musical skill, were required to indicate whether patterns within each pair were presented at the same rate, or at different rates.

Results of the pilot experiment suggest that the rate discrimination threshold was 11.1% for rate increases and 13.8% for rate decreases. These values are commensurate with the 12% value found by Geringer et al., 1994. It is worth noting that the observed thresholds are quite low, considering that pulses were not explicitly marked in the metrical stimulus patterns, and were not even implied in nonmetrical patterns. Perhaps the uniformly

moderate skill level of participants contributed to performance that could be considered better than average.

The threshold values obtained in the pilot study indicate slightly greater sensitivity to rate increases than to rate decreases. The contrast between this finding and observations of asymmetries in rate discrimination reported elsewhere in the literature can be explained by differences in experimental tasks. Studies that report advantages with rate decreases typically employ procedures where rate change is gradual, whereas the task used in the pilot experiment involved a sudden change in rate following a brief silent interval. Another contributor to the observed pattern of results may be that the central rate used in the pilot experiment was slightly faster than corresponding rates in the majority of other investigations. According to Ellis (1991), rate increases are favoured over rate decreases when the original rate is fast. Finally, most earlier investigations address asymmetry in rate discrimination with only isochronous sequences and metrical patterns. The inclusion of nonmetrical patterns (to which, strictly speaking, the notion of tempo does not apply, since they do not have an underlying pulse structure) in the pilot study may make it difficult to compare the observed effects with those of earlier studies.

The rate discrimination experiment that is the focus of the current investigation seeks to address some issues raised by the pilot study. It will employ both musician and nonmusician participants in order to allow the measurement and comparison of sensitivity to rate change in individuals with varying levels of musical skill. It is expected that the rate discrimination threshold will be lower in musicians than in nonmusicians. The current investigation also considers a broader range of presentation rates than were considered in the pilot study. Furthermore, in contrast to the pilot study, where the central rate always occupied the standard position in to-be-compared pairs, these rates will be combined exhaustively. This should enable a more rigorous analysis of the effects of factors such as whether the original rate is slow or fast and the direction of rate change. Finally, the effects of metricality upon rate discrimination will be examined. Previous work has indicated that differences in rate discrimination based on metricality should be expected. Drake and Botte (1993) found that sensitivity to rate change is greater with isochronous sequences than with 'irregular' (i.e., nonmetrical) sequences. Although metrical patterns are not necessarily isochronous, the beat-level and bar-level pulsations that underlie them are. If rate can be more accurately measured relative to these metrical pulsations than to irregular intervals

(Drake & Botte, 1993; Radocy & Boyle, 1988), rate discrimination should be better with metrical patterns than with nonmetrical patterns.

The main aim of the present experiment is to find the approximate presentation rate that is just-noticeably slower, and the presentation rate that is just-noticeably faster, than a central rate where, in metrical patterns, the beat period is 600 ms.

Method

Participants

Participants were six musicians and six nonmusicians ($N = 12$). Musicians had on average 8.33 years of experience on a musical instrument (5.66 years included formal training) and 3.83 years of training in music theory. Nonmusicians had on average 2.5 years of experience on a musical instrument (1.25 years included formal training) and 9 months of training in music theory, but had neither played their instrument nor studied theory for at least 5 years. Median age was 18 years for musicians and 20.5 years for nonmusicians.

Design

A $2 \times (3 \times 2 \times 2 \times 6)$ repeated measures design was employed. The between subjects variable was *musicality* (musician; nonmusician) and the within subjects variables were *metricality* (quadruple; triple; nonmetrical), *rate region* (slow; fast), *direction of rate change* (increasing; decreasing), and *magnitude of rate change* (4%; 8%; 12%; 16%; 20%; 24%). Values of the rate region factor are specified relative to the central rate under investigation (where time unit duration is 150 ms, which produces a rate of 6.67 time units per second). In the slow rate region, the central rate and slower rates are compared. Rate increases occur in this region when the second pattern within a pair of to-be-compared patterns is presented at the central rate. Rate decreases occur when the first pattern of a pair is presented at the central rate. In the fast rate region, the central rate and faster rates are compared. Rate increases occur when the first pattern of a pair is presented at the central rate, whereas rate decreases occur when second pattern is presented at the central rate. Like rate region, magnitude of rate change is specified relative to the central rate. Therefore, in the slow rate region, the central rate is compared with several slower rates produced by reducing the central rate by 4%, 8%, 12%, 16%, 20%, or 24%. In the fast rate region, the

central rate is accelerated by corresponding percentages. The rates produced by altering the central rate are referred to as ‘variable rates’.

The factorial combination of rate region and direction of rate change produces four possible types of rate change between patterns within a pair: (1) rate decreases in the slow rate region (i.e., central-rate followed by slow variable-rate); (2) rate increases in the slow rate region (i.e., slow variable-rate followed by central-rate); (3) rate increases in the fast rate region (i.e., central-rate followed by fast variable-rate); (4) rate decreases in the fast rate region (i.e., fast variable-rate followed by central-rate). As noted above, the amount of rate increase or decrease is determined by the magnitude of rate change factor, which has six values. Combining these six values with the four different types of rate change results in 24 rate change pairs. Then, combining these 24 pairs with the three metricality conditions gives a total of 72 metricality/rate change combinations.

The main dependent variable is ability to discriminate between the presentation rate of the first and second pattern within each rate change pair. To control for false alarms, each rate change, or target pair has a matching foil pair, in which there is no change in rate between the first and second pattern. Target pairs are listed in Table A4.5.1, and foil pairs are listed in Table A4.5.2.

The number of times participants chose to hear pairs from different metricality conditions was also examined.

Stimuli and apparatus

Stimuli were pairs of rhythm patterns wherein the first and second pattern within a pair were presented either at different rates (target pairs) or at the same rate (foil pairs). The patterns within foil pairs were identical in all respects, and the patterns within target pairs were identical in all respects other than presentation rate. The patterns within all pairs were separated by a 4 s silent interval. All patterns were articulated by a woodblock sound.

The patterns in both target and foil pairs were taken from 12 of the 36 rhythm sets described in section 4.4.4 of the General Method. The 12 rhythm sets were selected on the basis of the results of Singlepart Experiment 1 (see Chapter 5), which ranked rhythm sets from best to poorest according to whether they contained good exemplars of metrical and nonmetrical patterns. The patterns used as stimuli in the present experiment belong to the

12 best rhythm sets identified in Singlepart Experiment 1. Only the so-called target integrant patterns from each of these rhythm sets were employed. Of the three target integrant patterns in each rhythm set, one fits a quadruple meter, one fits a triple meter, and one is nonmetrical. Therefore, in accordance with the metricality variable, one third of the target and foil pairs contain quadruple patterns, one third contain triple patterns, and the remainder contain nonmetrical patterns.

The rate at which patterns within a pair were presented was specified by indicating the duration of individual time units comprising the grid of 49 time units that underlies each stimulus pattern. Using time unit duration, rather than beat period, allows the rate of nonmetrical patterns (which lack beat structure) to be specified. The duration of individual time units is 150 ms in the central rate (i.e., approximately 6.67 time units per second). This was chosen as the central rate, because, as discussed in section 4.4.4.3.1 in the body of this dissertation, combining four time units of 150 ms duration produces what is regarded as the most salient beat period - 600 ms - in metrical patterns. Variable rates were either 4%, 8%, 12%, 16%, 20%, or 24% slower or faster than the central rate, in accordance with the rate region and magnitude of rate change factors. Therefore, there were six slow variable rates, where time unit duration is 156, 163, 171, 179, 188, or 198 ms. Likewise, there were six fast variable rates, where time unit duration is 144, 139, 134, 129, 125, or 121 ms.

There are 216 target pairs of patterns in total, as shown in Table A4.5.1. Across these pairs, all 72 possible combinations of metricality, rate region, direction of rate change, magnitude of rate change are exhausted. Furthermore, each of these metricality/rate change combinations is associated three different rhythm sets. Table A4.5.2 shows 216 foil pairs that are matched to the target pairs in terms of metricality and the presentation rate of their first pattern (in foils the second pattern is presented at the same rate as the first). As with target pairs, different rhythm sets are associated with each foil.

Apparatus consisted of AKG headphones and MAX software running on a Macintosh computer, as described in the 4.4.3.

Table A4.5.1: Target pairs of quadruple, triple, and nonmetrical patterns. Presentation rate is specified by indicating the duration of time units (in ms) underlying the patterns (in format first pattern/second pattern). Each magnitude of rate change value in the slow and fast rate regions appears in a separate column. The rhythm sets (RS) from which patterns in each pool come from are indicated below each rate combination. In half the pairs in each metricality condition, the first pattern is presented at the central rate ('Central 1st'), whereas in the other half the first pattern is presented at the variable rate ('Variable 1st'). The three 'rhythm set' groups to which participants were allocated are also listed in the column labelled 'Group'.

		Group		Slow rate region				Fast rate region								
				198	188	179	171	163	156	144	139	134	129	125	121	
Quadruple	1	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	RS 34	RS 03	
	Central 1st	RS 24	RS 05	RS 35	RS 33	RS 22	RS 04	RS 21	RS 02	RS 27	RS 30	RS 34	RS 34	RS 34	RS 03	
	2	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	RS 22	RS 04	
	RS 21	RS 02	RS 27	RS 30	RS 34	RS 03	RS 24	RS 05	RS 05	RS 35	RS 33	RS 33	RS 33	RS 22	RS 04	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	RS 22	RS 04		
	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 35	RS 02	RS 24	
Variable 1st	1	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	RS 03
	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	RS 03	
	2	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	RS 03
	RS 24	RS 05	RS 35	RS 33	RS 22	RS 04	RS 21	RS 02	RS 27	RS 30	RS 30	RS 34	RS 34	RS 34	RS 03	
	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 35	RS 02	RS 24	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	150/121	
Triple	3	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	RS 22	RS 04	
	RS 21	RS 05	RS 35	RS 33	RS 22	RS 04	RS 21	RS 02	RS 27	RS 30	RS 30	RS 34	RS 34	RS 34	RS 03	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	150/121	
	RS 04	RS 27	RS 30	RS 34	RS 03	RS 24	RS 05	RS 05	RS 22	RS 30	RS 33	RS 33	RS 33	RS 22	RS 04	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	150/121	
	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 35	RS 02	RS 24	
Nonmetrical	3	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	RS 03
	RS 24	RS 05	RS 35	RS 33	RS 22	RS 04	RS 21	RS 02	RS 27	RS 30	RS 30	RS 34	RS 34	RS 34	RS 03	
	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	121/150	
	2	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	
	RS 21	RS 02	RS 27	RS 30	RS 34	RS 03	RS 24	RS 05	RS 05	RS 35	RS 35	RS 35	RS 35	RS 22	RS 04	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	150/121	
Central 1st	3	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	RS 03
	RS 21	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 22	RS 04	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	150/121	
	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 35	RS 22	RS 04	
	150/198	150/188	150/179	150/171	150/163	150/156	150/144	150/139	150/134	150/129	150/125	150/121	150/121	150/121	150/121	
	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 35	RS 22	RS 04	
Variable 1st	3	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	RS 03
	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	RS 03	
	2	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	
	RS 21	RS 02	RS 27	RS 30	RS 34	RS 03	RS 24	RS 05	RS 05	RS 35	RS 35	RS 35	RS 35	RS 22	RS 04	
	198/150	188/150	179/150	171/150	163/150	156/150	144/150	139/150	134/150	129/150	125/150	121/150	121/150	121/150	121/150	
	RS 04	RS 34	RS 33	RS 27	RS 05	RS 21	RS 03	RS 22	RS 30	RS 35	RS 35	RS 35	RS 35	RS 22	RS 04	

Table A4.5.2: *Foil pairs* of patterns to match the target pairs in Table A4.5.1.

Group	Slow rate region		Fast rate region		
	198	188	179	171	
Central	1 RS 24	150/150 RS 05	150/150 RS 35	150/150 RS 33	150/150 RS 22
	1 RS 21	150/150 RS 02	150/150 RS 27	150/150 RS 30	150/150 RS 34
	1 RS 04	150/150 RS 34	150/150 RS 33	150/150 RS 27	150/150 RS 21
	1 RS 04	198/198 RS 05	188/188 RS 35	179/179 RS 33	163/163 RS 04
Variable	1 RS 24	198/198 RS 04	188/188 RS 34	179/179 RS 27	156/156 RS 03
	2 RS 21	150/150 RS 02	150/150 RS 30	150/150 RS 34	150/150 RS 24
	3 RS 04	150/150 RS 05	150/150 RS 35	150/150 RS 33	150/150 RS 22
	3 RS 04	198/198 RS 04	188/188 RS 33	179/179 RS 30	144/144 RS 02
Central	1 RS 21	150/150 RS 02	150/150 RS 35	150/150 RS 33	150/150 RS 27
	2 RS 04	150/150 RS 05	150/150 RS 35	150/150 RS 33	150/150 RS 02
	3 RS 24	150/150 RS 05	150/150 RS 35	150/150 RS 33	150/150 RS 02
	3 RS 04	198/198 RS 04	188/188 RS 33	179/179 RS 30	139/139 RS 02
Variable	1 RS 24	198/198 RS 02	188/188 RS 34	179/179 RS 33	139/139 RS 05
	2 RS 21	150/150 RS 05	150/150 RS 35	150/150 RS 33	139/139 RS 03
	3 RS 04	150/150 RS 05	150/150 RS 35	150/150 RS 33	139/139 RS 02
	3 RS 04	198/198 RS 04	188/188 RS 34	179/179 RS 33	139/139 RS 02
Central	1 RS 21	150/150 RS 02	150/150 RS 35	150/150 RS 33	150/150 RS 27
	2 RS 04	150/150 RS 05	150/150 RS 35	150/150 RS 33	150/150 RS 02
	3 RS 24	150/150 RS 05	150/150 RS 35	150/150 RS 33	150/150 RS 02
	3 RS 04	198/198 RS 04	188/188 RS 34	179/179 RS 33	144/144 RS 02
Variable	1 RS 24	198/198 RS 02	188/188 RS 34	179/179 RS 33	139/139 RS 05
	2 RS 21	150/150 RS 05	150/150 RS 35	150/150 RS 33	139/139 RS 03
	3 RS 04	150/150 RS 05	150/150 RS 35	150/150 RS 33	139/139 RS 02
	3 RS 04	198/198 RS 04	188/188 RS 34	179/179 RS 33	144/144 RS 02

Procedure

Participants were tested individually at the computer in a small sound attenuated room. Testing took place over three experimental sessions. In each session, 24 target pairs and 24 foil pairs were presented to the participant. Each of these pairs was presented in a separate experimental trial, and trial order was randomised. All possible rate change combinations were included across the 24 target pairs. Thus, ability to discriminate the six magnitude of rate change values from the central rate was tested in pairs where (a) the central rate was followed by a slow variable rate, (b) the central rate was followed a fast variable rate, (c) a slow variable rate was followed by the central rate, and (d) a fast variable rate was followed by the central rate. Each pair in which the central rate came first was associated with a different rhythm set (see Table A4.5.1). Pairs where the variable rate came first were matched with these pairs in terms of rhythm set. The 24 foil pairs included in each test session matched both the central rate first pairs and variable rate first pairs in the session.

For each participant, only two things differed across the three test sessions: (a) the metricality of patterns and (b) the association between particular rate combinations and rhythm sets. Within a single test session, patterns were either quadruple, triple, or nonmetrical. The order in which sessions were run was counterbalanced. To determine rate combination/rhythm set association, each musician and nonmusician participant was allocated randomly into one of three groups. Each group differs in terms of the identity of the rhythm set that is associated with each particular rate combination (see Table A4.5.1). This process ensured that the participant did not encounter the same grouping of rhythm set and rate combination across test sessions.

A training and practice phase, lasting approximately 10 mins, occurred before the participant's first session. In this phase, the participant was provided with details about the procedure and given three practice trials. In these, the first pattern of the pair was always presented at the central rate. In the first practice trial (featuring a quadruple pattern), the second pattern was obviously slower than the first, in the second trial (featuring a triple pattern), the second pattern was obviously faster, and in the final practice trial (featuring a nonmetrical pattern), the first and second pattern were presented at the same rate. The participant was required to indicate (by pressing designated keys on the computer

keyboard) whether the patterns within a pair were presented at the same rate or at different rates. In the context of each trial, the number of times the pair could be listened to was not restricted (the participant pressed the spacebar on the computer keyboard to re-hear a pair). Feedback about performance was given after the practice trials were completed. Errors were made by only two participants, both of whom responded ‘different’ to the final practice trial. The experimenter reminded these participants that if they were unsure about how to respond, they could listen to the pair again. Both participants agreed that the patterns in the final pair were presented at the same rate upon re-hearing the pair. Once the participant was confident with the procedure, the first test session began.

The procedure in all trials, both in the initial practice phase and the three test sessions, was exactly the same. To begin each trial, the participant depressed the spacebar on a computer keyboard. Before the standard/comparison pair was presented, a drumroll followed by a number of taps occurred. A bongo drum sound was used for this ‘fanfare’. The roll had a 2 s duration, and the inter-onset interval of the taps that followed was 250 ms. The number of bongo taps could vary randomly within the range of 4 to 8 taps. The participant was required to count the number bongo taps that followed the roll. After the taps finished, a ‘dialog box’ with the prompt “How many taps?” appeared on the computer screen. The participant typed the result of their count into the dialog box and pressed the ‘return’ key on the computer to register their response. This task was intended to help maintain the participant’s attention, as well as to prevent them from comparing the second pattern of one pair with the first pattern of the next pair on consecutive trials. This countermeasure was particularly important because the participant was given the opportunity to hear each pair more than once. If the participant chose to re-hear a pair, the number of bongo taps in the introductory fanfare was not necessarily the same as for the previous hearing.

Two seconds after the participant registered their bongo tap count, a lower-case ‘a’ appeared in the centre of the computer screen. One second later the first pattern was presented. The lower-case ‘a’ disappeared at the onset of the final tone of the pattern. Three seconds later, a lower-case ‘b’ appeared in the same location as where the ‘a’ had been, followed 1 s later by the presentation of the second pattern. The ‘b’ disappeared at the onset of the final tone of the second pattern. Two seconds later, the prompt “SAME or DIFFERENT speed? OR Press SPACEBAR again” appeared below the center of the computer screen. If the participant felt that the first and second pattern were presented at

the same rate, they pressed a key labelled “SAME” on the computer keyboard. If they felt that the patterns within the pair were presented at different rates, they pressed a key labelled “DIFF” on the computer keyboard. The participant had the opportunity to hear the pair as many times as required to make their same/different judgement (by pressing the spacebar). They were encouraged to exercise this option only if they could not make a confident decision because they were genuinely unsure or due to a lapse in concentration. After a same/different response was registered, a prompt instructing the participant to press the spacebar for the next trial appeared near the center of the computer screen. No feedback was given during testing.

Each of the three test sessions lasted between 45 mins and 1 hr, depending on the amount of instruction required, the number of times the participant chose to listen to the stimulus pairs, and how quickly they progressed from one trial to the next.

Analyses

Participants’ Discrimination Index (DI) scores were calculated for each item type in the metricality x rate region x direction of rate change conditions. The main advantage of DI scores is their sensitivity to false alarms: DI scores are obtained by dividing the number of correct responses to target pairs (hits) minus the number of incorrect responses to foil pairs (false positives), by the number of target pairs. The resultant index is a score between -1 and 1, with zero indicating chance performance, 1 indicating a 100% hit rate, and -1 indicating a 100% miss rate.

A 2 x (2 x 2 x 6) ANOVA was performed on the DI scores (see Tables A4.5.3 & A4.5.4 at the end of this appendix). In this analysis, orthogonal planned contrasts were used to test the main effects and interactions of *musicality*, *rate region*, *direction of rate change*, and *magnitude of rate change*. The effects of *metricality* upon rate discrimination were tested in a separate ANOVA (see Tables A4.5.5 & A4.5.6). (These analyses were run separately because the number of contrasts needed to make all the necessary comparisons exceeded the memory limits of the analysis program *WinPsy32 Version 2.0*). In addition, the number of times musicians and nonmusicians chose to hear standard/comparison pair as a function of metricality was analysed in a 2 x (3) ANOVA (see Tables A4.5.7 & A4.5.8). Alpha was set at .05 in all analyses, and the critical value for F(1,10) is 4.96.

Results

Determining the rate discrimination threshold

To determine the approximate threshold for rate discrimination, planned contrasts compared the DI scores obtained for each individual magnitude of rate change value with DI scores obtained for all the magnitude values smaller than that value (except of course the smallest value of 4%). Thus, the rate discrimination threshold was operationally defined as the lowest magnitude of rate change value at which rate discrimination ability was superior to discrimination at smaller magnitude values. Separate comparisons were made for magnitude of rate change values in slow and fast rate regions. The contrast coefficients are shown in Table A4.5.3, and the ANOVA summary is given in Table A4.5.4.

In both the slow and fast rate regions, 16% was the lowest magnitude of rate change value that yielded significantly higher DI scores than those produced by smaller rate changes - in the slow rate region $F(1,10) = 15.59$; in the fast rate region $F(1,10) = 26.98$. DI scores obtained for magnitude values larger than 16% (i.e., 20% and 24%) also differed significantly from those obtained for smaller values (see Figure A4.5.1).

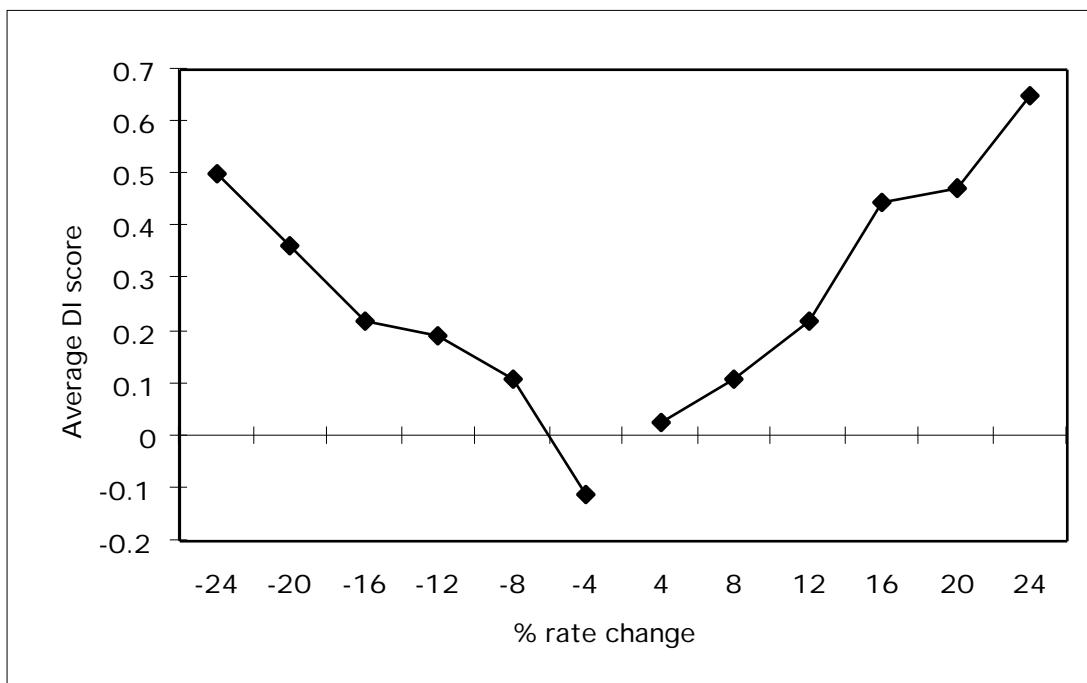


Figure A4.5.1: Effects of magnitude of rate change on rate discrimination. Each value on the horizontal axis corresponds to the percentage by which the central rate is altered to produce the variable rate. Negative values lie within the slow rate region and positive values lie within the fast rate region.

There were no significant interactions between the magnitude of rate change and direction of rate change variables. In other words, rate decreases and rate increases did not differentially affect rate discrimination ability at any magnitude value. Similarly, metricality and musicality did not interact significantly with magnitude of rate change. These findings provide justification for collapsing across the levels of the direction of rate change, metricality, and musicality variables when determining the lowest magnitude value where discrimination is better than it is for smaller values. Therefore, under the conditions tested, the approximate rate discrimination threshold is 16%.

Overall effects of rate region and direction of rate change

Although the main effects of rate region (slow or fast) and direction of rate change (decreasing or increasing) were not significant - $F(1,10) = 0.004$ and $F(1,10) = 1.09$, respectively - their interaction was - $F(1,10) = 13.77$. In the slow rate region, rate decreases were recognised more accurately than rate increases, whereas in the fast rate region, the opposite was observed: rate increases were recognised more accurately than rate decreases. This produced the crossover effect illustrated in Figure A4.5.2. Caution must be exercised when interpreting these findings because, in the slow rate region, rate decreases are in fact

larger, and rate increases smaller, than corresponding rate changes in the fast rate region. These asymmetries arise because the magnitude of rate change factor is specified in all cases relative to the central rate. Therefore, although a change from the central rate to a particular variable rate is in the order of magnitude specified by the given percentage values, the magnitude of rate change associated with progression from this variable rate back to the central rate will be different to the specified value. For example, a 4% increase in rate from the central rate of 6.67 time units per second gives a rate of 6.94 time units per second. However, a change in rate from this latter value - 6.94 time units per second - back down to 6.67 time units per seconds is a decrease of only 3.84%.

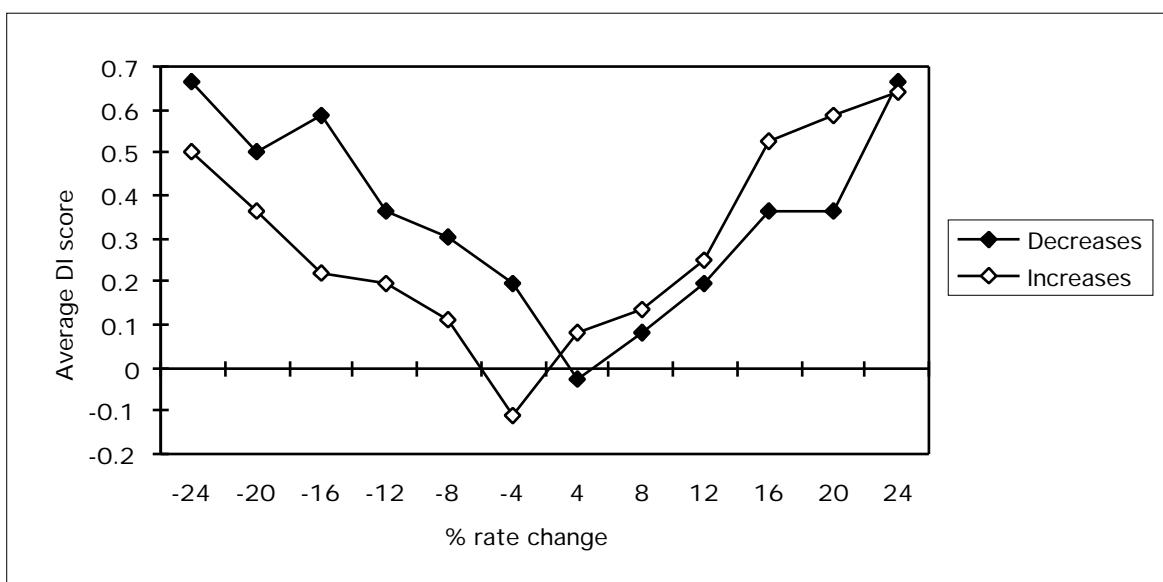


Figure A4.5.2: Effects of direction of rate change on rate discrimination and each magnitude of rate change value in slow (-) and fast (+) rate regions.

Overall effects of metricality

DI scores were significantly higher for metrical (i.e., quadruple and triple) standard/comparison pairs than for nonmetrical pairs - $F(1,10) = 56.51$. However, DI scores obtained for quadruple and triple pairs did not differ significantly - $F(1,10) = 0.24$. These findings suggest that rate discrimination was better when the patterns being discriminated were metrical than when they were nonmetrical (see Figure A4.5.3).

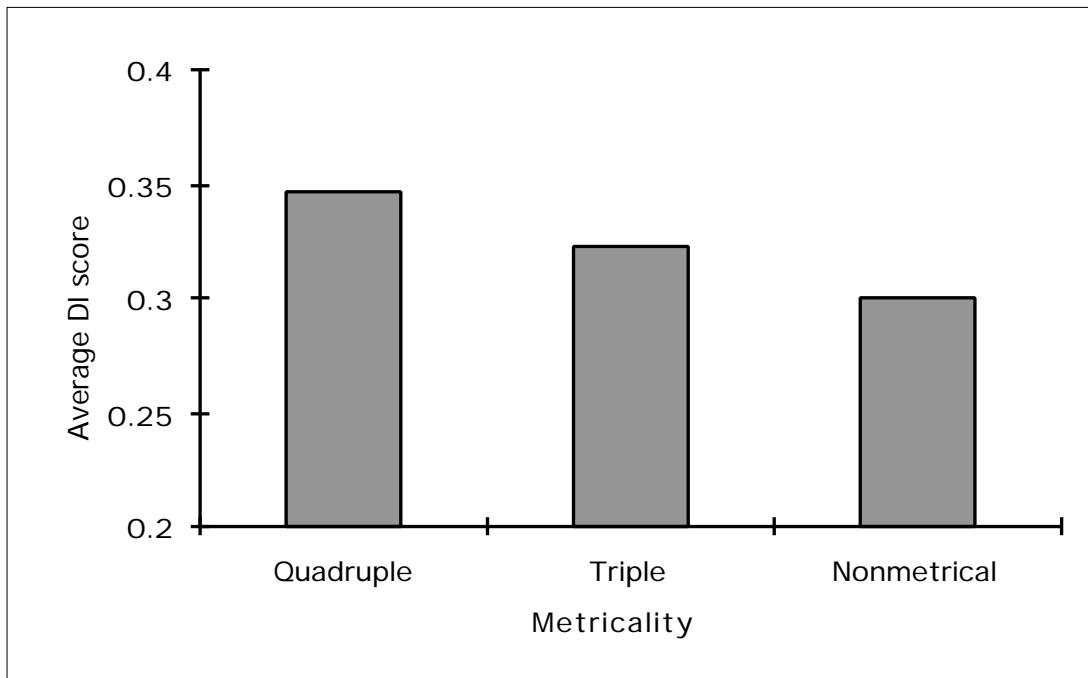


Figure A4.5.3: Effects of metricality on rate discrimination.

Although metricality did not interact significantly with either rate region or direction of rate change alone, the three-way interaction between these variables was significant - $F(1,10) = 7.78$. In other words, the crossover effect involving rate region and direction of rate change was more pronounced when patterns were metrical than when they were nonmetrical (see Figure A4.5.4).

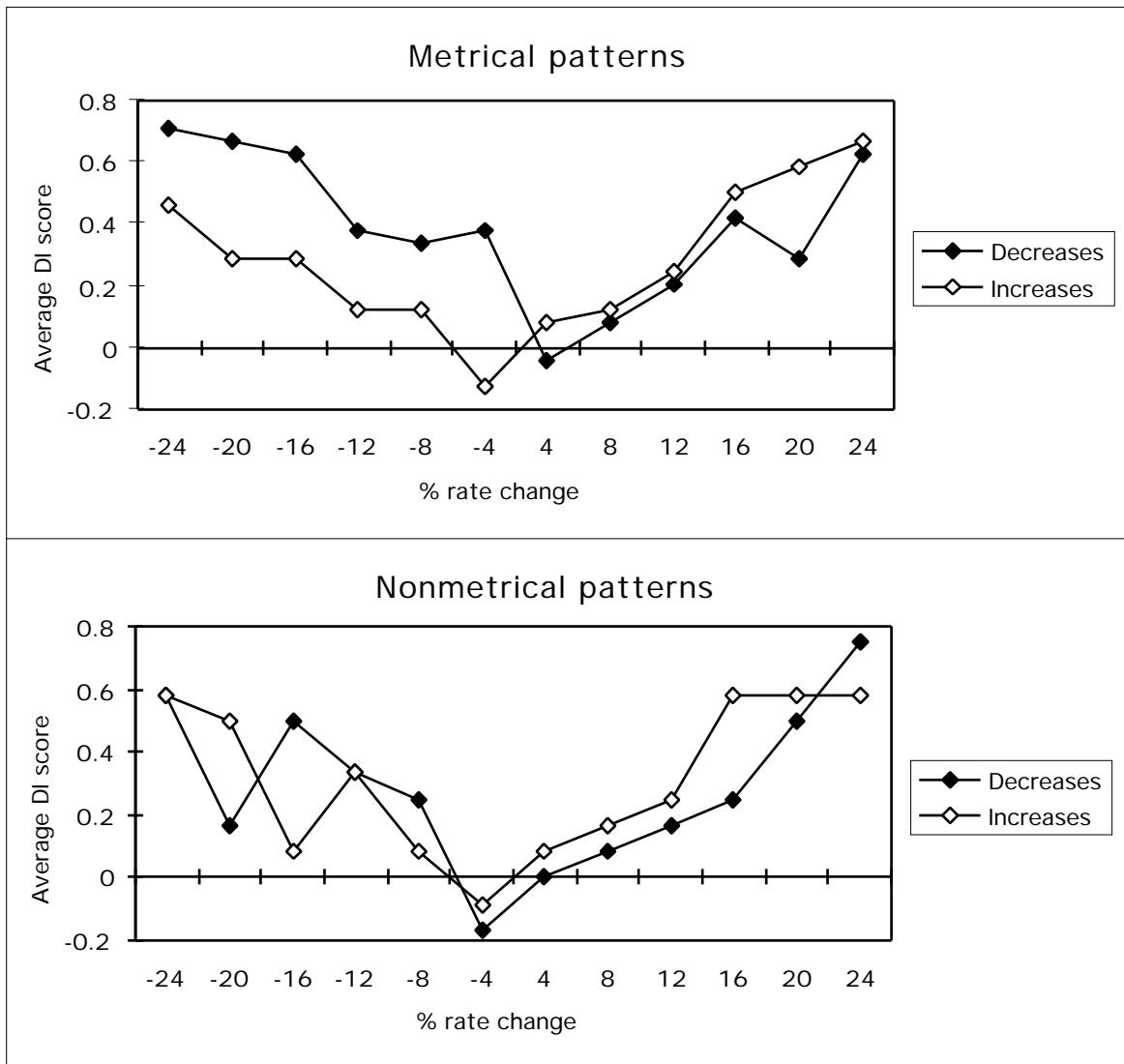


Figure A4.5.4: Effects of rate region and direction of rate change on rate discrimination in metrical (top panel) and nonmetrical (bottom panel) patterns.

Effects of musicality

Musicians' average DI scores were significantly higher than those of nonmusicians at each magnitude of rate change - $F(1,10) = 6.27$ (see Figure A4.5.5). This suggests that, overall, musicians performed better at the rate discrimination task than nonmusicians. However, there were no reliable differences in rate discrimination threshold based on musicality.

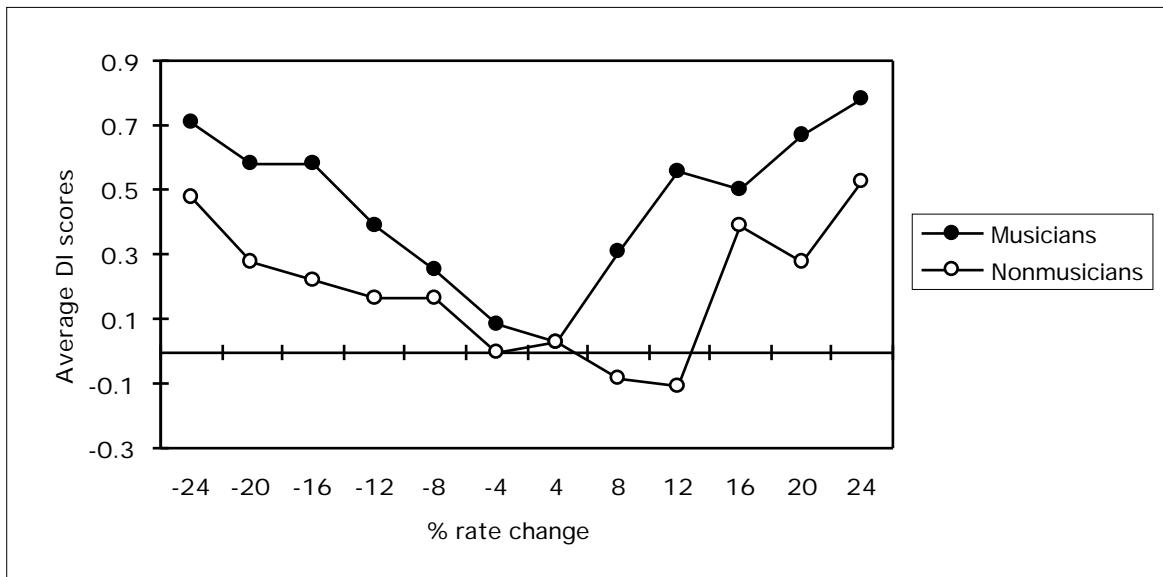


Figure A4.5.5: Effects of musicality on rate discrimination.

A significant interaction between musicality and metricality - $F(1,10) = 14.931$ - suggests that rate discrimination in metrical patterns, relative to nonmetrical patterns, was facilitated to a greater degree in musicians than nonmusicians (see Figure A4.5.6). Indeed, it can be seen in Figure A4.5.6 that the effects of metricality upon rate discrimination were negligible in nonmusicians.

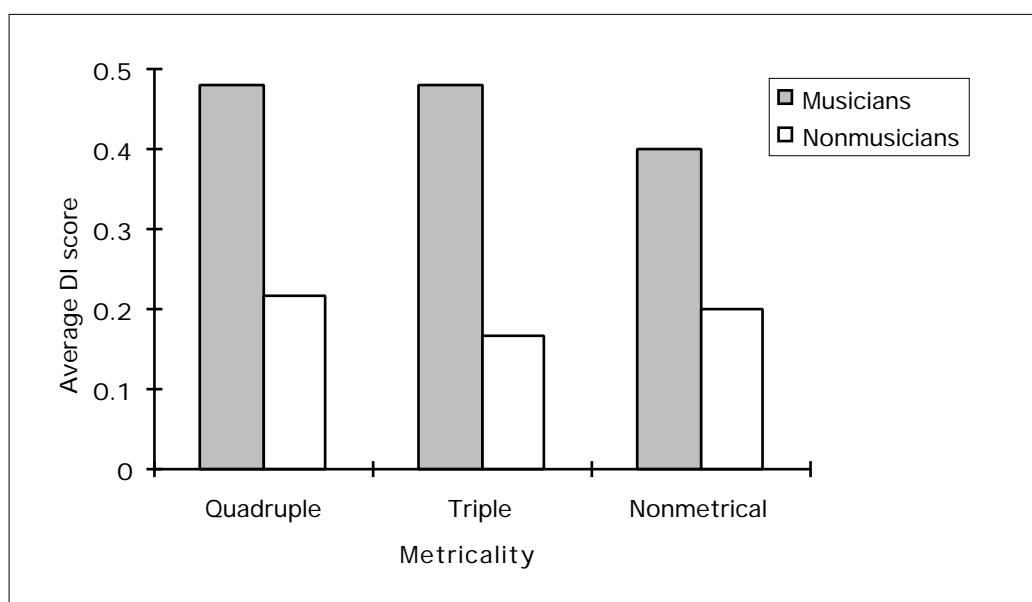


Figure A4.5.6: Effects of metricality and musicality on rate discrimination.

Number of hearings

The number of times participants chose to hear standard/comparison pairs did not differ significantly as a function of musicality or metricality. In fact, it was rare for both musicians and nonmusicians to listen to each pair more than once (see Figure A4.5.7).

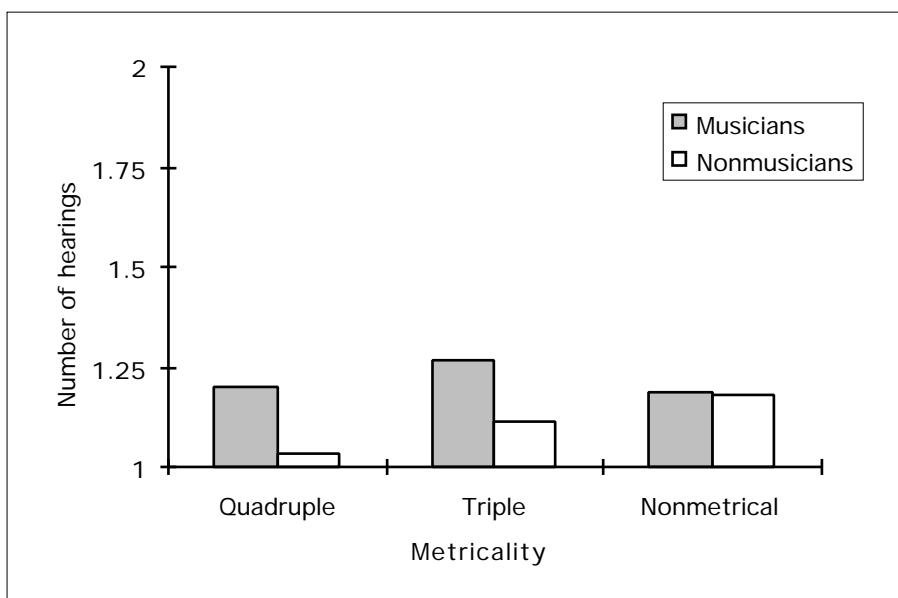


Figure A4.5.7: Number of times musicians and nonmusicians chose to hear quadruple, triple, and nonmetrical standard/comparison pairs.

Discussion

This experiment yielded results that suggest a rate discrimination threshold of 16% under the present conditions. This represents the magnitude of rate change, relative to a central rate where time unit duration is 150 ms, that was noticed at all levels of the musicality, metricality, rate region, and direction of rate change factors. In other words, rates 16% slower and faster than the central rate were discriminated from the central rate by both musicians and nonmusicians, in the context of metrical and nonmetrical patterns, regardless of whether direction of rate change was decreasing or increasing. The duration of each time unit underlying patterns is 179 ms at the rate 16% slower than the central rate, and 129 ms at the corresponding faster rate. (Note that the central rate can be expressed as 6.67 time units per second, in which case the slow rate is 5.6 time units per second and the fast rate is 7.8 time units per second). Because the 16% threshold was found to hold across all factorial combinations, presentation rate in future experiments will be made to vary

between values where time unit duration is 179 ms, 150 ms, and 129 ms to control for metricality carryover effects.

The 16% liminal value is slightly lower than estimates of the rate discrimination threshold reported elsewhere in the literature, which are usually in the order of 12%. Several factors may have contributed to the apparent lack of sensitivity in the present experiment. Notably, the current experiment differed from previous studies in the skill level of participants and the complexity of stimulus patterns. Whereas previous investigations employed participants who were musically skilled, or at least were experienced at listening in the context of psychophysical experiments, members of the nonmusician group in the present experiment lacked such listening skills. However, this explanation is not sufficient because there were no significant differences in the rate discrimination threshold between musicians and nonmusicians in the present study. A more convincing explanation for the low threshold is related to the stimuli employed. The patterns used in the current experiment were relatively complex: metrical patterns did not have explicitly marked isochronous beats, and nonmetrical patterns did not even have implicit beats.

Examining the effects of musicality and metricality upon ability to detect rate change revealed some noteworthy findings. Not only was rate discrimination better in musicians than in nonmusicians, and with metrical than with nonmetrical patterns, but it was also affected by the interaction of these factors. This interaction indicates that musicians are more sensitive than nonmusicians to the effects of metricality. It may be the case that musically skilled individuals are more successful at finding the implied beat in metrical patterns, as well as maintaining this beat during the silent interval separating the first and second pattern in pairs.

The interaction of metricality, rate region, and direction of rate change is also worthy of consideration. The interaction of rate region and direction of rate change suggest that, whereas rate decreases were more noticeable than rate increases in the slow rate region, the situation was reversed in the fast rate region. Taken alone, this result is consistent with Ellis' (1991) review described earlier. However, the present finding that this effect is influenced by metricality may contribute to a fuller understanding of its basis.

It was found that the advantages associated with rate decreases at slow rates and rate increases at fast rates are more pronounced when patterns are metrical than when they are

nonmetrical. Perhaps this finding can be explained by postulating that rate discrimination is related to pulse salience. In particular, sensitivity to rate change is high to the extent that the pulses initially experienced (i.e., before the rate change) are strong. It is assumed here (based on work by Parncutt, 1994) that the strongest pulse sensations are associated with metrical patterns presented at the central rate. Therefore, rate discrimination should be more accurate when the first pattern of a to-be-compared pair of metrical patterns is presented at the central rate, than when the second pattern is presented at the central rate. In the slow rate region, placing the central rate in the first position produces a decrease in rate between patterns in a pair. In accordance with the above rationale, such decreases were detected more accurately than rate increases in this region when patterns were metrical. On the other hand, in the fast rate region, a central rate first pattern produces rate increases, which, once again consistent with the current explanation, were detected better than decreases in the same rate region when patterns were metrical. Finally, because nonmetrical patterns do not evoke pulse sensations, the effects of rate region and direction of rate change are attenuated in nonmetrical contexts.

Table A4.5.3: List of planned contrasts for determining rate discrimination threshold.

Contrast No.	Comparison
<i>Musicality</i>	
A1	Musicians vs nonmusicians
<i>Magnitude of rate change in slow rate region</i>	
B1	-24% vs smaller rate change values (-20%, -16%, -12%, -8%, -4%)
B2	-20% vs smaller values
B3	-16% vs smaller values
B4	-12% vs smaller values
B5	-8% vs smaller values
<i>Magnitude of rate change in fast rate region</i>	
B6	24% vs smaller rate change values (20%, 16%, 12%, 8%, 4%)
B7	20% vs smaller values
B8	16% vs smaller values
B9	12% vs smaller values
B10	8% vs smaller values
<i>Direction of rate change</i>	
B11	Rate increases vs rate decreases
<i>Rate region</i>	
B12	Slow vs fast
<i>Interaction of direction of rate change and rate region</i>	
B13	Rate increases vs rate decreases x slow vs fast
<i>3-way interactions between magnitude of rate change, direction of rate change, and rate region</i>	
B14	-24% vs smaller values x increases vs decreases x slow vs fast
B15	-20% vs smaller values x increases vs decreases x slow vs fast
B16	-16% vs smaller values x increases vs decreases x slow vs fast
B17	-12% vs smaller values x increases vs decreases x slow vs fast
B18	-8% vs smaller values x increases vs decreases x slow vs fast
B19	24% vs smaller values x increases vs decreases x slow vs fast
B20	20% vs smaller values x increases vs decreases x slow vs fast
B21	16% vs smaller values x increases vs decreases x slow vs fast
B22	12% vs smaller values x increases vs decreases x slow vs fast
B23	8% vs smaller values x increases vs decreases x slow vs fast

Table A4.5.4: ANOVA summary for rate discrimination threshold.

Psy32 For Windows Version 2.0		Source	SS	df	MS	F
<hr/>						
Tempo discrimination						
<hr/>						
Number of Groups: 2						
Number of Repeats: 72						
<hr/>						
Number of subjects in Group 1: 6						
Number of subjects in Group 2: 6						
<hr/>						
Summary of Analysis of Variance						
<hr/>						
Source	SS	df	MS	F		
A1	14.260	1	14.260	6.270		
Error	22.743	10	2.274			
<hr/>						
Within						
<hr/>						
B1	15.052	1	15.052	73.475		
A1B1	0.019	1	0.019	0.092		
Error	2.049	10	0.205			
B2	6.328	1	6.328	13.631		
A1B2	0.334	1	0.334	0.719		
Error	4.642	10	0.464			
B3	8.195	1	8.195	15.592		
A1B3	0.001	1	0.001	0.001		
Error	5.256	10	0.526			
B4	2.241	1	2.241	4.840		
A1B4	2.241	1	2.241	4.840		
Error	4.630	10	0.463			
B5	1.125	1	1.125	1.564		
A1B5	0.681	1	0.681	0.946		
Error	7.194	10	0.719			
B6	9.467	1	9.467	20.267		
A1B6	0.056	1	0.056	0.120		
Error	4.671	10	0.467			
B7	4.225	1	4.225	18.325		
A1B7	0.136	1	0.136	0.590		
Error	2.306	10	0.231			
B8	5.671	1	5.671	26.982		
A1B8	0.782	1	0.782	3.722		
Error	2.102	10	0.210			
B9	1.120	1	1.120	1.873		
A1B9	2.676	1	2.676	4.474		
Error	5.981	10	0.598			
B10	0.250	1	0.250	0.391		
A1B10	1.361	1	1.361	2.130		
Error	6.389	10	0.639			

Table A4.5.5: List of planned contrasts for the effects of metricality on the rate discrimination threshold.

Contrast No.	Comparison
<i>Musicality</i>	
A1	Musicians vs nonmusicians
<i>Metricality</i>	
B1	Metrical vs nonmetrical
B2	Quadruple vs triple
<i>Interactions between metricality and direction of rate change</i>	
B3	Metrical vs nonmetrical x increasing vs decreasing
B4	Quadruple vs triple x increasing vs decreasing
<i>Interactions between metricality and rate region</i>	
B5	Metrical vs nonmetrical x slow vs fast
B6	Quadruple vs triple x slow vs fast
<i>3-way interactions between metricality, direction of rate change, and rate region</i>	
B7	Metrical vs nonmetrical x increasing vs decreasing x slow vs fast
B8	Quadruple vs triple x increasing vs decreasing x slow vs fast
<i>Interactions between metricality, magnitude of rate change, direction of rate change, and rate region</i>	
B9	Metrical vs nonmetrical x -24% vs smaller values x increases vs decreases x slow vs fast
B10	Metrical vs nonmetrical x -20% vs smaller values x increases vs decreases x slow vs fast
B11	Metrical vs nonmetrical x -16% vs smaller values x increases vs decreases x slow vs fast
B12	Metrical vs nonmetrical x -12% vs smaller values x increases vs decreases x slow vs fast
B13	Metrical vs nonmetrical x -8% vs smaller values x increases vs decreases x slow vs fast
B14	Metrical vs nonmetrical x 24% vs smaller values x increases vs decreases x slow vs fast
B15	Metrical vs nonmetrical x 20% vs smaller values x increases vs decreases x slow vs fast
B16	Metrical vs nonmetrical x 16% vs smaller values x increases vs decreases x slow vs fast
B17	Metrical vs nonmetrical x 12% vs smaller values x increases vs decreases x slow vs fast
B18	Metrical vs nonmetrical x 8% vs smaller values x increases vs decreases x slow vs fast
B19	Quadruple vs triple x -24% vs smaller values x increases vs decreases x slow vs fast
B20	Quadruple vs triple x -20% vs smaller values x increases vs decreases x slow vs fast
B21	Quadruple vs triple x -16% vs smaller values x increases vs decreases x slow vs fast
B22	Quadruple vs triple x -12% vs smaller values x increases vs decreases x slow vs fast
B23	Quadruple vs triple x -8% vs smaller values x increases vs decreases x slow vs fast
B24	Quadruple vs triple x 24% vs smaller values x increases vs decreases x slow vs fast
B25	Quadruple vs triple x 20% vs smaller values x increases vs decreases x slow vs fast
B26	Quadruple vs triple x 16% vs smaller values x increases vs decreases x slow vs fast
B27	Quadruple vs triple x 12% vs smaller values x increases vs decreases x slow vs fast
B28	Quadruple vs triple x 8% vs smaller values x increases vs decreases x slow vs fast

Table A4.5.6: ANOVA summary for effects of metricality on the rate discrimination threshold.

Psy32 For Windows Version 2.0					Source	SS	df	MS	F
Tempo discrimination & metricality									
Number of Groups:	2				B9	1.039	1	1.039	1.681
Number of Repeats:	72				A1B9	1.234	1	1.234	1.996
Number of subjects in Group 1:	6				Error	6.180	10	0.618	
Number of subjects in Group 2:	6				B10	0.475	1	0.475	2.056
					A1B10	0.100	1	0.100	0.434
					Error	2.312	10	0.231	
					B11	1.626	1	1.626	4.875
					A1B11	0.130	1	0.130	0.390
					Error	3.334	10	0.333	
					B12	0.005	1	0.005	0.020
					A1B12	0.375	1	0.375	1.601
					Error	2.343	10	0.234	
					B13	0.000	1	0.000	0.000
					A1B13	0.056	1	0.056	0.161
					Error	3.444	10	0.344	
A1	14.260	1	14.260	6.270	B14	1.023	1	1.023	3.383
Error	22.743	10	2.274		A1B14	1.837	1	1.837	6.078
Within					Error	3.023	10	0.302	
B1	13.251	1	13.251	56.510	B15	0.100	1	0.100	0.545
A1B1	3.501	1	3.501	14.931	A1B15	0.100	1	0.100	0.545
Error	2.345	10	0.234		Error	1.833	10	0.183	
B2	0.085	1	0.085	0.236	B16	0.907	1	0.907	2.197
A1B2	0.085	1	0.085	0.236	A1B16	0.463	1	0.463	1.121
Error	3.601	10	0.360		Error	4.130	10	0.413	
B3	1.418	1	1.418	2.206	B17	0.231	1	0.231	1.106
A1B3	0.029	1	0.029	0.045	A1B17	0.009	1	0.009	0.044
Error	6.428	10	0.643		Error	2.093	10	0.209	
B4	0.043	1	0.043	0.094	B18	0.028	1	0.028	0.050
A1B4	0.293	1	0.293	0.638	A1B18	0.028	1	0.028	0.050
Error	4.601	10	0.460		B19	0.042	1	0.042	0.193
B5	0.510	1	0.510	1.162	A1B19	0.184	1	0.184	0.843
A1B5	1.418	1	1.418	3.229	Error	2.178	10	0.218	
Error	4.391	10	0.439		B20	0.133	1	0.133	0.547
B6	0.002	1	0.002	0.004	A1B20	1.752	1	1.752	7.182
A1B6	0.016	1	0.016	0.032	Error	2.440	10	0.244	
Error	4.920	10	0.492		B21	0.500	1	0.500	1.907
B7	3.251	1	3.251	7.781	A1B21	0.003	1	0.003	0.013
A1B7	0.334	1	0.334	0.801	Error	2.622	10	0.262	
Error	4.178	10	0.418		B22	0.141	1	0.141	0.411
B8	0.293	1	0.293	1.550	A1B22	0.002	1	0.002	0.005
A1B8	0.085	1	0.085	0.450	Error	3.420	10	0.342	
Error	1.892	10	0.189		B23	0.630	1	0.630	2.788
					A1B23	0.047	1	0.047	0.207
					Error	2.260	10	0.226	
					B24	0.006	1	0.006	0.049
					A1B24	0.117	1	0.117	0.926
					Error	1.268	10	0.127	
					B25	0.176	1	0.176	0.566
					A1B25	1.926	1	1.926	6.192
					Error	3.110	10	0.311	
					B26	1.085	1	1.085	7.151
					A1B26	0.085	1	0.085	0.561
					Error	1.517	10	0.152	
					B27	0.347	1	0.347	4.808
					A1B27	0.681	1	0.681	9.423
					Error	0.722	10	0.072	
					B28	0.042	1	0.042	0.192
					A1B28	0.042	1	0.042	0.192
					Error	2.167	10	0.217	

Table A4.5.7: List of planned contrasts for the effects of metricality on auditory inspection time.

Contrast No.	Comparison
A1	<i>Musicality</i> Musicians vs ninmusicians
B1	<i>Metricality</i> Metrical vs nonmetrical
B2	Quadruple vs triple

Table A4.5.8: ANOVA summary for effects of metricality upon auditory inspection time.

Psy32 For Windows Version 2.0

Tempo number of hearings

Number of Groups: 2
Number of Repeats: 3

Number of subjects in Group 1: 6
Number of subjects in Group 2: 6

Summary of Analysis of Variance

Source SS df MS F

A1 0.107 1 0.107 0.389
Error 2.736 10 0.274

Within

B1 0.006 1 0.006 0.181
A1B1 0.047 1 0.047 1.371
Error 0.341 10 0.034
B2 0.032 1 0.032 4.836
A1B2 0.001 1 0.001 0.099
Error 0.066 10 0.007

APPENDIX 4.6

Autocorrelation Analyses

Introduction

Autocorrelation is a measure of the frequency of occurrence of events following an initial event in a series that unfolds over time. It is typically used to detect regularities in time series data (i.e., observations made at discrete points along a time continuum). Basically the technique involves calculating the degree of correlation between forms of the data where the initial event occurs at time zero, and where it is placed at lag intervals corresponding to successive points moving forward in time. In other words, the data string is compared with itself at a later point in time. Correlation coefficients at each time-point constitute an ‘autocorrelation function’. Autocorrelation functions can be seen to represent “the extent to which the present values of a series are predictable from the past values” (Gottman, 1981, p. 33). Conceptualising autocorrelation as the degree to which early events predict later events highlights its suitability for use as a measure of structural regularity.

Musical patterns and related behaviours can be considered to be quintessential examples of time series because the temporal ordering (rather than merely the serial order) of the events that characterise music has fundamental importance. Accordingly, a growing body of researchers claim that autocorrelation techniques are appropriate for analysing various aspects of musical structure and behavioural responses to music (e.g., Ando, Okano, & Takezoe, 1989; Brown, 1993; Desain & de Vos, 1990; Leman, 1995; Schubert, 1998; Vos, van Dijk, & Schomaker, 1994). Of particular relevance is Brown’s (1993) use of autocorrelation for determining musical meter by detecting periodicity in the occurrence of events that make up musical patterns. She reasons that “If events are correlated from measure to measure with a higher frequency of events occurring with the time separation of the measure, then peaks in the autocorrelation function should indicate the times at which measures begin” (Brown, 1993, p. 1953).

Brown’s (1993) analytical method involves (a) extracting a single part from a musical score, (b) converting note durations in this part to weighted amplitudes by assigning values based on relative inter-onset intervals, (c) choosing a time unit that allows the structure of the pattern to be specified as a series of weighted amplitude values (corresponding to the onsets of notes) and zeros (corresponding to time units where a note onset does not occur), and finally (d) performing an autocorrelation calculation on this data series.

For the analysis of patterns from the 36 rhythm sets currently under investigation, a similar procedure to Brown's is employed here, with the exception that a weighting process is not applied. This is because, in Brown's technique, this process assumes that there is a linear relationship between relative interonset interval and perceived accentuation of tones. The validity of this assumption is a serious consideration, because weighting the data accordingly influences the autocorrelation function quite markedly. Of course, leaving the data unweighted assumes that the tones are perceived to be equally accented, but this is a more conservative assumption.

The purpose of using autocorrelation to analyse the target and distracter patterns from the 36 rhythm sets is to provide objective evidence regarding the validity of the theoretical classification of patterns as quadruple, triple and nonmetrical. It is expected that the analyses will reveal that (a) the principles guiding the generation of patterns were successful in creating quadruple, triple, and nonmetrical target integrant patterns, and quadruple aggregate patterns, and that (b) the changes made to metrical target integrant patterns in order to create distracter patterns were successful in rendering them nonmetrical. Specifically, it is expected that peaks in autocorrelation functions will occur at lags corresponding to metrical divisions in the stimulus patterns that are theoretically metrical, but not in those that are theoretically nonmetrical. The autocorrelation analyses may be especially revealing in the case of nonmetrical patterns, because the generative principles used to construct the patterns were concerned more explicitly with introducing, rather than avoiding, periodicities. Autocorrelation should allow detection of periodicities that may have been surreptitiously introduced during this generative process.

The patterns that are the subject of the present analysis each span 49 time units, where the final unit is included only to imply pattern continuation (see Chapter 4, General Method). Hence, the major portion of each pattern consists of 48 time units. An assumption underlying the pattern generation principles was that groups of four time units correspond to beat-level pulses in the metrical patterns. Therefore, periodicities associated with bar-level pulses in metrical patterns should occur at integer multiples of the beat-level period. In patterns that theoretically best fit a quadruple meter, significant positive peaks in the autocorrelation function should appear at lags reflecting a periodic component based on 16 time units. In triple patterns, positive peaks should occur at lags that correspond to a

periodicity based on 12 time units. Finally, there should be an absence of significant peaks in the autocorrelation functions of nonmetrical patterns.¹

The periodicities that should emerge in metrical patterns correspond to bar-level, rather than beat-level, pulses. Peaks associated with bar-level periods are expected to appear because they are explicitly marked by pattern elements in the quadruple and triple patterns. Peaks corresponding to beat-level pulses are not expected, since the relevant periodicity (based on four time units) is merely implied by the structure of the metrical patterns. Whether human listeners experience these implicit pulses is examined in the experiments reported in Chapter 5.

Method

The patterns from the 36 rhythm sets were transformed into sequences of binary code. Each unit in these code sequences represents one time unit in the stimulus patterns. Time units marked by the occurrence of a tone in the stimulus patterns were coded as ‘1’, and empty time units were coded as ‘0’. Thus, strings of ‘1’s and ‘0’s that specified the temporal structure of the stimulus patterns were produced (see Figure A4.6.1).

Stimulus pattern: **x**- - - - **x**- - **x**- - - - - **xx**- - - - - **x**- - - - **x**- **x**- **x**

Coded sequence: 1000000010001000000000011000000000001000000010101

Figure A4.6.1: An example stimulus pattern (the target triple pattern from rhythm set 21) and a codified version of it.

A separate autocorrelation analysis was performed on each of the binary code versions of the 432 stimulus patterns: (a) the 36 target *quadruple integrant* patterns, and the distracter- x_i , distracter- y_i , and distracter- z_i patterns associated with each of these, (b) the 36 target *triple integrant* patterns, and the related distracter- x_i , distracter- y_i , and distracter- z_i patterns, (c) the 36 target *nonmetrical integrant* patterns, and the related distracter- x_i , - y_i , - z_i patterns, and (d) the 36 target *aggregate* patterns, and the related distracter- x_a , - y_a , - z_a patterns.

Autocorrelation functions at 24 lags were calculated for each coded pattern. Since the code sequences each contain 49 data points, only 48 of which are actually of interest, 24 lags are

¹ Negative autocorrelation values should also be associated with each pattern. These simply “denote a delay where the signal is out of phase” (Vos et al., 1994, p. 967), and typically do not receive as much attention as positive values in autocorrelational studies of musical patterns.

sufficient to detect periodicities that divide the sequences into two or more groups of units. The statistical analysis software package used to perform the computations was *SPSS for Windows (version 6.0)*.

Results

For each of the 432 individual input sequences, SPSS produced a histogram displaying the value of the correlation coefficient obtained at each of the computed lags. These values were then averaged across the 36 rhythm sets to produce the graphs in Figures A4.6.2 to A4.6.5, showing the strength of autocorrelation at each lag for each type of stimulus pattern. The purpose of this averaging was to reveal first the general features of the autocorrelation profile of each type of pattern. Autocorrelation in individual patterns is considered later.

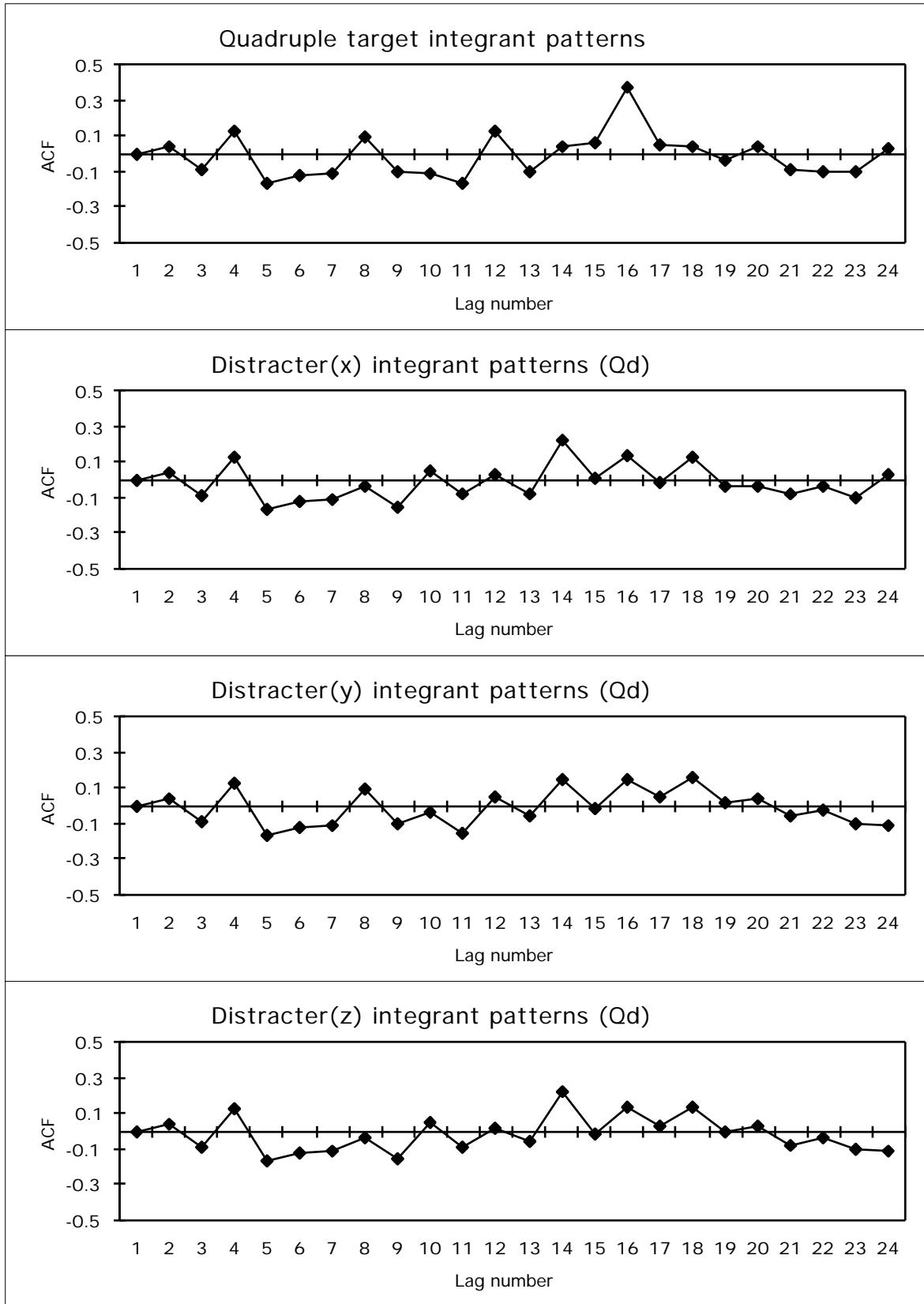


Figure A4.6.2: Autocorrelation functions (ACF) for *quadruple* target, and related distracter, integrant patterns averaged across all 36 rhythm sets.

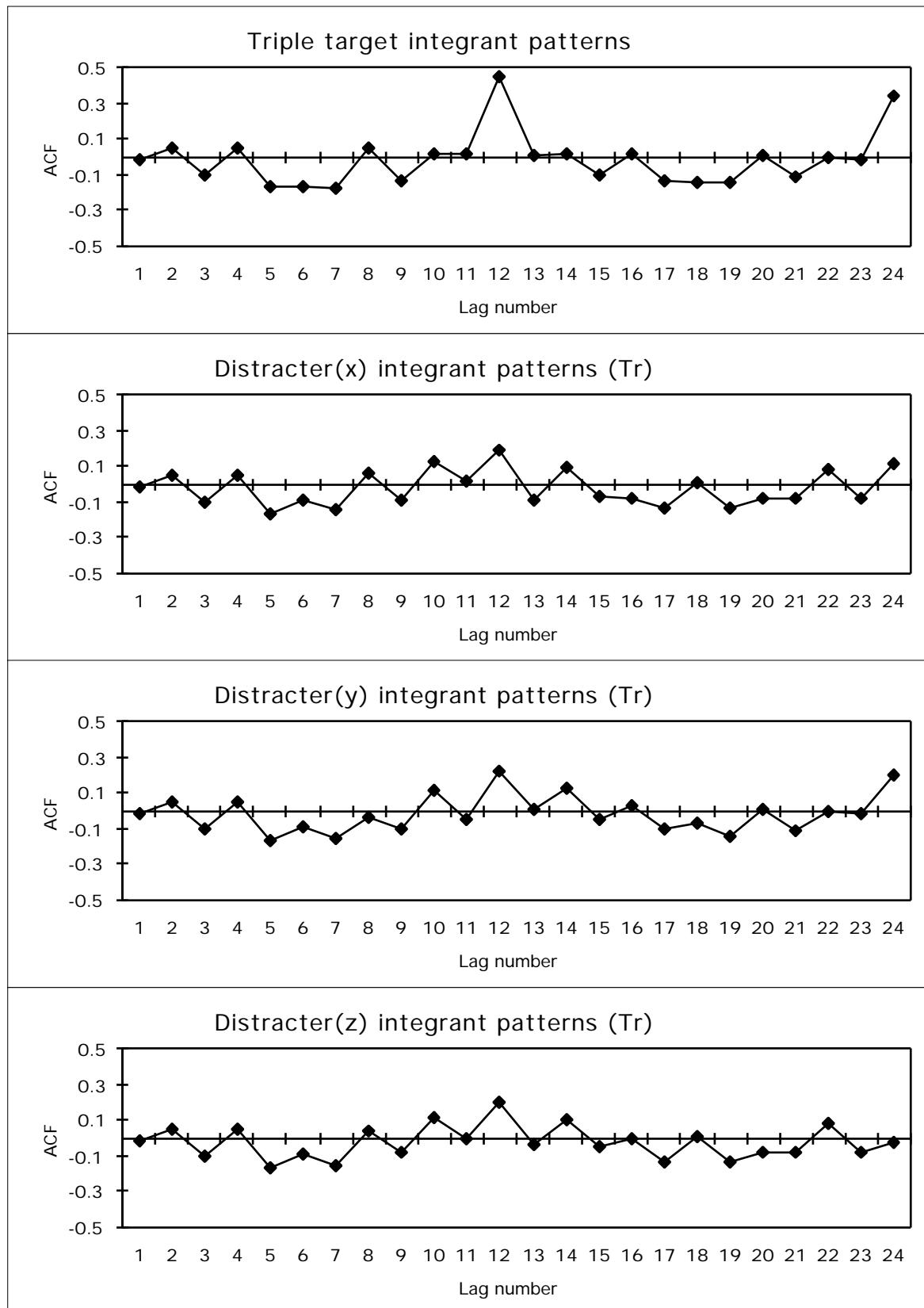


Figure A4.6.3: Autocorrelation functions for *triple* target, and related distracter, integrant patterns averaged across all 36 rhythm sets.

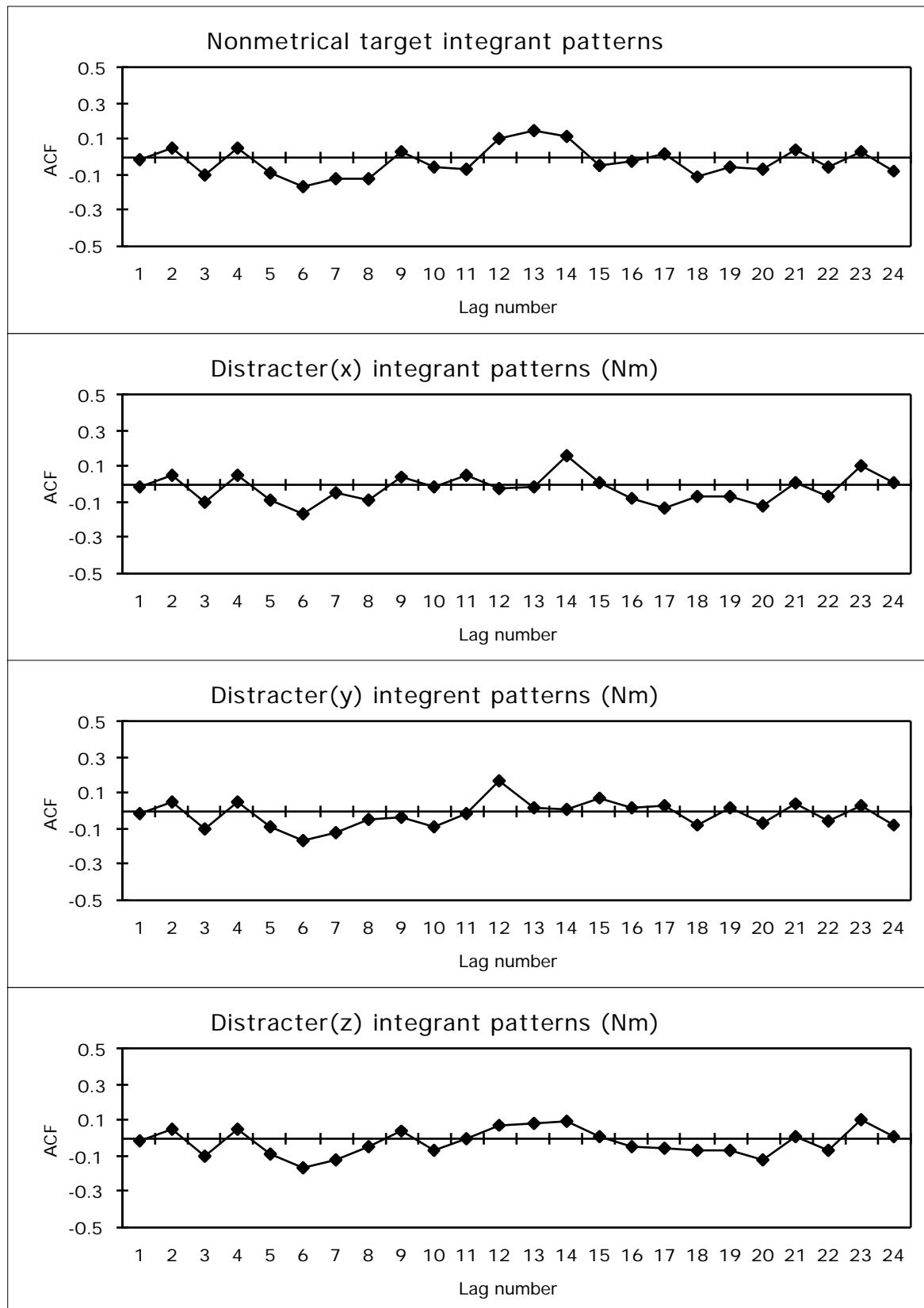


Figure A4.6.4: Autocorrelation functions for *nonmetrical* target, and related distracter, integrant patterns averaged across all 36 rhythm sets.

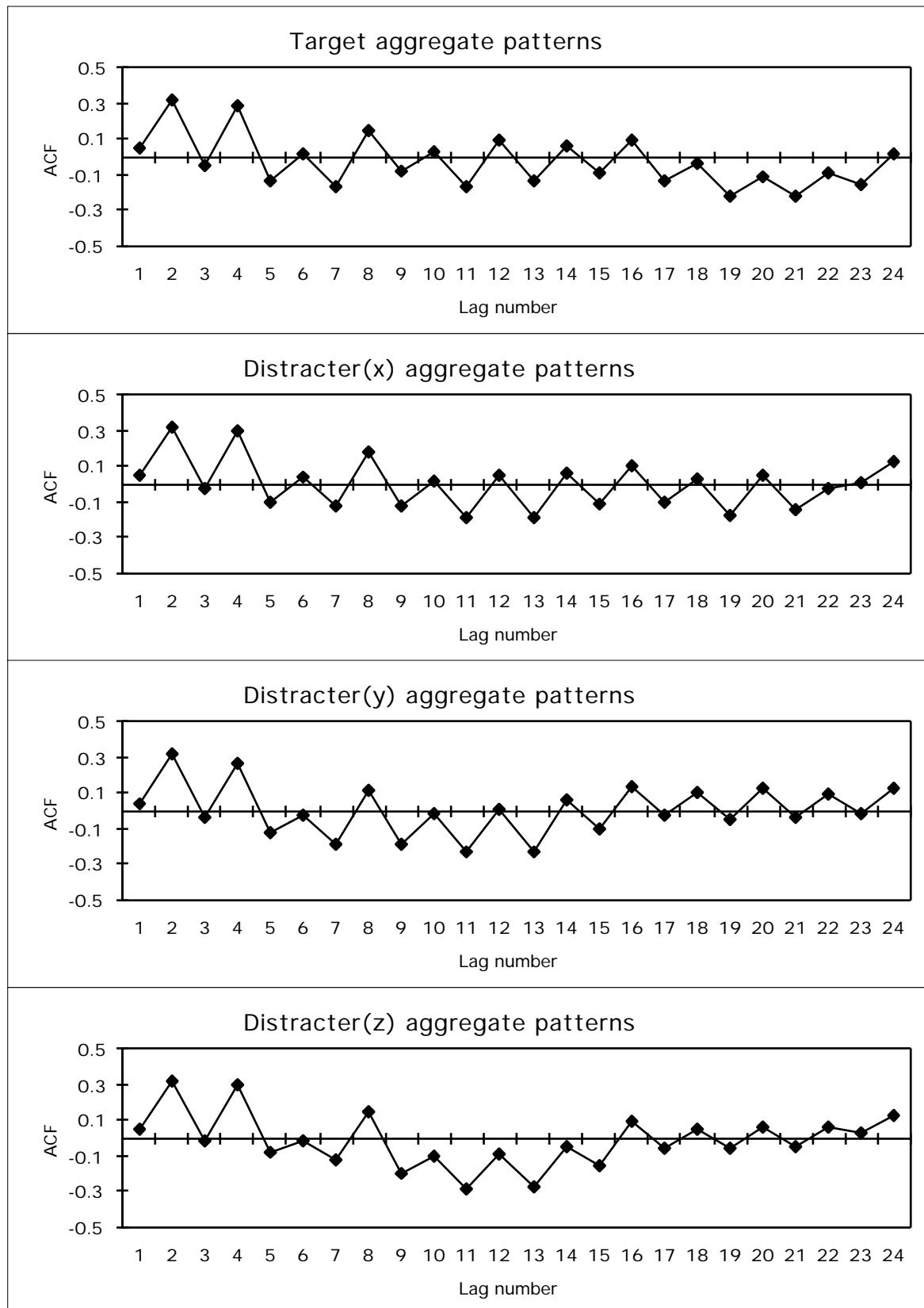


Figure A4.6.5: Autocorrelation functions for target and distracter aggregate patterns averaged across all 36 rhythm sets.

Collectively, quadruple target integrant patterns produce small peaks at lags 4, 8, 12, 20, and 24, and a larger peak at lag 16. This is consistent with a quadruple structure with a beat-level period based on four time units and a bar-level period based on 16 time units. The profiles of the distracter patterns related to these target patterns are not as well defined. Although there are some modest peaks, these are not placed at lags that correspond to any consistent underlying periodicity. This tentatively suggests that they do not contain the requisite periodicities for interpretation as metrical patterns.

The distinction between target and distracter patterns is less clear cut in the case of triple integrant patterns. The profile of target patterns in this group (small peaks at lags 2, 4, 8, 16, and 20, and large peaks at lags 12 and 24) is consistent with a triple structure where the beat-level and bar-level periods are four and 12 time units, respectively (the peak at lag 2 might reflect a period that subdivides the beat-level). However, profiles reminiscent of this structure also appear, to a lesser extent, in the related distracter patterns. This tentatively suggests that target and distracter patterns are fairly similar in terms of metricality in triple integrant patterns.

Occasional peaks appear in the autocorrelation functions of target and distracter nonmetrical patterns. However, these peaks are not consistent enough to suggest periodicities that could form the basis of a metric framework. For example, although a relatively large peak occurs at lag 12 in distracter(y) nonmetrical integrant patterns, the peak at lag 24 that would be required to define a triple meter does not occur.

The profiles of target and distracter aggregate patterns are quite similar to each other. This was expected because all aggregate patterns theoretically best fit a quadruple meter. The profile produced by these patterns resembles a well defined saw tooth function, indicating the presence of a periodicity based on groups of two time units. There appears to be a tendency for peaks to be higher at early lags in the series. However, there is an absence of stronger peaks at lags corresponding to possible metric divisions of these patterns. In other words, there is little evidence that the target and distracter aggregate patterns fit a quadruple meter better than they fit any other meter. Perhaps this reflects metric ambiguity in these aggregate structures.

It is, of course, necessary to examine the autocorrelation functions of individual sequences to determine whether they fit the metricality classification scheme currently under

investigation. Furthermore, whether peaks in the autocorrelation function are statistically significant needs to be considered. In accordance with conventions used in SPSS, coefficients that exceed confidence limits set at two standard error units both above and below zero correlation are taken to constitute significant peaks in the autocorrelation function. All significant peaks that correspond to possible metric divisions of each pattern from the 36 rhythm sets are listed in Tables A4.6.1 to A4.6.4.

Table A4.6.1: Significant peaks in autocorrelation functions for *quadruple* target (t) and related distracter (x, y, z) integrant patterns from each of the 36 rhythm sets (RS). Only peaks at lags that correspond to possible metric divisions of the 48 time unit grid underlying patterns are listed. The lag number where significant peaks were predicted is in bold italics.

RS	lag						
	2	4	6	8	12	16	24
1	-	-	-	-	-	t	-
2	-	-	-	-	-	t,z	-
3	-	-	-	-	-	t	-
4	-	-	-	-	-	t,y	-
5	-	-	-	-	-	t,z	-
6	-	-	-	-	x	t	-
7	-	t,x,y,z	-	-	t	t	-
8	-	-	-	-	t	t	-
9	-	t,x,y,z	-	-	-	t	-
10	-	-	-	-	t	t	-
11	-	-	-	-	-	t	-
12	-	-	-	-	t	t	-
13	-	-	-	-	-	t,x,y,z	-
14	-	-	-	-	-	t,y	-
15	-	-	-	-	-	t,x	-
16	-	-	-	-	x,z	t,y	-
17	-	-	-	-	-	t,x	-
18	-	-	-	-	x	t,x	-
19	-	t,x,y,z	-	-	t,x,z	t	-
20	-	-	-	-	t	t,y	-
21	-	t,x,y,z	-	-	-	t	-
22	-	-	-	-	t	t,x	-
23	-	-	-	-	-	t	-
24	-	-	-	-	t	t	-
25	-	t,x,y,z	-	-	t,y	t,y	-
26	-	-	-	-	t,y	t,y	-
27	-	t,x,y,z	-	-	x	t,x	-
28	-	-	-	-	t	t,z	-
29	-	-	-	-	x	t,x	-
30	-	-	-	-	t	t,z	-
31	-	t,x,y,z	-	-	t,y	t,x,y	-
32	-	-	-	-	t,x,y,z	t,x,y,z	-
33	-	t,x,y,z	-	-	x	t,x,y	-
34	-	-	-	-	t,x	t,x,y,z	-
35	-	-	-	-	x	t,x,z	-
36	-	-	-	-	t	t,x,z	-

Table A4.6.2: Significant peaks in autocorrelation functions for *triple* target (t) and related distracter (x, y, z) integrant patterns from each of the 36 rhythm sets (RS). Only peaks at lags that correspond to possible metric divisions of the 48 time unit grid underlying patterns are listed. The lag numbers where significant peaks were predicted is in bold italics.

Triple target and related distracter integrant patterns							
RS	lag						
	2	4	6	8	<i>I</i> 2	16	24
1	-	-	-	-	t,y	-	t
2	-	-	-	-	t,z	-	t
3	-	-	-	-	t,x	-	t,y
4	-	-	-	-	t,x,y	-	t,y
5	-	-	-	-	t,z	-	t
6	-	-	-	-	t,x,y	-	t
7	-	-	-	-	t	-	t,y
8	-	-	-	-	t	-	t,y
9	-	-	-	-	t	-	t,y
10	-	-	-	-	t,z	-	t,y
11	-	-	-	-	t,z	-	t,y
12	-	-	-	-	t,z	-	t
13	-	-	-	-	t,y	-	t,x,y
14	-	-	-	-	t,y	-	t,y
15	-	-	-	-	t,x	-	t
16	-	-	-	-	t,x,y,z	-	t
17	-	-	-	-	t,x	-	t
18	-	-	-	-	t,x,y,z	-	t
19	-	-	-	-	t	-	t,y
20	-	-	-	-	t,y	-	t,y
21	-	-	-	-	t	-	t
22	-	-	-	-	t,x,y,z	-	t
23	-	-	-	-	t,x	-	t
24	-	-	-	-	t,x,y,z	-	t
25	-	-	-	z	t,x,y	-	t,y
26	-	-	-	-	t,x,y	-	t,y
27	-	-	-	x	t,x,y	-	t
28	-	-	-	-	t,z	-	t
29	-	-	-	-	t,x,y	-	t
30	-	-	-	-	t,z	-	t
31	-	-	-	-	t,x,y	-	t,y
32	-	-	-	-	t,x,y,z	-	t,y
33	-	-	-	x	t,x,y	-	t,x
34	-	-	-	-	t,x,y,z	-	t
35	-	-	-	-	t,x,y,z	-	t
36	-	-	-	-	t,x,y,z	-	t

Table A4.6.3: Significant peaks in autocorrelation functions for *nonmetrical* target (t) and distracter (x, y, z) integrant patterns from each of the 36 rhythm sets (RS). Only peaks at lags that correspond to possible metric divisions of the 48 time unit grid underlying patterns are listed.

Nonmetrical target and distracter integrant patterns							
RS	<i>lag</i>						
	2	4	6	8	12	16	24
1	-	-	-	-	-	-	-
2	-	-	-	-	y	-	-
3	-	-	-	-	t	-	-
4	-	-	-	-	t	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	y	-	-
8	-	-	-	-	y	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12	-	-	-	-	y	-	-
13	-	-	-	-	-	-	-
14	-	-	-	-	y	-	-
15	-	-	-	-	t	-	-
16	t,x,y,z	-	-	-	-	-	-
17	-	-	-	-	t	-	-
18	t,x,y,z	-	-	-	-	-	-
19	-	-	-	-	y	-	-
20	-	-	-	-	y	-	-
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	-	-	-	-	t	-	-
24	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-
26	-	-	-	-	t	-	-
27	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-
30	-	-	-	-	y	-	-
31	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-

Table A4.6.4: Significant peaks in autocorrelation functions for target (t) and distracter (x, y, z) aggregate patterns from each of the 36 rhythm sets (RS). Only peaks at lags that correspond to possible metric divisions of the 48 time unit grid underlying patterns are listed.

RS	Aggregate patterns						
	2	4	6	8	12	16	24
1	-	-	-	-	t	-	y
2	t,x,y,z	x,z	-	-	-	-	-
3	-	x	-	x	-	-	-
4	t,x,y,z	t,x,y,z	-	t,x	-	-	x,y,z
5	x,z	-	-	-	-	-	-
6	-	-	-	x	-	-	-
7	t,y,z	t,y,z	-	-	-	-	-
8	t,x,y,z	t,x,y,z	-	-	-	-	-
9	-	x	-	t,x,y,z	-	-	-
10	t,x,y,z	t,x,y,z	x	t,x,y	-	-	-
11	-	-	-	-	-	-	-
12	t,x,y,z	-	-	-	t	-	-
13	z	-	-	-	t	t,z	-
14	t,x,y,z	z	-	-	-	-	-
15	t,x,y,z	x	-	x	-	-	-
16	t,x,y,z	t,x,y,z	-	t	-	-	x,y,z
17	t,x,y,z	-	-	x	-	-	-
18	t,y	-	-	t,x,y,z	-	z	t,y,z
19	t,x,y,z	t,x,y,z	-	-	-	-	-
20	t,x,y,z	t,x,y,z	-	-	t	-	-
21	t,x,y,z	x	-	x	-	-	-
22	t,x,y,z	t,x,y,z	-	t,x,y	-	-	-
23	x	t,x,y,z	-	x,y	-	-	-
24	t,x,y,z	t,x,y,z	-	t,x,y	-	-	-
25	t,x,y,z	t,x,y,z	-	t,x	-	-	-
26	t,x,y,z	t,x,y,z	-	t,x	-	-	x,y,z
27	-	t,x,y,z	-	t,x,y,z	t	t,z	t
28	t,x,y,z	t,x,y,z	t,x	t,x	-	-	x,y,z
29	-	z	-	z	t	t,z	-
30	t,x,y,z	z	-	-	-	-	x,y,z
31	t,x,z	t,x,z	-	-	-	x	-
32	t,x,y,z	t,x,y,z	-	t	t,y	-	x,y,z
33	t,x,y,z	t,x,y,z	-	t,x,y,z	t	t,x,y,z	t,x,y,z
34	t,x,y,z	t,x,y,z	t,x	-	-	-	x,y,z
35	-	t,x,y	-	t,x,y	t,x	t,x,y	t,x,y
36	t,x,y,z	t,x,y,z	t,x	-	-	-	x,y,z

From Table A4.6.1, it can be seen that quadruple target patterns from all rhythm sets have significant peaks at lag 16. This is consistent with their classification as quadruple. The significant peaks at lag 4 indicate that a period corresponding to beat-level pulses was detected in some patterns. Note that target and distracter patterns from several rhythm sets have a significant peak at lag 12. Although this may at first appear to be consistent with a triple structure, the lack of a significant peaks at lag 24 dismisses this possibility. In addition, in some rhythm sets, the theoretically nonmetrical distracter patterns have significant peaks at lag 16, which is indicative of quadruple structure. Such inconsistencies suggest that some rhythm sets contain better exemplars of quadruple target and nonmetrical distracter patterns than others.

Table A4.6.2 reveals that target triple integrant patterns from all rhythm sets have significant peaks at lags 12 and 24. This is consistent with triple structure. Although some of the related distracter patterns also contain significant peaks at this location, it is fairly rare for this to be followed by a significant peak at lag 24 (both peaks occur only in nine out of the total 108 distracter patterns in this group). Therefore, distracter patterns in this group generally do not contain periodicities suggestive of a triple meter.

There are very few nonmetrical integrant patterns whose autocorrelation function contains significant peaks (see Table A4.6.3). When peaks occur, they are usually at lag 12. It is doubtful whether this suggests a tendency towards triple structure because significant peaks at lag 24 were missing.

The data reported in Table A4.6.4 support the comments made earlier about the autocorrelation functions associated with aggregate patterns. In all but a few rhythm sets, significant peaks occur in target and distracter patterns more frequently at early lags than at late lags. Patterns from several rhythm sets produced significant peaks at lag 8. When this is followed by significant peaks at lags 16 and 24, a duple structure (where beat- and bar-level pulses occur in a 2:1 ratio) is suggested. However, this only occurs in the patterns from two rhythm sets (33 and 35). Overall, the aggregate patterns can be regarded as metrically ambiguous: there is no evidence that they conform better to quadruple than triple structures.

Discussion

The results of the autocorrelation analyses indicate that stimulus patterns generally contain periodic components that are consistent with their theoretical metricality. In the integrant patterns classified as quadruple, periodicities were detected that mirror the bar-level divisions of a quadruple metric framework. In triple integrant patterns, the emergent periodicities reflect triple bar-level divisions. In nonmetrical integrant patterns, there is an absence of the consistent periodic components necessary for metric structure. Nevertheless, the presence of significant peaks at certain locations in some theoretically nonmetrical patterns may justify running item analyses in future experiments. However, such isolated peaks should not be cause for too much concern. In their discussion the use of autocorrelation, albeit based upon melodic information, to determine meter, Vos et al. (1994, p. 967) hesitate to “attribute too much value to a single significant peak in a number of observations”. Rather, they argue that “It is the repeated occurrence of a peak at the expected bar length (and multiples thereof)” that is indicative of metrical structure (Vos et al., 1994, p. 967). In short, a single isolated peak does not guarantee that a pattern will afford a metrical interpretation.

The analyses of aggregate patterns are consistent with the claim that they are metrically ambiguous. This ambiguity is not resolved in autocorrelation functions because they only provide an objective statistical summary of structural features explicitly present in the patterns. In real musical contexts, the resolution of metric ambiguity by human listeners is influenced by a number subjective factors, ranging from the experience of accent to metric preferences developed through experience within a particular musical culture. Real time factors such as presentation rate also influence the choice of meter by human listeners in ambiguous contexts (e.g., by making some periodicities more salient than others).

These issues raise the question of whether autocorrelation provides an accurate model of how human listeners interpret rhythmic patterns. It is interesting to note that some researchers have postulated that a neurophysiological process resembling autocorrelation is used by listeners to interpret auditory sequences (e.g., Leman, 1995; Vercoe, 1992). Although Brown (1993, p. 1954) stops short of insisting upon the existence of such cognitive mechanisms, she does provide evidence that converges upon the idea that “humans do have access to the periodicities turned up by autocorrelation”. Whether

listeners interpret the patterns from the 36 rhythm sets in accordance with the autocorrelation analyses will be examined in the singlepart experiments in Chapter 5.

APPENDIX 5.1

Pools of stimulus patterns from Singlepart Experiment 1

Rhythm sets from which the quadruple, triple, nonmetrical, and aggregate patterns contained within each block were taken are listed below.

BLOCK	THEORETICAL PATTERN TYPE			
	Quadruple	Triple	Nonmetrical	Aggregate
A	4, 16, 28	1, 13, 25	7, 19, 31	10, 22, 34
B	1, 13, 25	10, 22, 34	4, 16, 28	7, 19, 31
C	10, 22, 34	7, 19, 31	1, 13, 25	4, 16, 28
D	7, 19, 31	4, 16, 28	10, 22, 34	1, 13, 25
E	5, 17, 29	2, 14, 26	8, 20, 32	11, 23, 35
F	2, 14, 26	11, 23, 35	5, 17, 29	8, 20, 32
G	11, 23, 35	8, 20, 32	2, 14, 26	5, 17, 29
H	8, 20, 32	5, 17, 29	11, 23, 35	2, 14, 26
I	6, 18, 30	3, 15, 27	9, 21, 33	12, 24, 36
J	3, 15, 27	12, 24, 36	6, 18, 30	9, 21, 33
K	12, 24, 36	9, 21, 33	3, 15, 27	6, 18, 30
L	9, 21, 33	6, 18, 30	12, 24, 36	3, 15, 27

APPENDIX 5.2

Counterbalanced block presentation orders from Singlepart Experiment 1

The four orders in which the 12 experimental blocks (A - L) were presented are listed below. These orders were determined by a pseudo-random procedure ensuring that no two blocks are adjacent in more than one list.

Order 1 D A G L B K I C J H F E

Order 2 K A L F C E B J G I D H

Order 3 J D G E A I B H L C K F

Order 4 H C A F B G K D L I E J

APPENDIX 5.3

Instructions for Singlepart Experiment 1

The instructions below are for making ratings according to a quadruple interpretive framework. Instructions for making ratings according to a triple framework are essentially the same, except that the word ‘quadruple’ is replaced by the word ‘triple’.

In this experiment, you will be asked to listen to several rhythm patterns, and to rate how well each of them fits a QUADRUPLE METER (i.e., 4/4).

- Each pattern will be presented in a separate ‘trial’. Trials will be grouped in ‘blocks’ of 12 (labelled Trial 1 to Trial 12). You will be presented with 12 such blocks. You will be asked to call the experimenter after each block of 12 trials.
- Each trial involves 3 stages:
 - (1) listen to pattern
 - (2) rate pattern
 - (3) confirm rating and move to next trial
- To complete each trial, follow the 3-step procedure described below.

STEP 1

- Press the ‘SPACEBAR’ on the computer keyboard to hear one presentation of the pattern. Pressing the SPACEBAR also causes the current trial number to be displayed at point (1) on the computer screen.
- Your task is to decide how well the pattern fits a **quadruple meter**.

- You may listen to the pattern as many times as you feel is necessary. Press the SPACEBAR to start each presentation.

STEP 2

- Rate how well the pattern fits a **quadruple meter** according to the criteria specified on the rating scale displayed on the computer screen. To make your rating, just click with the mouse on one of the boxes labelled 1, 2, 3, or 4.

A rating of 1 indicates that the pattern *does not fit* a **quadruple meter**. A rating of 2 indicates a *poor fit*. A rating of 3 indicates a *moderate fit*. And a rating of 4 indicates a *good fit*. **Although you may apply these labels as you feel is appropriate, please try to use the full range of the scale.**

- If you rate the pattern as a *poor fit*, a *moderate fit*, or a *good fit*, a ‘dialog box’ will appear on the computer screen. In this dialog box, you are asked to indicate on which **beat of the bar** (in the quadruple meter the pattern fits) the pattern begins. For example, if the pattern fits a 4/4 meter, it may begin on either beat 1, 2, 3, or 4.

When you have made your choice, click with the mouse on ‘OK’ in the dialog box, or press the ‘RETURN’ key on the computer keyboard. Note that if you indicate that the pattern *does not fit* a quadruple meter, this dialog box will not appear.

- When you have rated the pattern by clicking on one of the numbered boxes, your choice will appear in the small grey box below the rating scale. If appropriate, your choice of the beat of the bar on which the pattern begins will also be displayed. Feel free to listen to the pattern some more (by pressing the SPACEBAR) and, if necessary, revise your rating by clicking on another of the rating scale boxes.

STEP 3

- When you have finished rating how well the pattern fits a quadruple meter, click on the ‘PINK BUTTON’ with the mouse. A dialog box will appear asking whether you are sure about your rating.

If at this stage you are unsure about your rating, type ‘n’ (without the ‘ ’) in the highlighted window and then click with the mouse on OK or press the RETURN key. You may then

listen to the pattern some more (by pressing the SPACEBAR) and change your rating if you wish. Once you are sure about your rating, click on the PINK BUTTON again.

If you are satisfied with your rating, type ‘y’ (without the ‘ ’) and then click on OK or press RETURN. This ends the current trial.

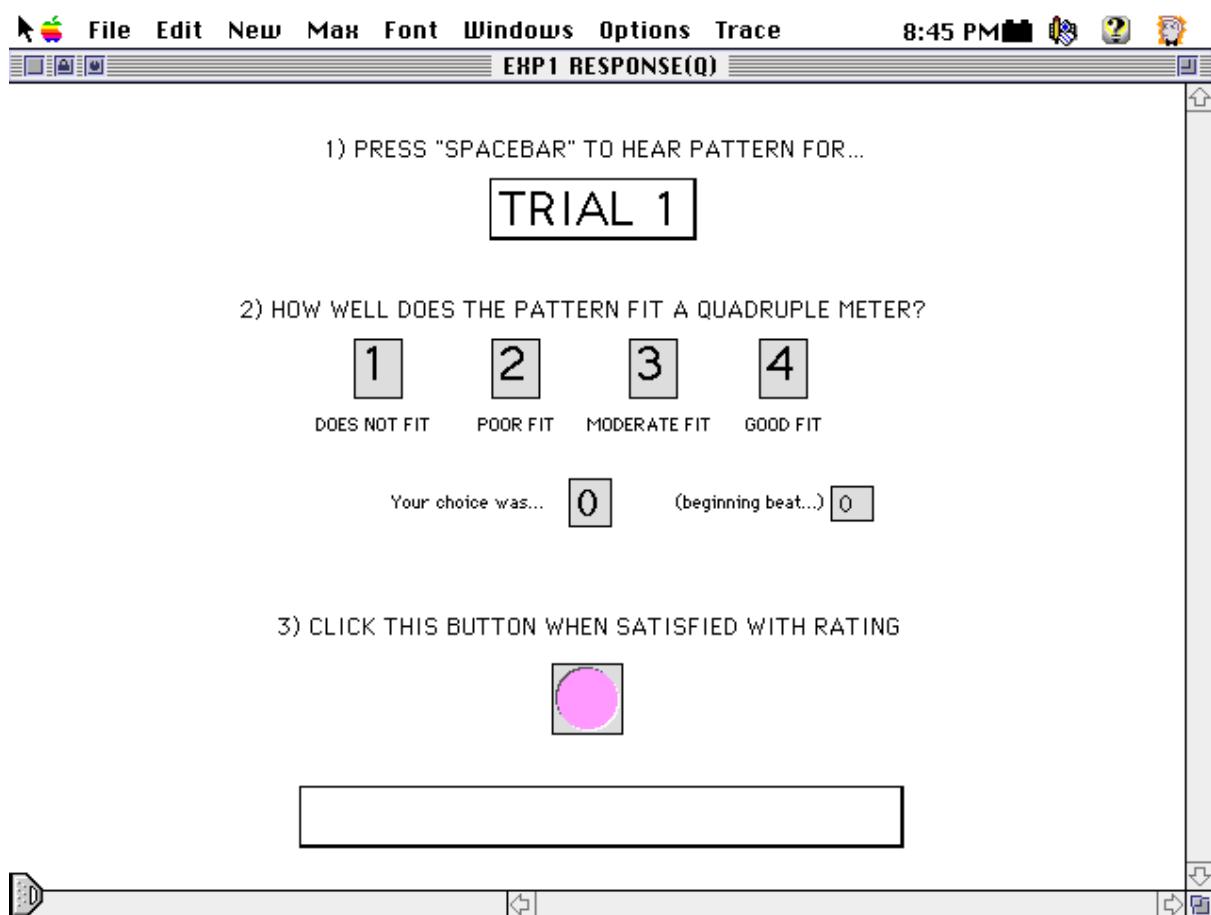
- Now you are ready to begin the next trial.
- Follow steps 1 to 3 for each new trial.

**After 12 trials, an ‘END’ message appears in the trial number window.
Press the buzzer when you see this message.**

APPENDIX 5.4

Response interface from Singlepart Experiment 1

The following diagram shows the response interface that was present when participants were making metricality judgements according to a quadruple interpretive framework. The interface present during triple metricality judgements was identical, except that the word ‘triple’ was substituted for the word ‘quadruple’.



APPENDIX 5.5

Metricality ratings and number of hearings from Singlepart Experiment 1

Average metricality ratings on quadruple (Qd) and triple (Tr) scales, *metricality scores* (obtained by subtracting average triple from quadruple ratings), and *average number of hearings* for patterns from the 36 rhythm sets (RS).

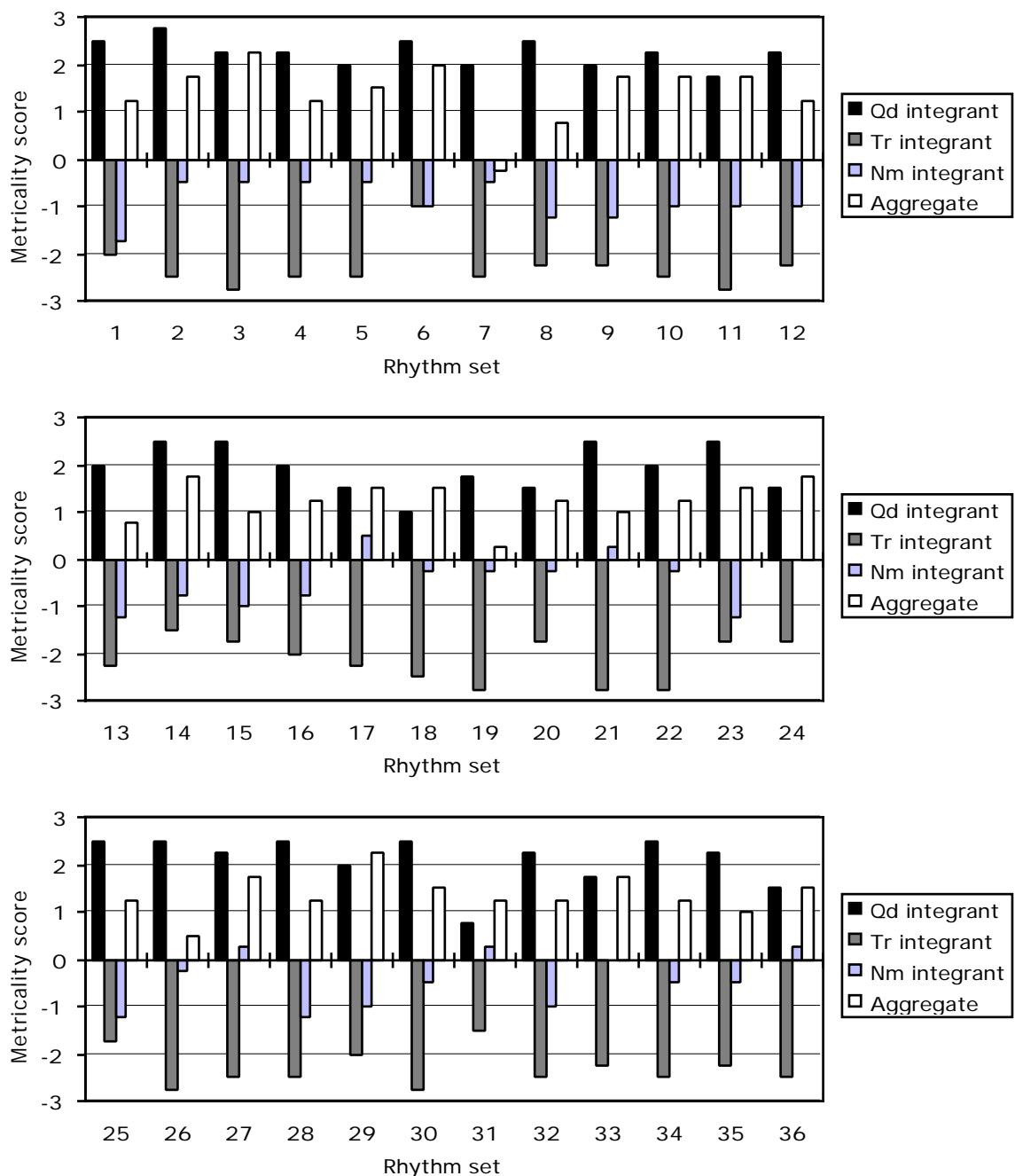
RS	Quadruple integrant			Triple integrant			Nonmetrical integrant			Quadruple aggregate		
	Qd	Tr	Qd-Tr	Hearings	Qd	Tr	Qd-Tr	Hearings	Qd	Tr	Qd-Tr	Hearings
1	4	1.5	2.5	2.625	1.25	3.25	-2	2.875	1.25	3	1.75	3.875
2	4	1.25	2.75	2.625	1.25	3.75	-2.5	3	1.25	1.75	0.5	6
3	4	1.75	2.25	2.375	1.25	4	-2.75	2.625	1.5	2	0.5	4.5
4	4	1.75	2.25	3.125	1.5	4	-2.5	3	1.75	2.25	0.5	4.375
5	3.5	1.5	2	2.25	1.25	3.75	-2.5	2.625	1.25	1.75	0.5	4.375
6	3.75	1.25	2.5	1.875	2	3	-1	2.375	1.25	2.25	1	4
7	3.75	1.75	2	2.875	1.25	3.75	-2.5	2.875	1.25	1.75	0.5	3.25
8	4	1.5	2.5	2.375	1.75	4	-2.25	3.125	1.5	2.75	1.25	3.25
9	4	2	2	3.25	1.75	4	-2.25	2.625	1.5	2.75	1.25	4.25
10	4	1.75	2.25	2.625	1.25	3.75	-2.5	2.375	1.5	2.5	1	5
11	3.25	1.5	1.75	2.625	1.25	4	-2.75	2.25	1.25	2.25	1	2.625
12	4	1.75	2.25	2.5	1.75	4	-2.25	2.125	1.25	2.25	1	5.75
13	3.5	1.5	2	3.25	1.5	3.75	-2.25	3	1.5	2.75	1.25	3.125
14	3.75	1.25	2.5	3.125	2.25	3.75	-1.5	2.125	2	2.75	0.75	3.25
15	4	1.5	2.5	2.875	1.75	3.5	-1.75	2.625	1	2	1	2.875
16	3.5	1.5	2	3.875	1.25	3.25	-2	3.625	1.75	2.5	0.75	3.875
17	3.25	1.75	1.5	3.5	1.75	4	-2.25	2.375	2	1.5	-0.5	3.875
18	3	2	1	2.375	1.25	3.75	-2.5	2.875	2	2.25	0.25	4.625

RS	Quadruple integrant			Triple integrant			Nonmetrical integrant			Quadruple aggregate		
	Qd	Tr	Qd-Tr	Hearings	Qd	Tr	Qd-Tr	Hearings	Qd	Tr	Qd-Tr	Hearings
19	4	2.25	1.75	2.5	1.25	4	-2.75	3	2	2.25	0.25	3.875
20	3.5	2	1.5	3.5	2	3.75	-1.75	2.875	1.75	2	0.25	3.125
21	4	1.5	2.5	3	1.25	4	-2.75	2.25	1.25	1	-0.25	4.125
22	3.75	1.75	2	3.125	1.25	4	-2.75	2	1.5	1.75	0.25	4.25
23	4	1.5	2.5	3	1.75	3.5	-1.75	3.375	1.5	2.75	1.25	3.25
24	4	2.5	1.5	2.75	2.25	4	-1.75	2.5	1.5	1.5	0	4.25
25	4	1.5	2.5	2.875	1.5	3.25	-1.75	2.625	1.25	2.5	1.25	3.5
26	4	1.5	2.5	3.125	1.25	4	-2.75	3.5	1.5	1.75	0.25	3.625
27	4	1.75	2.25	2.375	1.5	4	-2.5	2.875	1.25	1	-0.25	3.625
28	4	1.5	2.5	2.875	1.25	3.75	-2.5	1.75	1	2.25	1.25	4
29	4	2	2	2.375	2	4	-2	3.5	1.5	2.5	1	3.625
30	4	1.5	2.5	2.25	1.25	4	-2.75	2.875	1.5	2	0.5	5
31	3.5	2.75	0.75	5	1.5	3	-1.5	3.625	1.75	1.5	-0.25	5.125
32	4	1.75	2.25	3.625	1.5	4	-2.5	2.5	1.5	2.5	1	3.625
33	3.75	2	1.75	3	1.75	4	-2.25	2.875	1.25	1.25	0	3.875
34	4	1.5	2.5	2	1.5	4	-2.5	3	1.75	2.25	0.5	5.75
35	3.75	1.5	2.25	2.5	1.5	3.75	-2.25	3.125	1.25	1.75	0.5	2.875
36	3.75	2.25	1.5	3.625	1.5	4	-2.5	1.875	2	1.75	-0.25	6.5

APPENDIX 5.6

Metricality scores from Singlepart Experiment 1

Metricality scores for quadruple integrant, triple integrant, nonmetrical integrant, and aggregate patterns from the 36 rhythm sets.



APPENDIX 5.7

Rhythm set ordering from Singlepart Experiment 1

The 36 rhythm sets ordered from best to poorest on the basis of metricality scores calculated from metricality ratings.

QUALITY	RHYTHM SET
Best	21
↓	2
	27
	30
	34
	3
	4
	22
	33
	35
	5
<hr/>	
Medicore	24
↓	10
	12
	16
	20
	28
	32
	36
	17
	29
	9
	11
	14
	15
<hr/>	
Poor	18
↓	23
	25
	31
	1
	6
	26
	7
	8
	13
	19

APPENDIX 5.8

Metricality scores and area in metricality space for each rhythm set

The following table shows rhythm sets ranked according to their metricality scores and the area they span in metricality space.

Rhythm set	Metricality score	Score rank	Area in metricality space	Area rank
1	0.75	35	0.344	36
2	2.25	4.5	2.75	5.5
3	2	9	2.469	11
4	1.75	9	1.906	18
5	1.75	13.5	2.25	15
6	0.75	36	1.313	29
7	0.5	13.5	2.5	10
8	0.5	24	1.719	23
9	1.25	28.5	1.656	24
10	1.5	19	1.469	27.5
11	1	28.5	1.75	21.5
12	1.5	19	2.531	8
13	0.25	28.5	1	33
14	1	28.5	1.063	32
15	1	28.5	2.438	12.5
16	1.5	19	0.406	35
17	1.25	24	1.594	25
18	0.75	28.5	0.656	34
19	0	13.5	1.75	21.5
20	1.25	19	1.531	26
21	2.25	1.5	4.125	1
22	1.75	9	2.531	8
23	0.75	33	1.094	31
24	1.5	13.5	2.75	5.5
25	0.75	33	1.156	30
26	0.5	1.5	2.781	4
27	2	4.5	4.031	2
28	1.25	19	2.344	14
29	1.25	24	2	17
30	2	4.5	2.438	12.5
31	0.75	33	1.469	27.5
32	1.25	19	1.875	19.5
33	1.75	9	3.25	3
34	2	4.5	1.875	19.5
35	1.75	9	2.531	8
36	1.25	19	2.094	16

APPENDIX 5.9

Auditory inspection time data, planned contrasts, and ANOVA summary from Singlepart Experiment 1

Table A5.9.1: Individual participant's auditory inspection time (i.e., number of hearings) data for target integrant patterns from *best*, *mediocre*, and *poor* rhythm sets. Each score represents average number of hearings for patterns within each theoretical metricality category (quadruple; triple; nonmetrical).

Participant	Best rhythm sets			Mediocre rhythm sets			Poor rhythm sets		
	Quadruple	Triple	Nonmet.	Quadruple	Triple	Nonmet.	Quadruple	Triple	Nonmet.
1	2.273	2.5	3.818	2.214	2.429	3.5	3.045	2.318	3.091
2	2.091	2.182	3.818	2.607	2.286	3.214	2.318	1.773	2.636
3	3.682	4	5.818	3.429	3	6.107	3.545	3.5	5.318
4	2.682	2.636	4	3.536	2.893	3.75	3.045	3.455	3.682
Mean	2.663	2.833	4.365	2.948	2.653	4.143	2.990	2.760	3.683
SD	<i>0.731</i>	<i>0.801</i>	<i>0.974</i>	<i>0.643</i>	<i>0.345</i>	<i>1.330</i>	<i>0.506</i>	<i>0.856</i>	<i>1.172</i>

Table A5.9.2: Planned contrasts used in ANOVA

Contrasts	Best			Mediocre			Poor		
	Qd	Tr	Nm	Qd	Tr	Nm	Qd	Tr	Nm
Main effects									
B1: Metrical vs Nonmetrical	1	1	-2	1	1	-2	1	1	-2
B2: Quadruple vs Triple	1	-1	0	1	-1	0	1	-1	0
B3: Linear trend	1	1	1	0	0	0	-1	-1	-1
B4: Quadratic trend	1	1	1	-2	-2	-2	1	1	1
Interactions									
B5: Met vs Nonmet x Linear trend	1	1	-2	0	0	0	-1	-1	2
B6: Met vs Nonmet x Quadratic trend	1	1	-2	-2	-2	4	1	1	-2
B7: Qd vs Tr x Linear trend	1	-1	0	0	0	0	-1	1	0
B8: Qd vs Tr x Quadratic trend	1	-1	0	-2	2	0	1	-1	0

Table A5.9.3: ANOVA summary computed using *Psy32 for Windows Version 2.0*

Summary of Analysis of Variance				
Source	SS	df	MS	F
<hr/>				
Within				
B1	12.617	1	12.617	14.682
Error	2.578	3	0.859	
B2	0.084	1	0.084	8.975
Error	0.028	3	0.009	
B3	0.122	1	0.122	0.732
Error	0.499	3	0.166	
B4	0.008	1	0.008	0.113
Error	0.218	3	0.073	
B5	0.875	1	0.875	14.501
Error	0.181	3	0.060	
B6	0.030	1	0.030	0.157
Error	0.574	3	0.191	
B7	0.160	1	0.160	1.728
Error	0.278	3	0.093	
B8	0.094	1	0.094	0.877
Error	0.320	3	0.107	

APPENDIX 5.10

Subgroups from Singlepart Experiment 2

The table on the following page lists the rhythm sets (rs 1 to rs 36) from which patterns in each theoretical metricality category were selected for inclusion in each subgroup. The quality of rhythm sets is taken into account in their distribution throughout subgroups, ensuring that members of each subgroup receive a comparable range of patterns.

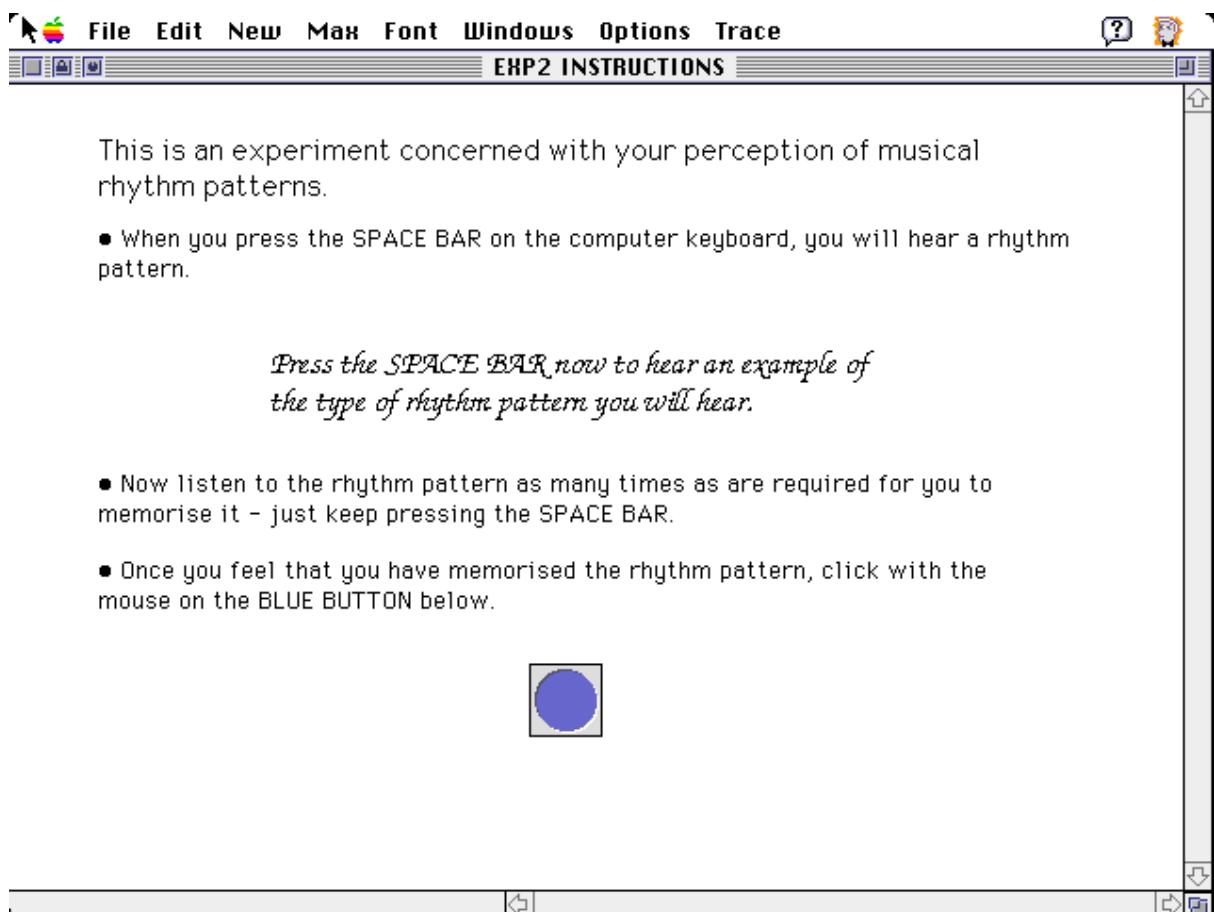
The table also shows how the six contexts are paired with each combination of rhythm set and pattern. Contexts are labelled from c 1 to c 6: c 1 = quadruple metrical; c 2 = triple metrical; c 3 = quadruple bar-level markers; c 4 = triple bar-level markers; c 5 = beat-level markers; c 6 = no markers. Although each rhythm set/pattern combination is paired with four contexts, individual participants encountered only one such pairing. Thus, each subgroup was divided into four smaller groups. Members of these smaller groups encountered each context twice within each metricality category. (Pairing each rhythm set/pattern combination with each of the six contexts would have blown out the design to unnecessarily large proportions).

	Subgroup		Theoretical Metricality			
		Quadruple	Triple	Nonmetrical		
Subgroup A	rs 04	c 1, 2, 3, 4	rs 21	c 2, 3, 4, 5	rs 30	c 3, 4, 5, 6
	rs 22	c 2, 3, 4, 5	rs 02	c 3, 4, 5, 6	rs 34	c 4, 5, 6, 1
	rs 33	c 3, 4, 5, 6	rs 27	c 4, 5, 6, 1	rs 03	c 5, 6, 1, 2
	rs 35	c 4, 5, 6, 1	rs 20	c 5, 6, 1, 2	rs 10	c 6, 1, 2, 3
	rs 05	c 5, 6, 1, 2	rs 28	c 6, 1, 2, 3	rs 12	c 1, 2, 3, 4
	rs 24	c 6, 1, 2, 3	rs 32	c 1, 2, 3, 4	rs 16	c 2, 3, 4, 5
	rs 15	c 6, 1, 2, 3	rs 36	c 1, 2, 3, 4	rs 09	c 2, 3, 4, 5
	rs 18	c 5, 6, 1, 2	rs 17	c 6, 1, 2, 3	rs 11	c 1, 2, 3, 4
	rs 23	c 4, 5, 6, 1	rs 29	c 5, 6, 1, 2	rs 14	c 6, 1, 2, 3
	rs 25	c 3, 4, 5, 6	rs 19	c 4, 5, 6, 1	rs 06	c 5, 6, 1, 2
	rs 31	c 2, 3, 4, 5	rs 08	c 3, 4, 5, 6	rs 26	c 4, 5, 6, 1
	rs 01	c 1, 2, 3, 4	rs 13	c 2, 3, 4, 5	rs 07	c 3, 4, 5, 6
Subgroup B	rs 21	c 1, 2, 3, 4	rs 30	c 2, 3, 4, 5	rs 04	c 3, 4, 5, 6
	rs 02	c 2, 3, 4, 5	rs 34	c 3, 4, 5, 6	rs 22	c 4, 5, 6, 1
	rs 27	c 3, 4, 5, 6	rs 03	c 4, 5, 6, 1	rs 33	c 5, 6, 1, 2
	rs 20	c 4, 5, 6, 1	rs 10	c 5, 6, 1, 2	rs 35	c 6, 1, 2, 3
	rs 28	c 5, 6, 1, 2	rs 12	c 6, 1, 2, 3	rs 05	c 1, 2, 3, 4
	rs 32	c 6, 1, 2, 3	rs 16	c 1, 2, 3, 4	rs 24	c 2, 3, 4, 5
	rs 36	c 6, 1, 2, 3	rs 09	c 1, 2, 3, 4	rs 15	c 2, 3, 4, 5
	rs 17	c 5, 6, 1, 2	rs 11	c 6, 1, 2, 3	rs 18	c 1, 2, 3, 4
	rs 29	c 4, 5, 6, 1	rs 14	c 5, 6, 1, 2	rs 23	c 6, 1, 2, 3
	rs 19	c 3, 4, 5, 6	rs 06	c 4, 5, 6, 1	rs 25	c 5, 6, 1, 2
	rs 08	c 2, 3, 4, 5	rs 26	c 3, 4, 5, 6	rs 31	c 4, 5, 6, 1
	rs 13	c 1, 2, 3, 4	rs 07	c 2, 3, 4, 5	rs 01	c 3, 4, 5, 6
Subgroup C	rs 30	c 1, 2, 3, 4	rs 04	c 2, 3, 4, 5	rs 21	c 3, 4, 5, 6
	rs 34	c 2, 3, 4, 5	rs 22	c 3, 4, 5, 6	rs 02	c 4, 5, 6, 1
	rs 03	c 3, 4, 5, 6	rs 33	c 4, 5, 6, 1	rs 27	c 5, 6, 1, 2
	rs 10	c 4, 5, 6, 1	rs 35	c 5, 6, 1, 2	rs 20	c 6, 1, 2, 3
	rs 12	c 5, 6, 1, 2	rs 05	c 6, 1, 2, 3	rs 28	c 1, 2, 3, 4
	rs 16	c 6, 1, 2, 3	rs 24	c 1, 2, 3, 4	rs 32	c 2, 3, 4, 5
	rs 09	c 6, 1, 2, 3	rs 15	c 1, 2, 3, 4	rs 36	c 2, 3, 4, 5
	rs 11	c 5, 6, 1, 2	rs 18	c 6, 1, 2, 3	rs 17	c 1, 2, 3, 4
	rs 14	c 4, 5, 6, 1	rs 23	c 5, 6, 1, 2	rs 29	c 6, 1, 2, 3
	rs 06	c 3, 4, 5, 6	rs 25	c 4, 5, 6, 1	rs 19	c 5, 6, 1, 2
	rs 26	c 2, 3, 4, 5	rs 31	c 3, 4, 5, 6	rs 08	c 4, 5, 6, 1
	rs 07	c 1, 2, 3, 4	rs 01	c 2, 3, 4, 5	rs 13	c 3, 4, 5, 6

APPENDIX 5.11

Instructions for Singlepart Experiment 2

The following computer screen captures show instructions presented to participants in the form of an interactive training exercise.



 File Edit New Max Font Windows Options Trace

E2 INSTRUCTIONS 2

- Next you will hear three MEMORY TEST ITEMS (Item A, Item B, Item C).
Your task is to decide whether each memory test item is the SAME as, or DIFFERENT to the rhythm pattern you memorised earlier.

You should indicate the degree to which you are CONFIDENT that each memory test item is the SAME as, or DIFFERENT to the memorised rhythm pattern by making a rating on a scale like the one below.

DIFFERENT			SAME		
Very Sure	Moderately Sure	Not Very Sure	Not Very Sure	Moderately Sure	Very Sure

If you decide that the test item is the SAME, click with the mouse on the GREENISH BUTTON that best represents how confident you are about your decision (Very Sure, Moderately Sure, Not Very Sure). However, if you decide that the test item is DIFFERENT, click with the mouse the PINKISH BUTTON that best represents how confident you are about your decision (Very Sure, Moderately Sure, Not Very Sure).

- Click on the BLUE BUTTON once you have familiarised yourself with the scale.

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E2 INSTRUCTIONS 3

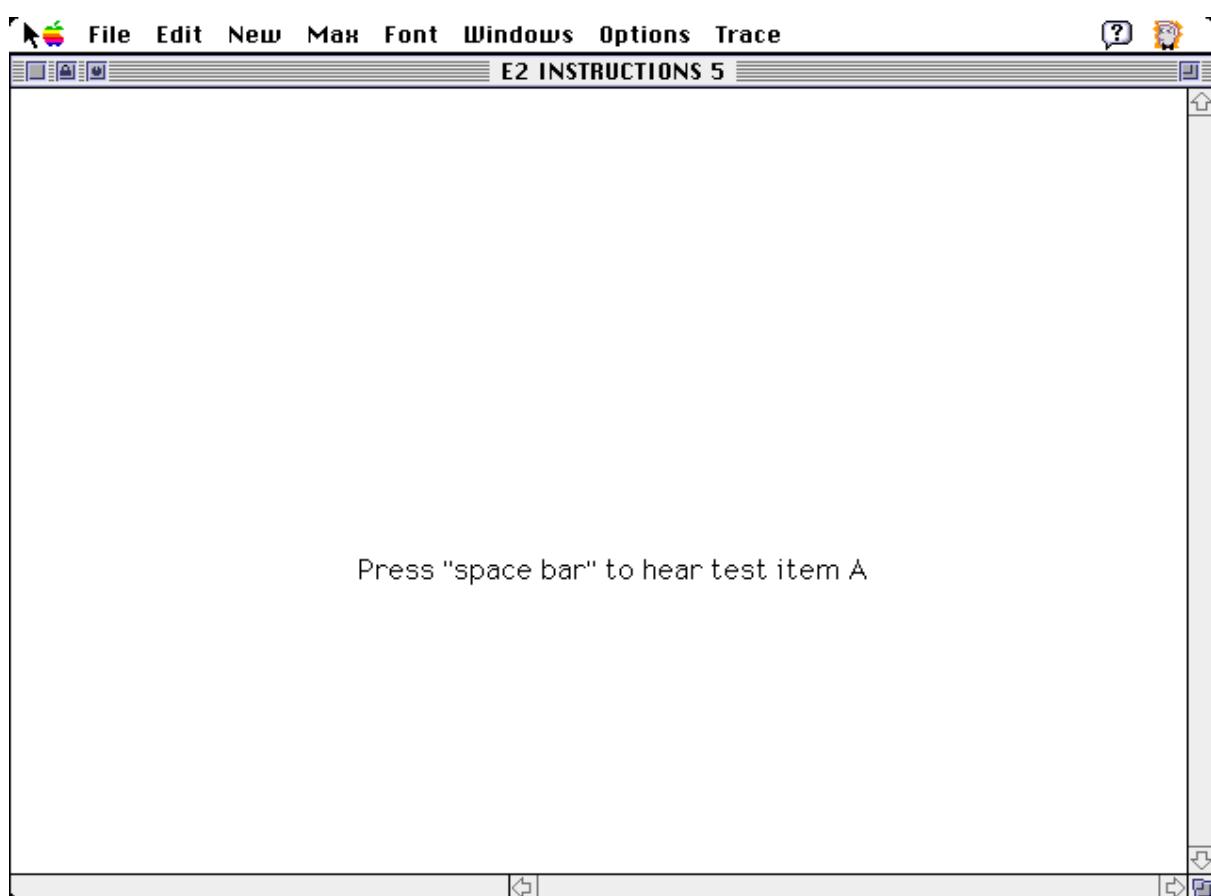
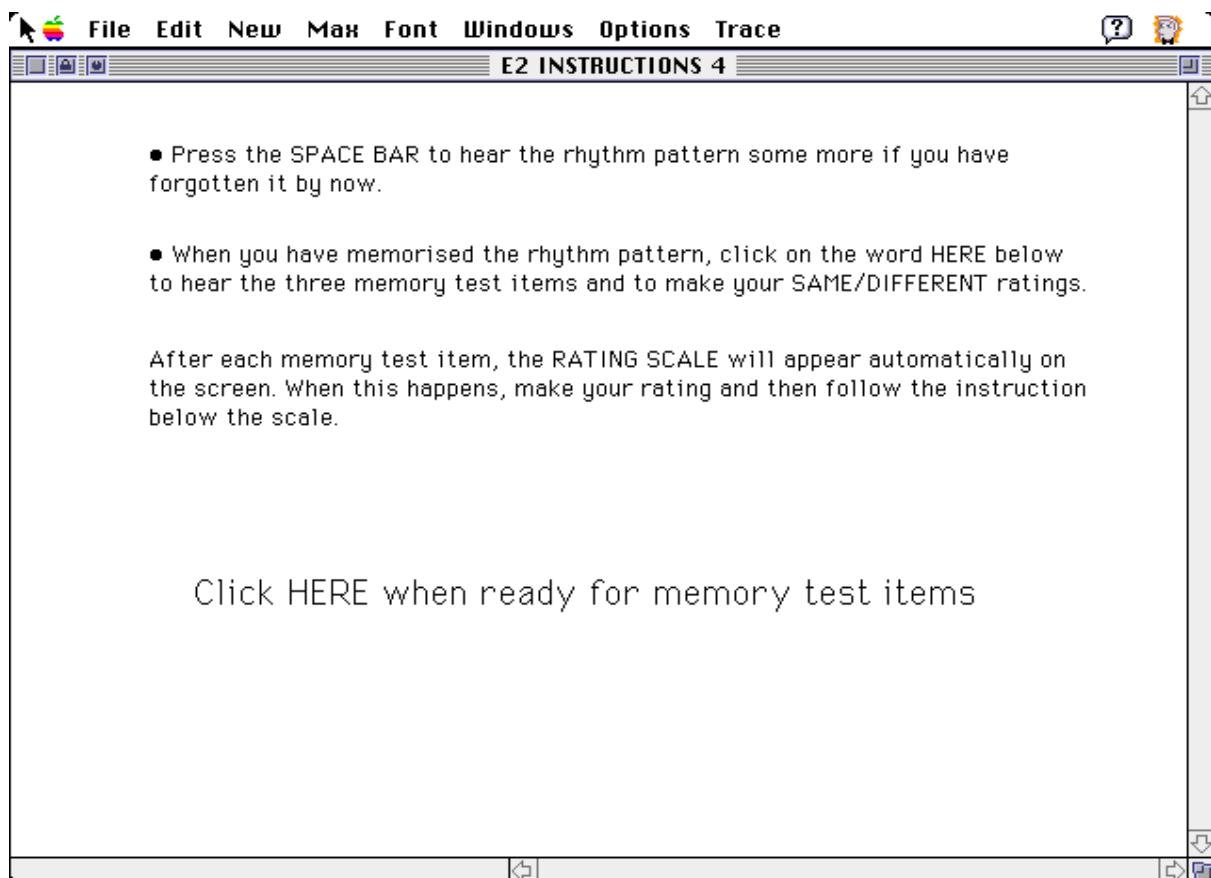
There is one way in which memory test items will differ from the pattern you memorised earlier.

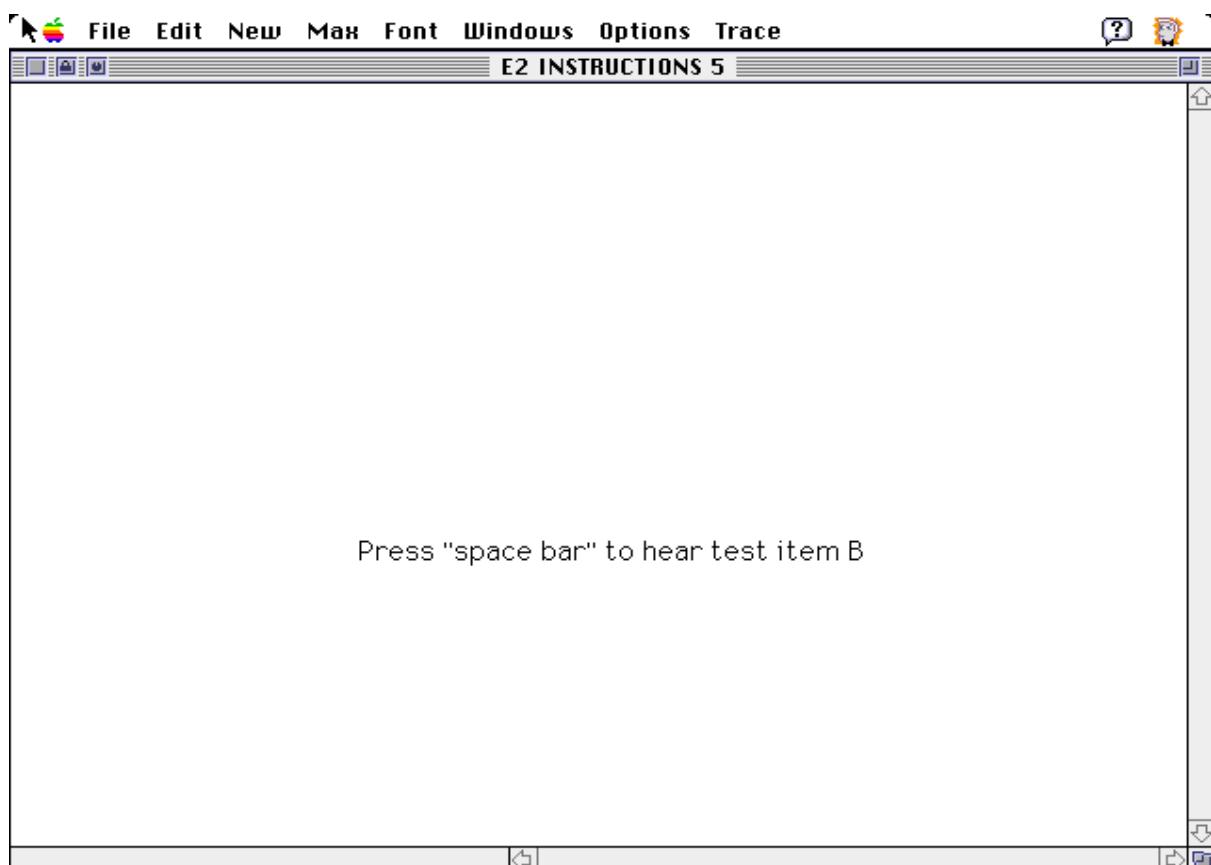
Some memory test items will be accompanied by beats on a bongo drum and/or a cymbal. Sometimes only the bongo beats will be present, sometimes only the cymbal beats will be present, and sometimes there will be no beats.

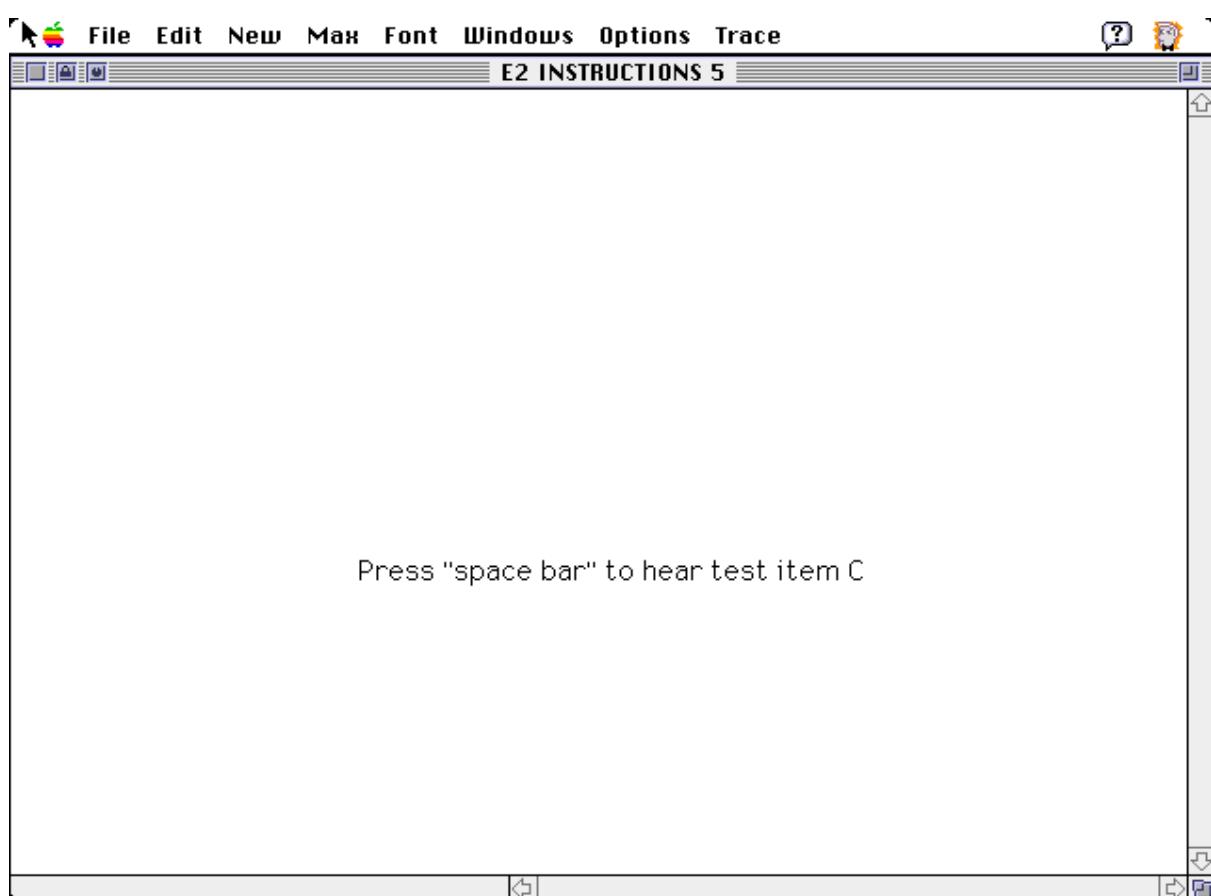
- Click on the YELLOW BUTTON to hear an example of the bongo and cymbal beats alone.

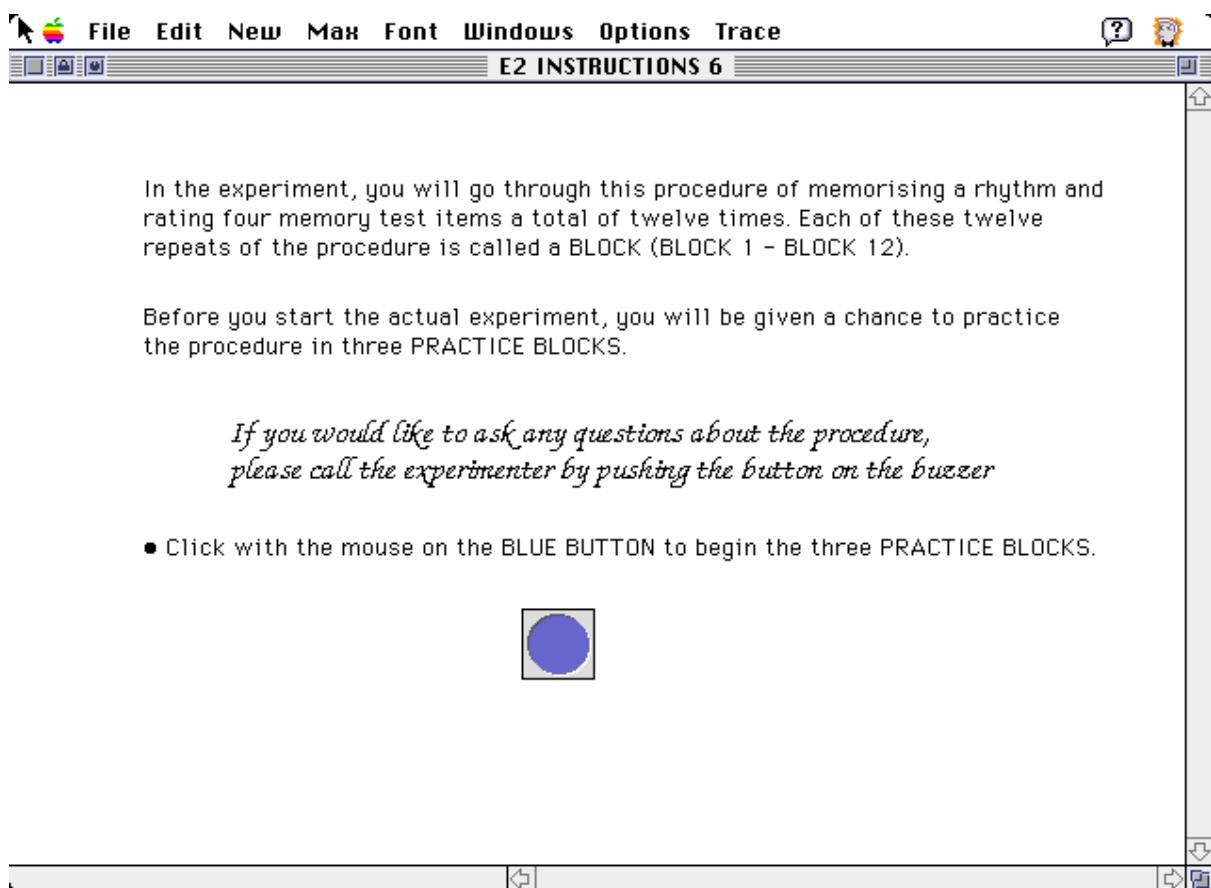
Don't consider the bongo and cymbal beats when making your SAME/DIFFERENT ratings.

- Now click on the BLUE BUTTON to hear the example bongo and cymbal beats combined with the rhythm pattern you heard before. After you have heard the rhythm pattern and the bongo and cymbal beats together, you will have the opportunity to hear the rhythm pattern alone again and then rate some memory test items.









APPENDIX 5.12

**Auditory inspection time data, planned contrasts, and
conventional ANOVA summary from Singlepart
Experiment 2**

Table A5.12.1: Each individual participant's auditory inspection time (i.e., average number of hearings) data for target integrant patterns from each theoretical metricality category (quadruple; triple; nonmetrical).

<i>Musicality</i>	<i>Subgroup</i>	<i>Participant</i>	Theoretical Metricality		
			<i>Quadruple</i>	<i>Triple</i>	<i>Nonmetrical</i>
Musician	A	1	5.167	7.167	9.917
		2	7.667	8.333	9.833
		3	6.750	5.667	3.250
		4	7.083	8.750	6.583
	B	5	2.833	4.417	4.500
		6	4.500	2.167	6.667
		7	4.750	5.917	6.083
		8	7.250	12.250	10.667
	C	9	5.417	6.583	6.833
		10	3.167	3.083	3.417
		11	4.667	5.500	5.667
		12	3.500	3.917	3.500
Nonmusician	A	13	5.667	5.667	7.417
		14	3.750	4.250	3.833
		15	5.500	6.250	5.917
		16	3.000	2.833	2.667
	B	17	6.500	9.917	7.583
		18	3.750	4.250	3.833
		19	5.417	5.333	7.417
		20	3.417	4.833	3.833
	C	21	3.750	3.750	4.500
		22	5.750	5.750	5.500
		23	3.417	3.833	4.000
		24	6.667	6.917	6.083

Table A5.12.2: Planned between groups contrasts used in ANOVA.

	Musicians			Nonmusicians		
	Subgroup			Subgroup		
	A	B	C	A	B	C
A1: Musicians vs Nonmusicians	1	1	1	-1	-1	-1
A2: Subgroup 1 vs Subgroups 2 & 3	2	-1	-1	2	-1	-1
A3: Subgroup 2 vs Subgroup 3	0	1	-1	0	1	-1

Table A5.12.3: Planned within group contrasts used in ANOVA.

	Theoretical Metricity		
	Quadruple	Triple	Nonmetrical
B1: Metrical vs Nonmetrical	1	1	-2
B2: Quadruple vs Triple	1	-1	0

Table A5.12.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
<hr/> Between <hr/>					
A1	0.726	1	0.726	1.518	
A2	0.582	1	0.582	1.217	
A3	0.004	1	0.004	0.008	
Error	8.604	18	0.478		
<hr/> Within <hr/>					
B1	3.464	1	3.464	2.269	
A1B1	1.056	1	1.056	0.692	
A2B1	0.453	1	0.453	0.296	
A3B1	0.004	1	0.004	0.002	
Error	27.477	18	1.527		
B2	6.750	1	6.750	5.501	
A1B2	0.333	1	0.333	0.272	
A2B2	0.287	1	0.287	0.234	
A3B2	0.000	1	0.000	0.000	
Error	22.085	18	1.227		

APPENDIX 5.13

Auditory inspection time data, planned contrasts, and item ANOVA summary from Singlepart Experiment 2

Table A5.13.1: Auditory inspection time (i.e., average number of hearings) data for target integrant patterns from each theoretical metricality category (quadruple; triple; nonmetrical) arranged by ‘item’.

<i>Musicality</i>	<i>Subgroup</i>	<i>Item</i>	Theoretical Metricality		
			<i>Quadruple</i>	<i>Triple</i>	<i>Nonmetrical</i>
Musician	A	1	7.75	6.5	6.25
		2	3.5	7	6.75
		3	5.25	6.25	6.5
		4	6	5.5	5
		5	8.75	9	9.5
		6	6.5	7.25	7
		7	5.75	8.75	8.5
		8	10.5	7.75	9.5
		9	7	7.25	6.25
		10	7	7.5	8.25
		11	5	7.75	6
	B	12	7	9.25	9.25
		13	5.5	7	10.75
		14	6.25	6.75	8
		15	7.25	6.5	5.75
		16	7	7.5	6.75
		17	4	5	5.75
		18	3.5	4.75	6.5
		19	3.5	4.25	4.5
		20	4.75	5.5	8
		21	5.25	7.25	13
		22	3	3	5.5
	C	23	4.25	10.75	4.75
		24	3.75	6	4.5
		25	3.25	3.25	4
		26	3	4.75	3.5
		27	4	2.25	3.75
		28	2.5	4	3
		29	4.5	4.25	6
		30	3.5	4.25	4.25
		31	3.25	5.75	4.75
		32	4	4.5	4.5
		33	6.75	7	6.5
		34	4	6.25	5.75
		35	6.5	4.75	5.25
		36	5	6.25	7

Table A5.13.1 continued.

<i>Musicality</i>	<i>Subgroup</i>	<i>Item</i>	Theoretical Metricality		
			<i>Quadruple</i>	<i>Triple</i>	<i>Nonmetrical</i>
Nonmusician	A	1	4.5	4.5	4.5
		2	3.75	4.25	5.25
		3	3.5	5.75	3.5
		4	4.5	3.75	5.5
		5	3.75	5.5	2.75
		6	3.5	5.25	3.75
		7	2.75	2.5	5
		8	5.25	5.75	5.25
		9	4.25	4	6.5
		10	4.25	3.25	4
	B	11	4.5	3.75	6
		12	4.75	4.75	5.5
		13	6	5.5	6.25
		14	4.75	6.5	4.25
		15	4	4.75	6
		16	5.5	6.5	6.5
		17	4.5	5.25	4.75
		18	4.5	8.25	7.75
	C	19	4	4.5	6.75
		20	5	6.75	7.75
		21	6.5	7.5	5
		22	4	4.75	5
		23	3.5	8.25	3.5
		24	5	4.5	4.5
		25	5.25	4.5	4.25
		26	5.5	4.75	3.75
		27	3.75	4.75	6
		28	3.5	4	6
		29	5.5	6.5	6
		30	6	5.25	5.25
		31	5	4.75	5
		32	4.25	6.75	5.25
		33	4.25	5	4.25
		34	5	4.75	4.75
		35	4.5	3.75	4
		36	6.5	6	5.75

Table A5.13.2: Planned between groups contrasts used in ANOVA.

	Musicians			Nonmusicians		
	Subgroup			Subgroup		
	A	B	C	A	B	C
A1: Musicians vs Nonmusicians	1	1	1	-1	-1	-1
A2: Subgroup 1 vs Subgroups 2 & 3	2	-1	-1	2	-1	-1
A3: Subgroup 2 vs Subgroup 3	0	1	-1	0	1	-1

Table A5.13.3: Planned within group contrasts used in ANOVA.

	Theoretical Metricity		
	Quadruple		Triple
			Nonmetrical
B1: Metrical vs Nonmetrical	1		1
B2: Quadruple vs Triple	1		-1
			0

Table A5.13.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
Between					
A1	48.403	1	48.403	15.091	
A2	13.547	1	13.547	4.224	
A3	32.585	1	32.585	10.159	
Error	211.689	66	3.207		
Within					
B1	11.751	1	11.751	8.052	
A1B1	2.483	1	2.483	1.701	
A2B1	0.110	1	0.110	0.075	
A3B1	3.391	1	3.391	2.323	
Error	96.319	66	1.459		
B2	20.438	1	20.438	18.548	
A1B2	0.959	1	0.959	0.870	
A2B2	0.656	1	0.656	0.596	
A3B2	5.631	1	5.631	5.110	
Error	72.727	66	1.102		

APPENDIX 5.14

**Musicality, metricality, and test pattern type ratings
data, planned contrasts, and ANOVA summary from
Singlepart Experiment 2**

Table A5.14.1: Each individual participant's same/different confidence ratings data for target integrant patterns from each theoretical metricality category (quadruple; triple; nonmetrical) collapsed across contexts.

	<i>Participant</i>	Quadruple			Triple			Nonmetrical		
		<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>
Musicians	1	0.833	-1.000	0.083	1.667	-1.250	-1.583	0.750	-0.750	-0.917
	2	1.333	-0.083	-0.333	0.667	-1.667	-0.667	-0.500	0.000	0.667
	3	2.417	-1.083	-0.250	-0.083	0.333	-1.500	0.833	-1.417	0.083
	4	1.583	-1.500	-0.583	0.833	-1.583	-2.167	0.167	-1.167	-0.250
	5	1.750	-1.333	-2.250	0.583	-1.083	-1.417	-0.167	-1.083	-0.417
	6	0.667	0.167	-0.583	1.167	0.167	-1.833	-0.500	-0.833	-0.333
	7	1.750	-1.250	-1.833	1.750	-1.333	-2.167	0.250	-0.417	-1.167
	8	2.667	-1.917	-2.000	2.000	-2.250	-2.583	-0.417	-1.917	-0.917
	9	0.583	-1.750	-1.417	1.083	-0.500	0.000	-1.083	-0.583	-1.167
	10	1.083	-1.333	-1.750	0.583	-1.750	-1.583	0.167	-0.167	-0.417
	11	1.667	-0.417	-2.167	0.417	-1.000	-1.333	0.500	-1.000	-0.667
	12	1.083	0.750	0.750	1.000	0.500	-0.167	0.833	0.667	0.083
Nonmusicians	13	1.833	0.167	1.333	1.500	-0.500	0.500	0.917	-0.167	0.250
	14	1.583	1.583	0.583	1.833	1.333	0.833	1.833	2.250	1.583
	15	1.083	-1.583	-1.583	2.250	-2.167	-1.833	-0.417	-1.000	0.333
	16	1.667	0.083	-0.167	0.583	-0.917	-0.250	0.000	-0.833	-0.167
	17	2.000	0.667	-0.417	1.167	-0.750	-0.250	1.417	0.750	0.833
	18	1.750	0.000	-0.250	2.083	0.500	-1.333	0.333	0.083	1.083
	19	-1.167	0.000	0.083	0.583	0.000	-0.500	0.000	-0.250	0.667
	20	-0.083	-0.250	-0.083	0.500	-1.167	-0.750	-0.417	-1.417	-0.083
	21	0.667	0.667	1.250	2.250	0.333	0.333	1.083	1.167	1.083
	22	1.750	1.417	1.250	0.750	0.583	-0.167	0.333	1.500	0.583
	23	0.583	-1.167	-0.500	1.250	-1.417	0.417	0.000	-1.167	0.667
	24	-0.083	1.250	-0.583	0.833	-0.667	-0.667	-0.083	-0.917	-0.417

Table A5.14.2: Planned between groups contrasts used in ANOVA.

	Musicians			Nonmusicians		
	Subgroup			Subgroup		
	A	B	C	A	B	C
A1: Musicians vs Nonmusicians	1	1	1	-1	-1	-1
A2: Subgroup 1 vs Subgroups 2 & 3	2	-1	-1	2	-1	-1
A3: Subgroup 2 vs Subgroup 3	0	1	-1	0	1	-1

Table A5.14.3: Planned within group contrasts used in ANOVA.

Contrast	Quadruple			Triple			Nonmetrical		
	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y
Main effects									
B1: Met vs Nonmet	1	1	1	1	1	1	-2	-2	-2
B2: Qd vs Tr	1	1	1	-1	-1	-1	0	0	0
B3: target vs distracter	2	-1	-1	2	-1	-1	2	-1	-1
B4: distracter-x vs distracter-y	0	1	-1	0	1	-1	0	1	-1
Interactions									
B5: Met vs Nonmet x t vs d	2	-1	-1	2	-1	-1	-4	2	2
B6: Met vs Nonmet x d-x vs d-y	0	1	-1	0	1	-1	0	-2	2
B7: Qd vs Tr x t vs d	2	-1	-1	-2	1	1	0	0	0
B8: Qd vs Tr x d-x vs d-y	0	1	-1	0	-1	1	0	0	0

Table A5.14.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
A1	134.174	1	134.174	8.208
A2	5.884	1	5.884	0.360
A3	15.709	1	15.709	0.961
Error	294.248	18	16.347	
Within				
B1	0.187	1	0.187	0.100
A1B1	0.281	1	0.281	0.150
A2B1	0.093	1	0.093	0.050
A3B1	0.058	1	0.058	0.031
Error	33.652	18	1.870	
B2	15.574	1	15.574	7.270
A1B2	0.334	1	0.334	0.156
A2B2	5.445	1	5.445	2.542
A3B2	0.391	1	0.391	0.182
Error	38.559	18	2.142	
B3	491.324	1	491.324	79.356
A1B3	54.688	1	54.688	8.833
A2B3	2.686	1	2.686	0.434
A3B3	14.815	1	14.815	2.393
Error	111.445	18	6.191	
B4	0.128	1	0.128	0.046
A1B4	3.827	1	3.827	1.379
A2B4	7.521	1	7.521	2.710
A3B4	0.250	1	0.250	0.090
Error	49.960	18	2.776	
B5	117.512	1	117.512	42.188
A1B5	4.785	1	4.785	1.718
A2B5	0.000	1	0.000	0.000
A3B5	4.236	1	4.236	1.521
Error	50.137	18	2.785	
B6	15.470	1	15.470	10.078
A1B6	0.000	1	0.000	0.000
A2B6	0.375	1	0.375	0.244
A3B6	7.508	1	7.508	4.891
Error	27.631	18	1.535	
B7	4.132	1	4.132	1.514
A1B7	14.538	1	14.538	5.327
A2B7	0.418	1	0.418	0.153
A3B7	0.070	1	0.070	0.026
Error	49.121	18	2.729	
B8	0.053	1	0.053	0.028
A1B8	3.136	1	3.136	1.655
A2B8	1.681	1	1.681	0.887
A3B8	2.190	1	2.190	1.156
Error	34.102	18	1.895	

APPENDIX 5.15

**Context effect ratings data, planned contrasts, and
ANOVA summary from Singlepart Experiment 2**

Table A5.15.1: Each individual participant's same/different confidence ratings data for target (t) and distracter (d) patterns from each theoretical metricality category (quadruple; triple; nonmetrical) in each of the six contexts (c 1 = quadruple metrical; c 2 = triple metrical; c 3 = quadruple bar-level markers; c 4 = triple bar-level markers; c 5 = beat-level markers; c 6 = no markers).

Participant	Quadruple												
	c1		c2		c3		c4		c5		c6		
	t	d	t	d	t	d	t	d	t	d	t	d	
Musicians	1	0.5	1.75	1.5	-1	-0.5	1.25	0.5	0	0	-2.25	3	-2.5
	2	1.5	0	1.5	0.5	1	0.25	0.5	0.75	2	-2.25	1.5	-0.5
	3	2.5	-1.5	2.5	-0.5	2	-1.5	2.5	0	2	-1.5	3	1
	4	2.5	-2	2	-2.75	1	-1.5	1	-1	2	-1.5	1	2.5
	5	0	-0.5	1	-2	3	-3	3	-2.75	0.5	-0.5	3	-2
	6	2	-0.75	0.5	-1.5	2	0.75	0	0.25	-3	0.25	2.5	-0.25
	7	3	-2.75	0.5	-1.75	-0.5	-2.75	2	1	3	-0.75	2.5	-2.25
	8	3	-2	3	-3	3	-3	3	-1.25	1	0.25	3	-2.75
	9	-0.5	-2	-1.5	-0.75	3	-3	0	0.25	3	-3	-0.5	-1
	10	1.5	0	-0.5	-1.25	2	-2.25	0	-1.5	3	-2.5	0.5	-1.75
	11	2.5	-2.25	0	-0.75	2	-3	0.5	-1.75	2	-0.25	3	0.25
	12	2	2	1	0	1	1	-1	0	1.5	1.5	2	0
Nonmusicians	13	0.5	0.5	3	1	2	2.5	2	0	2	0.25	1.5	0.25
	14	1	-0.5	2	1	0	1.25	3	2.5	1	0.25	2.5	2
	15	2.5	-2.5	-0.5	-2.75	-2	2	3	-2.75	0.5	-0.75	3	-2.75
	16	2.5	-1.5	3	-1.5	-2	1.5	2	2.25	3	0	1.5	-1
	17	2.5	0.5	3	1.25	3	-2.25	3	0.5	-1.5	2.25	2	-1.5
	18	2.5	-0.75	1	-0.25	1	0	2.5	0.5	1	1	2.5	-1.25
	19	-2.5	-0.75	-2.5	-1.25	0	0.75	-1	1	-0.5	0.25	-0.5	0.25
	20	1	-0.5	1.5	0.25	-1	0.5	-2.5	-0.75	-1.5	0	2	-0.5
	21	-2	0	2.5	0.75	1	1	-2	0.25	1.5	0.75	3	3
	22	2	1.5	1	1.25	2.5	2.25	1	1.25	2	0.5	2	1.25
	23	0.5	0	0	0.5	-3	-0.25	2.5	-2.75	0.5	0	3	-2.5
	24	2	-0.5	-2.5	0.25	1	2.25	-2	0.25	0	-1	1	0.75

Table A5.15.1 continued.

Participant	Triple												
	c1		c2		c3		c4		c5		c6		
	<i>t</i>	<i>d</i>											
Musicians	1	3	-1.75	0.5	-1.75	2.5	-2.75	1.5	-1.5	0.5	-1.75	2	1
	2	2	-2	2	-3	0	-1	0.5	1	-0.5	-1.25	0	-0.75
	3	2.5	-2	0	-1	-2	-1	-1.5	-0.75	0	0.25	0.5	1
	4	2	-2.5	2	-1	3	-1.5	0	-1.25	-2.5	-2.25	0.5	-2.75
	5	1.5	-2.25	2	0.75	-0.5	-1.5	-1	0	-1.5	-1.5	3	-3
	6	2	0.25	1.5	-1	1.5	-0.75	3	-1.5	-0.5	-2.75	-0.5	0.75
	7	1	-2.75	3	-2.75	2.5	0.25	1	-0.75	0.5	-3	2.5	-1.5
	8	2.5	-2	3	-1.5	3	-2.75	3	-3	-2.5	-2.5	3	-2.75
	9	1	-0.75	-2.5	-1.25	2	0.25	2.5	2	1	-2	2.5	0.25
	10	0.5	-1	-2.5	-2.5	2	-2	-1	-0.25	2	-1.75	2.5	-2.5
	11	0	-0.5	1	0	2	-2.5	-0.5	-2	-3	0.25	3	-2.25
	12	2	1.75	1	0.25	1	1	0	-2.25	-0.5	-1.5	2.5	1.75
Nonmusicians	13	2	-0.25	2	-1.5	0.5	0	0.5	-0.5	2.5	2.5	1.5	-0.25
	14	1	-1.75	1.5	-1.25	2	2.25	1.5	2.75	2	1.75	3	2.75
	15	2	-1.5	1.5	-1	1	-1.75	3	-2.5	3	-2.5	3	-2.75
	16	1	-1.5	-1	-0.5	0	-2.5	0.5	-1	3	1	0	1
	17	2	0	-1	-0.5	2.5	1.75	0.5	0	2	-1.75	1	-2.5
	18	2	0	2.5	0.25	0.5	0.25	3	-2.75	2	-1	2.5	0.75
	19	1	0.25	-0.5	0	-0.5	-1	0	-0.75	2.5	-1.25	1	1.25
	20	2	-2.25	0.5	-1.5	0.5	0.25	-0.5	-0.25	1	-1.5	-0.5	-0.5
	21	0.5	0	2.5	0.75	3	-1.5	2	0.5	3	2	2.5	0.25
	22	0	-1.75	2.5	1.75	1	-0.75	-1.5	0	1	0.75	1.5	1.25
	23	2.5	-2.5	1	-0.75	0	0	-0.5	1.25	2.5	0	2	-1
	24	-0.5	-2.5	0	-1.5	2.5	-1	0	-0.25	2.5	-0.25	0.5	1.5

Table A5.15.1 continued.

Participant	Nonmetrical												
	c1		c2		c3		c4		c5		c6		
	<i>t</i>	<i>d</i>	<i>t</i>	<i>d</i>	<i>t</i>	<i>d</i>	<i>t</i>	<i>d</i>	<i>t</i>	<i>d</i>	<i>t</i>	<i>d</i>	
Musicians	1	2	1.25	-2	-0.5	2	-1.75	2.5	-1.5	-2	-2	2	-0.5
	2	-0.5	0	0.5	-0.5	1.5	1.5	-1	0.75	-1.5	-0.25	-2	0.5
	3	0	-1	-0.5	-0.5	1.5	-1	1	-1.75	2	-2	1	2.25
	4	0.5	-0.75	-1	-1	-0.5	-2	2.5	1	-2.5	-2.5	2	1
	5	-0.5	0	2	-2	-2	0	-0.5	-1.25	0.5	0.5	-0.5	-1.75
	6	0	-0.75	-3	-1.5	2	-1.5	-1.5	0.5	0.5	-1.5	-1	1.25
	7	-0.5	0.5	0	-1.25	2	-1.5	-1	-0.75	-1	0	2	-1.75
	8	0	0	0.5	-1.5	0	-1	-3	-3	-0.5	-1.75	0.5	-1.25
	9	-2	-2.25	-1.5	-0.25	1.5	1	-2	0.25	-2.5	-2.75	0	-1.25
	10	-1	0	-2.5	-0.5	2	2	2	-1.5	-1	-0.5	1.5	-1.25
	11	2	0	0	-1.75	1	0.5	2.5	-3	0	-0.5	-2.5	-0.25
	12	-0.5	-3	0.5	1	2	1.75	2	2	0	-0.5	1	1
Nonmusicians	13	2	0.75	0.5	-0.75	0.5	1.5	-0.5	-1.25	1	0	2	0
	14	1.5	1.5	3	1.5	3	3	2.5	2.5	0	0	1	3
	15	-1	-0.25	0.5	0.75	-0.5	-0.75	-0.5	-0.75	-1.5	-1.5	0.5	0.5
	16	-2.5	-0.5	1.5	-0.75	0.5	0.75	-2	-2	2.5	-1	0	0.5
	17	2.5	0	0.5	1.5	3	0.25	0	1.5	2	-0.25	0.5	1.75
	18	0	1.25	0.5	0.5	-2	-0.5	0	-0.5	1.5	0.25	2	2.5
	19	0.5	-0.75	-0.5	0.5	0.5	1	-0.5	0	-0.5	1	0.5	-0.5
	20	0.5	-0.25	-2	-2.75	-1.5	-0.75	-0.5	-0.5	1	0.5	0	-0.75
	21	0	-1	0	-0.25	3	3	3	3	-1.5	1	2	1
	22	0	1.25	2	1.5	-2	0.5	0	0.5	0.5	1.5	1.5	1
	23	-3	-1.5	1.5	0	0.5	-1.25	-0.5	0.5	-1	-0.25	2.5	1
	24	2	-1	0	-1.25	0.5	0.75	-0.5	-1.75	-3	-1.25	0.5	0.5

Table A5.15.2: Planned between groups contrasts used in ANOVA.

	Musicians			Nonmusicians		
	Subgroup			Subgroup		
	A	B	C	A	B	C
A1: Musicians vs Nonmusicians	1	1	1	-1	-1	-1
A2: Subgroup 1 vs Subgroups 2 & 3	2	-1	-1	2	-1	-1
A3: Subgroup 2 vs Subgroup 3	0	1	-1	0	1	-1

Table A5.15.3: Key for planned within group contrasts used in ANOVA.***Main effects and interactions of contexts***

- B1** Consistent vs No markers
- B2** Inconsistent vs No markers
- B3** Full+Bar Consistent vs Beat
- B4** Full+Bar Inconsistent vs Beat
- B5** Full vs Bar Consistent
- B6** Full vs Bar Inconsistent
- B7** Consistent vs Inconsistent
- B8** Consistent vs Inconsistent x Full vs Bar

Interactions between context and test pattern type

- B9** Consistent vs No markers x t vs d
- B10** Inconsistent vs No markers x t vs d
- B11** Full+Bar Consistent vs Beat x t vs d
- B12** Full+Bar Inconsistent vs Beat x t vs d
- B13** Full vs Bar Consistent x t vs d
- B14** Full vs Bar Inconsistent x t vs d
- B15** Consistent vs Inconsistent x t vs d
- B16** (Consistent vs Inconsistent x Full vs Bar) x (t vs d)

Interactions between context, metricality, & test pattern type

- B17** Consistent vs No markers x (Met vs Nonmet x t vs d)
- B18** Inconsistent vs No markers x (Met vs Nonmet x t vs d)
- B19** Full+Bar Consistent vs Beat x (Met vs Nonmet x t vs d)
- B20** Full+Bar Inconsistent vs Beat x (Met vs Nonmet x t vs d)
- B21** Full vs Bar Consistent x (Met vs Nonmet x t vs d)
- B22** Full vs Bar Inconsistent x (Met vs Nonmet x t vs d)
- B23** Consistent vs Inconsistent x (Met vs Nonmet x t vs d)
- B24** (Consistent vs Inconsistent x Full vs Bar) x (Met vs Nonmet x t vs d)
- B25** Consistent vs No markers x (Qd vs Tr x t vs d)
- B26** Inconsistent vs No markers x (Qd vs Tr x t vs d)
- B27** Full+Bar Consistent vs Beat x (Qd vs Tr x t vs d)
- B28** Full+Bar Inconsistent vs Beat x (Qd vs Tr x t vs d)
- B29** Full vs Bar Consistent x (Qd vs Tr x t vs d)
- B30** Full vs Bar Inconsistent x (Qd vs Tr x t vs d)
- B31** Consistent vs Inconsistent x (Qd vs Tr x t vs d)
- B32** (Consistent vs Inconsistent x Full vs Bar) x (Qd vs Tr x t vs d)

Table A5.15.4: Planned within group contrasts used in ANOVA.

	Qd						Tr						Nm					
	c1	c2	c3	c4	c5	c6	c1	c2	c3	c4	c5	c6	c1	c2	c3	c4	c5	c6
	t	d	t	d	t	d	t	d	t	d	t	d	t	d	t	d	t	d
B1	1	1	0	0	1	1	0	1	-3	0	0	1	1	0	1	-3	1	1
B2	0	0	1	1	0	0	1	1	0	0	1	1	0	0	-2	-2	1	1
B3	1	1	0	0	1	1	0	0	-2	0	0	1	1	0	-2	0	0	1
B4	0	0	1	1	0	0	1	1	-2	0	0	1	1	0	-2	0	1	1
B5	1	1	0	0	-1	0	0	0	0	0	0	1	1	0	-1	0	-1	0
B6	0	0	1	1	0	0	-1	0	0	0	1	1	0	0	0	0	0	0
B7	1	1	-1	1	1	-1	1	0	0	-1	1	-1	1	0	0	0	0	0
B8	1	1	-1	-1	1	1	0	0	0	-1	1	1	1	-1	0	0	0	0
B9	-1	0	0	1	-1	0	0	1	-1	3	0	0	1	-1	-1	3	1	-1
B10	0	0	-1	0	0	1	-1	0	-2	2	1	-1	0	0	0	-2	2	1
B11	1	-1	0	0	1	-1	0	0	-2	2	0	0	1	-1	-2	2	0	0
B12	0	0	1	-1	0	0	1	-2	2	0	0	1	-1	0	-2	2	0	0
B13	1	-1	0	0	-1	1	0	0	0	0	0	1	-1	0	0	0	1	-1
B14	0	0	-1	0	0	-1	1	0	0	0	-1	1	0	0	0	0	1	-1
B15	1	-1	1	1	-1	1	0	0	0	-1	1	1	-1	0	0	0	0	0
B16	1	-1	1	-1	1	-1	0	0	0	-1	1	1	-1	1	0	0	0	0
B17	1	-1	0	0	1	-1	0	0	1	-3	3	0	1	-1	1	-3	3	-1
B18	0	0	1	-1	0	0	1	-1	0	-2	2	1	-1	0	0	-2	2	1
B19	1	-1	0	0	1	-1	0	0	-2	2	0	0	1	-1	0	-2	2	1
B20	0	0	-1	0	0	1	-1	-2	2	0	0	1	-1	0	0	-2	2	0
B21	1	-1	0	0	-1	1	0	0	0	0	0	1	-1	0	0	0	0	0
B22	0	0	1	-1	0	0	-1	1	0	0	-1	1	0	0	0	0	2	-2
B23	1	-1	1	-1	-1	1	0	0	0	-1	1	1	-1	1	0	0	0	0
B24	1	-1	1	-1	1	1	-1	0	0	0	-1	1	-1	1	0	0	0	0
B25	1	-1	0	0	-1	0	0	1	-3	3	0	0	-1	1	3	0	0	0
B26	0	0	1	-1	0	0	1	-1	0	-2	2	-1	1	0	0	2	2	0
B27	1	-1	0	1	-1	0	0	0	-2	2	0	0	-1	1	2	-2	0	0
B28	0	0	-1	0	0	1	-1	-2	2	0	-1	1	0	0	2	-2	0	0
B29	1	-1	0	0	-1	1	0	0	0	0	-1	1	0	0	1	-1	0	0
B30	0	0	1	-1	0	0	-1	1	0	0	0	-1	1	0	0	0	0	0
B31	1	-1	1	1	-1	1	0	0	0	1	-1	1	1	-1	1	0	0	0
B32	1	-1	1	-1	1	1	-1	0	0	0	1	-1	1	1	-1	0	0	0

Table A5.15.5: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					B9	0.395	1	0.395	0.189
Source	SS	df	MS	F	A1B9	0.852	1	0.852	0.408
Between									
A1	38.039	1	38.039	6.204	A2B9	1.014	1	1.014	0.486
A2	4.755	1	4.755	0.775	A3B9	0.007	1	0.007	0.003
A3	2.297	1	2.297	0.375	Error	37.572	18	2.087	
Error	110.372	18	6.132		B10	8.129	1	8.129	6.131
					A1B10	0.773	1	0.773	0.583
					A2B10	7.528	1	7.528	5.677
					A3B10	0.002	1	0.002	0.001
					Error	23.867	18	1.326	
					B11	4.093	1	4.093	1.552
Within									
B1	12.224	1	12.224	7.947	A1B11	4.014	1	4.014	1.522
A1B1	0.170	1	0.170	0.111	A2B11	1.159	1	1.159	0.439
A2B1	0.066	1	0.066	0.043	A3B11	7.066	1	7.066	2.679
A3B1	2.483	1	2.483	1.614	Error	47.481	18	2.638	
Error	27.688	18	1.538		B12	0.003	1	0.003	0.001
B2	20.980	1	20.980	18.711	A1B12	0.170	1	0.170	0.059
A1B2	5.662	1	5.662	5.050	A2B12	0.417	1	0.417	0.144
A2B2	0.764	1	0.764	0.681	A3B12	17.420	1	17.420	6.000
A3B2	2.794	1	2.794	2.492	Error	52.265	18	2.904	
Error	20.184	18	1.121		B13	9.281	1	9.281	7.119
B3	0.281	1	0.281	0.139	A1B13	8.015	1	8.015	6.148
A1B3	9.877	1	9.877	4.868	A2B13	12.197	1	12.197	9.356
A2B3	0.316	1	0.316	0.156	A3B13	3.915	1	3.915	3.003
A3B3	4.845	1	4.845	2.388	Error	23.466	18	1.304	
Error	36.523	18	2.029		B14	4.774	1	4.774	2.951
B4	0.065	1	0.065	0.048	A1B14	0.024	1	0.024	0.015
A1B4	4.253	1	4.253	3.114	A2B14	2.628	1	2.628	1.625
A2B4	0.552	1	0.552	0.404	A3B14	0.657	1	0.657	0.406
A3B4	10.469	1	10.469	7.665	Error	29.116	18	1.618	
Error	24.584	18	1.366		B15	6.510	1	6.510	4.874
B5	0.418	1	0.418	0.367	A1B15	4.271	1	4.271	3.198
A1B5	0.095	1	0.095	0.083	A2B15	5.005	1	5.005	3.747
A2B5	1.791	1	1.791	1.572	A3B15	3.876	1	3.876	2.902
A3B5	0.435	1	0.435	0.382	Error	24.045	18	1.336	
Error	20.500	18	1.139		B16	0.510	1	0.510	0.302
B6	1.296	1	1.296	0.506	A1B16	6.126	1	6.126	3.628
A1B6	5.327	1	5.327	2.079	A2B16	2.408	1	2.408	1.426
A2B6	0.162	1	0.162	0.063	A3B16	0.938	1	0.938	0.556
A3B6	0.657	1	0.657	0.256	Error	30.393	18	1.688	
Error	46.128	18	2.563						
B7	1.042	1	1.042	0.725					
A1B7	1.969	1	1.969	1.371					
A2B7	2.876	1	2.876	2.002					
A3B7	1.806	1	1.806	1.257					
Error	25.857	18	1.437						
B8	0.167	1	0.167	0.140					
A1B8	2.751	1	2.751	2.311					
A2B8	2.083	1	2.083	1.750					
A3B8	1.485	1	1.485	1.248					
Error	21.424	18	1.190						

Table A5.15.5 continued.

B17	3.221	1	3.221	1.945	B25	6.302	1	6.302	3.256
A1B17	2.215	1	2.215	1.338	A1B25	4.923	1	4.923	2.543
A2B17	0.162	1	0.162	0.098	A2B25	3.926	1	3.926	2.028
A3B17	1.151	1	1.151	0.695	A3B25	0.156	1	0.156	0.081
Error	29.810	18	1.656		Error	34.843	18	1.936	
B18	12.939	1	12.939	7.202	B26	1.877	1	1.877	0.857
A1B18	0.077	1	0.077	0.043	A1B26	4.563	1	4.563	2.082
A2B18	4.692	1	4.692	2.612	A2B26	0.371	1	0.371	0.169
A3B18	0.539	1	0.539	0.300	A3B26	5.629	1	5.629	2.569
Error	32.336	18	1.796		Error	39.439	18	2.191	
B19	0.252	1	0.252	0.310	B27	1.242	1	1.242	1.308
A1B19	5.876	1	5.876	7.230	A1B27	2.954	1	2.954	3.110
A2B19	1.964	1	1.964	2.416	A2B27	12.552	1	12.552	13.216
A3B19	1.695	1	1.695	2.086	A3B27	13.973	1	13.973	14.712
Error	14.628	18	0.813		Error	17.096	18	0.950	
B20	1.438	1	1.438	1.021	B28	0.024	1	0.024	0.018
A1B20	1.094	1	1.094	0.777	A1B28	8.326	1	8.326	6.207
A2B20	0.008	1	0.008	0.006	A2B28	2.192	1	2.192	1.634
A3B20	6.836	1	6.836	4.852	A3B28	8.094	1	8.094	6.034
Error	25.359	18	1.409		Error	24.145	18	1.341	
B21	0.339	1	0.339	0.169	B39	0.094	1	0.094	0.054
A1B21	1.381	1	1.381	0.688	A1B39	2.815	1	2.815	1.611
A2B21	3.844	1	3.844	1.916	A2B39	1.727	1	1.727	0.988
A3B21	0.016	1	0.016	0.008	A3B39	1.700	1	1.700	0.973
Error	36.121	18	2.007		Error	31.451	18	1.747	
B22	0.003	1	0.003	0.003	B30	0.055	1	0.055	0.031
A1B22	1.078	1	1.078	1.025	A1B30	0.073	1	0.073	0.041
A2B22	0.328	1	0.328	0.312	A2B30	0.004	1	0.004	0.002
A3B22	0.549	1	0.549	0.521	A3B30	1.270	1	1.270	0.709
Error	18.937	18	1.052		Error	32.225	18	1.790	
B23	6.510	1	6.510	4.874	B31	2.423	1	2.423	1.793
A1B23	4.271	1	4.271	3.198	A1B31	2.042	1	2.042	1.511
A2B23	5.005	1	5.005	3.747	A2B31	6.380	1	6.380	4.722
A3B23	3.876	1	3.876	2.902	A3B31	1.196	1	1.196	0.885
Error	24.045	18	1.336		Error	24.322	18	1.351	
B24	0.510	1	0.510	0.302	B32	0.146	1	0.146	0.180
A1B24	6.126	1	6.126	3.628	A1B32	1.898	1	1.898	2.333
A2B24	2.408	1	2.408	1.426	A2B32	0.949	1	0.949	1.167
A3B24	0.938	1	0.938	0.556	A3B32	2.954	1	2.954	3.630
Error	30.393	18	1.688		Error	14.646	18	0.814	

APPENDIX 6.1

Subgroups for Multipart Experiment 1

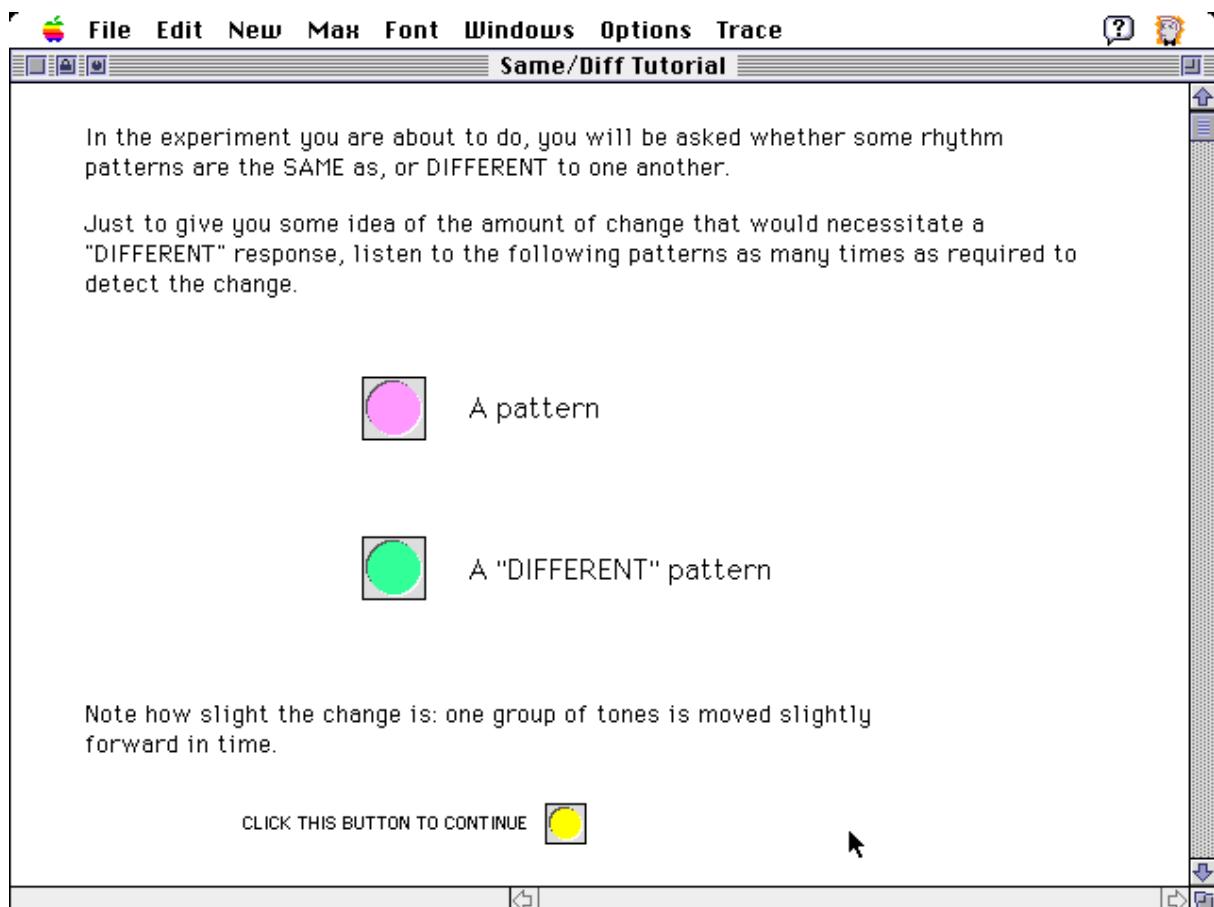
The following table lists the rhythm sets (rs) from which patterns in each theoretical metricality category were selected for inclusion in each subgroup. Each subgroup was divided into two smaller groups, represented by the two rows within the subgroup divisions of the table. Half the participants within each subgroup encountered patterns from the upper row in Multipart Experiment 1 and then the lower row in Multipart Experiment 2. This was reversed for the remaining participants.

Subgroup	Theoretical Metricality					
	Quadruple		Triple		Nonmetrical	
Subgroup A	rs 34	rs 22	rs 21	rs 24	rs 27	rs 35
	rs 03	rs 04	rs 02	rs 05	rs 30	rs 33
Subgroup B	rs 21	rs 24	rs 27	rs 35	rs 34	rs 22
	rs 02	rs 05	rs 30	rs 33	rs 03	rs 04
Subgroup C	rs 27	rs 35	rs 34	rs 22	rs 21	rs 24
	rs 30	rs 33	rs 03	rs 04	rs 02	rs 05

APPENDIX 6.2

Tutorial exercise Multipart Experiments 1 & 2

The following computer screen captures show the tutorial completed by participants to ascertain whether they could detect the types of changes that distinguished target and distracter patterns.



**[Same/Diff 2]**

In the experiment, you will hear patterns that are played by two different instruments at the same time.

It is important that you can hear what the two instruments are playing as if it were one rhythm pattern.

Click on Button 1 to hear a pattern shared between two instruments.

 BUTTON 1

Click on Button 2 to hear the SAME pattern played by one instrument.

 BUTTON 2

Click on Button 3 to hear a DIFFERENT pattern to that associated with Button 1.

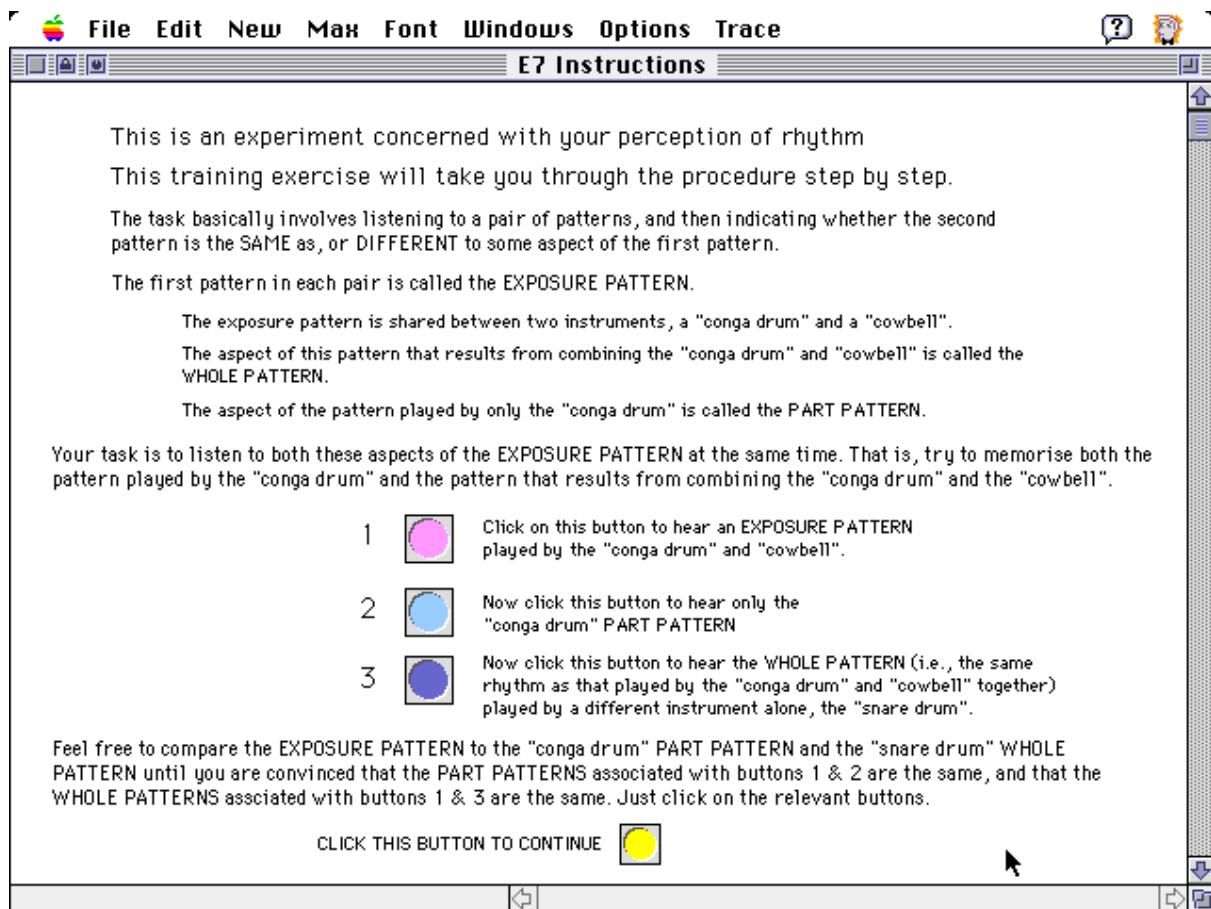
 BUTTON 3

Compare these patterns until you feel that you understand what is meant by SAME and DIFFERENT in the context of these patterns.

APPENDIX 6.3

Instructions Multipart Experiment 1

The following computer screen captures show instructions (and the first screen of the first practice block) given to participants in the prioritised integrative attending condition. Instructions were similar in selective and nonprioritised integrative attending conditions, except that references to aggregate patterns were omitted in selective attending instructions, and integrant patterns were not referred to in nonprioritised integrative attending instructions.



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[E7 Instructions 2]

In the actual experiment, the EXPOSURE PATTERN will be followed by EITHER the words "PART TEST" or "WHOLE TEST" on the computer screen.

- If the words "PART TEST" appear, they will be followed by a pattern played on a "conga drum" alone. Your task is to determine whether this pattern is the SAME as, or DIFFERENT to the PART PATTERN played by the "conga drum" in the context of the EXPOSURE PATTERN heard previously.

A rating scale will appear on the computer screen after the PART TEST pattern has ended. Just click on the button on the scale that best indicates how confident you are that the PART TEST item was the same as, or different to the PART PATTERN.

- If the words "WHOLE TEST" appear, they will be followed by a pattern played on a "snare drum" alone. Your task is to determine whether this pattern is the SAME as, or DIFFERENT to the WHOLE PATTERN played by the "conga drum" and the "cowbell" in the context of the EXPOSURE PATTERN heard previously.

The rating scale on which you should make your response will appear on the computer screen after the WHOLE TEST pattern has ended.

Note that you will not know whether you will be tested for memory of the PART PATTERN or the WHOLE PATTERN until after the EXPOSURE PATTERN. Therefore, it is important to concentrate on both aspects of the EXPOSURE PATTERN.

CLICK THIS BUTTON TO CONTINUE 

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[E7 Instructions 3]

Now you be given a chance to practice the procedure.

You will hear four identical EXPOSURE PATTERNS, each followed by either a PART TEST or a WHOLE TEST item and a rating scale.

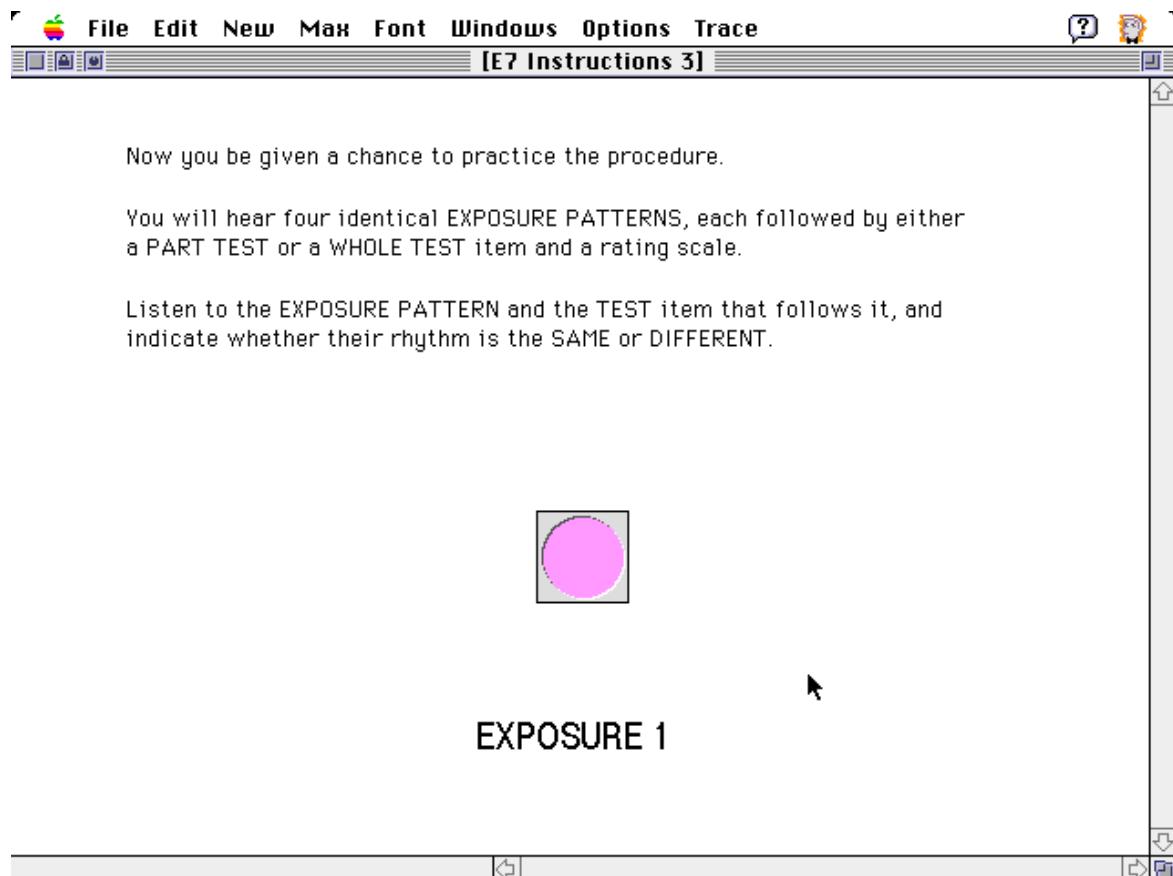
Listen to the EXPOSURE PATTERN and the TEST item that follows it, and indicate whether their rhythm is the SAME or DIFFERENT.

Click pink button to hear... **EXPOSURE/TEST PAIR 1**

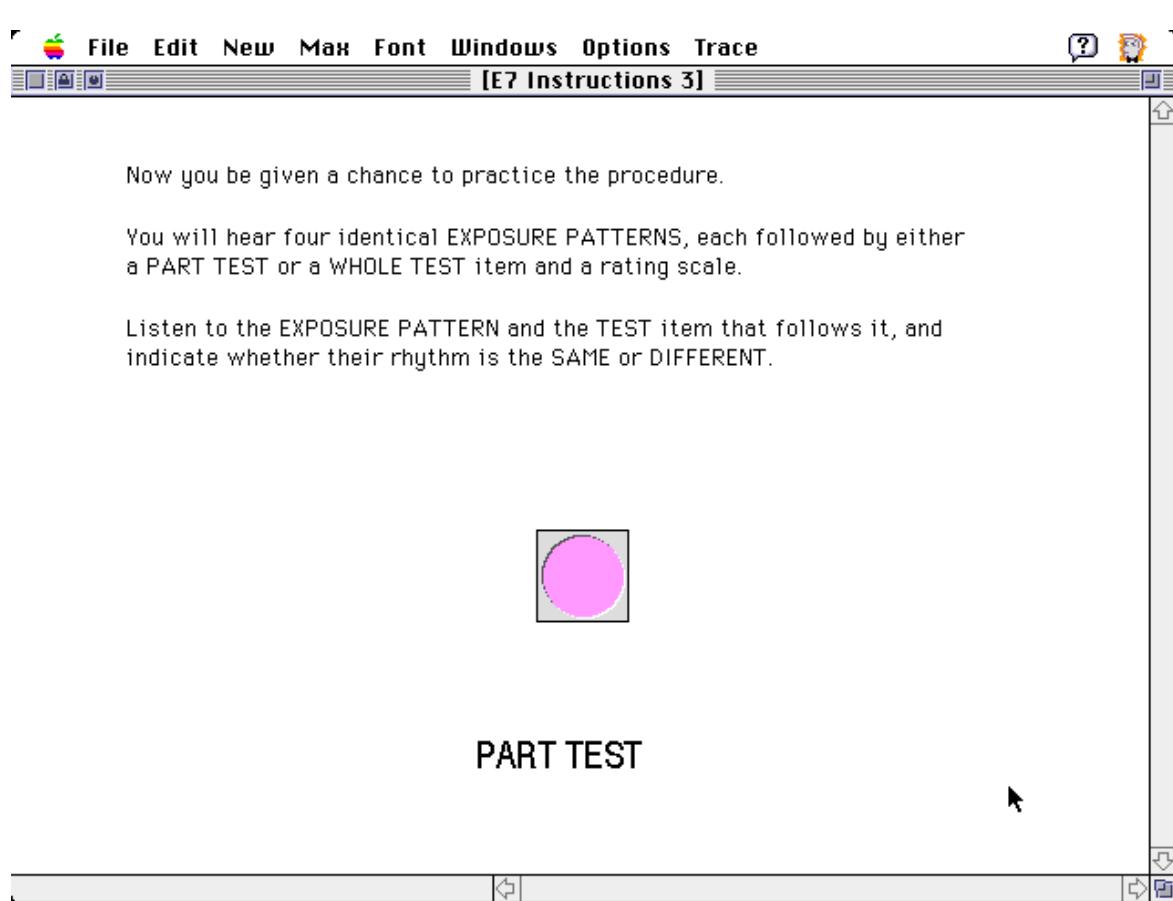




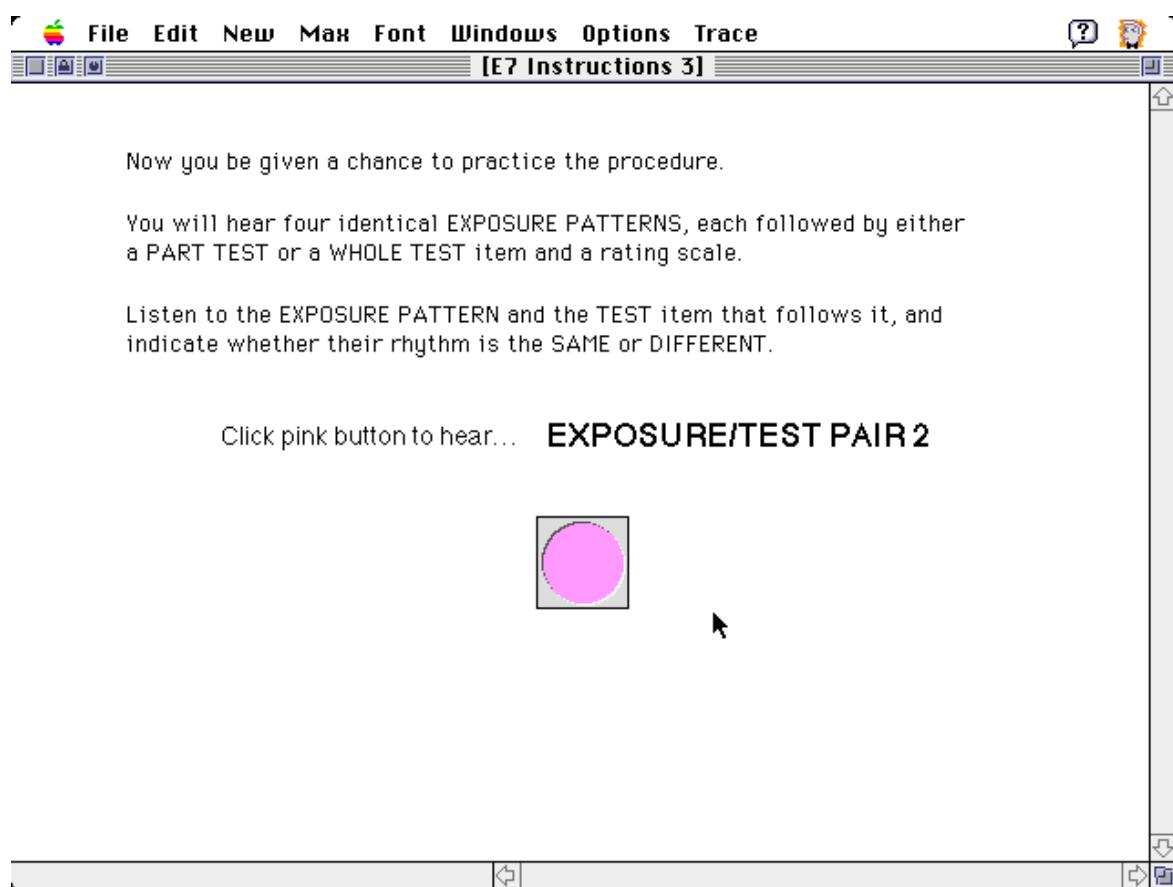
[ ]

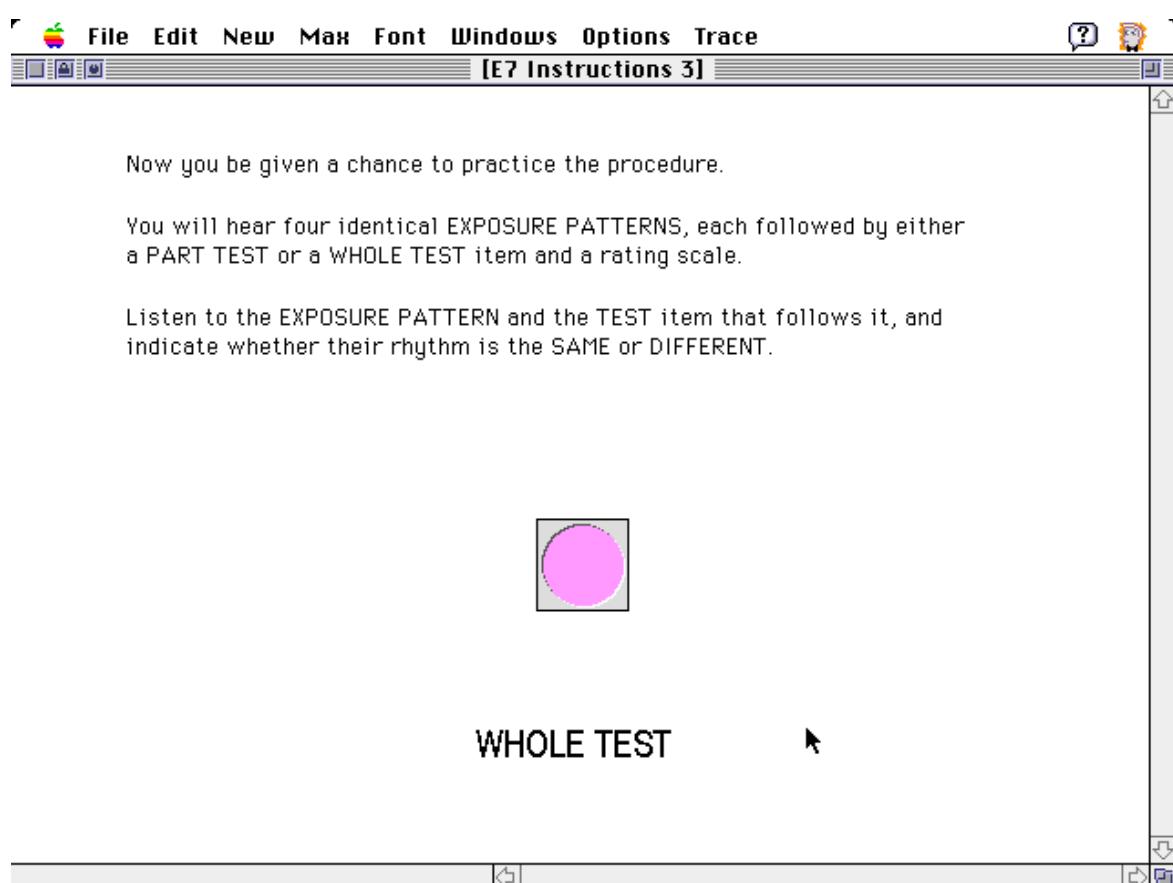
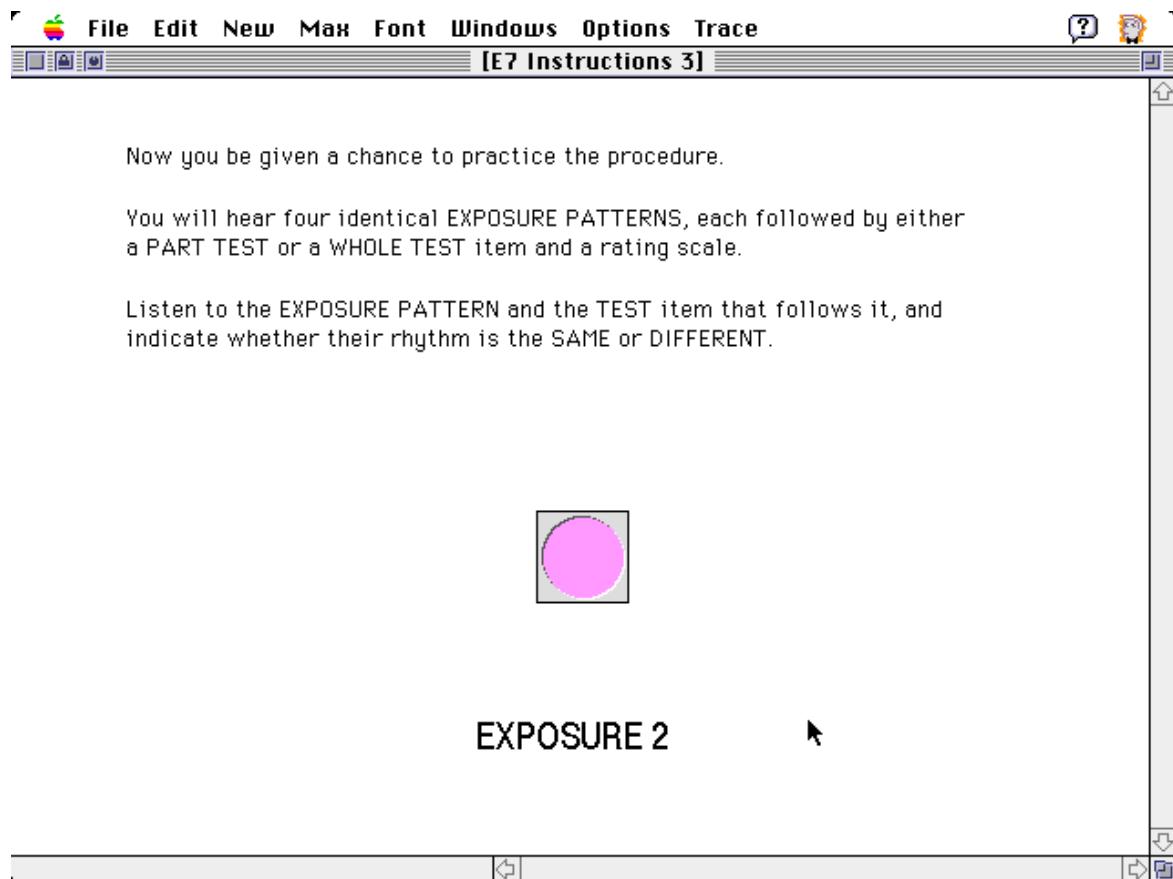


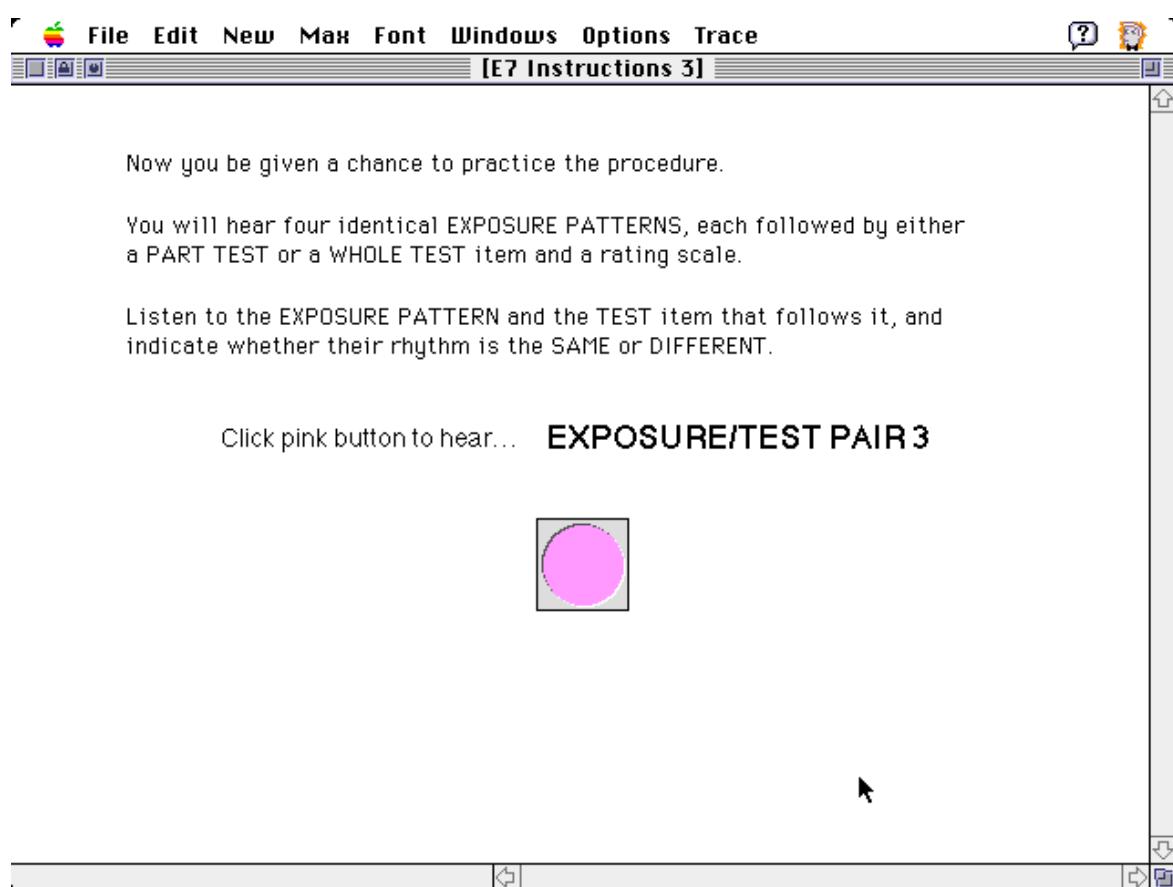
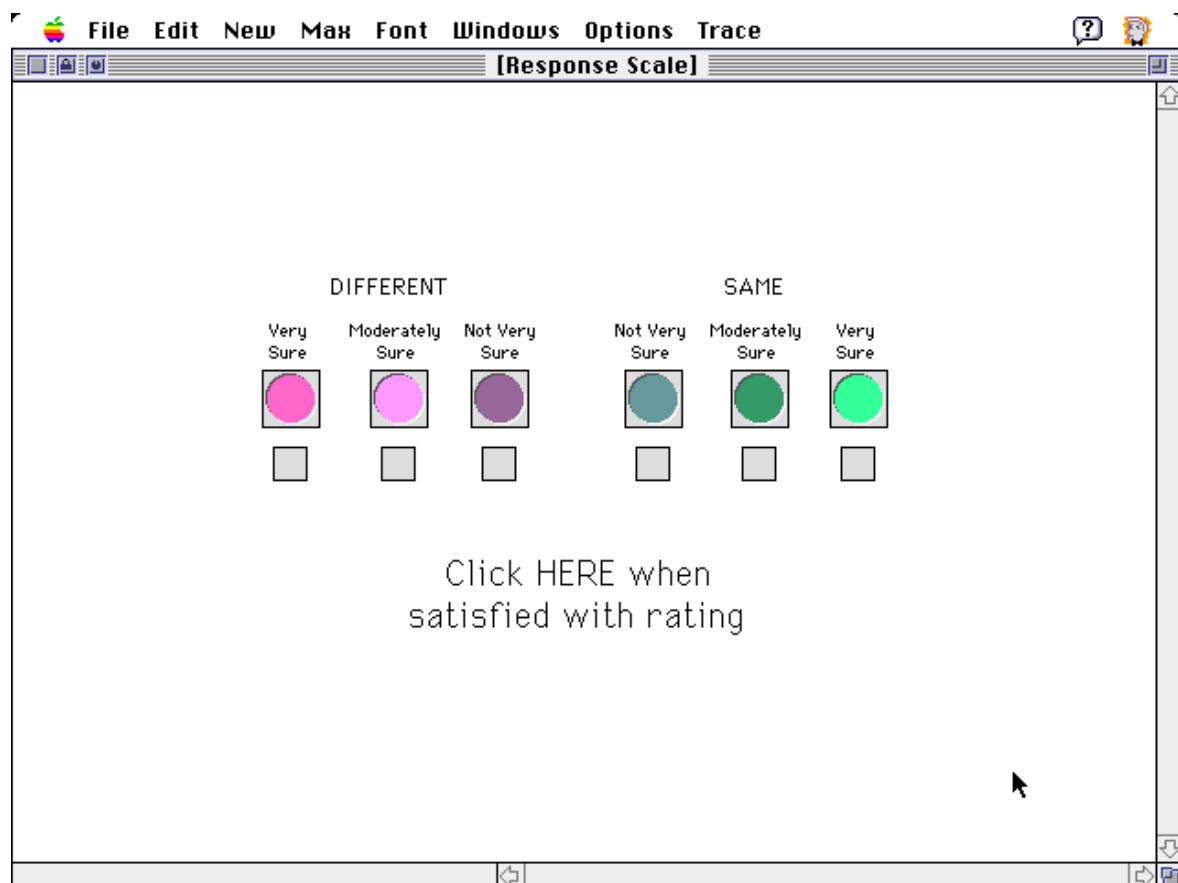
EXPOSURE 1

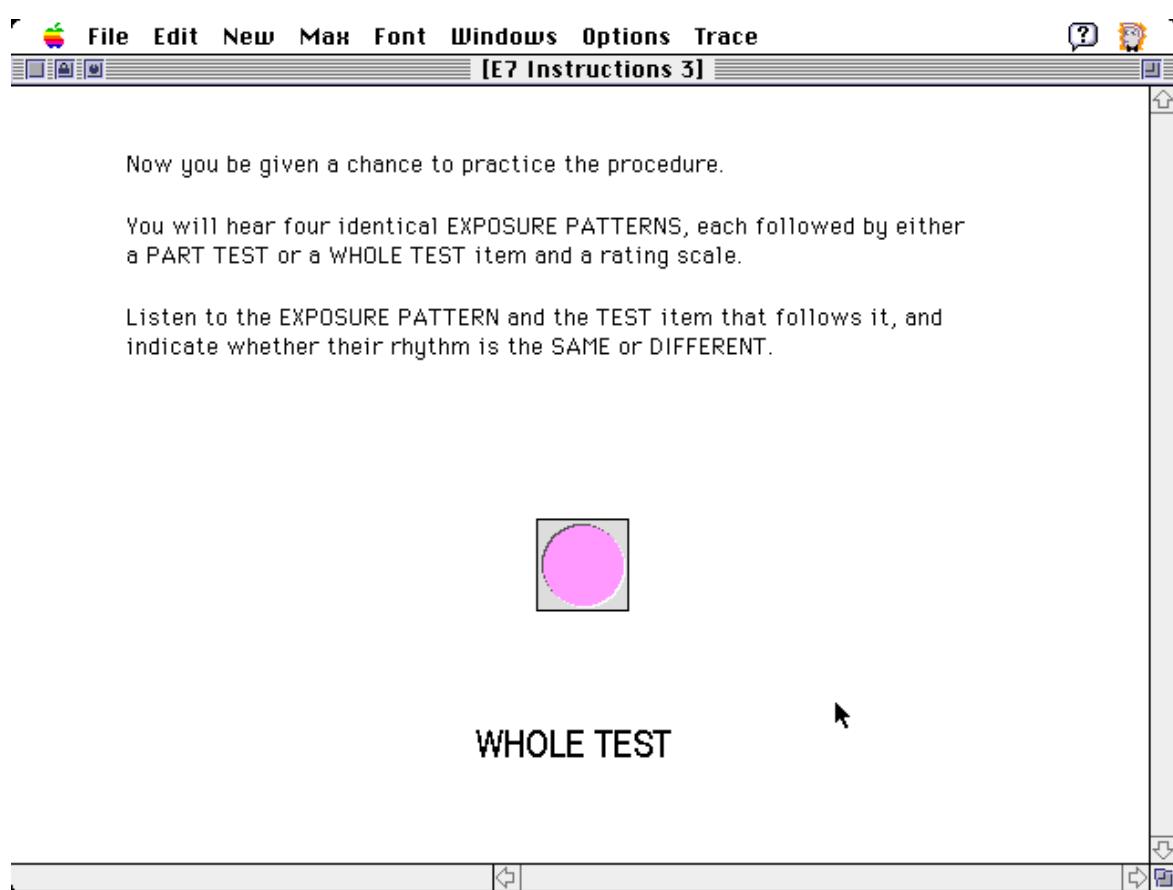
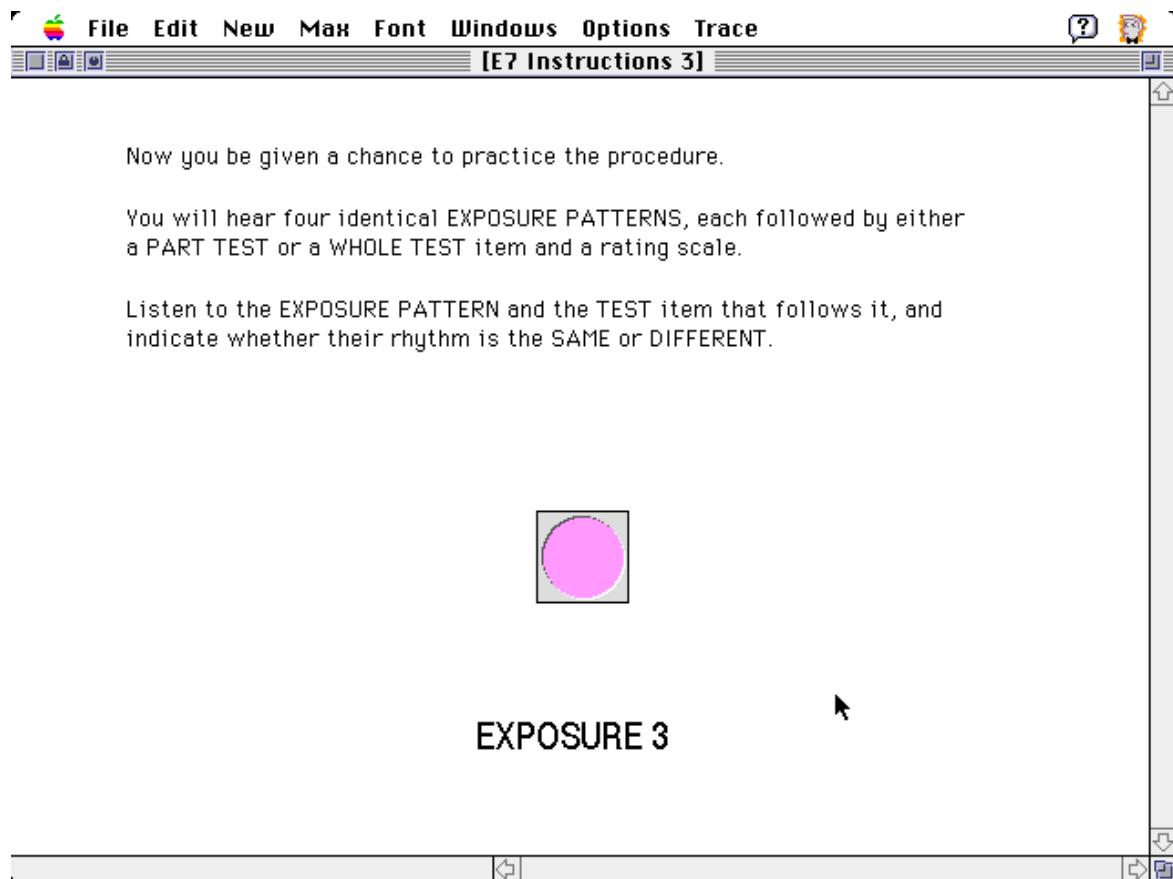


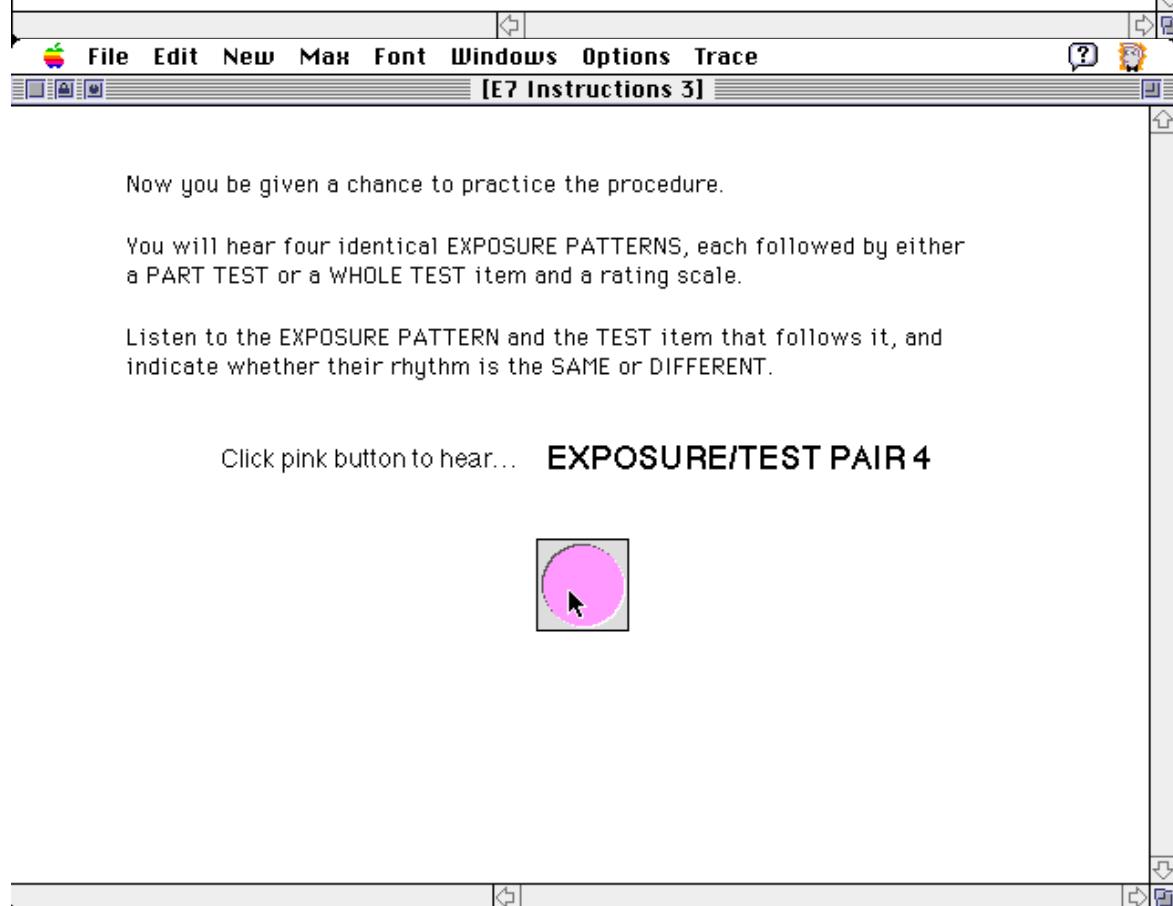
PART TEST

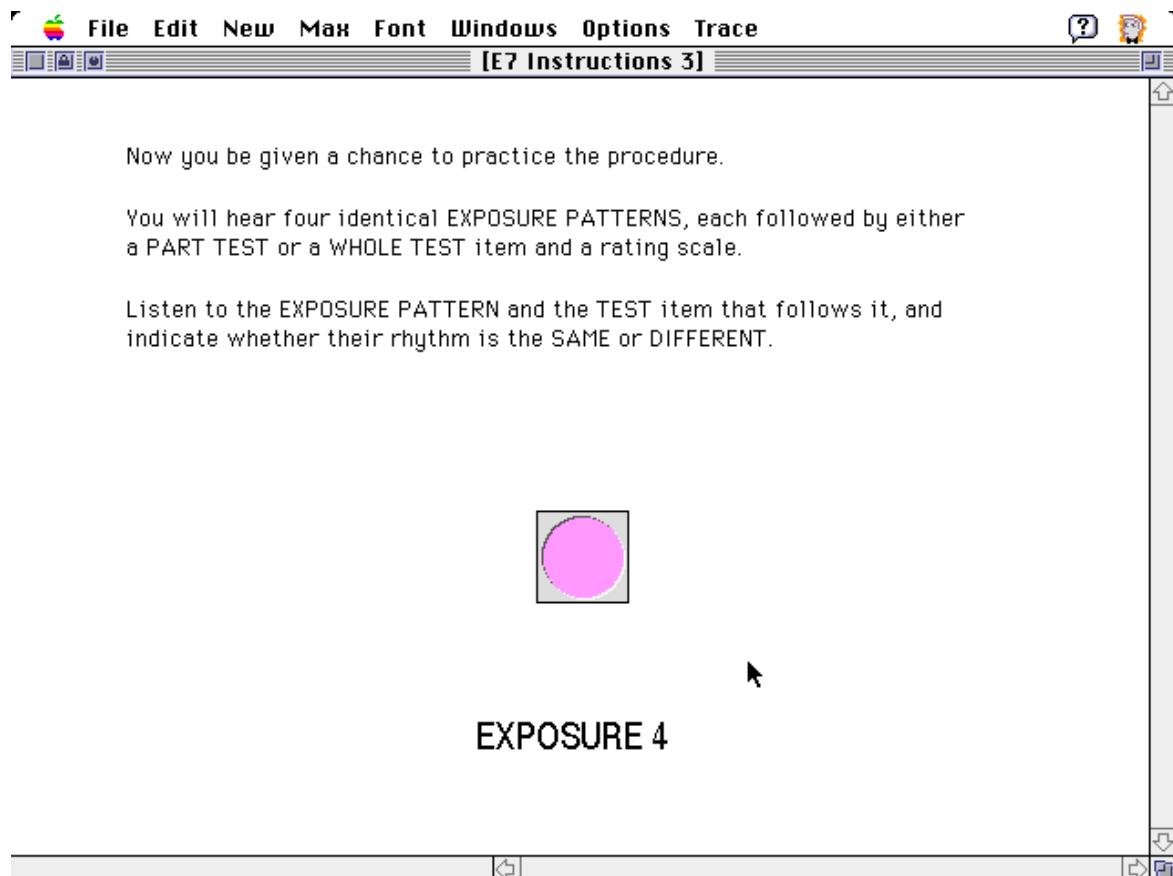




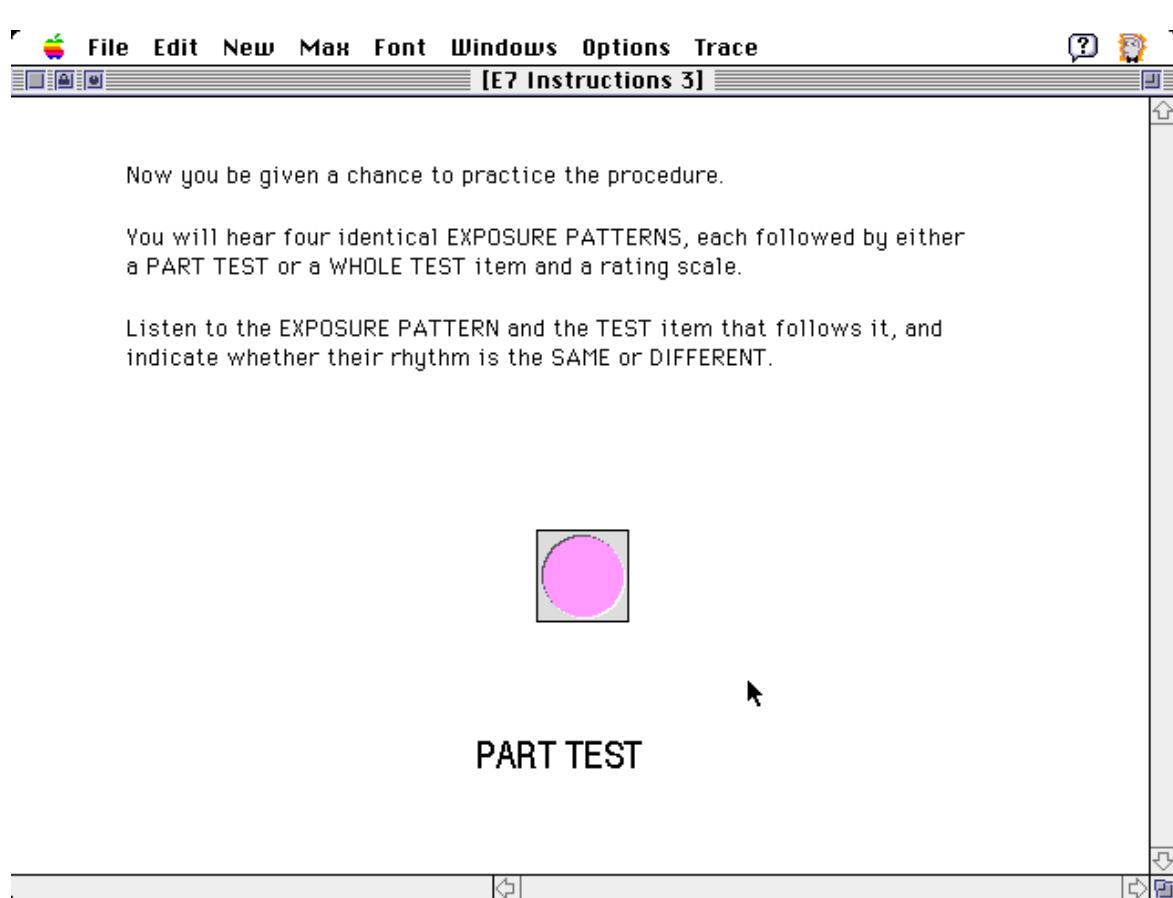




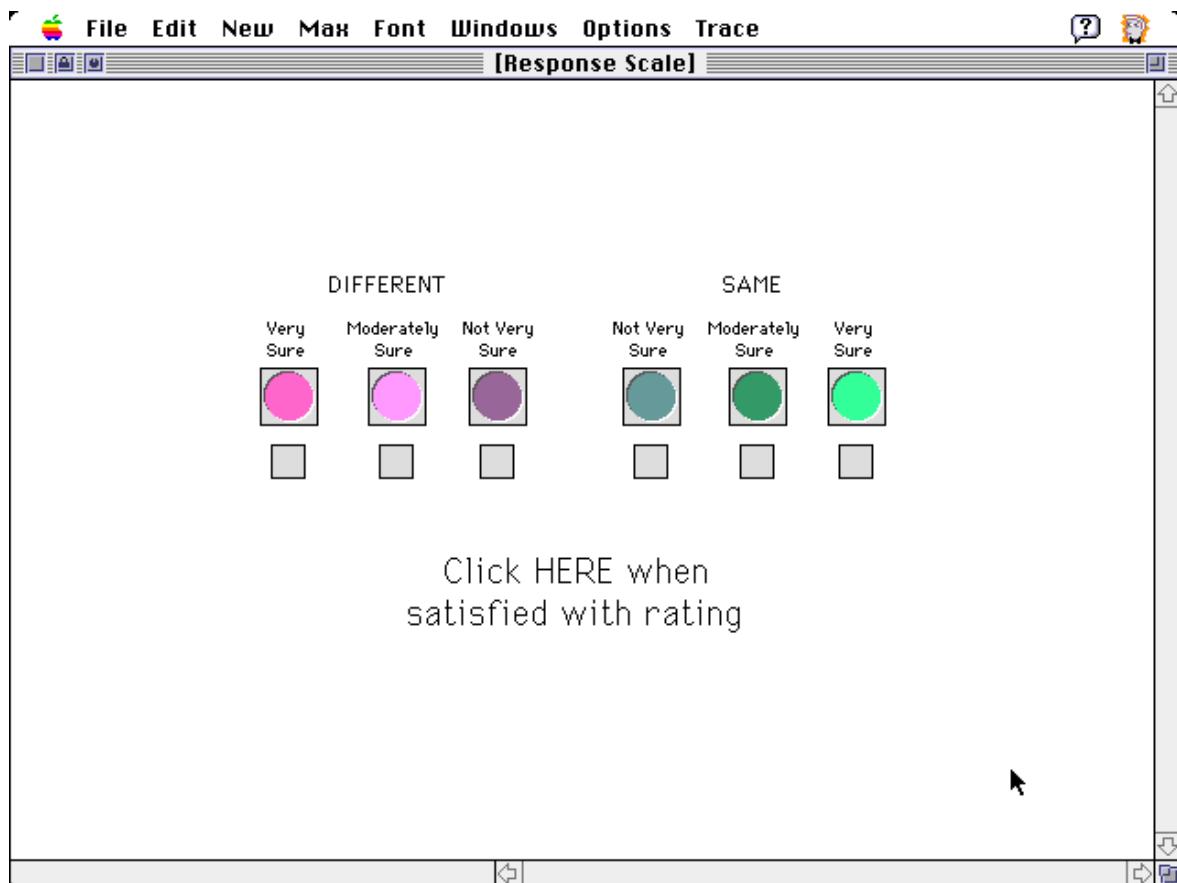




EXPOSURE 4



PART TEST



In the actual experiment, you will be presented with six sets of 10 EXPOSURE/TEST PATTERN pairs.

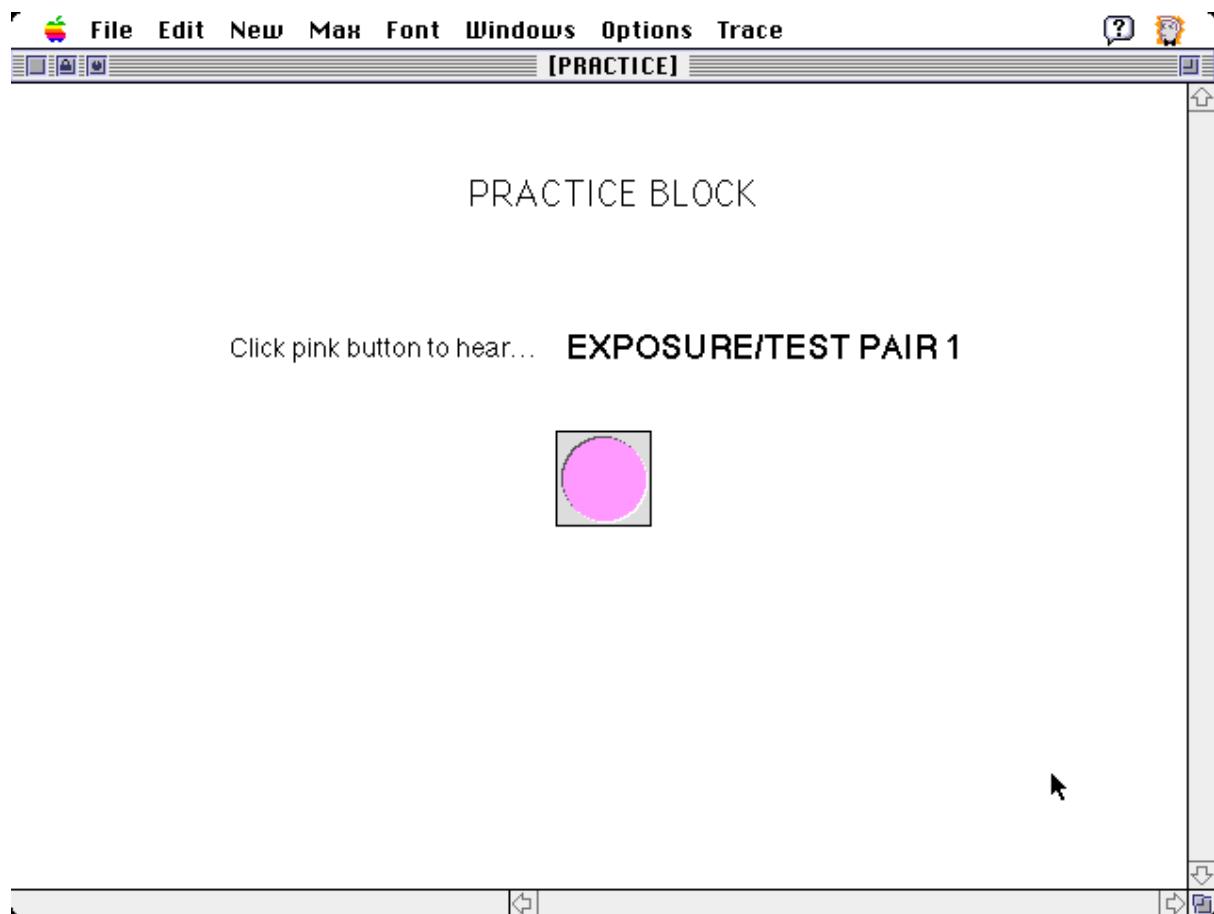
Each set of 10 EXPOSURE/TEST pairs is called a "block". You will therefore receive six blocks of pairs.

In each block, the same EXPOSURE PATTERN will be the first pattern of each pair. Of course, the second pattern of each pair will be one of several possible PART TEST and WHOLE TEST items.

If you don't understand the procedure, please call the experimenter by pushing the buzzer.

If you feel that you understand the procedure, click below to do one PRACTICE BLOCK.

CLICK THIS BUTTON FOR THE PRACTICE BLOCK



APPENDIX 6.4

Post-test questionnaire for Multipart Experiments

1 & 2

POST-TEST QUESTIONNAIRE

1) How **demanding** did you find the task overall?

Extremely Easy	Very Easy	Fairly Easy	Fairly Difficult	Very Difficult	Extremely Difficult	Impossibly Difficult
1	2	3	4	5	6	7

2) How often do you feel that you were **guessing** when making the ratings?

Never	Rarely	Sometimes	Most of the time	Always
1	2	3	4	5

APPENDIX 6.5

**Integrant ratings data, planned contrasts, and
conventional ANOVA summary from Multipart
Experiment 1**

Table A6.5.1: Each individual participant's average ratings for target (*t*) and distracter (*d-x* & *d-y*) integrant test items in each attending mode condition (prioritised integrative attending & selective attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

Prioritised Integrative Attending											
<i>Musicality</i>	<i>Subgroup</i>	<i>Participant</i>	Quadruple			Triple			Nonmetrical		
			<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>
Musician	A	1	2	3	-1	2	3	0.5	0	0	-2
		2	-0.5	0	3	0	-2.5	0	2	-2.5	1.5
		3	3	0.5	-0.5	-2.5	-2.5	-2.5	-2.5	-2.5	-0.5
		4	0	1	1.5	1	1	1	-0.5	-1.5	-0.5
		5	2.5	-0.5	0.5	1.5	2	0.5	2	0	0.5
		6	2	1	-2	-3	-1	1	-3	-2.5	-1
		7	0	-3	-3	-2	-0.5	-2	-0.5	-0.5	-1.5
		8	1	0	0	-1.5	1.5	0.5	1	0.5	2
		9	1	0	-1	0.5	-1	-3	0	-2.5	1.5
		10	3	-2.5	-3	3	-2	-3	1	-1	2.5
		11	1	-1	-1	0	1.5	0.5	-1.5	0	0.5
		12	2	2.5	2	2	0.5	0	-0.5	2	2.5
		13	1	2.5	1	2	2.5	1	2.5	0	-1.5
		14	2.5	0.5	2	2	1.5	0.5	0.5	1.5	2.5
		15	-1.5	-2	0	0	0.5	-2.5	2	0	-2
C	C	16	2.5	2.5	0	2.5	1	-2.5	3	0.5	2
		17	-1	0	-1.5	1.5	0	2	-0.5	1.5	-1
		18	2.5	0.5	-3	-0.5	0	3	0	0.5	-0.5
		19	0	-1.5	0.5	-0.5	-1	-1	2	0.5	1
		20	3	-2	-2.5	3	-3	-3	1	0	-2
		21	-2	0.5	-1	-1.5	-0.5	-2.5	-2	-1	-0.5
		22	0.5	-2.5	2	0	2	2	2	1.5	0.5
		23	2.5	1.5	-2	2	1	1.5	2	2	0
		24	-3	-3	-3	-3	-3	-3	-3	-3	-3
Nonmus.	A	25	2	3	0	0.5	-2	2	-0.5	-1.5	-1
		26	2.5	-1.5	2	1.5	0.5	-1	2.5	0	0.5
		27	3	1.5	2	2	2.5	-1	0	0	-3
		28	2	1.5	2	-1.5	1	-2	-2	0	-1.5
		29	0	2.5	-1	1	-1	1	-1.5	0.5	1
		30	1	1.5	0	-0.5	2	0	1.5	-1	0.5
		31	-0.5	-2.5	-0.5	-1	-0.5	-3	-2.5	-3	-2.5
		32	1.5	1.5	-0.5	0	-2	0.5	1.5	0.5	0
		33	2	-1	1.5	3	1.5	-2	0	0.5	2
		34	1.5	2.5	0	0	2	1.5	-0.5	-1.5	-1.5
		35	3	-2.5	1	2.5	0	-2	1	-2.5	1.5
		36	-1.5	1.5	1.5	2.5	0	-1.5	0	1.5	0.5
		37	1	2	-2	0.5	1	-1	1	3	0
		38	2	1.5	2	0.5	0	1.5	2	0.5	2
C	C	39	-1.5	-3	1	-1	1.5	2	2.5	1	-1.5
		40	3	0.5	1	0.5	-0.5	2	1.5	-1.5	-1.5
		41	0	-0.5	-0.5	-2.5	-0.5	-2	0	0	-3
		42	2	1.5	-0.5	0	-1.5	2	2	2	2
		43	1	1	1	-1	1	0	1	0	0
		44	3	2.5	1	3	3	2.5	3	3	2.5
		45	2	0	0.5	0.5	1	-1	0	1	1
		46	2.5	2.5	2	0	-1.5	0.5	2.5	-2	2
		47	3	-1.5	2	2	2.5	-3	-3	-1	0.5
		48	2	2	2	0.5	1.5	0.5	1.5	0	1.5

Table A6.5.1 continued

			Selective Attending								
Musicality	Subgroup	Participant	Quadruple			Triple			Nonmetrical		
			t	d-x	d-y	t	d-x	d-y	t	d-x	d-y
Musician	A	49	-1.5	-0.5	-1	0	2	-2	-0.5	-0.5	2
		50	2	-0.5	-3	-2.5	-2.5	0	-0.5	2	-2.5
		51	3	2.5	0.5	0.5	2.5	2	0.5	1	-2.5
		52	3	-3	-3	3	-0.5	-3	-2.5	-2	-3
		53	-0.5	-0.5	0	-0.5	1.5	1.5	-2.5	-2	-1.5
		54	-0.5	-0.5	-0.5	-2	0	1.5	1.5	0.5	-0.5
		55	-2	0	-0.5	0	2	-2	0	-0.5	2.5
		56	3	2	-2	-3	0	-2.5	-3	0.5	0.5
		57	3	0.5	-0.5	-2.5	0	-0.5	3	0	2.5
		58	0	2	1.5	0.5	1	-0.5	1.5	2	1.5
Musician	B	59	-0.5	0	-2	0	1.5	0.5	0	2	-2.5
		60	0	2	-2.5	1	0.5	-2	0	-0.5	3
		61	0	3	2.5	0	0.5	-1.5	0	-2	0.5
		62	3	0	1.5	2	-1.5	-2.5	0.5	0	-2
		63	-0.5	1.5	-1	2.5	0	0	2	-1	0.5
		64	3	2.5	2.5	0.5	0	-2	2	3	0.5
		65	2	0	2	0	0	2	3	2.5	0
		66	0.5	-0.5	1	0	0	-0.5	2	1	1.5
		67	0	2	-2	0.5	0	-2	-0.5	2	1
		68	-0.5	-2.5	0	2	-2	-3	3	2	1
Musician	C	69	2	2	2	1	0	-1.5	-1	2	2.5
		70	2.5	2.5	2.5	2.5	2	2.5	3	3	3
		71	3	-3	-0.5	3	-2.5	0	1.5	-3	0
		72	3	0	-2.5	3	-2	-3	3	3	-1.5
Nonmus.	A	73	0.5	3	0.5	1	0.5	2	3	2	1.5
		74	1	2	-0.5	1.5	-2	-1	-3	-2	3
		75	1.5	1.5	0	1	1	1	-1	0	-2
		76	3	2	2	0	2.5	2.5	3	2.5	2.5
		77	2.5	-0.5	-2.5	1.5	2.5	-2.5	0.5	-0.5	-0.5
		78	-3	2.5	-2.5	-0.5	2.5	-3	-2.5	-2	-0.5
		79	1	-1	0	0.5	1.5	-1	0	-1	0.5
		80	2	3	1.5	2.5	2	3	3	3	2.5
		81	1.5	1.5	1	2	1	2	2.5	0.5	2
		82	3	2.5	3	3	1.5	2.5	1	2	2
Nonmus.	B	83	3	2.5	2.5	3	2.5	2.5	2.5	3	2.5
		84	-2	2	-1.5	0	1.5	-1.5	1	0.5	0.5
		85	2	2	2.5	2	3	2	2.5	2.5	3
		86	0	-2	0.5	1.5	1	1.5	0	0	-1
		87	2.5	2	3	0	-2.5	-1.5	0	0	2
		88	3	2.5	0.5	0	0	0.5	0.5	1	-3
		89	2.5	2	1.5	2.5	2.5	0.5	2.5	2.5	2.5
		90	2	1	1.5	0	0	-0.5	1.5	0	0.5
		91	0	-1	-1	0	1	1	0.5	0	-1
		92	2.5	3	2	2.5	0	0.5	2.5	2	2
Nonmus.	C	93	2	-2	0	1.5	-0.5	-3	0.5	-1.5	2
		94	1.5	-3	0	2	-0.5	-2.5	0	0	0
		95	0	0	2	-1.5	0	1.5	0	0.5	-1
		96	1.5	1	0	-0.5	-1.5	2	-0.5	-1	0.5

Table A6.5.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Selective					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Selective attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Selective attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.5.3: Planned within group contrasts used in ANOVA.

	Matched			Mismatched			Nonmetrical		
	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	-1	-1	-1	0	0	0
B3: Target vs Distracters	2	-1	-1	2	-1	-1	2	-1	-1
B4: Distracter-x vs Distracter-y	0	1	-1	0	1	-1	0	1	-1
B5: Metrical vs Nonmetrical x Target vs Distracters	2	-1	-1	2	-1	-1	-4	2	2
B6: Metrical vs Nonmetrical x Distracter-x vs -y	0	1	-1	0	1	-1	0	-2	2
B7: Matched vs Mismatched x Target vs Distracters	2	-1	-1	-2	1	1	0	0	0
B8: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	-1	1	0	0	0

Table A6.5.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
Within				
A1	20.782	1	20.782	2.643
A2	53.005	1	53.005	6.742
A3	0.510	1	0.510	0.065
A4	40.181	1	40.181	5.111
A5	11.250	1	11.250	1.431
Error	660.431	84	7.862	
B1	0.997	1	0.997	0.467
A1B1	4.952	1	4.952	2.322
A2B1	8.684	1	8.684	4.073
A3B1	0.064	1	0.064	0.030
A4B1	23.092	1	23.092	10.831
A5B1	3.391	1	3.391	1.590
Error	179.095	84	2.132	
B2	25.629	1	25.629	12.955
A1B2	0.000	1	0.000	0.000
A2B2	0.879	1	0.879	0.444
A3B2	4.969	1	4.969	2.512
A4B2	0.002	1	0.002	0.001
A5B2	0.053	1	0.053	0.027
Error	166.182	84	1.978	
B3	67.292	1	67.292	23.990
A1B3	0.973	1	0.973	0.347
A2B3	2.836	1	2.836	1.011
A3B3	0.188	1	0.188	0.067
A4B3	8.362	1	8.362	2.981
A5B3	0.681	1	0.681	0.243
Error	235.622	84	2.805	
B4	13.141	1	13.141	6.135
A1B4	2.127	1	2.127	0.993
A2B4	2.007	1	2.007	0.937
A3B4	1.361	1	1.361	0.635
A4B4	2.820	1	2.820	1.317
A5B4	1.378	1	1.378	0.643
Error	179.927	84	2.142	
B5	7.223	1	7.223	3.735
A1B5	0.612	1	0.612	0.317
A2B5	1.542	1	1.542	0.797
A3B5	0.065	1	0.065	0.034
A4B5	0.148	1	0.148	0.077
A5B5	0.918	1	0.918	0.475
Error	162.462	84	1.934	
B6	10.695	1	10.695	5.700
A1B6	0.001	1	0.001	0.000
A2B6	0.014	1	0.014	0.007
A3B6	0.889	1	0.889	0.474
A4B6	4.000	1	4.000	2.132
A5B6	5.005	1	5.005	2.668
Error	157.604	84	1.876	
B7	3.781	1	3.781	2.586
A1B7	1.837	1	1.837	1.256
A2B7	0.383	1	0.383	0.262
A3B7	0.043	1	0.043	0.029
A4B7	8.266	1	8.266	5.652
A5B7	3.000	1	3.000	2.052
Error	122.833	84	1.462	
B8	1.378	1	1.378	0.598
A1B8	0.440	1	0.440	0.191
A2B8	0.260	1	0.260	0.113
A3B8	0.844	1	0.844	0.366
A4B8	1.880	1	1.880	0.816
A5B8	0.563	1	0.563	0.244
Error	193.469	84	2.303	

APPENDIX 6.6

**Aggregate ratings data, planned contrasts, and
conventional ANOVA summary from Multipart
Experiment 1**

Table A6.6.1: Each individual participant's average ratings for target (*t*) and distracter (*d-x* & *d-y*) aggregate test items in each attending mode condition (prioritised integrative attending & nonprioritised integrative attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

			Prioritised Integrative Attending								
Musicality	Subgroup	Participant	Quadruple			Triple			Nonmetrical		
			<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>
Musician	A	1	2.5	-3	-3	3	2	0.5	1	0	-0.5
		2	0	-3	-3	0.5	-3	2.5	0.5	-3	-3
		3	1.5	-3	1	0.5	-3	2	2	-2.5	0
		4	1	-2.5	-1	1	-2	-0.5	0	-1.5	1
		5	-0.5	-3	-0.5	0.5	-2.5	0	-0.5	-2	0
		6	-2.5	-3	0	0	-2.5	-2	-1	-2.5	2.5
		7	3	-3	-2	2.5	-3	0.5	2.5	0	0
		8	2	-2	0	1.5	-2	1	-1	0	-2
		9	2	-1.5	1	1.5	-1	1	0.5	0	1
		10	0.5	-2.5	-0.5	-2.5	-2	-3	1	-3	-0.5
	B	11	1	-0.5	0.5	1.5	0	-1	1.5	1	0.5
		12	2.5	-3	1.5	2.5	-3	0	2	-2.5	2
		13	1.5	0	0	2.5	-2	0	1.5	-1.5	-1.5
		14	2	-3	-2.5	0.5	-3	-2	1	-3	-3
		15	1.5	-0.5	0.5	0	-0.5	0	2	1	-2.5
	C	16	2.5	-3	-3	2	-0.5	-3	1.5	-2	-1
		17	-0.5	-1	2	1	-1	0	0	2	0
		18	3	-3	-0.5	-0.5	-2.5	1	0	0	-0.5
		19	1.5	-2.5	-1	0	-1.5	0.5	1	-2.5	0.5
		20	0	-0.5	-1	0	-1	-1	0	-1	1
		21	-0.5	-1	0.5	1	-2.5	-1	-1.5	-1	-2
		22	2.5	-2	0.5	2	-2	-1.5	1.5	-2	-2
		23	2	-2.5	-2.5	2	-3	0	0	-2.5	2
		24	2.5	-2.5	-3	-0.5	-3	-3	0	-3	0
Nonmus.	A	25	0	-2	-0.5	1.5	-2.5	0.5	0	-2	0
		26	2.5	-0.5	2	0.5	-1.5	0	1.5	1.5	1
		27	-2.5	-1	-2	0	-0.5	1	0	-1	0
		28	-0.5	-2	0	1	-2	-0.5	-1	-2	0.5
		29	0.5	-1.5	0	2.5	-1	2	2	1	2
		30	0.5	-1	-0.5	2	-3	0	-0.5	-3	0
		31	0	-3	-1	3	0	-0.5	2	0	2
	B	32	0.5	0	0	0.5	-0.5	1	1	2	0.5
		33	1	-2	-1	3	-3	-3	2.5	-3	-2
		34	3	-1	-1	1	0	-2.5	2.5	0.5	-0.5
		35	-2.5	-0.5	-2.5	0	-2.5	-2	1.5	-3	0
		36	0	-2.5	1.5	0.5	0.5	0.5	2	2	1
		37	1.5	-2.5	0	-1	1.5	-1	1.5	0.5	2.5
		38	2	-2	-1.5	2.5	-2.5	0.5	2	-1.5	0
	C	39	0.5	1.5	0.5	2.5	1	-1	-2	1	0
		40	0.5	-2.5	0	0	-3	0	-0.5	-1	-2.5
		41	-1.5	-1	1.5	0	1.5	0	2	-0.5	0
		42	1.5	1.5	0	2	-2.5	-2	2	-2.5	1
		43	0.5	-2	1	1.5	-2	-1	0	-1.5	1.5
		44	-0.5	-2.5	-2.5	1.5	-3	2.5	0	-0.5	-2
		45	0	-2.5	-2	0	-2.5	0	1	-2.5	-1
		46	2	0	-2.5	1	-2	-0.5	0	0	0
		47	3	-3	0	-1.5	-0.5	-1	2.5	-3	-1
		48	1	-0.5	0	0.5	-1.5	-2.5	1	-3	-0.5

Table A6.6.1 continued

Nonprioritised Integrative Attending												
<i>Musicality</i>	<i>Subgroup</i>	<i>Participant</i>	Quadruple			Triple			Nonmetrical			
			<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	
Musician	A	49	0	-3	-1.5	0	-1	2.5	-2.5	0	-2	
		50	-1	-3	-3	0	-2	1	0.5	-2.5	-2	
		51	0	2.5	-3	1.5	-2.5	1.5	2	0.5	-3	
		52	3	-1	-2	2	-0.5	2	-1.5	1.5	1.5	
		53	2	-3	-3	2	-3	-3	2	-2.5	-3	
		54	3	-3	0	0	0	3	2.5	-2	0	
	B	55	1	-2	-0.5	2.5	-2	0	2.5	-2	0	
		56	2	-3	-3	2	-2.5	-0.5	0.5	-3	-2.5	
		57	-3	-2.5	-1	-1	0	-2	1	1.5	0.5	
		58	2.5	-3	-2.5	0	-3	-2.5	3	-3	-2.5	
		59	2.5	-0.5	0	2	0	2	2	0	-1	
		60	-0.5	-2	-2.5	0.5	-2	-1.5	1	-2.5	-2	
Nonmus.	A	61	-2	-3	-3	-2	-3	-0.5	0.5	-3	-3	
		62	1.5	-3	-2	2	-2.5	-2.5	0.5	-3	-3	
		63	1.5	-2.5	2.5	1.5	-2.5	-2	0.5	-3	-3	
		64	3	1	-1	2	3	-1	2	-3	-3	
		65	-1	-3	-3	0	-3	-3	0	-3	-2.5	
		66	0	-0.5	0.5	0	2	-1	2	0	2	
	B	67	2.5	-0.5	0	2	-0.5	1.5	2	-2.5	-2.5	
		68	-0.5	-1.5	-0.5	2	-2.5	0	1	-3	0	
		69	0.5	-3	-3	2	-3	-3	2.5	-3	-0.5	
		70	0	0	0.5	2	-0.5	0	-2	2.5	-2.5	
		71	3	-3	-0.5	3	-2.5	0	3	-3	-0.5	
		72	-0.5	-2.5	-3	0	-1.5	-3	-2	0	-2.5	
C	A	73	2	-3	-2	-1.5	-3	-1	2.5	-0.5	-0.5	
		74	2.5	0	-1.5	1.5	-2	0	1.5	-1	-2	
		75	1.5	-1.5	1	1	-1	0.5	1	0	1	
		76	0	-3	-3	2	-2.5	-3	2	1.5	-1.5	
		77	-0.5	0	1	0.5	0	0	0	1	0	
		78	2	-2	-1.5	1.5	-0.5	-2.5	2.5	1.5	0.5	
		79	0.5	-3	-3	0	-3	-2.5	0	-3	-1	
	B	80	1	-3	2	3	-2.5	2	0.5	-0.5	-3	
		81	-0.5	-1	1	1	0	0	1	1	0	
		82	3	-2.5	0	-3	0	2	-0.5	-3	0	
		83	0	-1.5	-0.5	0	-1	0	0	0	-1	
		84	0.5	1	1.5	0.5	0.5	1.5	1	1.5	0.5	
		85	1	-0.5	0	-2.5	3	2.5	1	2.5	3	
		86	-2.5	0	-2.5	0.5	1.5	-1.5	-3	2	-1.5	
	C	87	1	-2.5	1.5	1.5	-1	2	0	-2.5	-1.5	
		88	3	3	0	3	2.5	3	3	2.5	0	
		89	0.5	1.5	0	1.5	-1	0	2.5	-2	1.5	
		90	2.5	-0.5	1.5	2	-0.5	1.5	3	2	2	
		91	1	-1	1	1	-0.5	-1	0	-1	-2	
		92	1.5	-1.5	-1	0	-1	1.5	2	-1	1	
		93	-0.5	-1	0.5	1.5	-2	0	1.5	-1.5	0	
Nonmus.	C	94	0	-0.5	1.5	1.5	-3	-2.5	1	-2.5	0.5	
		95	-1.5	2	-0.5	-1.5	-2.5	-1.5	1.5	-2	0.5	
		96	0	-1.5	1	0.5	2.5	0	0.5	-0.5	-0.5	

Table A6.6.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Nonprioritised Integrative					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Nonprioritised Integrative attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Nonprioritised Integrative attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.6.3: Planned within group contrasts used in ANOVA.

	Matched			Mismatched			Nonmetrical		
	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	-1	-1	-1	0	0	0
B3: Target vs Distracters	2	-1	-1	2	-1	-1	2	-1	-1
B4: Distracter-x vs Distracter-y	0	1	-1	0	1	-1	0	1	-1
B5: Metrical vs Nonmetrical x Target vs Distracters	2	-1	-1	2	-1	-1	-4	2	2
B6: Metrical vs Nonmetrical x Distracter-x vs -y	0	1	-1	0	1	-1	0	-2	2
B7: Matched vs Mismatched x Target vs Distracters	2	-1	-1	-2	1	1	0	0	0
B8: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	-1	1	0	0	0

Table A6.6.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
<hr/>				
A1	0.104	1	0.104	0.021
A2	42.003	1	42.003	8.281
A3	9.903	1	9.903	1.952
A4	0.406	1	0.406	0.080
A5	1.834	1	1.834	0.362
Error	426.080	84	5.072	
<hr/>				
Within				
<hr/>				
B1	4.431	1	4.431	2.593
A1B1	2.118	1	2.118	1.240
A2B1	5.168	1	5.168	3.024
A3B1	0.347	1	0.347	0.203
A4B1	1.130	1	1.130	0.661
A5B1	0.063	1	0.063	0.037
Error	143.540	84	1.709	
B2	7.000	1	7.000	6.421
A1B2	1.129	1	1.129	1.035
A2B2	1.129	1	1.129	1.035
A3B2	2.990	1	2.990	2.743
A4B2	13.026	1	13.026	11.948
A5B2	0.990	1	0.990	0.908
Error	91.578	84	1.090	
B3	609.781	1	609.781	185.797
A1B3	0.198	1	0.198	0.060
A2B3	35.449	1	35.449	10.801
A3B3	5.615	1	5.615	1.711
A4B3	1.358	1	1.358	0.414
A5B3	0.115	1	0.115	0.035
Error	275.686	84	3.282	
B4	97.105	1	97.105	43.562
A1B4	13.598	1	13.598	6.100
A2B4	0.803	1	0.803	0.360
A3B4	1.723	1	1.723	0.773
A4B4	5.766	1	5.766	2.587
A5B4	6.641	1	6.641	2.979
Error	187.245	84	2.229	
B5	1.922	1	1.922	1.660
A1B5	6.554	1	6.554	5.662
A2B5	0.548	1	0.548	0.473
A3B5	1.521	1	1.521	1.314
A4B5	6.813	1	6.813	5.885
A5B5	0.594	1	0.594	0.513
Error	97.234	84	1.158	
B6	6.495	1	6.495	3.940
A1B6	1.877	1	1.877	1.139
A2B6	0.521	1	0.521	0.316
A3B6	0.861	1	0.861	0.522
A4B6	6.146	1	6.146	3.728
A5B6	2.876	1	2.876	1.745
Error	138.482	84	1.649	
B7	1.568	1	1.568	0.883
A1B7	0.439	1	0.439	0.248
A2B7	2.971	1	2.971	1.674
A3B7	1.797	1	1.797	1.013
A4B7	0.694	1	0.694	0.391
A5B7	3.797	1	3.797	2.139
Error	149.086	84	1.775	
B8	0.287	1	0.287	0.204
A1B8	0.287	1	0.287	0.204
A2B8	0.548	1	0.548	0.389
A3B8	0.548	1	0.548	0.389
A4B8	9.188	1	9.188	6.524
A5B8	2.250	1	2.250	1.598
Error	118.289	84	1.408	

APPENDIX 6.7

**Integrant ratings data, planned contrasts, and *item*
ANOVA summary from Multipart Experiment 1**

Table A6.7.1: Average ratings for target (t) and distracter ($d-x$ & $d-y$) integrant test items in each attending mode condition (prioritised integrative attending & selective attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

Musicality	Subgroup	Item	Quadruple			Triple			Nonmetrical		
			t	$d-x$	$d-y$	t	$d-x$	$d-y$	t	$d-x$	$d-y$
Prioritised Integrative Attending											
Musician	A	1	1.75	-0.5	0	-1	0.5	-0.75	-0.5	-2	0.5
		2	2	1.5	-0.25	-0.5	-0.75	0.75	-1.5	-1.25	-1.25
		3	2.25	-0.75	-0.75	0.5	-0.5	1	0.75	-1.25	-0.25
	B	4	-1	0.75	0.25	-1.25	1.25	-1.5	0.5	0	0.25
		5	2	0.75	0.5	1.5	0.75	1.5	0	0.75	0.75
		6	1.25	1.5	1.5	1.5	2.25	-0.5	0.5	1	1.25
		7	1.25	-0.5	-1.5	1.25	-1.25	-2.75	1.5	-1.5	1.25
	C	8	1.25	-0.5	-0.5	1.75	0.5	-2.75	1.5	0	0.75
		9	1	-1	-0.5	-0.75	0	-1.25	0.75	0.25	-1
		10	-0.25	-1.75	0	1.25	-1.25	-1	0.75	0.25	0.5
		11	0.25	-0.75	-2.25	-1	1.25	1	1	-0.25	-1.25
		12	0.25	0.25	-2.5	1	-2.25	0.75	-1.75	0.75	-1
Nonmus.	A	13	1.5	2	0.25	0.5	1	-1.25	0	1.5	-1.25
		14	1.5	1.5	1.25	0	1.25	0.25	-1	-1.75	-0.25
		15	1.5	0	-1	1.25	-2.25	-0.75	-0.25	-1.5	-1.25
	B	16	1.25	0.25	1.5	-0.75	0.25	0	0.75	-0.5	-0.25
		17	1	0.5	-0.25	0.75	0.25	-0.25	1.25	0	0
		18	1.25	0.75	1.5	2.25	0.25	-1.25	0.75	1.25	2
		19	1.25	-1	1.75	1	0.75	0.5	0.75	-0.25	-0.75
	C	20	1.25	0.5	0	0.25	1.5	1.25	1	-0.5	-0.5
		21	2.25	1.5	1.5	0.5	1	1	1.5	1	1.25
		22	2	1.5	0.75	0.75	0.75	0	1.75	0	1.5
		23	2	0	0.5	0.25	-0.25	-1	-0.25	-0.25	0.75
		24	1.5	0.75	1	-0.25	1.25	-0.25	0.5	0.75	-0.25
Selective Attending											
Musician	A	25	1.25	-0.5	-1.5	0.5	2	0	-0.25	-0.75	-2.25
		26	1.25	-0.25	0	0	-0.25	1	-1.25	-0.5	-1.5
		27	0.75	2.25	-0.75	-0.75	0.5	-1.25	-1	-1.25	1.25
	B	28	0	-1.75	-2.5	-2	0.25	-2	-1	2	0
		29	1	0.75	-0.5	1	1.25	-1	0	0.25	-0.75
		30	0.25	1.75	0.25	0.5	-0.75	-1.75	0.25	-0.5	0.25
		31	2.25	0.75	1	0.5	-1.75	-2	2.5	-0.25	1.25
	C	32	0.5	2.5	0.25	0	2.25	0.5	1.75	2.25	1.25
		33	-0.5	1.25	-0.25	2	-0.75	-0.75	2	1.75	1.5
		34	2.5	0.75	1.5	1	0.75	-1.25	0.25	2.75	2.25
		35	2.5	1	-0.75	1	-1	-1.25	2.25	1	0
		36	2.5	-2	0.75	2.25	-1	0.5	2.25	1.5	-1.5
Nonmus.	A	37	0.75	1.75	-1.25	0.5	2	-0.25	0.75	0	1.25
		38	1.25	1	-0.25	0.5	2.25	-0.75	-0.75	0	-1.5
		39	1.75	1.25	1	2	1.25	1	0.5	0.25	2.25
	B	40	0.5	2.25	-0.25	0.75	-0.25	0.5	1	0.75	1.5
		41	1	1	1	2.5	2	0.75	1	1.5	1.75
		42	0.5	1.25	1	0.75	2	1.5	2	1.5	0.75
		43	2.5	2	1.25	1.5	0.75	1.75	2.5	1.25	0.75
	C	44	2.5	2.25	2.5	1	-0.75	0	-0.5	0.5	0.75
		45	1.75	-0.75	0	1.5	1	-0.75	1	0	0.75
		46	1.25	-0.75	0.5	1.5	-1	-1.25	0.75	0.25	0.75
		47	0.25	0	1.75	0.75	0	1.25	-0.25	0	2.25
		48	0.75	1.5	1	-0.75	0.5	1.25	1.5	2	0

Table A6.7.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Selective					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Selective attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Selective attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.7.3: Planned within group contrasts used in ANOVA.

	Matched			Mismatched			Nonmetrical		
	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	-1	-1	-1	0	0	0
B3: Target vs Distracters	2	-1	-1	2	-1	-1	2	-1	-1
B4: Distracter-x vs Distracter-y	0	1	-1	0	1	-1	0	1	-1
B5: Metrical vs Nonmetrical x Target vs Distracters	2	-1	-1	2	-1	-1	-4	2	2
B6: Metrical vs Nonmetrical x Distracter-x vs -y	0	1	-1	0	1	-1	0	-2	2
B7: Matched vs Mismatched x Target vs Distracters	2	-1	-1	-2	1	1	0	0	0
B8: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	-1	1	0	0	0

Table A6.7.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
A1	10.625	1	10.625	8.035
A2	25.887	1	25.887	19.577
A3	0.198	1	0.198	0.150
A4	20.320	1	20.320	15.367
A5	5.418	1	5.418	4.097
Error	47.602	36	1.322	
Within				
B1	0.463	1	0.463	0.411
A1B1	2.557	1	2.557	2.270
A2B1	3.190	1	3.190	2.832
A3B1	0.014	1	0.014	0.013
A4B1	11.669	1	11.669	10.359
A5B1	1.778	1	1.778	1.578
Error	40.554	36	1.126	
B2	12.087	1	12.087	14.768
A1B2	0.014	1	0.014	0.017
A2B2	0.195	1	0.195	0.239
A3B2	3.230	1	3.230	3.947
A4B2	0.002	1	0.002	0.002
A5B2	0.083	1	0.083	0.102
Error	29.464	36	0.818	
B3	31.035	1	31.035	23.069
A1B3	0.859	1	0.859	0.639
A2B3	2.266	1	2.266	1.685
A3B3	0.385	1	0.385	0.287
A4B3	3.543	1	3.543	2.634
A5B3	0.091	1	0.091	0.068
Error	48.431	36	1.345	
B4	7.110	1	7.110	7.194
A1B4	1.287	1	1.287	1.302
A2B4	1.643	1	1.643	1.662
A3B4	1.221	1	1.221	1.235
A4B4	1.242	1	1.242	1.257
A5B4	0.495	1	0.495	0.501
Error	35.576	36	0.988	
B5	3.750	1	3.750	4.825
A1B5	0.347	1	0.347	0.447
A2B5	0.750	1	0.750	0.965
A3B5	0.037	1	0.037	0.048
A4B5	0.089	1	0.089	0.114
A5B5	0.521	1	0.521	0.670
Error	27.983	36	0.777	
B6	4.428	1	4.428	5.254
A1B6	0.053	1	0.053	0.062
A2B6	0.000	1	0.000	0.000
A3B6	0.563	1	0.563	0.667
A4B6	2.438	1	2.438	2.893
A5B6	3.375	1	3.375	4.005
Error	30.339	36	0.843	
B7	1.668	1	1.668	2.375
A1B7	1.085	1	1.085	1.545
A2B7	0.316	1	0.316	0.450
A3B7	0.000	1	0.000	0.001
A4B7	4.376	1	4.376	6.230
A5B7	1.260	1	1.260	1.794
Error	25.286	36	0.702	
B8	0.630	1	0.630	0.670
A1B8	0.255	1	0.255	0.271
A2B8	0.158	1	0.158	0.167
A3B8	0.376	1	0.376	0.400
A4B8	0.891	1	0.891	0.947
A5B8	0.330	1	0.330	0.351
Error	33.875	36	0.941	

APPENDIX 6.8

Aggregate ratings data, planned contrasts, and *item* ANOVA summary from Multipart Experiment 1

Table A6.8.1: Average ratings for target (t) and distracter ($d-x$ & $d-y$) aggregate test items in each attending mode condition (prioritised integrative attending & nonprioritised integrative attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

Musicality	Subgroup	Item	Quadruple			Triple			Nonmetrical		
			t	$d-x$	$d-y$	t	$d-x$	$d-y$	t	$d-x$	$d-y$
Prioritised Integrative Attending											
Musician	A	1	0	-3	0	0.25	-2.5	-0.25	0.25	-2.5	0.75
		2	-0.25	-2.75	-0.25	0.75	-2.5	0	0	-1.75	1
		3	2.5	-2.75	-2.5	1.25	-1.75	0.25	-1	-0.25	-1.25
		4	1.25	-2.75	-1.5	2.5	-1.25	2	2.5	-1.25	-1.5
	B	5	2	-1.75	-0.75	1.5	-2.5	-0.25	1.25	-1.75	0
		6	1.5	-1.5	0.5	2	-1.5	-1.25	1.75	-1.25	-1
		7	2	-1	-1.75	0.75	-2.75	-0.5	0.75	-2	-2
	C	8	1.25	-2.75	0.75	-0.25	0.75	-2	1.75	0	0.5
		9	1	-2	0.25	1.25	-2	0	-0.25	-1.25	-0.25
		10	0.75	-1	-0.75	0.25	-1.5	-1.5	0.75	-2	-1
		11	1.25	-2	-1.5	0.5	-2.5	0.75	1.25	-1.75	-1.25
	Nonmus.	12	2.25	-2.5	-0.5	0.5	-2.25	-1.75	-1.25	0	2
		13	-1.75	-1.25	-1	1.75	-2.25	0.25	0.5	-1.75	1.25
		14	0.75	-1.5	-0.25	1	-1	1	-0.25	-0.75	0
		15	1.25	-2	0.75	1.25	-1	0	1.25	0	1
Nonmus.	B	16	0.25	-0.75	-0.5	1.5	-1.25	0.5	1	0.75	0.75
		17	0	-2.75	-0.5	1.25	-1.5	-0.25	1.75	0	-0.25
		18	0.5	-1	-0.75	-0.25	0	-0.75	1.75	-1	2
		19	1.5	-1	0.5	2	-1	-1.25	0.75	-1.25	-1
	C	20	1	-1	-1.25	1.25	-1.5	-2	0.5	0	-1.5
		21	0.5	-2.75	-1.75	0.5	-2.75	-0.75	0.25	-1.5	-0.75
		22	0.5	-0.75	-1.25	1.5	-2	1.25	0.25	-0.75	0
		23	1	-1	0.25	0.25	-1	-1.25	2	-1.75	-1.25
	A	24	1	-0.5	0.5	0.25	-0.5	-1.5	1.75	-2.75	1
		25	2.5	-0.75	-3	0.75	-0.25	1	1.25	-0.75	-0.5
		26	1.5	-1.5	-1	2	-2.75	0.75	1.25	-0.5	-1.75
		27	1	-3	-1.5	0.5	-1.75	-0.25	-0.25	-2.5	-1.75
Nonprioritised Integrative Attending	B	28	0	-2.5	-2.5	1.75	-2	1.75	0.75	-1.25	-1.5
		29	0	-1.5	-1	0.75	-1.5	0	0	-1.75	-2.25
		30	0.75	-2.75	-2.75	0.5	-2.25	-1.25	2	-2.5	-2.25
		31	1	-2.25	-1.5	0.5	-1	-2.5	1.5	-1.75	-2.5
	C	32	1	-1.25	0.5	0.75	-0.25	-1.25	1.75	-2	-1.5
		33	0	0	-1.5	2	-0.25	0.5	0.75	-1.75	-2.5
		34	1.25	-2.5	0	2	-3	-1.25	1	-1.25	-0.25
		35	-1	-3	-1.25	-0.25	-1.25	-2.25	-0.5	-2.25	-1.75
	A	36	0.5	-1.5	-1.75	1.75	-1.25	-2.5	1.25	-0.75	0.25
		37	0.75	-1.5	-0.75	1	-0.25	-1.75	1.5	0.75	0.75
		38	0.75	-1.75	-0.5	1.5	-1.75	-0.75	1.25	1.25	-0.75
		39	1.25	-1.75	-0.75	1.5	-2.5	-1.5	0.5	-1.5	-2.75
	B	40	1.75	-2.75	-1.5	0	-2.75	0.75	1.75	-1	-0.5
		41	1	0	0.5	0.75	0.5	0.5	-1	1.75	0.75
		42	-1.5	-0.5	-1.25	-1.5	1.5	0.75	0.5	1.25	-0.25
		43	1.5	-0.75	-0.75	0.5	-0.25	1.75	1.25	-0.5	-0.25
	C	44	1.75	-0.75	2	0.75	1	1.75	0.5	-0.5	-0.5
		45	0.5	-0.75	0	1.25	-2.5	-1	1.75	-1.25	-1
		46	0.5	-1.25	1	0.75	-0.75	0	0.5	-1.75	0.75
		47	-0.5	0.25	0.5	1.5	0.75	0.25	1.25	0	1.5
	A	48	1.25	0.5	0.5	-0.25	-1.5	-0.25	2.5	-1.25	0.25

Table A6.8.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Nonprioritised Integrative					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Nonprioritised Integrative attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Nonprioritised Integrative attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.8.3: Planned within group contrasts used in ANOVA.

	Matched			Mismatched			Nonmetrical		
	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	-1	-1	-1	0	0	0
B3: Target vs Distracters	2	-1	-1	2	-1	-1	2	-1	-1
B4: Distracter-x vs Distracter-y	0	1	-1	0	1	-1	0	1	-1
B5: Metrical vs Nonmetrical x Target vs Distracters	2	-1	-1	2	-1	-1	-4	2	2
B6: Metrical vs Nonmetrical x Distracter-x vs -y	0	1	-1	0	1	-1	0	-2	2
B7: Matched vs Mismatched x Target vs Distracters	2	-1	-1	-2	1	1	0	0	0
B8: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	-1	1	0	0	0

Table A6.8.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
A1	0.007	1	0.007	0.005
A2	22.345	1	22.345	17.261
A3	5.615	1	5.615	4.337
A4	0.122	1	0.122	0.094
A5	1.287	1	1.287	0.994
Error	46.602	36	1.295	
Within				
B1	2.370	1	2.370	2.745
A1B1	0.957	1	0.957	1.108
A2B1	2.423	1	2.423	2.806
A3B1	0.134	1	0.134	0.155
A4B1	0.512	1	0.512	0.593
A5B1	0.057	1	0.057	0.066
Error	31.082	36	0.863	
B2	3.500	1	3.500	5.769
A1B2	0.564	1	0.564	0.930
A2B2	0.564	1	0.564	0.930
A3B2	1.495	1	1.495	2.464
A4B2	6.513	1	6.513	10.735
A5B2	0.495	1	0.495	0.816
Error	21.841	36	0.607	
B3	301.337	1	301.337	343.940
A1B3	0.174	1	0.174	0.198
A2B3	16.876	1	16.876	19.262
A3B3	2.476	1	2.476	2.826
A4B3	0.803	1	0.803	0.917
A5B3	0.013	1	0.013	0.015
Error	31.541	36	0.876	
B4	47.735	1	47.735	56.482
A1B4	7.110	1	7.110	8.412
A2B4	0.330	1	0.330	0.391
A3B4	0.974	1	0.974	1.153
A4B4	3.026	1	3.026	3.581
A5B4	3.063	1	3.063	3.624
Error	30.424	36	0.845	
B5	1.070	1	1.070	1.220
A1B5	3.084	1	3.084	3.515
A2B5	0.333	1	0.333	0.380
A3B5	0.669	1	0.669	0.762
A4B5	3.267	1	3.267	3.723
A5B5	0.374	1	0.374	0.426
Error	31.587	36	0.877	
B6	2.990	1	2.990	4.424
A1B6	0.803	1	0.803	1.187
A2B6	0.191	1	0.191	0.283
A3B6	0.532	1	0.532	0.787
A4B6	3.257	1	3.257	4.818
A5B6	1.660	1	1.660	2.456
Error	24.333	36	0.676	
B7	0.532	1	0.532	0.966
A1B7	0.098	1	0.098	0.177
A2B7	1.129	1	1.129	2.052
A3B7	1.219	1	1.219	2.216
A4B7	0.490	1	0.490	0.890
A5B7	2.462	1	2.462	4.475
Error	19.807	36	0.550	
B8	0.083	1	0.083	0.078
A1B8	0.083	1	0.083	0.078
A2B8	0.188	1	0.188	0.176
A3B8	0.188	1	0.188	0.176
A4B8	4.871	1	4.871	4.583
A5B8	0.903	1	0.903	0.849
Error	38.266	36	1.063	

APPENDIX 6.9

‘Demandingness’ ratings data, planned contrasts, and ANOVA summary from Multipart Experiment 1

Table A6.9.1: Demandingness ratings in each attending mode condition (prioritised integrative attending, selective attending, and nonprioritised integrative attending).

<i>Musicality</i>	<i>Subgroup</i>	Prioritised Integrative	Selective	Nonprioritised Integrative
Musicians	A	5	5	4
		4	5	4
		5	5	4
		5	4	5
		5	4	5
		5	5	4
		4	5	5
	B	6	3	3
		4	4	6
		4	6	5
		6	5	4
		3	4	4
		4	4	3
		4	5	5
	C	4	4	4
		5	5	4
		5	5	5
		3	5	4
		4	4	4
		6	4	4
		5	4	5
Nonmusicians	A	5	3	3
		6	6	5
		4	6	6
		5	3	4
		5	6	4
		6	5	3
		3	4	5
	B	6	4	4
		3	4	4
		6	4	4
		6	3	6
		4	5	6
		4	5	4
		5	4	5
	C	4	3	4
		5	3	5
		5	5	6
		4	4	5
		6	3	5
		4	4	4
		6	6	6

Table A6.9.2: Planned between groups contrasts used in ANOVA.

Prioritised Integrative Attending			Selective Attending			Nonprioritised Integrative Attending		
Musicians			Nonmusicians			Musicians		
A	Subgroup B	C	A	Subgroup B	C	A	Subgroup B	C
2	2	2	2	2	2	-1	-1	-1
0	0	0	0	0	0	1	1	1
1	1	1	-1	-1	1	1	1	-1
2	2	-2	-2	-2	-1	-1	1	1
0	0	0	0	0	1	1	1	-1
2	-1	2	-1	-1	2	-1	2	-1
0	1	-1	0	1	-1	0	1	-1

Table A6.9.3: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
<hr/> Between <hr/>				
A1	0.681	1	0.681	0.815
A2	0.000	1	0.000	0.000
A3	1.778	1	1.778	2.128
A4	0.056	1	0.056	0.067
A5	2.042	1	2.042	2.444
A6	1.837	1	1.837	2.199
A7	0.094	1	0.094	0.112
Error	105.250	126	0.835	
<hr/>				

APPENDIX 6.10

‘Guessing’ ratings data, planned contrasts, and ANOVA summary from Multipart Experiment 1

Table A6.10.1: Guessing ratings in each attending mode condition (prioritised integrative attending, selective attending, and nonprioritised integrative attending).

<i>Musicality</i>	<i>Subgroup</i>	Prioritised Integrative	Selective	Nonprioritised Integrative
Musicians	A	4	3	3
		2	2	4
		3	3	3
		4	2	3
		3	1	2
		3	3	3
		3	4	3
	B	3	3	2
		2	2	4
		4	4	3
		3	3	3
		3	2	3
	C	3	3	2
		2	3	3
		3	2	3
		4	1	2
		3	3	4
		3	3	3
		4	3	4
Nonmusicians	A	4	3	4
		3	4	4
		3	2	3
		3	4	3
		4	4	2
		3	3	3
		4	3	2
	B	3	3	3
		4	2	4
		4	2	4
		3	4	3
		1	4	3
		3	2	2
		3	2	3
	C	4	2	4
		2	3	3
		3	3	3
		4	3	4
		2	3	4
		4	4	4
		3	3	2
		3	3	4
		3	3	4

Table A6.10.2: Planned between groups contrasts used in ANOVA.

Prioritised Integrative Attending			Selective Attending			Nonprioritised Integrative Attending		
Musicians			Nonmusicians			Musicians		
Subgroup			Subgroup			Subgroup		
A	B	C	A	B	C	A	B	C
A1: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending								
2	2	2	2	2	-1	-1	-1	-1
A2: Selective attending vs Nonprioritised integrative attending								
0	0	0	0	0	1	1	1	-1
A3: Musicians vs Nonmusicians								
1	1	-1	-1	-1	1	1	-1	-1
A4: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending x Musicians vs Nonmusicians								
2	2	-2	-2	-2	-1	-1	1	1
A5: Selective attending vs Nonprioritised integrative attending x Musicians vs Nonmusicians								
0	0	0	0	0	1	1	1	1
A6: Subgroup A vs Subgroups B & C								
2	-1	-1	2	-1	-1	2	-1	-1
A7: Subgroup B vs Subgroup C								
0	1	-1	0	1	-1	0	1	-1

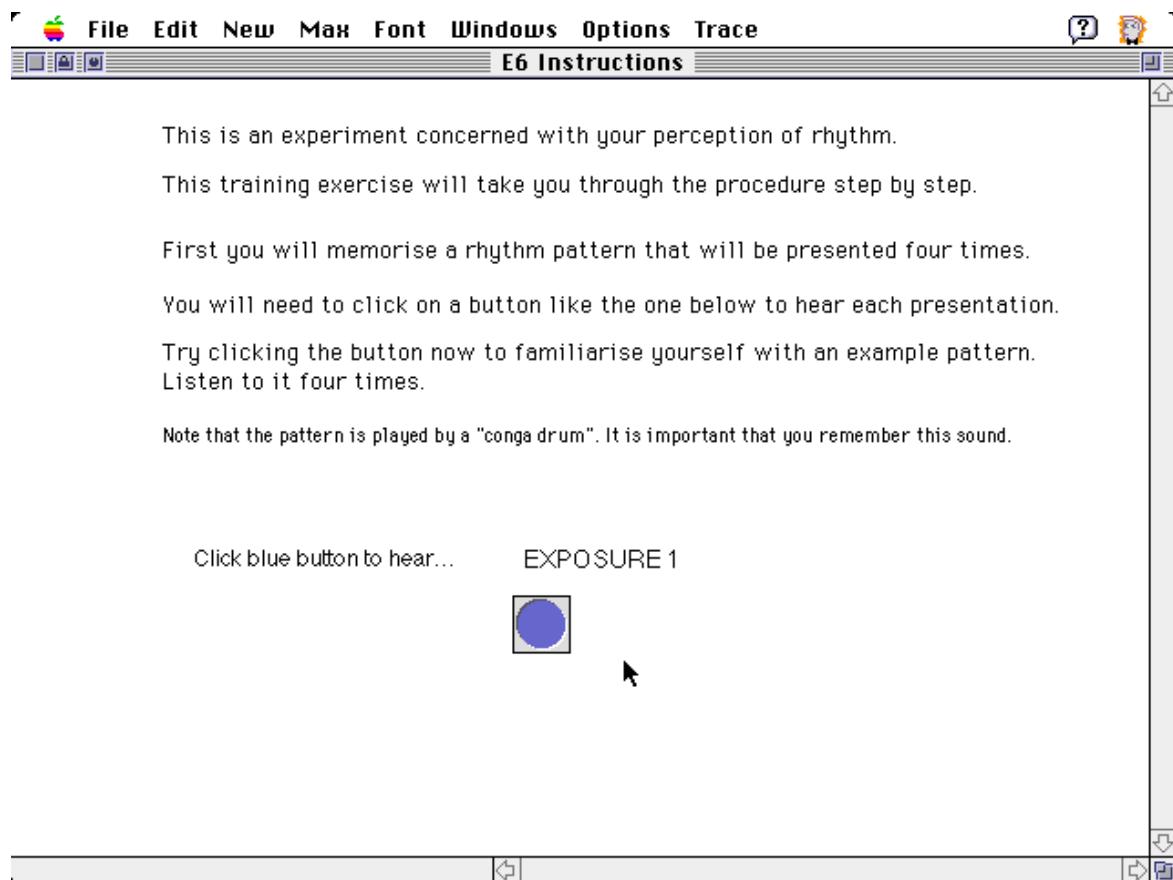
Table A6.10.3: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

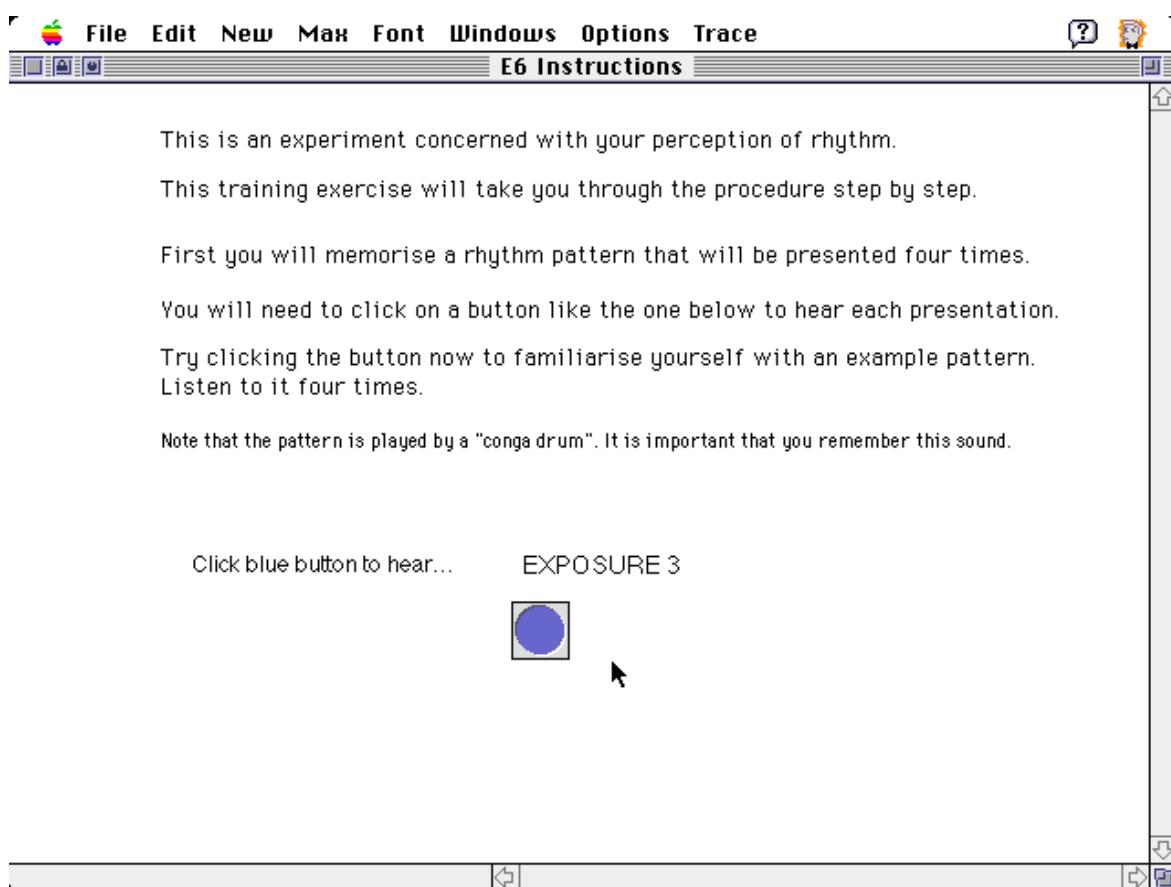
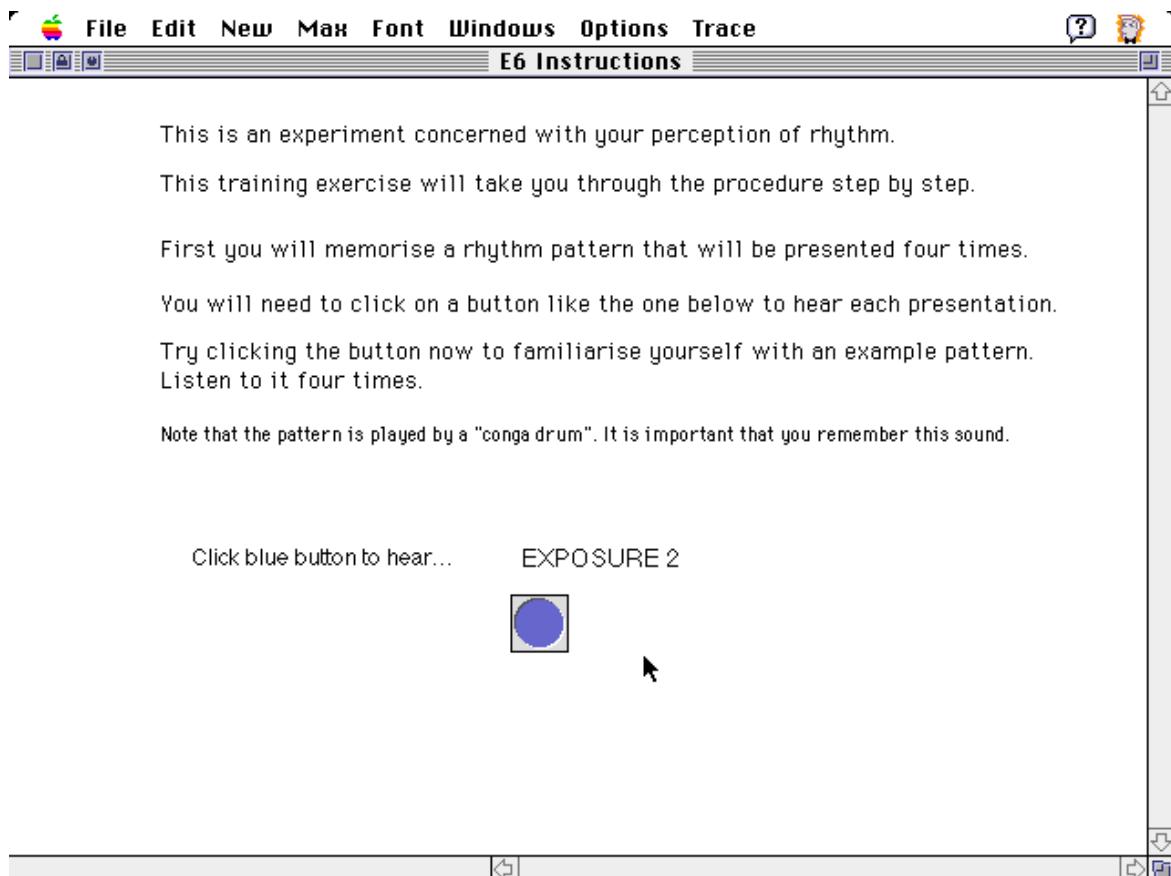
Summary of Analysis of Variance				
Source	SS	df	MS	F
<hr/>				
Between				
A1	0.781	1	0.781	1.450
A2	1.760	1	1.760	3.268
A3	1.563	1	1.563	2.901
A4	0.781	1	0.781	1.450
A5	0.010	1	0.010	0.019
A6	0.000	1	0.000	0.000
A7	0.667	1	0.667	1.238
Error	67.875	126	0.539	
<hr/>				

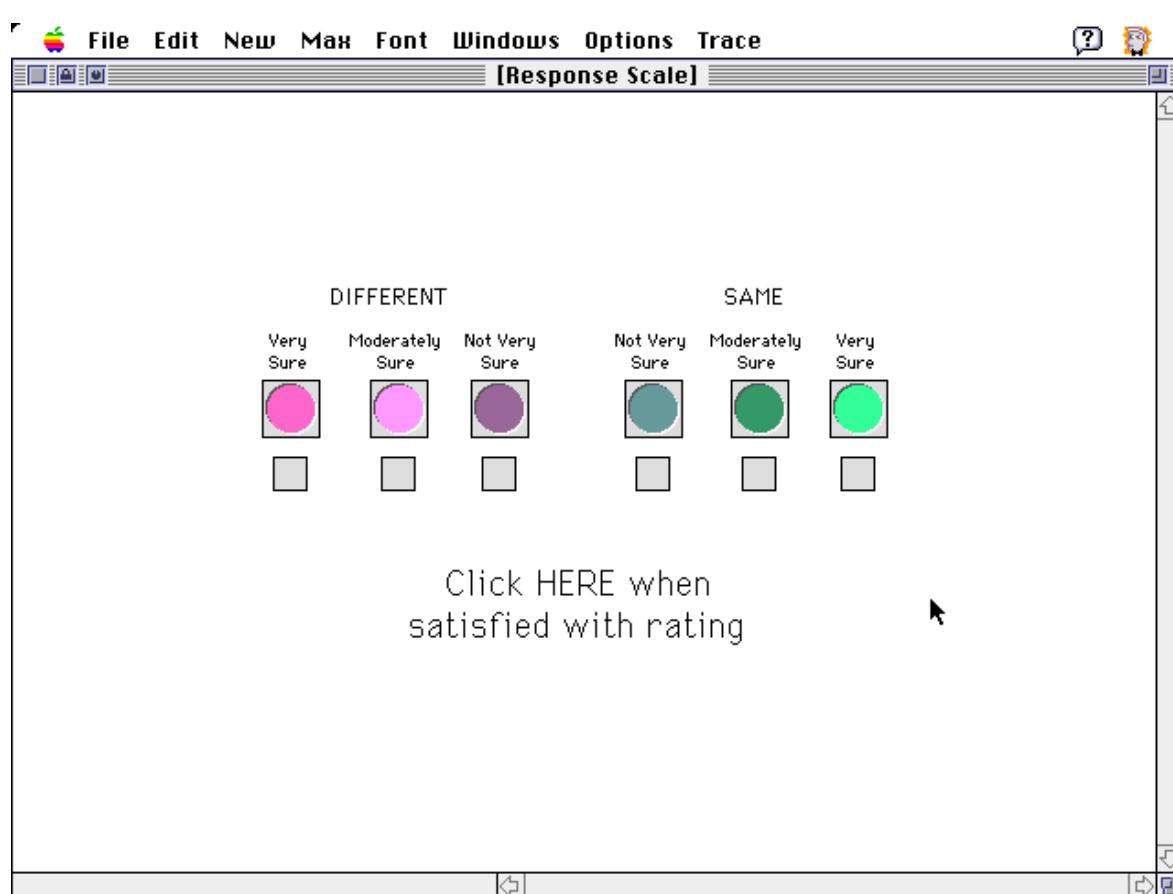
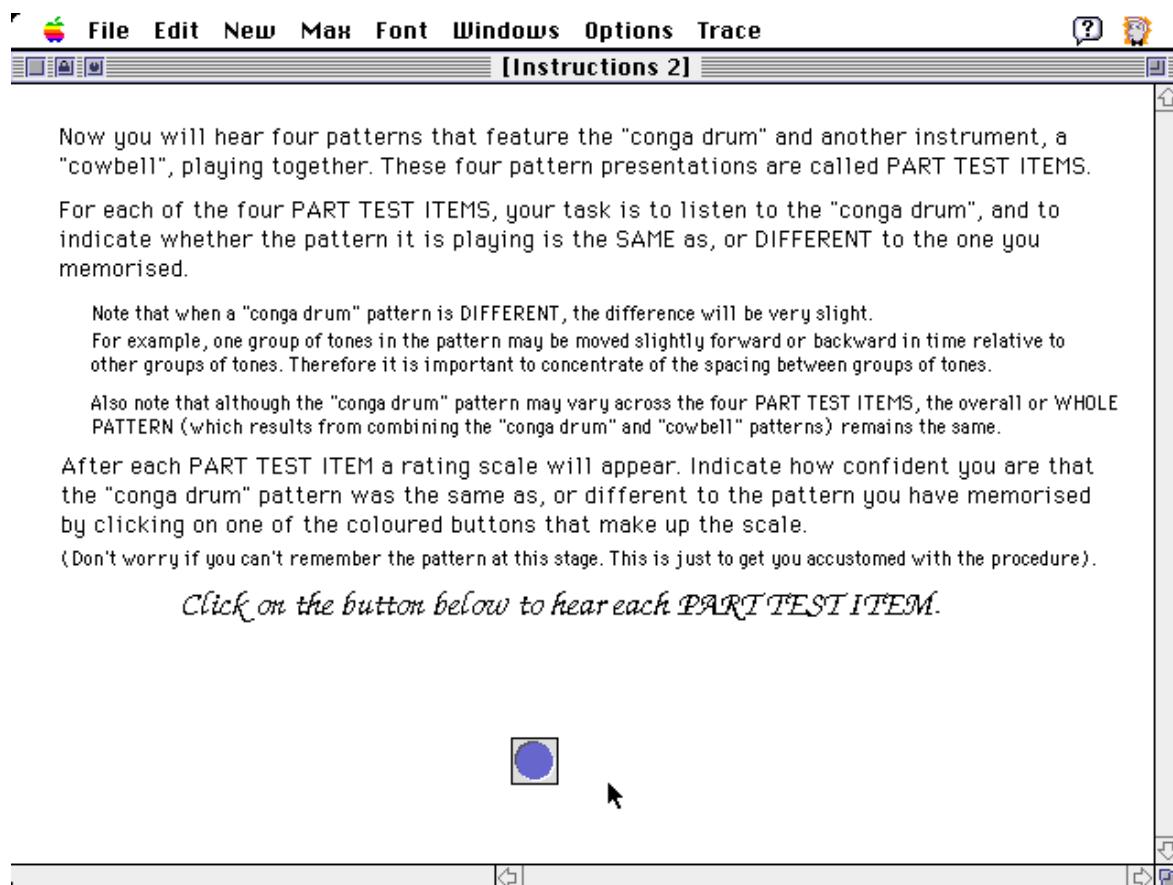
APPENDIX 6.11

Instructions for Multipart Experiment 2

The following computer screen captures show instructions (and the first screen of the first practice block) given to participants in the prioritised integrative attending condition. Instructions were similar in selective and nonprioritised integrative attending conditions, except that references to aggregate patterns were omitted in selective attending instructions, and integrant patterns were not referred to in nonprioritised integrative attending instructions.







Now you will hear four patterns that feature the "conga drum" and another instrument, a "cowbell", playing together. These four pattern presentations are called PART TEST ITEMS.

For each of the four PART TEST ITEMS, your task is to listen to the "conga drum", and to indicate whether the pattern it is playing is the SAME as, or DIFFERENT to the one you memorised.

Note that when a "conga drum" pattern is DIFFERENT, the difference will be very slight.

For example, one group of tones in the pattern may be moved slightly forward or backward in time relative to other groups of tones. Therefore it is important to concentrate on the spacing between groups of tones.

Also note that although the "conga drum" pattern may vary across the four PART TEST ITEMS, the overall or WHOLE PATTERN (which results from combining the "conga drum" and "cowbell" patterns) remains the same.

After each PART TEST ITEM a rating scale will appear. Indicate how confident you are that the "conga drum" pattern was the same as, or different to the pattern you have memorised by clicking on one of the coloured buttons that make up the scale.

(Don't worry if you can't remember the pattern at this stage. This is just to get you accustomed with the procedure).

[Instructions 2]

Now you will hear four patterns that feature the "conga drum" and another instrument, a "cowbell", playing together. These four pattern presentations are called PART TEST ITEMS.

For each of the four PART TEST ITEMS, your task is to listen to the "conga drum", and to indicate whether the pattern it is playing is the SAME as, or DIFFERENT to the one you memorised.

Note that when a "conga drum" pattern is DIFFERENT, the difference will be very slight.

For example, one group of tones in the pattern may be moved slightly forward or backward in time relative to other groups of tones. Therefore it is important to concentrate on the spacing between groups of tones.

Also note that although the "conga drum" pattern may vary across the four PART TEST ITEMS, the overall or WHOLE PATTERN (which results from combining the "conga drum" and "cowbell" patterns) remains the same.

After each PART TEST ITEM a rating scale will appear. Indicate how confident you are that the "conga drum" pattern was the same as, or different to the pattern you have memorised by clicking on one of the coloured buttons that make up the scale.

(Don't worry if you can't remember the pattern at this stage. This is just to get you accustomed with the procedure).

Click on the button below to hear each PART TEST ITEM.

Click blue button to hear... PART RHYTHM TEST ITEM 3



[Response Scale]

DIFFERENT			SAME		
Very Sure	Moderately Sure	Not Very Sure	Not Very Sure	Moderately Sure	Very Sure
					
					

Click HERE when satisfied with rating

[Instructions 2]

Now you will hear four patterns that feature the "conga drum" and another instrument, a "cowbell", playing together. These four pattern presentations are called PART TEST ITEMS.

For each of the four PART TEST ITEMS, your task is to listen to the "conga drum", and to indicate whether the pattern it is playing is the SAME as, or DIFFERENT to the one you memorised.

Note that when a "conga drum" pattern is DIFFERENT, the difference will be very slight.

For example, one group of tones in the pattern may be moved slightly forward or backward in time relative to other groups of tones. Therefore it is important to concentrate on the spacing between groups of tones.

Also note that although the "conga drum" pattern may vary across the four PART TEST ITEMS, the overall or WHOLE PATTERN (which results from combining the "conga drum" and "cowbell" patterns) remains the same.

After each PART TEST ITEM a rating scale will appear. Indicate how confident you are that the "conga drum" pattern was the same as, or different to the pattern you have memorised by clicking on one of the coloured buttons that make up the scale.

(Don't worry if you can't remember the pattern at this stage. This is just to get you accustomed with the procedure).

Click on the button below to hear each PART TEST ITEM.

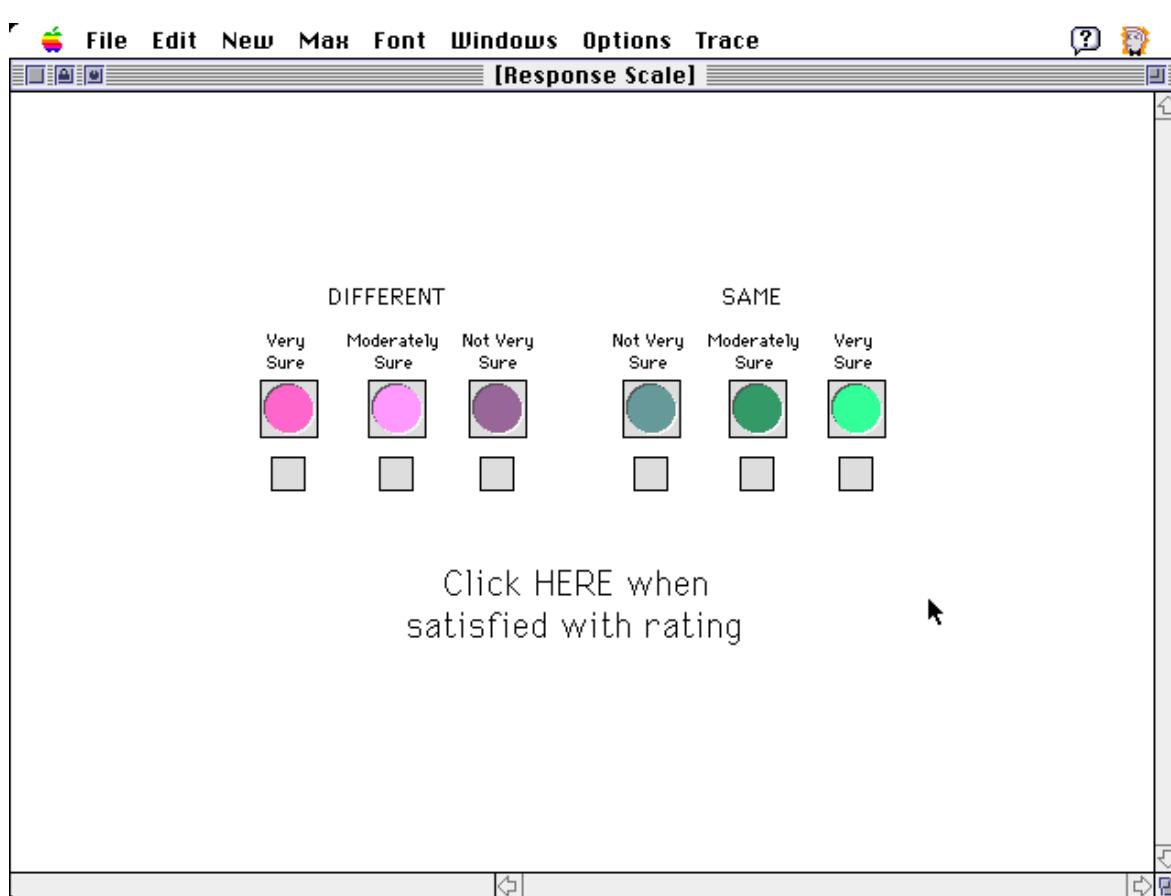
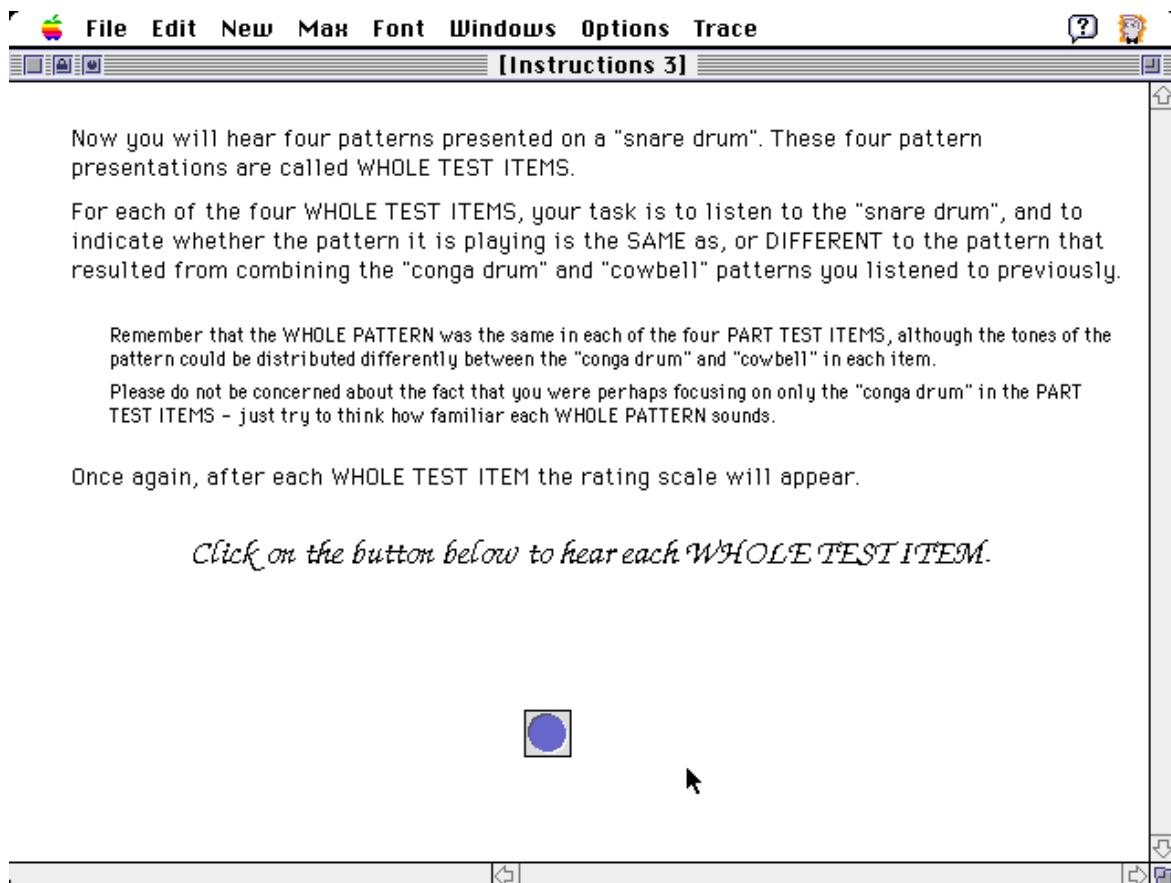
Click blue button to hear... PART RHYTHM TEST ITEM 4



[Response Scale]

DIFFERENT			SAME		
Very Sure	Moderately Sure	Not Very Sure	Not Very Sure	Moderately Sure	Very Sure
					
					

Click HERE when satisfied with rating



Now you will hear four patterns presented on a "snare drum". These four pattern presentations are called WHOLE TEST ITEMS.

For each of the four WHOLE TEST ITEMS, your task is to listen to the "snare drum", and to indicate whether the pattern it is playing is the SAME as, or DIFFERENT to the pattern that resulted from combining the "conga drum" and "cowbell" patterns you listened to previously.

Remember that the WHOLE PATTERN was the same in each of the four PART TEST ITEMS, although the tones of the pattern could be distributed differently between the "conga drum" and "cowbell" in each item.

Please do not be concerned about the fact that you were perhaps focusing on only the "conga drum" in the PART TEST ITEMS – just try to think how familiar each WHOLE PATTERN sounds.

Once again, after each WHOLE TEST ITEM the rating scale will appear.

Click on the button below to hear each WHOLE TEST ITEM.

Click blue button to hear... WHOLE RHYTHM TEST ITEM 2





Now you will hear four patterns presented on a "snare drum". These four pattern presentations are called WHOLE TEST ITEMS.

For each of the four WHOLE TEST ITEMS, your task is to listen to the "snare drum", and to indicate whether the pattern it is playing is the SAME as, or DIFFERENT to the pattern that resulted from combining the "conga drum" and "cowbell" patterns you listened to previously.

Remember that the WHOLE PATTERN was the same in each of the four PART TEST ITEMS, although the tones of the pattern could be distributed differently between the "conga drum" and "cowbell" in each item.

Please do not be concerned about the fact that you were perhaps focusing on only the "conga drum" in the PART TEST ITEMS – just try to think how familiar each WHOLE PATTERN sounds.

Once again, after each WHOLE TEST ITEM the rating scale will appear.

Now you will hear four patterns presented on a "snare drum". These four pattern presentations are called WHOLE TEST ITEMS.

For each of the four WHOLE TEST ITEMS, your task is to listen to the "snare drum", and to indicate whether the pattern it is playing is the SAME as, or DIFFERENT to the pattern that resulted from combining the "conga drum" and "cowbell" patterns you listened to previously.

Remember that the WHOLE PATTERN was the same in each of the four PART TEST ITEMS, although the tones of the pattern could be distributed differently between the "conga drum" and "cowbell" in each item.

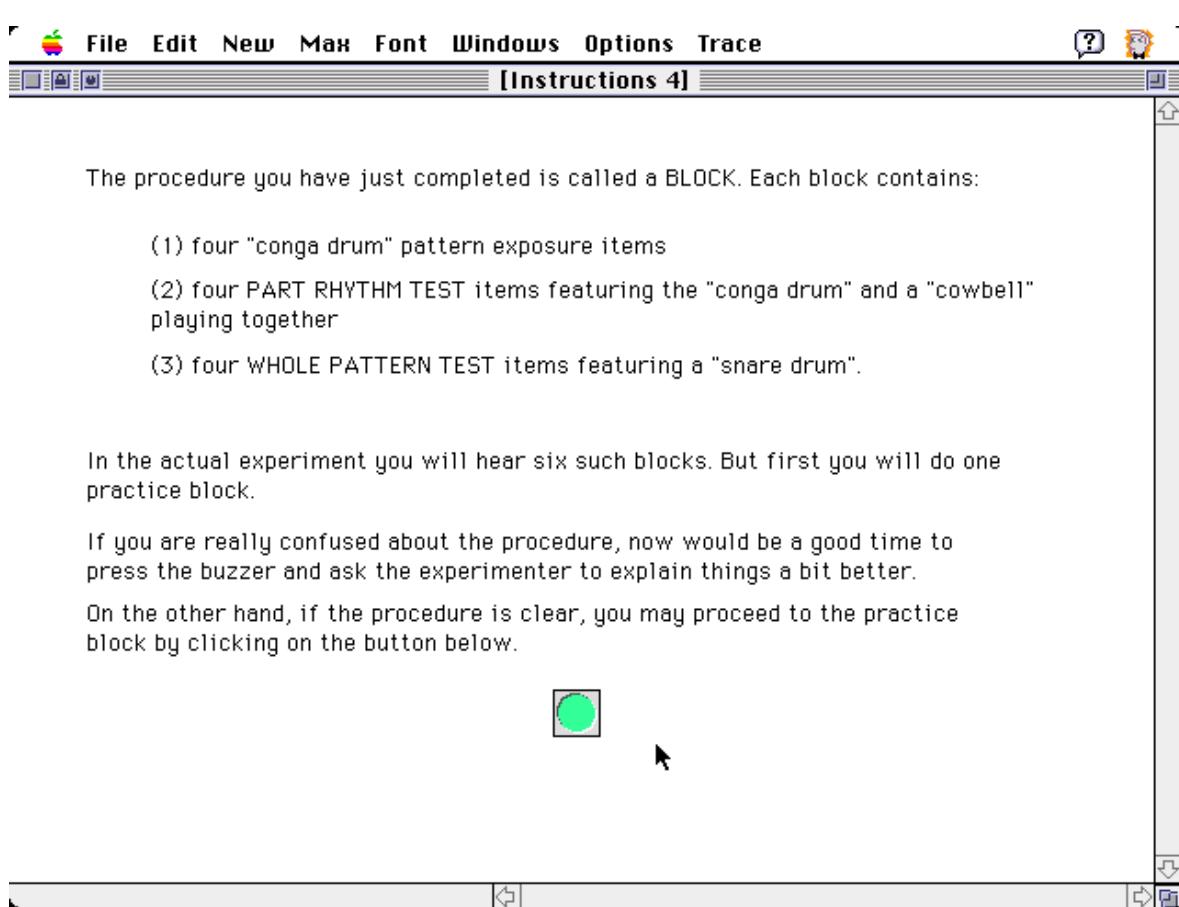
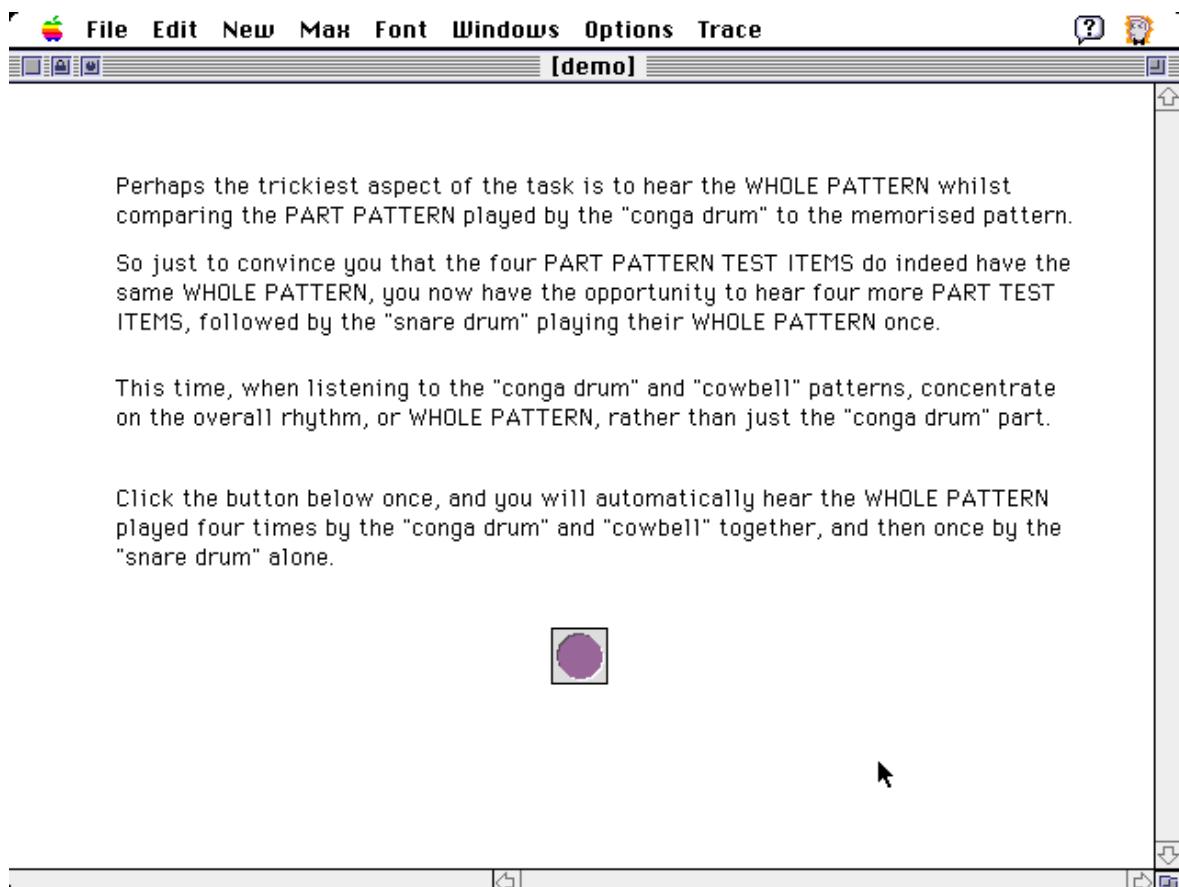
Please do not be concerned about the fact that you were perhaps focusing on only the "conga drum" in the PART TEST ITEMS – just try to think how familiar each WHOLE PATTERN sounds.

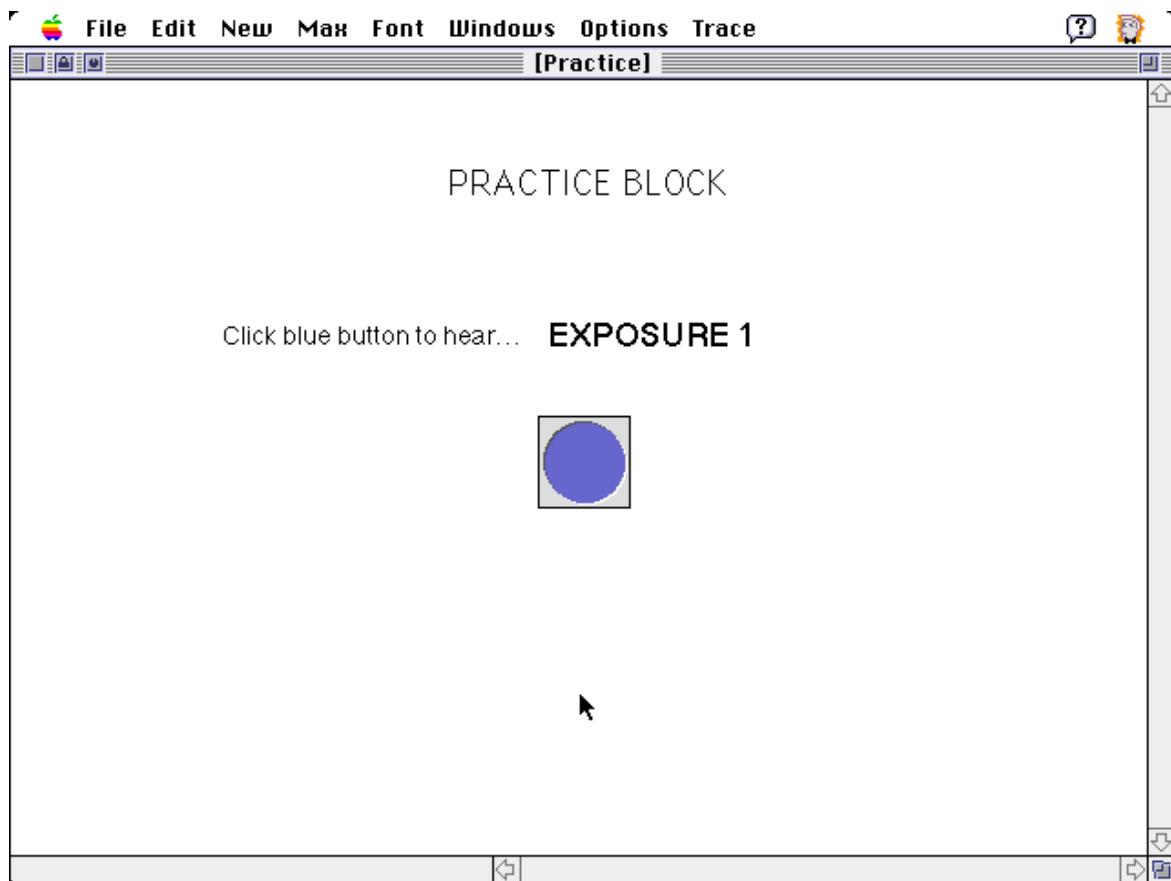
Once again, after each WHOLE TEST ITEM the rating scale will appear.

Click on the button below to hear each WHOLE TEST ITEM.

Click blue button to hear... WHOLE RHYTHM TEST ITEM 4







APPENDIX 6.12

**Integrant ratings data, planned contrasts, and
conventional ANOVA summary from Multipart
Experiment 2**

Table A6.12.1: Each individual participant's average ratings for target (t) and distracter ($d-x$, $d-y$, & $d-z$) integrant test items in each attending mode condition (prioritised integrative attending & selective attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

Prioritised Integrative Attending														
<i>Musicality</i>	<i>Subgroup</i>	<i>Participant</i>	Matched				Mismatched				Nonmetrical			
			<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>d-z</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>d-z</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>d-z</i>
Musician	A	1	3	-2.5	-0.5	-3	-1	-0.5	-0.5	2	2	-1.5	0	-1.5
		2	2.5	0	-2	0	0.5	1.5	-2.5	-0.5	3	-0.5	2	-1
		3	1.5	-2	-0.5	-0.5	3	-2.5	-0.5	0	-1.5	0	2.5	-2
		4	1.5	1	0.5	0	1.5	1.5	-0.5	-1.5	0.5	-1.5	-0.5	-1.5
		5	1	0	-2.5	-2	0	-0.5	-2	0	1.5	0	-0.5	1.5
		6	0	-0.5	0	1	-0.5	1.5	1	0.5	0	-1.5	0	-2.5
		7	2.5	-0.5	-0.5	-3	1.5	-0.5	-2.5	-2.5	1.5	-1.5	-2	-2.5
		8	0.5	-3	-2	-3	0	1	-2	-2.5	0.5	-1.5	1.5	-2
B	B	9	2.5	-1	-1	-1.5	0.5	-2	-1	-1	-2	-2.5	-2.5	-2.5
		10	3	0	-3	0.5	2	0	-2	-2.5	2	-2.5	0.5	0
		11	0	-1	1.5	-1.5	1.5	-1.5	0	-1	-1	-0.5	1.5	-2
		12	1	0	0.5	0.5	2	0.5	-2.5	-1.5	2	-1	-0.5	-2.5
		13	2	1.5	2	3	2	1	-0.5	0	2	0.5	0.5	2
		14	1	-1.5	-1.5	-1	3	-3	-3	-3	-1.5	0	1.5	0
		15	2.5	-2.5	-2	0	2	0	0.5	1	0	-2	-0.5	-0.5
		16	-1	-3	-3	-3	3	-1.5	-2.5	-2	-0.5	1.5	0	0.5
C	C	17	-1	-0.5	0.5	2.5	0	0.5	0	-0.5	1	-1	2	0
		18	1	0	3	-1.5	0	-2	-3	0	-0.5	-1.5	-0.5	0
		19	0.5	-2.5	-2.5	-3	-0.5	-0.5	1.5	0.5	-1	0	-1.5	1.5
		20	1	1	0	-1	0	-1	0	1	0	2	0	-1
		21	-2.5	0	-1.5	-1	-1	-2	-1	-1	2	0.5	-2	-3
		22	2.5	-2	-0.5	-0.5	2	0	0.5	0.5	0	0	0.5	-1.5
		23	3	2.5	-3	1.5	1.5	3	2	2	2	0	3	2
		24	0	-3	-3	-3	0.5	-3	-3	-3	-0.5	-1	-2.5	-2
Nonmus.	A	25	0.5	-2	0	0.5	1.5	3	3	2.5	-2.5	-0.5	-0.5	-0.5
		26	3	-0.5	-3	-3	-1	2.5	-3	-2	0	-1.5	-0.5	-1
		27	-3	-3	-0.5	-3	-2	0.5	-0.5	2.5	-0.5	0	0	-2
		28	-1.5	1.5	0.5	1	1	0.5	1.5	0	0	0	0.5	-1
		29	2	-0.5	0	0.5	-1	-0.5	0	0	-0.5	-1.5	1.5	-0.5
		30	0	1	1.5	-1	0	0.5	1	2	0	0	0	2
		31	-3	0	1	0	-2.5	0	-3	-2.5	1	3	3	3
		32	2.5	2	-2	-1	0	1	-1.5	-1	-0.5	0	1	-1
B	B	33	0	2	0.5	0	2	-1.5	1.5	-1	0	-2.5	-2.5	1
		34	3	3	3	3	0.5	0	0	0	2	2.5	3	1.5
		35	0	-0.5	2	-1.5	0.5	-2	0	-2	0	-1	-0.5	0
		36	0	0	0	-3	1	2	0.5	2.5	1	1	-3	2.5
		37	-1	0	2.5	1	-1	-0.5	0.5	2.5	0.5	0	1.5	0
		38	1.5	-0.5	2	0.5	0.5	-1	0.5	-1.5	-1.5	-0.5	0.5	1.5
		39	0.5	1.5	-1	0.5	-2	2	-0.5	1	1.5	-2.5	0.5	-1.5
		40	0.5	-1.5	0	0.5	0	0	-0.5	0	1	1	0.5	-1.5
C	C	41	-2.5	2.5	-3	0	0	-3	-0.5	0	2	0.5	-3	-3
		42	-0.5	1.5	2	-1.5	0	1.5	0.5	0	1	0	-0.5	1.5
		43	2	3	1	3	3	2.5	3	3	0.5	2.5	3	1
		44	-0.5	1	0	1	2.5	2	0	2.5	3	3	2.5	2.5
		45	1.5	1	0	0	1	0	0	-1	0	0	-1.5	0
		46	3	3	3	0	0	1	0.5	1	1	1	3	3
		47	2	-3	2	2.5	3	-3	-3	0	3	-2.5	0	0
		48	-0.5	1	-0.5	0	-2	-1.5	0	1.5	1.5	2	-1	-1

Table A6.12.1 continued

			Selective Attending											
Musicality	Subgroup	Participant	Matched				Mismatched				Nonmetrical			
			t	d-x	d-y	d-z	t	d-x	d-y	d-z	t	d-x	d-y	d-z
Musician	A	49	3	-3	-3	-3	2.5	-2.5	-3	-3	-2.5	-3	-0.5	-2.5
		50	0	-2	1	2	0	-1.5	-2	-2	-1.5	-2	-1.5	-1.5
		51	-0.5	2	-0.5	0.5	2	2.5	-3	0	2	0.5	-0.5	0
		52	0	-1.5	0	2.5	1	1	1	0.5	-0.5	-0.5	1	-1
		53	0.5	0	-2.5	-2	3	-1.5	-2.5	-2.5	-0.5	-1	-2	-0.5
		54	3	0	0	0	0	0	-3	-3	3	3	-3	-3
		55	-0.5	-3	-3	-3	-0.5	1.5	-2	-3	0	1.5	0	0
		56	0	0	-2.5	-3	3	-3	-3	-3	2.5	-2.5	-3	2.5
		57	3	-3	-3	-3	0	-2	-2.5	-0.5	-1.5	0	-1	-0.5
		58	2	-2	-1	-2.5	2	-1	-2.5	-2.5	-2.5	-1.5	-0.5	-0.5
		59	2.5	-2	-1	-2.5	0	0	0	-2	2	2	-2	-2
		60	0	0.5	0	0	0	0	0	-0.5	2	0.5	-0.5	0
		61	3	-3	-3	-3	-0.5	-2.5	-3	-3	2	-2.5	-2.5	-3
		62	0	2	-2	-1.5	2.5	-2	0	-2	0	0.5	-1	0
		63	3	-2.5	-2.5	2	2.5	-2.5	-2.5	0	0.5	-3	-3	0
C	C	64	0	-3	-3	-3	0	-3	-3	-3	3	0	-1	-3
		65	2	0	-2.5	-2.5	0.5	-0.5	-2	-2.5	0	-1.5	1.5	0
		66	0	0	-2.5	-1	0	-3	-1	-3	0.5	1.5	-2	-2
		67	2.5	-0.5	-0.5	-3	-2	0	0	0	2.5	2	-0.5	0
		68	-2	-0.5	-0.5	1.5	0	0	-1	0	-2.5	-1	2	0.5
		69	3	-3	-3	-3	2.5	-2	0	2	-0.5	-0.5	0	2
		70	3	-0.5	-2.5	-2.5	0.5	3	2	0	2.5	0	2.5	-2
		71	2	-0.5	0.5	-0.5	1	-0.5	-2	-2	0.5	0.5	0	-2
		72	-1	-1	-1.5	-2	0.5	-2.5	-3	-3	0.5	-1.5	-2.5	0.5
Nonmus.	A	73	2	-3	-3	-2	2.5	-2	-0.5	-2	1.5	-3	-2	1.5
		74	2	-2.5	-1.5	-2.5	0	1.5	2.5	0	-0.5	-2	1.5	0
		75	2.5	2	1.5	1	3	1.5	2	1	2	1.5	2	2
		76	1	0	-1.5	0	2	-1.5	-1.5	0	2	-0.5	-0.5	1.5
		77	0	-1	0	1.5	0	0	0	1	0.5	1.5	0	1
		78	1.5	-2	-1.5	-2	-1	-0.5	0	-1	0	-1.5	-1.5	-0.5
		79	3	-3	-2.5	-3	-0.5	-2.5	-1	0	0	-3	-2	-3
		80	3	0	2	3	2.5	0.5	-1.5	0.5	2.5	0	3	3
		81	0	0	0	1	0	1.5	0	0	-0.5	-1.5	0.5	2
		82	0	-3	0	3	3	0.5	0	0	2	-3	-3	-3
		83	1.5	1.5	1	0.5	-1	-1.5	-0.5	1	1.5	-1.5	0	0
		84	0	-2.5	0.5	0	-0.5	-2	0.5	-1	0	0	-2	2.5
		85	2	-2	1	1	0	2	2	3	0.5	-0.5	-1	-0.5
		86	0	1.5	2	1.5	2	2	0	1.5	2	0	0	-1
B	C	87	1.5	1.5	-1.5	-1	1	1.5	0	0.5	2	-1.5	1	0
		88	1	3	3	3	3	3	3	3	3	3	3	3
		89	-1	2.5	-1.5	0.5	0.5	0	0.5	2	2	-1	3	2
		90	2.5	2	1.5	2.5	2.5	1	2	2	1.5	2	1	1
		91	0	-0.5	-1.5	-2	1	2	2.5	2.5	0	0.5	2	0.5
		92	-1	0	-1.5	0	1	-1	1.5	1.5	1	1	-2	0
		93	1	-1.5	1.5	-2	-1.5	0	-1.5	0	-0.5	0	1.5	0
		94	-0.5	0.5	-1	-1.5	-1	-1	-1	0	1	-1	1	0
		95	2	2.5	0.5	0	0	0	-1	-3	-1.5	-2.5	2	-2
		96	2	-2.5	-3	-3	0.5	0.5	0	-1	0	-1.5	0.5	0

Table A6.12.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Selective					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Selective attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Selective attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.12.3: Planned within group contrasts used in ANOVA.

	Matched				Mismatched				Nonmetrical			
	t	d-x	d-y	d-z	t	d-x	d-y	d-z	t	d-x	d-y	d-z
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	1	1	-2	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	1	-1	-1	-1	-1	0	0	0	0
B3: Target vs Distracters	3	-1	-1	-1	3	-1	-1	-1	3	-1	-1	-1
B4: Distracter-x & -y vs Distracter-z	0	1	1	-2	0	1	1	-2	0	1	1	-2
B5: Distracter-x vs Distracter-y	0	1	-1	0	0	1	-1	0	0	1	-1	0
B6: Metrical vs Nonmetrical x Target vs Distracters	3	-1	-1	-1	3	-1	-1	-1	-6	2	2	2
B7: Metrical vs Nonmetrical x Distracter- x & -y vs -z	0	1	1	-2	0	1	1	-2	0	-2	-2	4
B8: Metrical vs Nonmetrical x Distracter- x vs -y	0	1	-1	0	0	1	-1	0	0	-2	2	0
B9: Matched vs Mismatched x Target vs Distracters	3	-1	-1	-1	-3	1	1	1	0	0	0	0
B10: Matched vs Mismatched x Distracter-x & -y vs -z	0	1	1	-2	0	-1	-1	2	0	0	0	0
B11: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	0	-1	1	0	0	0	0	0

Table A6.12.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance									
Source	SS	df	MS	F	Source	SS	df	MS	F
Between									
A1	9.570	1	9.570	1.179	B9	5.542	1	5.542	2.365
A2	159.758	1	159.758	19.678	A1B9	1.129	1	1.129	0.482
A3	8.681	1	8.681	1.069	A2B9	0.111	1	0.111	0.047
A4	13.984	1	13.984	1.723	A3B9	1.266	1	1.266	0.540
A5	2.938	1	2.938	0.362	A4B9	2.302	1	2.302	0.982
Error	681.969	84	8.119		A5B9	1.628	1	1.628	0.694
					Error	196.878	84	2.344	
					B10	0.420	1	0.420	0.368
					A1B10	2.820	1	2.820	2.468
Within									
B1	3.674	1	3.674	1.568	A2B10	2.170	1	2.170	1.899
A1B1	1.000	1	1.000	0.427	A3B10	0.383	1	0.383	0.335
A2B1	3.285	1	3.285	1.402	A4B10	1.460	1	1.460	1.278
A3B1	2.709	1	2.709	1.156	A5B10	3.126	1	3.126	2.736
A4B1	0.037	1	0.037	0.016	Error	95.990	84	1.143	
A5B1	7.042	1	7.042	3.006	B11	0.940	1	0.940	0.671
Error	196.789	84	2.343		A1B11	0.510	1	0.510	0.364
B2	0.376	1	0.376	0.141	A2B11	0.440	1	0.440	0.314
A1B2	0.949	1	0.949	0.355	A3B11	0.010	1	0.010	0.007
A2B2	0.521	1	0.521	0.195	A4B11	7.130	1	7.130	5.091
A3B2	4.380	1	4.380	1.636	A5B11	5.941	1	5.941	4.242
A4B2	1.204	1	1.204	0.450	Error	117.656	84	1.401	
A5B2	2.258	1	2.258	0.843					
Error	224.914	84	2.678						
B3	270.010	1	270.010	93.751					
A1B3	18.229	1	18.229	6.329					
A2B3	85.315	1	85.315	29.622					
A3B3	1.260	1	1.260	0.438					
A4B3	2.578	1	2.578	0.895					
A5B3	10.227	1	10.227	3.551					
Error	241.927	84	2.880						
B4	0.033	1	0.033	0.019					
A1B4	1.719	1	1.719	1.018					
A2B4	4.230	1	4.230	2.506					
A3B4	1.783	1	1.783	1.056					
A4B4	0.586	1	0.586	0.347					
A5B4	1.918	1	1.918	1.136					
Error	141.776	84	1.688						
B5	0.365	1	0.365	0.221					
A1B5	0.271	1	0.271	0.165					
A2B5	5.941	1	5.941	3.603					
A3B5	9.125	1	9.125	5.534					
A4B5	0.730	1	0.730	0.443					
A5B5	1.148	1	1.148	0.696					
Error	138.516	84	1.649						
B6	10.083	1	10.083	4.886					
A1B6	1.225	1	1.225	0.593					
A2B6	17.824	1	17.824	8.638					
A3B6	0.033	1	0.033	0.016					
A4B6	1.204	1	1.204	0.583					
A5B6	0.014	1	0.014	0.007					
Error	173.336	84	2.064						
B7	0.065	1	0.065	0.040					
A1B7	1.946	1	1.946	1.186					
A2B7	3.190	1	3.190	1.944					
A3B7	0.510	1	0.510	0.311					
A4B7	0.047	1	0.047	0.029					
A5B7	1.042	1	1.042	0.635					
Error	137.844	84	1.641						
B8	10.889	1	10.889	5.530					
A1B8	0.313	1	0.313	0.159					
A2B8	0.000	1	0.000	0.000					
A3B8	4.626	1	4.626	2.349					
A4B8	4.168	1	4.168	2.117					
A5B8	1.418	1	1.418	0.720					
Error	165.406	84	1.969						

APPENDIX 6.13

**Aggregate ratings data, planned contrasts, and
conventional ANOVA summary from Multipart
Experiment 2**

Table A6.13.1: Each individual participant's average ratings for target (t) and distracter ($d-x$, $d-y$, & $d-z$) aggregate test items in each attending mode condition (prioritised integrative attending & nonprioritised integrative attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

Prioritised Integrative Attending														
<i>Musicality</i>	<i>Subgroup</i>	<i>Participant</i>	Matched				Mismatched				Nonmetrical			
			<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>d-z</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>d-z</i>	<i>t</i>	<i>d-x</i>	<i>d-y</i>	<i>d-z</i>
Musician	A	1	-3	-3	0	-0.5	2	-0.5	-0.5	-3	1.5	-3	2.5	-3
		2	3	-2	0.5	-1	0.5	-2.5	-2.5	0.5	2	2.5	0	0
		3	2	-3	-0.5	-3	0	0	1	-1	1.5	-1.5	0	-1.5
		4	1	0	-1.5	0	-1	0	-1	0	1	-1.5	0	-1
		5	-1	-2	0.5	-2	2	-2	1	-2	1	-1.5	2	-2
	B	6	0	-0.5	0	-1.5	0	-0.5	0	-1.5	1	-1.5	-0.5	-0.5
		7	0.5	-0.5	-3	-2.5	2	-0.5	-3	-2.5	0	0	-2	-2.5
		8	1.5	-1.5	-0.5	-3	1.5	-0.5	0.5	-0.5	0	-0.5	-1.5	0
		9	-0.5	0	-2	-0.5	-0.5	1	-1	-2.5	2.5	1.5	0	1
		10	1.5	0	-3	0.5	0.5	0.5	-1	-0.5	1.5	1.5	-2.5	-0.5
Nonmus.	A	11	-1	-0.5	1.5	0	-0.5	0	-1	-1	-1	1	-1.5	-1
		12	0	2	2	-0.5	0.5	-1	2.5	-2	2	0	0.5	-2
		13	2	-3	-0.5	-3	2	-2	0	-2.5	1.5	-2	-2	-0.5
		14	0	-2.5	-0.5	-3	2	-1	-2	-3	2	-2.5	-2.5	-2.5
		15	-0.5	0	-0.5	-2.5	-1	-2	1.5	1.5	1.5	-1.5	-0.5	-1
	B	16	1	-2	-2	-3	1.5	-2	-1	-3	-1	-3	-2	-2.5
		17	-1.5	-1.5	-0.5	-0.5	0.5	0.5	0.5	0	1.5	-1.5	-1.5	0
		18	-2.5	-2.5	1.5	-3	-2	-0.5	-3	3	-0.5	0	0	-0.5
		19	1.5	0.5	-0.5	2	0.5	0	-1.5	1.5	-0.5	-0.5	1.5	0
		20	0	-0.5	0	0	1	0	-1.5	0	0	-1	0	0
C	A	21	-1.5	-3	0.5	-2	2	-2.5	-1.5	-0.5	2.5	-1.5	-2	-2
		22	2	-2.5	-0.5	-1	-1	-2	-1.5	-0.5	0	-2.5	0	-1.5
		23	1.5	-1.5	2	1.5	0.5	0.5	-3	-1.5	0.5	-2	0	-2.5
		24	0	-2.5	1.5	-0.5	0	2	1	-1	2	-0.5	-0.5	-2
		25	-1	-2.5	0	0.5	0.5	0	-0.5	-0.5	0	0	-2	-1
	B	26	1.5	-2	0	0	0.5	0	1.5	-1	-0.5	-1.5	0.5	-1.5
		27	-0.5	-3	0.5	-1	2	-3	0.5	-3	-2	-1	-2	-1
		28	1	-2.5	-2	-2	0.5	0	0	-2	1	-2	-2.5	-2.5
		29	-0.5	-1.5	1.5	-1	-0.5	1.5	-1.5	0	0	0	1.5	0
		30	1	-2.5	1.5	-1	0	-1	2	-2.5	2	-2	0	-2
C	A	31	0.5	-0.5	-2	-3	1.5	-2	2	-3	0	-0.5	-2.5	-2.5
		32	0	-1	0	1	1	0	1.5	0	1	0	0	-1
		33	0.5	-2	-2	-2.5	1.5	-1.5	-0.5	1	1.5	-1	-2.5	-2
		34	-0.5	-1.5	-2.5	-2.5	-1	-1.5	0.5	-1.5	-1	-1	-1.5	-1
		35	-1	-0.5	-2	-2	0	-2.5	-0.5	-2.5	1.5	-2.5	0	-2.5
	B	36	1	0.5	0	2	1.5	1.5	2	2	-2	2	0	1.5
		37	0	-2	-2	-2	1	-1.5	-1	1.5	3	2	-1	-0.5
		38	1.5	-2	2	-2	0	-1.5	-1	-1.5	0.5	0	0.5	-1.5
		39	-2	-0.5	1	1.5	0	-1.5	1.5	-1	0	0.5	2	-2
		40	2	-1.5	-2	-0.5	0	-1	0	-0.5	1.5	-1.5	0	-2.5
C	A	41	-0.5	-1.5	1.5	-0.5	-0.5	-0.5	-1	-1	1	-1	-2	-2
		42	-0.5	-1	1	0	-0.5	-2	2	1	1.5	-1.5	1.5	-1
		43	-3	-3	0.5	-2	1	-3	-1.5	-3	2	0	2	-3
		44	1.5	-2	-0.5	-3	-2	-2.5	-0.5	-3	0.5	-3	-1	-3
	B	45	0	-1.5	1	-1	1	-1	1	-1.5	1	-1.5	1	-1
		46	0	0.5	-0.5	0	-2.5	-2	1	0.5	0	0	-2	-1
		47	2.5	-3	0	-3	2	-3	0.5	-3	0	0	-3	-0.5
		48	0	0	-2	0.5	0	1.5	-1.5	-1.5	0	-1	0	-1.5

Table A6.13.1 continued

Nonprioritised Integrative Attending														
Musicality	Subgroup	Participant	Matched				Mismatched				Nonmetrical			
			t	d-x	d-y	d-z	t	d-x	d-y	d-z	t	d-x	d-y	d-z
Musician	A	49	2	-3	0	-3	1.5	-3	-2	-2.5	0	-2.5	1	-2.5
		50	1.5	-3	-3	-3	0	-3	-0.5	-3	0	-2.5	-3	-3
		51	0.5	-2	0	-2	-0.5	-2	1	0	2	-2.5	-2	-1.5
		52	3	-3	-3	-3	3	-3	-3	-3	3	-3	-3	-3
		53	-0.5	-3	-3	-3	1.5	-3	0	-3	0	-2.5	-2	-3
		54	0	-2	-2	-2	-1.5	-1.5	-1.5	-2	0	1	-0.5	-1.5
	B	55	1.5	-1.5	-2.5	-2.5	0.5	0	-2	-3	0	-1.5	-2	-3
		56	2.5	-3	0	-1	-2.5	-3	-3	-2	2	0	2	2
		57	2	-3	0	-2.5	3	-3	-0.5	-3	0.5	-3	-3	-3
		58	2	-3	-0.5	-3	1.5	-2	1	-2	1.5	-3	0	-3
		59	2	-3	-2	-3	1.5	-1	-2.5	-3	-0.5	-3	-3	-0.5
		60	0.5	0	0	-2	0	-3	0	-2.5	0.5	-2.5	-0.5	-0.5
Nonmus.	A	61	-2	-3	0	-3	-3	-2.5	-0.5	-3	-3	-3	0	-3
		62	1.5	-3	-2.5	-3	0.5	-2.5	-2.5	-3	2	-3	-2	-3
		63	-0.5	0.5	1	-1.5	-1	1.5	0.5	-1.5	0.5	-3	-1	-2.5
		64	2	2	-0.5	0	2	2	0	-1	1.5	1	0.5	-0.5
		65	-0.5	-2	-0.5	0	0	-2.5	0	-3	-3	-2.5	0.5	0.5
		66	2	-1.5	0	0	2	-1.5	1.5	-2	1.5	-0.5	-1	0
	B	67	0	-2.5	0	-2	-1.5	-2	-2	-2	1	-2	-1	-2.5
		68	2.5	-3	-2.5	-3	2.5	-2	-3	-3	2	-3	-1	-3
		69	0	-0.5	-2	-3	-0.5	-0.5	-2	-2.5	0.5	-1.5	-0.5	-2.5
		70	2	-1.5	-3	-3	2.5	-2.5	-2.5	-3	0.5	-3	-0.5	-3
		71	2	-0.5	-2	-2.5	2	-2	-2	-2.5	2	-2	-0.5	-2.5
		72	3	0	-1	0.5	2.5	-2.5	2	-2.5	-0.5	0.5	0	2.5
Nonmus.	A	73	-2	-2	0.5	-1	2.5	-3	-2.5	-0.5	0.5	-2.5	2	2.5
		74	0.5	-3	-3	-3	0.5	-3	-3	-3	2.5	-3	0	-2
		75	0.5	-2.5	0	0	2	-2	1	-2	2	-2.5	-1.5	-2
		76	2.5	-0.5	-2	-1	3	-3	-1	-3	2.5	-2	0	-3
		77	0	-3	-3	0	0	-3	3	-0.5	2.5	-1.5	0	-3
		78	2	-2.5	-0.5	-1.5	1	-0.5	0.5	-3	-2.5	-0.5	0.5	-3
	B	79	2.5	-3	-3	-3	2	-3	-3	-3	2.5	-3	-2.5	-3
		80	2	-2	-3	-2.5	1.5	-1	-2	-1	2	-2	-2	-0.5
		81	2	1.5	1	0.5	-0.5	0.5	-1.5	2.5	2	0.5	1.5	1.5
		82	3	-0.5	-1	1	1.5	-1	2	-2	2	0.5	0	0
		83	3	-2	0	-2.5	3	-1.5	2	-2.5	1.5	-2	1	-2
		84	0	0	-1	1.5	1.5	0	0.5	-1.5	-1	-0.5	0	-3
C	A	85	2	1.5	2	0.5	1.5	-0.5	1	1.5	-0.5	0	0.5	0.5
		86	2	0	0	0	-1.5	0.5	1.5	1.5	2	2	-1.5	-2
		87	-1.5	-2	2	-2	0	0	2	-1.5	1.5	-2	2	-2
		88	1.5	1	1.5	-2.5	-0.5	-1	-1	0	0	-2.5	-2	-3
		89	-2	-3	-0.5	-3	0.5	-0.5	0	-2.5	2.5	-0.5	0	-2.5
		90	1.5	-0.5	-1	0	2	-1.5	1.5	-2	2	-3	2	-2.5
	B	91	0	0.5	0.5	-0.5	2	-0.5	-0.5	1	2	-1	2	-2.5
		92	0	0	-1	-1	3	-1	0	-2.5	2	-2.5	1	-2.5
		93	-0.5	-0.5	-3	-3	0	-1	-3	-2.5	0	-3	-0.5	-3
		94	1.5	-2	-1	-0.5	-0.5	-1	-1	-1.5	0.5	-1	-1	-2
		95	0	0	-1	1	-2	-2.5	-2.5	-1.5	-0.5	-2	1	-1
		96	1.5	-2	-0.5	-1	2	-2	-2.5	-2.5	1.5	-2	-1.5	-1

Table A6.13.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Nonprioritised Integrative					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Nonprioritised Integrative attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Nonprioritised Integrative attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.13.3: Planned within group contrasts used in ANOVA.

	Matched				Mismatched				Nonmetrical			
	t	d-x	d-y	d-z	t	d-x	d-y	d-z	t	d-x	d-y	d-z
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	1	1	-2	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	1	-1	-1	-1	-1	0	0	0	0
B3: Target vs Distractors	3	-1	-1	-1	3	-1	-1	-1	3	-1	-1	-1
B4: Distracter-x & -y vs Distracter-z	0	1	1	-2	0	1	1	-2	0	1	1	-2
B5: Distracter-x vs Distracter-y	0	1	-1	0	0	1	-1	0	0	1	-1	0
B6: Metrical vs Nonmetrical x Target vs Distractors	3	-1	-1	-1	3	-1	-1	-1	-6	2	2	2
B7: Metrical vs Nonmetrical x Distracter-x & -y vs -z	0	1	1	-2	0	1	1	-2	0	-2	-2	4
B8: Metrical vs Nonmetrical x Distracter-x vs -y	0	1	-1	0	0	1	-1	0	0	-2	2	0
B9: Matched vs Mismatched x Target vs Distractors	3	-1	-1	-1	-3	1	1	1	0	0	0	0
B10: Matched vs Mismatched x Distracter-x & -y vs -z	0	1	1	-2	0	-1	-1	2	0	0	0	0
B11: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	0	-1	1	0	0	0	0	0

Table A6.13.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					Source	SS	df	MS	F
Source	SS	df	MS	F					
Between					B9	0.305	1	0.305	0.219
A1	18.503	1	18.503	4.397	A1B9	0.220	1	0.220	0.158
A2	19.531	1	19.531	4.641	A2B9	0.404	1	0.404	0.290
A3	27.195	1	27.195	6.462	A3B9	2.037	1	2.037	1.461
A4	15.178	1	15.178	3.606	A4B9	0.339	1	0.339	0.243
A5	6.750	1	6.750	1.604	A5B9	3.145	1	3.145	2.257
Error	353.516	84	4.209		Error	117.056	84	1.394	
Within					B10	3.230	1	3.230	2.493
B1	0.404	1	0.404	0.291	A1B10	0.383	1	0.383	0.295
A1B1	0.057	1	0.057	0.041	A2B10	1.188	1	1.188	0.917
A2B1	0.517	1	0.517	0.373	A3B10	1.188	1	1.188	0.917
A3B1	0.079	1	0.079	0.057	A4B10	2.281	1	2.281	1.761
A4B1	2.650	1	2.650	1.911	A5B10	0.172	1	0.172	0.133
A5B1	2.005	1	2.005	1.446	Error	108.823	84	1.296	
Error	116.488	84	1.387		B11	0.094	1	0.094	0.072
B2	0.914	1	0.914	0.800	A1B11	5.042	1	5.042	3.885
A1B2	4.925	1	4.925	4.310	A2B11	4.167	1	4.167	3.211
A2B2	0.399	1	0.399	0.349	A3B11	1.500	1	1.500	1.156
A3B2	0.073	1	0.073	0.064	A4B11	0.026	1	0.026	0.020
A4B2	3.145	1	3.145	2.752	A5B11	3.876	1	3.876	2.987
A5B2	1.477	1	1.477	1.293	Error	109.000	84	1.298	
Error	95.980	84	1.143						
B3	681.778	1	681.778	172.071					
A1B3	53.005	1	53.005	13.378					
A2B3	7.042	1	7.042	1.777					
A3B3	0.354	1	0.354	0.089					
A4B3	17.622	1	17.622	4.447					
A5B3	0.391	1	0.391	0.099					
Error	332.825	84	3.962						
B4	50.362	1	50.362	37.975					
A1B4	0.669	1	0.669	0.504					
A2B4	0.021	1	0.021	0.016					
A3B4	0.792	1	0.792	0.597					
A4B4	0.160	1	0.160	0.120					
A5B4	2.127	1	2.127	1.604					
Error	111.399	84	1.326						
B5	91.840	1	91.840	37.550					
A1B5	1.668	1	1.668	0.682					
A2B5	2.918	1	2.918	1.193					
A3B5	1.000	1	1.000	0.409					
A4B5	1.495	1	1.495	0.611					
A5B5	1.969	1	1.969	0.805					
Error	205.448	84	2.446						
B6	1.864	1	1.864	1.234					
A1B6	4.108	1	4.108	2.721					
A2B6	1.641	1	1.641	1.087					
A3B6	3.277	1	3.277	2.170					
A4B6	2.570	1	2.570	1.702					
A5B6	0.000	1	0.000	0.000					
Error	126.822	84	1.510						
B7	1.716	1	1.716	2.064					
A1B7	0.396	1	0.396	0.477					
A2B7	6.253	1	6.253	7.524					
A3B7	1.806	1	1.806	2.173					
A4B7	0.001	1	0.001	0.001					
A5B7	1.642	1	1.642	1.975					
Error	69.809	84	0.831						
B8	0.056	1	0.056	0.041					
A1B8	11.681	1	11.681	8.701					
A2B8	0.347	1	0.347	0.259					
A3B8	5.281	1	5.281	3.934					
A4B8	0.643	1	0.643	0.479					
A5B8	5.086	1	5.086	3.789					
Error	112.771	84	1.343						

APPENDIX 6.14

**Integrant ratings data, planned contrasts, and *item*
ANOVA summary from Multipart Experiment 2**

Table A6.14.1: Average ratings for target (t) and distracter ($d-x$, $d-y$, & $d-z$) integrant test items in each attending mode condition (prioritised integrative attending & selective attending) and multi-part rhythmic complexity condition (matched, mismatched, & nonmetrical).

Musicality	Subgroup	Item	Matched				Mismatched				Nonmetrical			
			t	$d-x$	$d-y$	$d-z$	t	$d-x$	$d-y$	$d-z$	t	$d-x$	$d-y$	$d-z$
Prioritised Integrative Attending														
Musician	A	1	3	-3	-2.25	-2.5	-0.75	0	-2.25	0	2	-0.5	1	-1.25
		2	1.25	0	-0.25	-2	1.25	0.75	-1.5	-1.5	1.5	-2	-0.25	-2.25
		3	1.5	0.5	-1.75	0	1.75	0.5	-0.5	0	0.5	-1.25	1	-0.75
		4	0.5	-1.25	0.5	-0.75	0.25	-0.5	-0.5	-1	-0.25	-0.25	-0.25	-1.5
	B	5	2	-2	-1.5	0.5	2	-0.5	-2.5	-2.25	0.5	-1.5	0.25	-1
		6	1.5	-1.25	-3	-2.5	1.75	-1.25	0	-2	-0.75	-1.25	-1.5	-0.25
		7	0.75	-0.75	1.25	0.25	1.75	-1	-0.75	-0.5	0.5	-1	-0.25	-0.5
		8	1.25	0.25	0	0.25	2.5	-0.5	-2.25	-1.5	0.25	0.5	1.75	-0.75
	C	9	1.5	-1.25	-1	-0.25	1.25	-0.25	-1.5	-1.5	0.25	-0.75	1.25	-1
		10	0	0.75	-0.25	0	-0.25	-0.5	-0.5	0.75	0.75	-1	-0.25	1
		11	1	0	-0.75	-0.5	0	0	-0.5	-0.5	0	0	-1	-1
		12	-0.25	-1.75	-1.5	-2.25	0.25	-1.75	1	-0.75	0.5	1.25	-0.5	-1
Nonmus.	A	13	1.25	1.25	-1.5	0.25	-0.75	2.25	-1.25	-0.5	1	-0.5	2	-0.75
		14	0.25	-1.5	-0.5	-2	-0.25	1	-1	0.5	-2	1	-0.5	1
		15	0	0.25	-0.75	-1	-1	1.25	-0.25	1	-1.25	-1.25	0.75	0.25
	B	16	-1.25	-0.75	1.5	-0.25	0	-0.75	1.25	0.5	0.75	0.5	0.25	-1
		17	2.25	0.75	1.25	0.5	1.25	0	-0.25	-0.5	2	0.5	1.5	0
		18	-0.25	1.75	0	1.5	-1	0.25	0.5	-1.5	0.25	-1.25	-0.75	-0.25
		19	0.5	-1	2.5	-1.75	0	0	0.5	0.5	0.25	-0.25	-0.25	0.25
	C	20	-0.25	0.5	0.75	0.25	0.5	-0.75	0.25	-0.5	-0.25	0	-0.5	1.75
		21	-0.75	0.25	-0.25	-0.5	1.5	-1.25	-1.25	-1	1.75	0.5	-0.75	-1.25
		22	0	0.75	0.5	1	-1	-1.75	-0.25	2	2	-0.5	-1.5	0
		23	2.25	2.5	0	1	1	0.5	1	2	1.25	0.75	1.75	0.75
		24	0.75	1.5	2	1	2.25	2.25	0.75	0.75	1	2.5	1.75	2.5
Selective Attending														
Musician	A	25	2.25	-2.75	-2	-1.75	2	-1.25	-2.25	-2.75	-0.5	-1.75	-1	0
		26	-1	-1.25	-1.75	-1.75	0.5	-1.5	-2.75	-1.75	-0.25	-1.25	-1.5	-0.75
		27	2.25	0.5	0.5	0.5	0.25	-0.5	-1.25	0	1.75	0.75	-2	-1
	B	28	-0.75	-0.25	-2	0	2.75	1.5	-2.5	-1.5	0.25	0.25	-0.25	-1.25
		29	1.5	-2.5	-1.75	-1.5	0.75	-1.75	-2.5	-0.25	-1	-0.25	-2	-0.5
		30	2.5	-2.75	-3	-1.75	1.5	-2.5	-2.75	-3	0.75	-2	-0.75	-1.5
		31	1.5	-0.5	-1.5	-1.25	1.25	-0.25	-0.5	-2.75	1.25	1	-1.25	-1.5
	C	32	1.25	-0.75	-1.5	-2.25	-0.25	-2	-1	-1.25	1.75	-0.75	-1.75	-1
		33	1	-0.5	-1	-1.5	0.75	-0.25	-2.5	-1.5	-0.25	0.5	-0.25	-0.5
		34	0.5	-0.25	-2	-1.5	0.25	-3	-1.5	-2.75	1	-1	-1.25	-1.25
		35	1.75	-2.75	-2	-2	1	0.25	0.25	0.75	0	0	-0.25	0.5
		36	1.5	0.5	-1.25	-1.5	-0.5	0.25	0.25	-1	1	0.25	2.25	-0.25
Nonmus.	A	37	2.75	-1.75	-1.25	-1.25	1	-1	-0.25	-0.75	1	-2.75	0.5	0.75
		38	2.25	-2.5	-1.25	-1	1.25	-0.25	0	-0.25	0.75	-1.25	-0.25	0
		39	1.75	0.25	-0.5	0.25	1.25	-0.75	0.5	0.75	1.25	1	0.25	1.5
	B	40	0.75	-0.75	-0.25	0	0.75	0.5	-0.25	-1.25	1	-0.5	-0.25	0.5
		41	-0.5	0.25	1.25	1.5	1.25	1	0	0.25	1.25	-0.75	0.75	0.25
		42	1.75	0.5	-0.5	1.5	2.25	2.25	1.5	-1	2	-0.75	0	0.75
		43	0	-0.25	0.75	0.75	0.25	0.5	-0.25	1	1.25	0.25	-0.25	-0.25
		44	1.75	-0.5	1.5	0.75	0	-0.25	1.25	1	0.75	-1.25	-1.25	0.75
	C	45	1.75	1.25	-0.75	0.25	1.5	0.75	0	1.25	0.5	-0.75	2	0.5
		46	1	1	-0.5	-0.25	0.25	0	0.75	0	0.5	-0.75	1.25	0
		47	0	-1.25	-0.75	-2	0.5	-0.25	0	1.25	-0.25	0.25	0.75	1
		48	-0.25	0.5	-0.5	-0.75	-0.75	0.25	0.75	0.75	1	0	0.5	-0.75

Table A6.14.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Selective					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Selective attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Selective attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.14.3: Planned within group contrasts used in ANOVA.

	Matched				Mismatched				Nonmetrical			
	t	d-x	d-y	d-z	t	d-x	d-y	d-z	t	d-x	d-y	d-z
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	1	1	-2	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	1	-1	-1	-1	-1	0	0	0	0
B3: Target vs Distracters	3	-1	-1	-1	3	-1	-1	-1	3	-1	-1	-1
B4: Distracter-x & -y vs Distracter-z	0	1	1	-2	0	1	1	-2	0	1	1	-2
B5: Distracter-x vs Distracter-y	0	1	-1	0	0	1	-1	0	0	1	-1	0
B6: Metrical vs Nonmetrical x Target vs Distracters	3	-1	-1	-1	3	-1	-1	-1	-6	2	2	2
B7: Metrical vs Nonmetrical x Distracter- x & -y vs -z	0	1	1	-2	0	1	1	-2	0	-2	-2	4
B8: Metrical vs Nonmetrical x Distracter- x vs -y	0	1	-1	0	0	1	-1	0	0	-2	2	0
B9: Matched vs Mismatched x Target vs Distracters	3	-1	-1	-1	-3	1	1	1	0	0	0	0
B10: Matched vs Mismatched x Distracter-x & -y vs -z	0	1	1	-2	0	-1	-1	2	0	0	0	0
B11: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	0	-1	1	0	0	0	0	0

Table A6.14.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					Source	SS	df	MS	F
Source	SS	df	MS	F	B8	5.444	1	5.444	4.060
Between					A1B8	0.157	1	0.157	0.117
A1	4.168	1	4.168	1.697	A2B8	0.000	1	0.000	0.000
A2	78.028	1	78.028	31.759	A3B8	2.313	1	2.313	1.725
A3	3.438	1	3.438	1.399	A4B8	2.084	1	2.084	1.554
A4	5.486	1	5.486	2.233	A5B8	0.709	1	0.709	0.529
A5	2.423	1	2.423	0.986	Error	48.276	36	1.341	
Error	88.448	36	2.457		B9	2.170	1	2.170	2.178
Within					A1B9	0.730	1	0.730	0.733
B1	2.393	1	2.393	5.013	A2B9	0.026	1	0.026	0.026
A1B1	0.365	1	0.365	0.764	A3B9	0.401	1	0.401	0.403
A2B1	1.459	1	1.459	3.058	A4B9	1.655	1	1.655	1.661
A3B1	1.003	1	1.003	2.103	A5B9	1.313	1	1.313	1.317
A4B1	0.006	1	0.006	0.013	Error	35.874	36	0.996	
A5B1	2.666	1	2.666	5.586	B10	0.007	1	0.007	0.010
Error	17.181	36	0.477		A1B10	0.803	1	0.803	1.183
B2	0.010	1	0.010	0.012	A2B10	0.694	1	0.694	1.024
A1B2	0.753	1	0.753	0.900	A3B10	0.803	1	0.803	1.183
A2B2	0.146	1	0.146	0.175	A4B10	0.063	1	0.063	0.092
A3B2	1.438	1	1.438	1.721	A5B10	3.760	1	3.760	5.546
A4B2	1.313	1	1.313	1.570	Error	24.411	36	0.678	
A5B2	2.203	1	2.203	2.636	B11	0.470	1	0.470	0.640
Error	30.090	36	0.836		A1B11	0.255	1	0.255	0.348
B3	138.663	1	138.663	132.430	A2B11	0.220	1	0.220	0.300
A1B3	8.613	1	8.613	8.226	A3B11	0.005	1	0.005	0.007
A2B3	41.876	1	41.876	39.993	A4B11	3.565	1	3.565	4.857
A3B3	0.858	1	0.858	0.819	A5B11	2.971	1	2.971	4.048
A4B3	0.924	1	0.924	0.882	Error	26.422	36	0.734	
A5B3	6.052	1	6.052	5.780					
Error	37.694	36	1.047						
B4	0.325	1	0.325	0.444					
A1B4	1.358	1	1.358	1.856					
A2B4	1.649	1	1.649	2.254					
A3B4	0.325	1	0.325	0.444					
A4B4	0.002	1	0.002	0.003					
A5B4	0.174	1	0.174	0.237					
Error	26.339	36	0.732						
B5	0.183	1	0.183	0.273					
A1B5	0.136	1	0.136	0.203					
A2B5	2.971	1	2.971	4.445					
A3B5	4.563	1	4.563	6.827					
A4B5	0.365	1	0.365	0.546					
A5B5	0.574	1	0.574	0.859					
Error	24.060	36	0.668						
B6	5.550	1	5.550	5.222					
A1B6	0.523	1	0.523	0.492					
A2B6	8.660	1	8.660	8.147					
A3B6	0.001	1	0.001	0.001					
A4B6	0.426	1	0.426	0.401					
A5B6	0.050	1	0.050	0.047					
Error	38.265	36	1.063						
B7	0.018	1	0.018	0.034					
A1B7	0.669	1	0.669	1.317					
A2B7	1.913	1	1.913	3.767					
A3B7	0.058	1	0.058	0.114					
A4B7	0.038	1	0.038	0.075					
A5B7	1.253	1	1.253	2.468					
Error	18.283	36	0.508						

APPENDIX 6.15

Aggregate ratings data, planned contrasts, and *item* ANOVA summary from Multipart Experiment 2

Table A6.15.1: Average ratings for target (t) and distracter ($d-x$, $d-y$, & $d-z$) aggregate test items in each attending mode condition (prioritised integrative attending & nonprioritised integrative attending) and multipart rhythmic complexity condition (matched, mismatched, & nonmetrical).

Musicality	Subgroup	Item	Matched				Mismatched				Nonmetrical			
			t	$d-x$	$d-y$	$d-z$	t	$d-x$	$d-y$	$d-z$	t	$d-x$	$d-y$	$d-z$
Prioritised Integrative Attending														
Musician	A	1	0	-1	-1.5	-1.5	0.5	-0.75	-2.25	-0.5	1.25	-0.25	-0.25	-0.75
		2	1	-2.5	0	-2	2.5	-1.25	-0.5	-2.25	0.5	-0.25	-0.25	-2
		3	0	-1.5	0.5	-1.5	0.25	-0.5	0.5	-1.25	1.25	-1.5	0	-1
		4	1	-1.25	-1.25	-1.75	0.25	-0.75	0	-1	1	-1.5	0.75	-1.5
	B	5	-0.25	-1	-2.5	-0.5	0.25	-1	0	-1.75	1	-0.5	-1.25	-0.25
		6	1	0	-1.25	-2.25	0	-0.25	-0.75	-0.5	1.25	-0.25	-1.25	-1.25
		7	0.25	-1.25	-0.25	-1	0.5	-2.5	-0.75	-2.25	1.25	-0.5	-2.25	-1
		8	0.25	-0.75	1.5	-2.25	1.5	0.5	0.5	-2	1	-1.25	-0.5	-2
	C	9	0	-2	0.75	-0.5	-1.75	0	-2	0.75	1.25	-2	-2	-0.25
		10	-1.25	-2	1.5	-0.75	1.25	1.25	-0.25	-0.5	0.5	0	1	-2.25
		11	0.75	-2	-1.25	-0.5	0.25	-0.5	-1.75	0.75	-0.5	-2	0.5	-1.75
		12	0.25	-0.75	1	0	1	-1.75	-1.25	-0.5	1.5	-0.75	-0.75	0
Nonmus.	A	13	1	-1.75	-1.25	0.5	0.75	-1	0.75	-1.75	-0.75	-1	-1.5	-2
		14	-0.5	-1.25	0.25	-1.25	1	0	1.5	-0.5	1	0	-0.5	-1
		15	1.25	-2	-0.25	-0.75	0.25	-1	0.5	-2.25	0.25	-0.75	-0.5	-1.75
		16	-0.75	-2.75	1	-1.75	0.75	-0.25	0	-1.5	0.25	-1.75	-1	-1
	B	17	-1.75	-0.5	-1.5	0	0.25	-1.25	1.5	-0.5	-0.5	0.25	-1.25	-1.25
		18	1.75	-2.25	-1.25	-2	0	-1.5	-0.75	-0.5	1.5	-1.75	0	-2.5
		19	-0.5	-0.25	-0.5	-1.25	0.5	-0.5	-0.25	-0.5	1	0	0.5	-1
		20	1.25	-1.75	-0.5	-0.75	0.75	-1.5	0	0.25	0.5	0.75	-0.75	-0.5
	C	21	0	-1.25	-0.25	-1	0.25	-1.25	-1.25	-0.5	-0.25	-1.75	-0.75	-0.5
		22	0.75	-1.5	0.5	-0.5	0.25	-0.75	1.25	-1.75	1.5	0	-1	-2
		23	-1.25	-2	0.5	-1.25	-1	-1.75	1	-1.25	0.75	-0.25	-0.5	-2
		24	0.5	-1	-0.25	-1.75	-0.25	-2.5	-1	-2.25	1	-2	0.5	-2
Nonprioritised Integrative Attending														
Musician	A	25	2.25	-2.5	-1.5	-1.75	0	-2	-2	-2.5	0.5	-1.5	-0.25	-2
		26	1.5	-2.75	-1.25	-3	-0.25	-2.5	-1.75	-2.75	0.5	-1.75	-0.75	-1.25
		27	0.25	-2.5	-2.5	-2.5	1.25	-2.5	-1.25	-2.5	1.5	-2	-1.5	-2
		28	1.25	-2.5	-1.5	-2.5	0	-2.25	-0.5	-1.5	1	-1.5	-2.25	-2.5
	B	29	1.5	-0.5	0	-1.75	2	-0.5	-0.25	-2.5	2	-2	-1	-1.5
		30	1.25	-1.25	0	-1.75	0.75	-0.25	0.75	-1.25	0	-2	-0.75	-3
		31	1	-2.75	-1.5	-2.75	0	-2.5	-1.5	-3	-1.5	-2.75	-1.5	-1.75
		32	0	-1.75	-0.75	-2.75	-0.5	-2	-1.25	-2.75	1	-3	-1.25	-1.75
	C	33	1	-2.75	-1.5	-2.75	2.25	-2.5	-1.5	-3	-1.5	-2.75	-1.5	-1.75
		34	2	-1.5	-1	0.25	-0.5	-1.75	1.25	-2.25	-0.5	-1.25	-1.25	0
		35	1	0	-1.25	-1.25	2.25	-2.5	-0.5	-2.75	0.75	-2.25	2.25	-1
		36	1.5	-1.75	-1.5	-2.75	0.5	-1.5	-3	-2.75	0.75	-2.5	0.5	-3
Nonmus.	A	37	0	-3	-1.5	-3	0.75	-3	-3	-1.25	1.5	-2.75	-0.5	-1.5
		38	1.5	-2	-2.75	-1.75	2.5	-2	-2.25	-2.5	2.25	-2.5	-0.75	0
		39	0.25	-1.25	-1.25	0	0.75	-2.75	0.75	-2.75	1.5	-0.75	-0.75	-2.75
		40	2.25	-3	-1.5	-1.25	2.25	-1.5	1	-1.5	0.75	-2.5	0.25	-2.75
	B	41	1.25	-0.5	0.5	-0.5	-0.5	-0.75	1.25	0.5	1	-1	0.5	-0.75
		42	1.25	0.5	1.25	-1	0.75	0	-0.5	-1	1.75	-0.75	0.25	-1
		43	2.25	-1	-0.5	-0.5	1.5	-0.75	1.5	0	0	0.25	-1	-2
		44	1.25	0.75	1	0.25	0.75	0	1	-0.5	1	-0.5	1	-1.25
	C	45	1	-0.75	1.25	-0.75	0.25	-2.25	-1.25	-1.75	2	0	0.25	-0.25
		46	0.25	-0.25	-0.75	0.5	1.25	0	0.25	-1	1	-1	-0.25	-1.75
		47	1.5	-1.25	-2	-0.25	1	1	-1.5	-1	2	-1.75	-0.5	-2.75
		48	-1	0.25	-0.25	-2.25	1.25	-2.75	-0.75	-1.75	0.25	-2	1.25	-2.25

Table A6.15.2: Planned between groups contrasts used in ANOVA.

	Prioritised Integrative						Nonprioritised Integrative					
	Musician			Nonmus.			Musician			Nonmus.		
	Subgroup			Subgroup			Subgroup			Subgroup		
	A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised Integrative vs Nonprioritised Integrative attending	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1
A2: Musicians vs Nonmusicians	1	1	1	-1	-1	-1	1	1	1	-1	-1	-1
A3: Prioritised Integrative vs Nonprioritised Integrative attending x Musicians vs Nonmusicians	1	1	1	-1	-1	-1	-1	-1	-1	1	1	1
A4: Subgroup A vs Subgroups B & C	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
A5: Subgroup B vs Subgroup C	0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.15.3: Planned within group contrasts used in ANOVA.

	Matched				Mismatched				Nonmetrical			
	t	d-x	d-y	d-z	t	d-x	d-y	d-z	t	d-x	d-y	d-z
B1: Metrical vs Nonmetrical	1	1	1	1	1	1	1	1	-2	-2	-2	-2
B2: Matched vs Mismatched	1	1	1	1	-1	-1	-1	-1	0	0	0	0
B3: Target vs Distracters	3	-1	-1	-1	3	-1	-1	-1	3	-1	-1	-1
B4: Distracter-x & -y vs Distracter-z	0	1	1	-2	0	1	1	-2	0	1	1	-2
B5: Distracter-x vs Distracter-y	0	1	-1	0	0	1	-1	0	0	1	-1	0
B6: Metrical vs Nonmetrical x Target vs Distracters	3	-1	-1	-1	3	-1	-1	-1	-6	2	2	2
B7: Metrical vs Nonmetrical x Distracter-x & -y vs -z	0	1	1	-2	0	1	1	-2	0	-2	-2	4
B8: Metrical vs Nonmetrical x Distracter-x vs -y	0	1	-1	0	0	1	-1	0	0	-2	2	0
B9: Matched vs Mismatched x Target vs Distracters	3	-1	-1	-1	-3	1	1	1	0	0	0	0
B10: Matched vs Mismatched x Distracter-x & -y vs -z	0	1	1	-2	0	-1	-1	2	0	0	0	0
B11: Matched vs Mismatched x Distracter-x vs -y	0	1	-1	0	0	-1	1	0	0	0	0	0

Table A6.15.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					Source	SS	df	MS	F
Source	SS	df	MS	F	B8	0.039	1	0.039	0.041
Between					A1B8	5.690	1	5.690	5.903
A1	7.056	1	7.056	5.274	A2B8	0.938	1	0.938	0.974
A2	14.615	1	14.615	10.923	A3B8	1.151	1	1.151	1.194
A3	19.232	1	19.232	14.374	A4B8	0.297	1	0.297	0.308
A4	9.165	1	9.165	6.850	A5B8	2.423	1	2.423	2.513
A5	1.863	1	1.863	1.393	Error	34.702	36	0.964	
Error	48.165	36	1.338		B9	0.147	1	0.147	0.190
Within					A1B9	0.105	1	0.105	0.136
B1	0.070	1	0.070	0.111	A2B9	0.209	1	0.209	0.270
A1B1	0.125	1	0.125	0.197	A3B9	1.033	1	1.033	1.340
A2B1	0.183	1	0.183	0.287	A4B9	0.174	1	0.174	0.225
A3B1	0.078	1	0.078	0.123	A5B9	1.595	1	1.595	2.069
A4B1	1.642	1	1.642	2.585	Error	27.757	36	0.771	
A5B1	0.602	1	0.602	0.948	B10	1.435	1	1.435	2.044
Error	22.866	36	0.635		A1B10	0.133	1	0.133	0.189
B2	0.260	1	0.260	0.428	A2B10	0.404	1	0.404	0.575
A1B2	3.010	1	3.010	4.950	A3B10	0.821	1	0.821	1.170
A2B2	0.146	1	0.146	0.241	A4B10	1.253	1	1.253	1.785
A3B2	0.016	1	0.016	0.027	A5B10	0.042	1	0.042	0.059
A4B2	1.880	1	1.880	3.092	Error	25.275	36	0.702	
A5B2	1.129	1	1.129	1.856	B11	0.055	1	0.055	0.081
Error	21.895	36	0.608		A1B11	2.464	1	2.464	3.609
B3	327.477	1	327.477	382.745	A2B11	1.930	1	1.930	2.827
A1B3	22.860	1	22.860	26.718	A3B11	0.847	1	0.847	1.240
A2B3	3.589	1	3.589	4.195	A4B11	0.010	1	0.010	0.015
A3B3	0.193	1	0.193	0.225	A5B11	2.000	1	2.000	2.930
A4B3	10.418	1	10.418	12.176	Error	24.574	36	0.683	
A5B3	0.000	1	0.000	0.000					
Error	30.802	36	0.856						
B4	25.523	1	25.523	30.114					
A1B4	0.375	1	0.375	0.442					
A2B4	0.000	1	0.000	0.000					
A3B4	0.535	1	0.535	0.631					
A4B4	0.094	1	0.094	0.111					
A5B4	0.979	1	0.979	1.155					
Error	30.512	36	0.848						
B5	47.126	1	47.126	81.495					
A1B5	1.003	1	1.003	1.735					
A2B5	0.500	1	0.500	0.865					
A3B5	1.459	1	1.459	2.523					
A4B5	0.643	1	0.643	1.113					
A5B5	1.211	1	1.211	2.095					
Error	20.818	36	0.578						
B6	0.510	1	0.510	0.826					
A1B6	2.836	1	2.836	4.591					
A2B6	1.318	1	1.318	2.134					
A3B6	2.318	1	2.318	3.752					
A4B6	0.914	1	0.914	1.480					
A5B6	0.104	1	0.104	0.169					
Error	22.240	36	0.618						
B7	0.847	1	0.847	1.912					
A1B7	0.203	1	0.203	0.459					
A2B7	2.815	1	2.815	6.358					
A3B7	0.740	1	0.740	1.670					
A4B7	0.001	1	0.001	0.001					
A5B7	0.808	1	0.808	1.823					
Error	15.942	36	0.443						

APPENDIX 6.16

‘Demandingness’ ratings data, planned contrasts, and ANOVA summary from Multipart Experiment 2

Table A6.16.1: Demandingness ratings in each attending mode condition (prioritised integrative attending, selective attending, and nonprioritised integrative attending).

<i>Musicality</i>	<i>Subgroup</i>	Prioritised Integrative	Selective	Nonprioritised Integrative
Musicians	A	5	3	4
		4	5	4
		4	4	5
		5	4	3
		4	3	5
		4	4	4
	B	3	4	5
		3	3	3
		6	5	3
		5	4	4
		6	4	3
		4	4	4
Nonmusicians	C	5	5	4
		5	4	3
		6	5	4
		4	3	4
		5	3	3
		6	4	4
	A	4	4	5
		6	4	4
		5	5	4
		6	5	2
		4	3	5
		4	4	4
	B	4	3	4
		6	3	5
		4	5	4
		5	4	4
		5	5	6
		6	5	3
	C	4	4	4
		4	4	2
		6	5	4
		4	4	6
		4	4	4
		4	4	4

Table A6.16.2: Planned between groups contrasts used in ANOVA.

Prioritised Integrative Attending			Selective Attending			Nonprioritised Integrative Attending		
Musicians			Nonmusicians			Musicians		
Subgroup			Subgroup			Subgroup		
A	B	C	A	B	C	A	B	C
A1: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending								
2	2	2	2	2	-1	-1	-1	-1
A2: Selective attending vs Nonprioritised integrative attending								
0	0	0	0	0	1	1	1	-1
A3: Musicians vs Nonmusicians								
1	1	-1	-1	-1	1	1	-1	-1
A4: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending x Musicians vs Nonmusicians								
2	2	-2	-2	-2	-1	-1	1	1
A5: Selective attending vs Nonprioritised integrative attending x Musicians vs Nonmusicians								
0	0	0	0	0	1	1	1	1
A6: Subgroup A vs Subgroups B & C								
2	-1	2	-1	-1	2	-1	2	-1
A7: Subgroup B vs Subgroup C								
0	1	-1	0	1	-1	0	1	-1

Table A6.16.3: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
<hr/>				
Between				
A1	16.056	1	16.056	22.385
A2	0.667	1	0.667	0.929
A3	0.563	1	0.563	0.784
A4	0.125	1	0.125	0.174
A5	0.375	1	0.375	0.523
A6	2.170	1	2.170	3.026
A7	0.510	1	0.510	0.712
Error	90.375	126	0.717	
<hr/>				

APPENDIX 6.17

‘Guessing’ ratings data, planned contrasts, and ANOVA summary from Multipart Experiment 2

Table A6.17.1: Guessing ratings in each attending mode condition (prioritised integrative attending, selective attending, and nonprioritised integrative attending).

<i>Musicality</i>	<i>Subgroup</i>	Prioritised Integrative	Selective	Nonprioritised Integrative
Musicians	A	3	2	2
		3	4	2
		3	3	4
		3	2	1
		3	2	1
		3	3	2
		3	3	4
	B	2	3	2
		3	3	2
		3	3	3
		4	3	2
		3	3	3
	C	2	4	2
		3	2	3
		3	3	3
		3	4	3
		3	3	2
		4	3	2
		4	3	3
Nonmusicians	A	4	3	3
		4	3	3
		3	3	2
		3	4	2
		3	2	4
		3	3	3
		3	1	3
	B	5	3	2
		3	4	4
		4	3	3
		3	3	3
		3	3	3
		3	4	5
		4	3	3
	C	3	3	4
		3	3	1
		3	3	3
		3	3	3
		3	4	4
		4	3	4
		3	3	2
		3	3	3
		4	3	3

Table A6.17.2: Planned between groups contrasts used in ANOVA.

Prioritised Integrative Attending			Selective Attending			Nonprioritised Integrative Attending		
Musicians			Nonmusicians			Musicians		
Subgroup			Subgroup			Subgroup		
A	B	C	A	B	C	A	B	C
A1: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending								
2	2	2	2	2	-1	-1	-1	-1
A2: Selective attending vs Nonprioritised integrative attending								
0	0	0	0	0	1	1	1	-1
A3: Musicians vs Nonmusicians								
1	1	-1	-1	-1	1	1	-1	-1
A4: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending x Musicians vs Nonmusicians								
2	2	-2	-2	-2	-1	-1	1	1
A5: Selective attending vs Nonprioritised integrative attending x Musicians vs Nonmusicians								
0	0	0	0	0	1	1	1	1
A6: Subgroup A vs Subgroups B & C								
2	-1	2	-1	-1	2	-1	2	-1
A7: Subgroup B vs Subgroup C								
0	1	-1	0	1	-1	0	1	-1

Table A6.17.3: ANOVA summary computed using
Psy32 for Windows Version 2.0.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
A1	4.253	1	4.253	9.201
A2	1.260	1	1.260	2.726
A3	3.361	1	3.361	7.270
A4	0.170	1	0.170	0.368
A5	1.260	1	1.260	2.726
A6	2.170	1	2.170	4.694
A7	0.010	1	0.010	0.023
Error	58.250	126	0.462	

APPENDIX 6.18

**Analysis of demandingness and guessing across Multipart
Experiments 1 & 2**

Table A6.18.1: Planned between groups contrasts used in ANOVA.

Prioritised Integrative Attending			Selective Attending			Nonprioritised Integrative Attending					
Musicians			Nonmusicians			Musicians			Nonmusicians		
Subgroup			Subgroup			Subgroup			Subgroup		
A	B	C	A	B	C	A	B	C	A	B	C
A1: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending											
2	2	2	2	2	-1	-1	-1	-1	-1	-1	-1
A2: Selective attending vs Nonprioritised integrative attending											
0	0	0	0	0	1	1	1	1	-1	-1	-1
A3: Musicians vs Nonmusicians											
1	1	-1	-1	-1	1	1	1	-1	1	1	-1
A4: Prioritised integrative attending vs Selective attending & Nonprioritised integrative attending x Musicians vs Nonmusicians											
2	2	-2	-2	-2	-1	-1	1	1	-1	-1	1
A5: Selective attending vs Nonprioritised integrative attending x Musicians vs Nonmusicians											
0	0	0	0	0	1	1	1	-1	-1	-1	1
A6: Subgroup A vs Subgroups B & C											
2	-1	2	-1	-1	2	-1	-1	2	-1	-1	2
A7: Subgroup B vs Subgroup C											
0	1	-1	0	1	-1	0	1	-1	0	1	-1

Table A6.18.2: Within group contrast used in ANOVA.

	Encoding (Multipart experiment 1)	Retrieval (Multipart experiment 2)
B1:	1	-1

Table A6.18.3: Demandingness ANOVA summary
computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
A1	11.674	1	11.674	13.611
A2	0.333	1	0.333	0.389
A3	2.170	1	2.170	2.530
A4	0.174	1	0.174	0.202
A5	2.083	1	2.083	2.429
A6	0.007	1	0.007	0.008
A7	0.521	1	0.521	0.607
Error	108.063	126	0.858	
Within				
B1	3.781	1	3.781	5.441
A1B1	5.063	1	5.063	7.285
A2B1	0.333	1	0.333	0.480
A3B1	0.170	1	0.170	0.245
A4B1	0.007	1	0.007	0.010
A5B1	0.333	1	0.333	0.480
A6B1	4.000	1	4.000	5.756
A7B1	0.083	1	0.083	0.120
Error	87.563	126	0.695	

Table A6.18.4: Guessing ANOVA summary
computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance				
Source	SS	df	MS	F
Between				
A1	4.340	1	4.340	7.933
A2	0.021	1	0.021	0.038
A3	4.753	1	4.753	8.688
A4	0.840	1	0.840	1.536
A5	0.521	1	0.521	0.952
A6	1.085	1	1.085	1.983
A7	0.422	1	0.422	0.771
Error	68.938	126	0.547	
Within				
B1	0.087	1	0.087	0.191
A1B1	0.694	1	0.694	1.530
A2B1	3.000	1	3.000	6.610
A3B1	0.170	1	0.170	0.375
A4B1	0.111	1	0.111	0.245
A5B1	0.750	1	0.750	1.652
A6B1	1.085	1	1.085	2.391
A7B1	0.255	1	0.255	0.562
Error	57.188	126	0.454	

APPENDIX 6.19

Subgroups for Multipart Experiment 3

The following table lists the rhythm sets (rs) from which patterns in each theoretical metricality category were selected for inclusion in each of six subgroups.

Subgroup	Theoretical Metricality					
	Quadruple		Triple		Nonmetrical	
Subgroup A	rs 34	rs 22	rs 21	rs 24	rs 27	rs 35
Subgroup B	rs 03	rs 04	rs 02	rs 05	rs 30	rs 33
Subgroup C	rs 21	rs 24	rs 27	rs 35	rs 34	rs 22
Subgroup D	rs 02	rs 05	rs 30	rs 33	rs 03	rs 04
Subgroup E	rs 27	rs 35	rs 34	rs 22	rs 21	rs 24
Subgroup F	rs 30	rs 33	rs 03	rs 04	rs 02	rs 05

APPENDIX 6.20

Instructions for Multipart Experiment 3

The experimenter read through the following instructions with the participant. A diagram similar to Figure 6.13 was shown to the participant to assist instruction.

RHYTHMIC CANON INSTRUCTIONS

In this experiment, you will be asked to reproduce some rhythm patterns by tapping on a drum pad. The actual task is a form rhythmic canon, where the computer plays the lead part and you follow.

The lead part consists of an antecedent/consequent (question/answer) pair of patterns. The consequent pattern follows the antecedent pattern immediately, and both have the same overall duration. Your task is begin tapping the antecedent/consequent pair at the point when the consequent pattern begins in the computerised lead part. Thus your reproduction of the antecedent pattern should be accompanied by the computer's presentation of the consequent pattern, whereas your reproduction of the consequent pattern should be unaccompanied.

For each antecedent/consequent pair, you will be given three trials at reproduction. In order to help you to locate the transition from the antecedent to the consequent pattern (i.e., the cue to begin your reproduction), you will be given the opportunity to familiarise yourself with the antecedent pattern before each set of three trials. Therefore, each experimental block, of which there are six, contains a *familiarisation* phase and a *test* phase. A different antecedent/consequent pair is presented in each block.

In the *familiarisation* phase, you are required to click on the green button on the computer screen to hear the antecedent pattern. Each button click triggers one presentation of the antecedent pattern. Listen to the antecedent pattern as many times as are required to

memorise it. Note that the *final* tone of the antecedent pattern will serve as the *first* tone of the consequent pattern in the antecedent/consequent pairs.

The *test* phase consists of three presentations of the antecedent/consequent pair (Performance Trials 1-3). You are required to press the spacebar on the computer keyboard to initiate each performance trial. For each trial, listen to the familiar antecedent pattern, and then begin your reproduction of it on the first tone of the consequent pattern. Whilst reproducing the antecedent pattern, listen to the consequent pattern that is being presented concurrently, and attempt to memorise it. Then let your reproduction of the consequent pattern follow on immediately from your reproduction of the antecedent pattern, as in a rhythmic canon. When your reproduction of the antecedent/consequent pair is completed, wait for a message indicating that the computer is ready to progress to the next trial.

You may find that some antecedent patterns are very difficult to reproduce. Nevertheless, please try to complete each trial as accurately as the circumstances allow.

You will now be given the opportunity to practice the procedure.

APPENDIX 6.21

Auditory inspection time data, planned contrasts, and ***conventional ANOVA summary from Multipart*** **Experiment 3**

Table A6.21.1: Individual participant's auditory inspection time (i.e., average number of hearings) data for antecedent patterns from each theoretical metricality category (quadruple; triple; nonmetrical).

		Theoretical Metricality		
<i>Subgroup</i>	<i>Participant</i>	<i>Quadruple</i>	<i>Triple</i>	<i>Nonmetrical</i>
A	1	3	3	9
	2	2	2	8
B	3	4.5	3.5	13.5
	4	4	9	13
C	5	8.5	9	13.5
	6	6	4	56.5
D	7	5.5	8	11.5
	8	5.5	5	9.5
E	9	5	5.5	8.5
	10	4.5	5	10
F	11	8.5	14	36
	12	3	3	5.5

Table A6.21.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.21.3: Planned within group contrasts used in ANOVA.

	Theoretical Metricality		
	Quadruple	Triple	Nonmetrical
B1: Metrical vs Nonmetrical	1	1	-2
B2: Quadruple vs Triple	1	-1	0

Table A6.21.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
Between					
A1	9.507	1	9.507	0.097	
A2	435.125	1	435.125	4.445	
A3	8.167	1	8.167	0.083	
A4	56.889	1	56.889	0.581	
A5	30.375	1	30.375	0.310	
Error	587.292	6	97.882		
Within					
B1	924.500	1	924.500	6.177	
A1B1	86.681	1	86.681	0.579	
A2B1	410.063	1	410.063	2.740	
A3B1	1.021	1	1.021	0.007	
A4B1	62.674	1	62.674	0.419	
A5B1	1.688	1	1.688	0.011	
Error	897.958	6	149.660		
B2	5.042	1	5.042	1.485	
A1B2	1.500	1	1.500	0.442	
A2B2	0.021	1	0.021	0.006	
A3B2	0.562	1	0.562	0.166	
A4B2	4.688	1	4.688	1.380	
A5B2	1.562	1	1.562	0.460	
Error	20.375	6	3.396		

APPENDIX 6.22

Auditory inspection time data, planned contrasts, and *item* ANOVA summary from Multipart Experiment 3

Table A6.22.1: Auditory inspection time (i.e., average number of hearings) data for antecedent patterns from each theoretical metricality category (quadruple; triple; nonmetrical).

Subgroup	Item	Theoretical Metricality		
		Quadruple	Triple	Nonmetrical
A	1	2.5	2.5	10.5
	2	2.5	2.5	6.5
B	3	5.5	8	20
	4	3	4.5	6.5
C	5	7	6	47
	6	7.5	7	23
D	7	5.5	6	12.5
	8	5.5	7	8.5
E	9	4	5	10.5
	10	5.5	5.5	8
F	11	6	7.5	17
	12	5.5	9.5	24.5

Table A6.22.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.22.3: Planned within group contrasts used in ANOVA.

	Theoretical Metricity		
	Quadruple	Triple	Nonmetrical
B1: Metrical vs Nonmetrical	1	1	-2
B2: Quadruple vs Triple	1	-1	0

Table A6.22.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
Between					
A1	9.507	1	9.507	0.345	
A2	435.125	1	435.125	15.779	
A3	8.167	1	8.167	0.296	
A4	56.889	1	56.889	2.063	
A5	30.375	1	30.375	1.101	
Error	165.45	8	20.681	27.576	
Within					
B1	924.500	1	924.500	20.372	
A1B1	86.681	1	86.681	1.910	
A2B1	410.062	1	410.062	9.036	
A3B1	1.021	1	1.021	0.022	
A4B1	62.674	1	62.674	1.381	
A5B1	1.688	1	1.688	0.037	
Error	272.292	6	45.382		
B2	5.042	1	5.042	12.737	
A1B2	1.500	1	1.500	3.789	
A2B2	0.021	1	0.021	0.053	
A3B2	0.562	1	0.562	1.421	
A4B2	4.688	1	4.688	11.842	
A5B2	1.562	1	1.562	3.947	
Error	2.375	6	0.396		

APPENDIX 6.23

**Antecedent reproduction accuracy data, planned
contrasts, and *conventional* ANOVA summary from
Multipart Experiment 3**

Table A6.23.1: Each individual participant's reproduction accuracy (i.e., correlation between target and reproduced patterns) data for antecedent patterns from each multipart rhythmic complexity condition (matched metrical; mismatched metrical; nonmetrical).

<i>Subgroup</i>	<i>Participant</i>	Complexity		
		<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
A	1	0.925	0.699	0.171
	2	0.122	0.106	0.033
B	3	0.721	0.762	0.104
	4	0.925	0.975	-0.093
C	5	0.950	0.975	0.596
	6	0.939	0.975	0.937
D	7	0.788	0.780	0.237
	8	0.854	0.816	0.157
E	9	0.795	0.937	0.189
	10	0.938	0.854	0.358
F	11	0.938	0.843	0.408
	12	0.801	0.743	0.054

Table A6.23.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.23.3: Planned within group contrasts used in ANOVA.

	Complexity		
	Matched	Mismatched	Nonmetrical
B1: Metrical vs Nonmetrical	1	1	-2
B2: Matched vs Mismatched	1	-1	0

Table A6.23.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
<hr/> Between <hr/>					
A1	0.012	1	0.012	0.153	
A2	0.371	1	0.371	4.580	
A3	0.132	1	0.132	1.626	
A4	0.408	1	0.408	5.048	
A5	0.034	1	0.034	0.416	
Error	0.485	6	0.081		
<hr/> Within <hr/>					
B1	2.297	1	2.297	59.908	
A1B1	0.040	1	0.040	1.051	
A2B1	0.077	1	0.077	2.017	
A3B1	0.075	1	0.075	1.956	
A4B1	0.070	1	0.070	1.833	
A5B1	0.078	1	0.078	2.039	
Error	0.230	6	0.038		
B2	0.002	1	0.002	0.546	
A1B2	0.000	1	0.000	0.027	
A2B2	0.000	1	0.000	0.010	
A3B2	0.012	1	0.012	2.934	
A4B2	0.007	1	0.007	1.788	
A5B2	0.003	1	0.003	0.806	
Error	0.024	6	0.004		

APPENDIX 6.24

A priori consequent reproduction accuracy data, planned contrasts, and conventional ANOVA summary from Multipart Experiment 3

Table A6.24.1: Each individual participant's reproduction accuracy (i.e., correlation between target and reproduced patterns) data for consequent patterns from each multipart rhythmic complexity condition (matched metrical; mismatched metrical; nonmetrical).

<i>Subgroup</i>	<i>Participant</i>	Complexity		
		<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
A	1	0.706	0.267	0.113
	2	0.400	0.319	0.165
B	3	0.375	0.544	0.302
	4	0.594	0.410	0.447
C	5	0.361	0.524	0.231
	6	0.587	0.697	0.700
D	7	0.443	0.431	0.316
	8	0.719	0.446	0.200
E	9	0.579	0.491	0.091
	10	0.614	0.755	0.529
F	11	0.435	0.437	0.355
	12	0.625	0.320	0.490

Table A6.24.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.24.3: Planned within group contrasts used in ANOVA.

	Complexity		
	Matched	Mismatched	Nonmetrical
B1: Metrical vs Nonmetrical	1	1	-2
B2: Matched vs Mismatched	1	-1	0

Table A6.24.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
<hr/> Between <hr/>					
A1	0.008	1	0.008	0.195	
A2	0.022	1	0.022	0.549	
A3	0.061	1	0.061	1.490	
A4	0.047	1	0.047	1.166	
A5	0.002	1	0.002	0.040	
Error	0.244	6	0.041		
<hr/> Within <hr/>					
B1	0.245	1	0.245	15.957	
A1B1	0.003	1	0.003	0.196	
A2B1	0.058	1	0.058	3.799	
A3B1	0.006	1	0.006	0.365	
A4B1	0.007	1	0.007	0.457	
A5B1	0.017	1	0.017	1.106	
Error	0.092	6	0.015		
B2	0.026	1	0.026	1.350	
A1B2	0.003	1	0.003	0.158	
A2B2	0.010	1	0.010	0.531	
A3B2	0.044	1	0.044	2.266	
A4B2	0.044	1	0.044	2.250	
A5B2	0.002	1	0.002	0.089	
Error	0.118	6	0.020		

APPENDIX 6.25

A posteriori consequent reproduction accuracy data,
planned contrasts, and *conventional* ANOVA summary
from Multipart Experiment 3

Table A6.25.1: Each individual participant's reproduction accuracy (i.e., correlation between target and reproduced patterns) data for consequent patterns from each multipart rhythmic complexity condition (matched metrical; mismatched metrical; nonmetrical).

<i>Subgroup</i>	<i>Participant</i>	Complexity		
		<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
A	1	0.706	0.165	0.322
	2	0.346	0.226	0.200
B	3	0.479	0.544	0.269
	4	0.594	0.410	0.377
C	5	0.361	0.524	0.352
	6	0.587	0.697	0.700
D	7	0.443	0.431	0.366
	8	0.719	0.446	0.425
E	9	0.597	0.491	0.166
	10	0.614	0.755	0.553
F	11	0.435	0.437	0.385
	12	0.625	0.320	0.503

Table A6.25.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.25.3: Planned within group contrasts used in ANOVA.

	Complexity		
	Matched	Mismatched	Nonmetrical
B1: Metrical vs Nonmetrical	1	1	-2
B2: Matched vs Mismatched	1	-1	0

Table A6.25.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
<hr/> Between <hr/>					
A1	0.020	1	0.020	0.538	
A2	0.020	1	0.020	0.541	
A3	0.046	1	0.046	1.236	
A4	0.080	1	0.080	2.136	
A5	0.005	1	0.005	0.146	
Error	0.225	6	0.037		
<hr/> Within <hr/>					
B1	0.102	1	0.102	16.539	
A1B1	0.001	1	0.001	0.227	
A2B1	0.040	1	0.040	6.447	
A3B1	0.017	1	0.017	2.712	
A4B1	0.001	1	0.001	0.171	
A5B1	0.001	1	0.001	0.172	
Error	0.037	6	0.006		
B2	0.047	1	0.047	2.414	
A1B2	0.000	1	0.000	0.005	
A2B2	0.020	1	0.020	1.011	
A3B2	0.046	1	0.046	2.395	
A4B2	0.059	1	0.059	3.039	
A5B2	0.003	1	0.003	0.159	
Error	0.116	6	0.019		

APPENDIX 6.26

Reproduction accuracy data, planned contrasts, and *item* ANOVA summary from Multipart Experiment 3

Table A6.26.1: Reproduction accuracy (i.e., correlation between target and reproduced patterns) data for antecedent patterns from each multipart rhythmic complexity condition (matched metrical; mismatched metrical; nonmetrical).

<i>Subgroup</i>	<i>Item</i>	Complexity		
		<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
A	1	0.566	0.237	0.134
	2	0.481	0.568	0.070
B	3	0.683	1.000	0.104
	4	0.963	0.737	-0.093
C	5	0.902	0.950	0.741
	6	0.987	1.000	0.793
D	7	0.926	0.780	0.304
	8	0.717	0.816	0.091
E	9	0.783	0.879	0.344
	10	0.950	0.912	0.203
F	11	0.809	0.755	0.346
	12	0.930	0.831	0.116

Table A6.26.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.26.3: Planned within group contrasts used in ANOVA.

	Complexity		
	<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
B1: Metrical vs Nonmetrical	1	1	-2
B2: Matched vs Mismatched	1	-1	0

Table A6.26.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
<hr/> Between <hr/>					
A1	0.012	1	0.012	1.762	
A2	0.371	1	0.371	52.502	
A3	0.131	1	0.131	18.602	
A4	0.409	1	0.409	57.964	
A5	0.034	1	0.034	4.793	
Error	0.042	6	0.007		
<hr/> Within <hr/>					
B1	2.296	1	2.296	159.266	
A1B1	0.040	1	0.040	2.798	
A2B1	0.077	1	0.077	5.375	
A3B1	0.075	1	0.075	5.207	
A4B1	0.070	1	0.070	4.891	
A5B1	0.078	1	0.078	5.418	
Error	0.086	6	0.014		
B2	0.002	1	0.002	0.098	
A1B2	0.000	1	0.000	0.005	
A2B2	0.000	1	0.000	0.002	
A3B2	0.012	1	0.012	0.524	
A4B2	0.007	1	0.007	0.317	
A5B2	0.003	1	0.003	0.142	
Error	0.137	6	0.023		

APPENDIX 6.27

***A priori* consequent reproduction accuracy data, planned contrasts, and *item* ANOVA summary from Multipart Experiment 3**

Table A6.27.1: Reproduction accuracy (i.e., correlation between target and reproduced patterns) data for consequent patterns from each multipart rhythmic complexity condition (matched metrical; mismatched metrical; nonmetrical).

<i>Subgroup</i>	<i>Item</i>	Complexity		
		<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
A	1	0.591	0.267	0.113
	2	0.515	0.319	0.165
B	3	0.319	0.454	0.361
	4	0.650	0.500	0.388
C	5	0.436	0.569	0.385
	6	0.513	0.651	0.546
D	7	0.591	0.551	0.358
	8	0.571	0.326	0.158
E	9	0.549	0.633	0.265
	10	0.644	0.613	0.354
F	11	0.530	0.335	0.437
	12	0.530	0.422	0.409

Table A6.27.2: Planned between groups contrasts used in ANOVA.

	Subgroup					
	A	B	C	D	E	F
A1:	1	1	1	-1	-1	-1
A2:	2	-1	-1	2	-1	-1
A3:	0	1	-1	0	1	-1

Table A6.27.3: Planned within group contrasts used in ANOVA.

	Complexity		
	<i>Matched</i>	<i>Mismatched</i>	<i>Nonmetrical</i>
B1: Metrical vs Nonmetrical	1	1	-2
B2: Matched vs Mismatched	1	-1	0

Table A6.27.4: ANOVA summary computed using *Psy32 for Windows Version 2.0*.

Summary of Analysis of Variance					
Source	SS	df	MS	F	
<hr/> Between <hr/>					
A1	0.008	1	0.008	0.576	
A2	0.022	1	0.022	1.632	
A3	0.061	1	0.061	4.402	
A4	0.047	1	0.047	3.440	
A5	0.002	1	0.002	0.120	
Error	0.082	6	0.014		
<hr/> Within <hr/>					
B1	0.245	1	0.245	87.211	
A1B1	0.003	1	0.003	1.068	
A2B1	0.059	1	0.059	20.851	
A3B1	0.006	1	0.006	1.981	
A4B1	0.007	1	0.007	2.525	
A5B1	0.017	1	0.017	6.071	
Error	0.017	6	0.003		
B2	0.027	1	0.027	3.979	
A1B2	0.003	1	0.003	0.458	
A2B2	0.010	1	0.010	1.540	
A3B2	0.044	1	0.044	6.644	
A4B2	0.044	1	0.044	6.561	
A5B2	0.002	1	0.002	0.261	
Error	0.040	6	0.007		

APPENDIX 7.1

Tempo Analysis: Integrant ratings data, planned contrasts, and ANOVA summary from Multipart Experiment 1

Table A7.1.1: Average ratings by musicians and nonmusicians for target (t) and distracter ($d-x$ & $d-y$) integrant test items in each multipart rhythmic complexity condition (matched, mismatched, & nonmetrical) at slow, medium, and fast tempi.

		Slow						Medium						Fast										
		Qd			Tr			Nm			Qd			Tr			Qd			Tr				
		t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y		
Musicians	3	-2	-1	0	-1	1.5	0.5	-1	2	-2	-1	1.5	0	1.5	-1	0	1	1.5	1.5	-1	0	2.5	-2	-1
	2	2	-3	-1	2	1.5	0.5	-2	1	0	0	-1	1.5	2	0.5	-3	1	3	-3	-2	0.5	-1	2	-1
	3	3	-1	0	0	-1	0.5	-2	0	2	0	0	-1	2	-1	-2	1	0.5	-2	2	0	1.5	1	0.5
	2	-2	3	-2	2	-2	1.5	2	1.5	-2	-1	0	1.5	-1	1	2	-2	1	2	3	-1	-3	-1	
	1	1	2	-1	2	2	-1	-3	-1	0	0	-2	2.5	-1	0	-1	2	0	1.5	-1	2	-1	-2	
	2	2	2	3	2	-1	1.5	-2	0	-2	-3	-1	2	-1	2	1	3	2	-1	0	-1	1	-1	
	3	3	-1	3	-1	-3	2	0.5	0.5	3	-2	-3	-2	-2	3	2	2	0.5	-2	2	-1	3	1	
	2	3	2	-2	2	-3	1	0.5	2	3	-1	1.5	0	1	1	-1	-1	0	-2	3	3	-2	-1	
	2	2	1	-2	2	0.5	1.5	-2	3	-1	-2	-2	-2	-2	3	1	2	-3	2	3	-3	-1	2	
	1	-1	-1	1	-1	2	-1	-1	-2	-1	1	-2	2	-1	-2	1	-2	-3	-1	-3	-2	2	2	
Nonmusicians	-2	-2	3	3	-3	-3	-2	-3	1	-1	-3	2	1	1	-1	-3	3	2	1	-1	2	2	-2	
	3	-2	-3	1	2	2	2	2	-2	1	-1	2	-1	2	1	2	-2	3	2	2	-3	3	-1	
	2.5	-1	2.5	2	3	-2	1	3	-3	2.5	2	0.5	0.5	-1	0	2	2.5	1.5	-1	-2	-2	0	-1	
	2	-2	0	0.5	1.5	-2	3	-2	2	0	1	1.5	-3	2	-3	0.5	2.5	2	0	2.5	-2	2	-1	
	2	-1	-1	3	-3	-1	-3	-2	-2	0.5	2	1.5	-1	-2	2	2	1	1	2	1.5	-1	2	-2	
	2	0	0	0.5	2	-2	2	1	-1	2	2.5	1	3	-2	-1	-1	3	2.5	-1	1.5	0	0	0	
	0.5	-1	0.5	2.5	2	0	2	-2	-1	1.5	0.5	1.5	-1	3	-1	-1	0	1	2	0.5	-1	0	0	
	1.5	1.5	-3	-1	1	0	1	-1	-1	2.5	0.5	2	-1	-2	2	0.5	-1	-1	1	2	-1	1	-2	
	3	-2	2.5	2	2	-1	0.5	3	3	-2	1	2	3	-2	0	0	1.5	1	3	-2	0.5	1.5	2	
	2	1	2	2	-1	0	-1	2	2	1	1	-1	2	1	-1	-3	0	3	3	2	3	-2	2	
	1	2	2	-1	-2	0	3	-1	1	3	-1	-1	2	1	-1	2	0	1.7	-0	-3	2	2	-2	
	-1	-3	1	0	-1	-1	2	2	1	1	-1	2	2	1	-1	2	0	1.7	-0	-3	2	2	-1	

Table A7.1.2: Key to planned contrasts

A1	Mus vs Nonmus (1, -1)
B1	Slow/Fast vs Medium
B2	Slow vs Fast
B3	Met vs Nonmet
B4	Qd vs Tr
B5	t vs d
B6	x vs y
B7	Slow/Fast vs Medium X Met vs Nonmet
B8	Slow/Fast vs Medium X Qd vs Tr
B9	Slow/Fast vs Medium X t vs d
B10	Slow/Fast vs Medium X x vs y
B11	Slow vs Fast X Met vs Nonmet
B12	Slow vs Fast X Qd vs Tr
B13	Slow vs Fast X t vs d
B14	Slow vs Fast X x vs y
B15	Met vs Nonmet X t vs d
B16	Met vs Nonmet X x vs y
B17	Qd vs Tr X t vs d
B18	Qd vs Tr X x vs y
B19	Slow/Fast vs Medium X Met vs Nonmet X t vs d
B20	Slow/Fast vs Medium X Met vs Nonmet X x vs y
B21	Slow/Fast vs Medium X Qd vs Tr X t vs d
B22	Slow/Fast vs Medium X Qd vs Tr X x vs y
B23	Slow vs Fast X Met vs Nonmet X t vs d
B24	Slow vs Fast X Met vs Nonmet X x vs y
B25	Slow vs Fast X Qd vs Tr X t vs d
B26	Slow vs Fast X Qd vs Tr X x vs y

Table A7.1.3: Planned within group contrasts

	Slow						Medium						Fast					
	Qd	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	d-x	d-y	t	
B1	-1	-1	-1	-1	-1	-1	-1	-1	2	2	2	2	2	1	1	1	1	1
B2	1	1	1	1	1	1	1	1	0	0	0	0	0	-1	-1	-1	-1	-1
B3	1	1	1	1	1	-2	-2	1	1	1	1	1	-2	-2	1	1	-1	-2
B4	-1	-1	-1	1	1	0	0	-1	-1	1	1	1	1	-1	-1	1	1	0
B5	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
B6	0	1	-1	0	1	-1	0	1	0	1	-1	0	1	-1	0	1	0	0
B7	-1	-1	-1	-1	-1	2	2	2	2	2	2	2	2	0	1	1	-2	-2
B8	1	1	1	-1	-1	0	0	0	-2	-2	-2	2	2	0	0	-1	1	0
B9	-2	1	1	-2	1	1	-2	1	1	4	-2	-2	4	-2	2	-1	2	-1
B10	0	-1	1	0	-1	1	0	-1	1	0	2	-2	0	2	-2	0	1	-1
B11	1	1	1	1	1	-2	-2	-2	0	0	0	0	0	0	0	-1	-1	2
B12	-1	-1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	-1	0
B13	2	-1	-1	2	-1	-1	2	-1	0	0	0	0	0	0	0	1	-2	1
B14	0	1	-1	0	1	-1	0	1	-1	0	0	0	0	0	0	-1	1	0
B15	2	-1	2	-1	-1	-1	4	2	2	2	-1	-1	-4	2	2	-1	-1	-4
B16	0	1	-1	0	1	-1	0	-2	2	0	1	-1	0	-2	2	0	1	-2
B17	-2	1	1	2	-1	-1	0	0	0	-2	1	1	2	-1	1	2	-1	0
B18	0	-1	1	0	1	-1	0	0	0	0	-1	1	0	0	0	1	0	0
B19	-2	1	1	-2	1	1	4	-2	-2	4	-2	4	-2	-8	4	4	2	2
B20	0	-1	1	0	-1	1	0	2	-2	0	2	-2	0	4	4	0	1	-2
B21	2	-1	-1	-2	1	1	0	0	0	-4	2	2	-2	0	0	0	1	0
B22	0	1	-1	0	-1	1	0	0	0	-2	2	0	2	-2	0	0	-1	0
B23	2	-1	-1	2	-1	-1	-4	2	2	0	0	0	0	0	0	1	-2	-2
B24	0	1	-1	0	1	2	-1	0	-1	0	-2	0	0	0	0	-1	1	4
B25	-2	1	1	2	-1	-1	0	0	0	0	0	0	0	0	0	-2	1	0
B26	0	-1	1	0	1	-1	0	0	0	0	0	0	0	0	0	-1	0	0

Table A7.1.4: ANOVA summary computed using *Psy 32 for Windows Version 2.0*.

Summary of Analysis of Variance					Source	SS	df	MS	F
Source	SS	df	MS	F	B14	0.079	1	0.079	0.036
A1	19.108	1	19.108	4.604	A1B14	0.003	1	0.003	0.001
Error	83.003	20	4.150		Error	43.941	20	2.197	
					B15	0.802	1	0.802	0.365
					A1B15	1.728	1	1.728	0.787
Within					Error	43.902	20	2.195	
					B16	6.111	1	6.111	1.747
B1	3.340	1	3.340	1.577	A1B16	0.700	1	0.700	0.200
A1B1	12.410	1	12.410	5.857	Error	69.971	20	3.499	
Error	42.378	20	2.119		B17	6.014	1	6.014	1.931
B2	1.133	1	1.133	0.556	A1B17	0.438	1	0.438	0.141
A1B2	3.168	1	3.168	1.554	Error	62.281	20	3.114	
Error	40.775	20	2.039		B18	6.796	1	6.796	2.563
B3	2.592	1	2.592	0.548	A1B18	0.129	1	0.129	0.049
A1B3	2.425	1	2.425	0.512	Error	53.022	20	2.651	
Error	94.628	20	4.731		B19	1.730	1	1.730	0.745
B4	14.427	1	14.427	4.549	A1B19	1.959	1	1.959	0.844
A1B4	5.867	1	5.867	1.850	Error	46.420	20	2.321	
Error	63.432	20	3.172		B20	0.924	1	0.924	0.389
B5	49.705	1	49.705	20.558	A1B20	1.826	1	1.826	0.768
A1B5	1.740	1	1.740	0.720	Error	47.542	20	2.377	
Error	48.357	20	2.418		B21	0.470	1	0.470	0.165
B6	4.036	1	4.036	1.605	A1B21	0.276	1	0.276	0.097
A1B6	0.037	1	0.037	0.015	Error	56.977	20	2.849	
Error	50.309	20	2.515		B22	0.947	1	0.947	0.588
B7	0.023	1	0.023	0.004	A1B22	0.872	1	0.872	0.541
A1B7	15.040	1	15.040	2.382	Error	32.239	20	1.612	
Error	126.278	20	6.314		B23	0.535	1	0.535	0.147
B8	1.417	1	1.417	0.480	A1B23	0.230	1	0.230	0.063
A1B8	18.809	1	18.809	6.371	Error	73.053	20	3.653	
Error	59.045	20	2.952		B24	1.211	1	1.211	0.491
B9	0.233	1	0.233	0.072	A1B24	1.900	1	1.900	0.770
A1B9	10.161	1	10.161	3.114	Error	49.339	20	2.467	
Error	65.258	20	3.263		B25	2.614	1	2.614	0.514
B10	0.744	1	0.744	0.327	A1B25	1.092	1	1.092	0.214
A1B10	1.259	1	1.259	0.554	Error	101.818	20	5.091	
Error	45.441	20	2.272		B26	6.102	1	6.102	2.128
B11	0.014	1	0.014	0.003	A1B26	1.352	1	1.352	0.472
A1B11	1.464	1	1.464	0.350	Error	57.354	20	2.868	
Error	83.587	20	4.179						
B12	0.610	1	0.610	0.202					
A1B12	10.292	1	10.292	3.401					
Error	60.527	20	3.026						
B13	4.780	1	4.780	2.397					
A1B13	10.396	1	10.396	5.213					
Error	39.886	20	1.994						

APPENDIX 7.2

Tempo analysis: Aggregate ratings data, planned contrasts, and ANOVA summary from Multipart Experiment 1

Table A7.2.1: Average ratings for target (*t*) and distracter (*d-x* & *d-y*) aggregate test items in each multipart rhythmic complexity condition (matched, mismatched, & nonmetrical) at slow, medium, and fast tempi.

		Slow				Medium				Fast												
		Qd		Tr		Qd		Tr		Qd		Tr										
		<i>t</i>	<i>d-x</i>	<i>d-y</i>																		
2	-3	-1	1.5	-2	1.5	1	0.5	-1	2	-3	-1	1.5	-3	-2	0	1.5	-3	3	1.5	-3	2	
0	-3	0	0.5	-3	0	0	-3	-1	-1	0	0.5	1	-3	3	-1	1	-2	0	1	0	0.5	
2	-3	0	-1	-2	0.5	-2	-1	2	-3	-2	1	-3	0.5	-1	-2	2	-3	0.5	-3	-3	-1	
3	-3	2	-3	3	-1	-2	-1	1.5	0	-1	1.5	0	-3	2	-3	0	-2	1	-2	-3	-1	
2	-2	2	1	-1	0.5	-1	-2	1.5	-1	1.5	0	-3	2	-2	0	-3	0	1	-3	3	-2	
2	-3	2	2	-3	-1	1	-2	-1	2	-1	-3	1.5	-3	0.5	1	-3	0	-2	0	1	1	2
3	-2	-2	-3	-2	-3	1	-2	-2	-1	-3	2	1	-3	2	1	-1	1	1	1	2	1	2
2	-3	1	3	-3	1	-1	0.5	-1	1	-1	3	-3	2	1	-1	1	-1	1	-2	1	-2	2
3	-3	2	-2	-1	0.5	-1	1	-1	1	-1	3	-3	2	1	-2	2	-3	3	-1	1	-2	-1
2	-2	-2	-3	-2	-3	1	-2	-2	-1	-3	2	1	-3	0.5	1	-1	1	-1	-2	1	-3	2
2	-3	1	3	-3	1	-1	0.5	-1	1	-1	3	-3	0	0.5	1	-1	1	-1	-2	1	-3	2
3	-3	2	-2	-1	0.5	-1	1	-1	1	-1	3	-3	2	1	-2	2	-3	3	-1	1	-2	-1
2	-2	1	1	-1	2	-1	-3	0	-3	1	-2	-2	1	-2	1	-1	-2	-3	1	-1	1	-1
2	-3	3	-1	-1	-3	2	1	1	3	-3	2	-1	-1	-3	3	2	2	-2	2	-2	3	-1
3	-3	-3	1	-1	1	1	1	3	-2	1	-2	1	-3	1	-1	2	-3	2	2	-2	3	-1
2	-2	1	-1	2	-1	-3	0	-3	1	-2	-2	1	-2	1	-1	-2	-3	1	-1	-2	3	-1
2	-3	3	-1	-1	-3	2	1	1	3	-3	2	-1	-1	-3	3	2	2	-2	2	-2	3	-1
3	-3	-3	1	-1	1	1	1	3	-2	1	-2	1	-3	1	-1	2	-3	2	2	-2	3	-1
1.5	-2	0.5	1.5	-2	1.5	2	2	3	0	-2	0	-3	1	0	-3	2	-2	0	0	0	-2	0.5
0.5	-2	2	0	-2	-2	2	-1	-2	-1	-3	1	-3	2	1.5	1.5	0	-2	2	-3	0.5	1	-2
1.5	-1	-1	2.5	0.5	2.5	3	-2	-2	1.5	0.5	0	-1	-2	1	1	-3	-1	0.5	2	1	-2	1.5
2.5	-2	1	2.5	-3	-2	-3	-1	2	2	-3	2	-2	-3	0	-1	1	-3	2	-2	1	2	0
-2	-2	-1	1	-1	-1	1	1	-1	2	-1	-3	0	-2	1	1	-1	0.5	2	2	-1	-2	0
1.5	-1	1.5	-2	0	1	-1	1	-1	2	2	0	0.5	3	-3	2	0	-1	2.5	-1	0	2.5	0.5
0	-1	-3	1.5	-3	1.5	1	-2	-1	3	-1	-3	-2	-1	0.5	-2	1	-1	2	-2	1.5	-3	-1
2	-2	-1	1	-2	-1	-1	1	-1	2	-1	-1	-2	-2	-1	2.5	-1	0	1	2	2	3	-1
3	-1	1	1	-2	-1	2	-3	-1	3	-1	-3	1	-2	2.5	-2	2	3	1	-1	1	1	-1
2	2	3	0.5	0	-1	1	-3	2	-1	-1	1	3	1	1	-1	1.7	-1	0	-2	3	-1	2

Table A7.2.2: Key to planned contrasts

A1	Mus vs Nonmus (1, -1)
B1	Slow/Fast vs Medium
B2	Slow vs Fast
B3	Met vs Nonmet
B4	Qd vs Tr
B5	t vs d
B6	x vs y
B7	Slow/Fast vs Medium X Met vs Nonmet
B8	Slow/Fast vs Medium X Qd vs Tr
B9	Slow/Fast vs Medium X t vs d
B10	Slow/Fast vs Medium X x vs y
B11	Slow vs Fast X Met vs Nonmet
B12	Slow vs Fast X Qd vs Tr
B13	Slow vs Fast X t vs d
B14	Slow vs Fast X x vs y
B15	Met vs Nonmet X t vs d
B16	Met vs Nonmet X x vs y
B17	Qd vs Tr X t vs d
B18	Qd vs Tr X x vs y
B19	Slow/Fast vs Medium X Met vs Nonmet X t vs d
B20	Slow/Fast vs Medium X Met vs Nonmet X x vs y
B21	Slow/Fast vs Medium X Qd vs Tr X t vs d
B22	Slow/Fast vs Medium X Qd vs Tr X x vs y
B23	Slow vs Fast X Met vs Nonmet X t vs d
B24	Slow vs Fast X Met vs Nonmet X x vs y
B25	Slow vs Fast X Qd vs Tr X t vs d
B26	Slow vs Fast X Qd vs Tr X x vs y

Table A7.2.3: Planned within group contrasts

	Slow						Medium						Fast						Nm					
	Qd	t	d-x	d-y	Tr	t	d-x	d-y	Qd	t	d-x	d-y	Tr	t	d-x	d-y	Qd	t	d-x	d-y	Tr	t	d-x	d-y
B1	-1	-1	-1	-1	-1	-1	-1	-1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
B2	1	1	1	1	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
B3	1	1	1	1	1	1	-2	-2	1	1	1	1	-2	-2	1	1	1	1	1	1	1	1	-2	-2
B4	-1	-1	-1	1	1	1	0	0	-1	-1	1	1	0	0	-1	-1	-1	-1	1	1	1	0	0	0
B5	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1	2	-1	-1
B6	0	1	-1	0	1	-1	0	1	0	1	-1	0	1	-1	0	1	-1	0	1	-1	0	1	-1	-1
B7	-1	-1	-1	-1	-1	-1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-2
B8	1	1	1	-1	-1	-1	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
B9	-2	1	1	-2	1	1	-2	1	1	4	-2	-2	4	-2	-2	4	-2	-2	2	-1	2	-1	-1	-1
B10	0	-1	1	0	-1	1	0	-1	1	0	2	-2	0	2	-2	0	2	-2	0	1	-1	0	1	-1
B11	1	1	1	1	1	1	-2	-2	-2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B12	-1	-1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B13	2	-1	-1	2	-1	-1	2	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B14	0	1	-1	0	1	-1	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B15	2	-1	2	-1	-1	-1	-4	2	2	2	-1	-1	2	-1	-1	-4	2	2	2	-1	-1	-4	2	2
B16	0	1	-1	0	1	-1	0	-2	2	0	1	-1	0	0	-2	2	0	1	-1	0	1	-1	0	-2
B17	-2	1	1	2	-1	-1	0	0	0	-2	1	1	2	-1	0	0	0	0	0	2	1	1	2	1
B18	0	-1	1	0	1	-1	0	0	0	0	-1	1	0	-1	0	0	0	0	0	0	0	0	0	0
B19	-2	1	1	-2	1	1	4	-2	-2	4	-2	-2	4	-2	-2	4	-2	-2	0	2	-1	-1	-4	2
B20	0	-1	1	0	-1	1	0	2	-2	0	2	-2	0	2	-2	0	2	-2	0	1	-1	0	1	-2
B21	2	-1	-1	-2	1	1	0	0	0	-4	2	2	4	-2	-2	0	0	0	0	0	2	-1	-1	0
B22	0	1	-1	0	-1	1	0	0	0	0	-2	2	0	2	-2	0	0	0	0	0	1	0	-1	0
B23	2	-1	-1	2	-1	-1	-4	2	2	0	0	0	0	0	0	0	0	0	0	0	1	1	-2	-2
B24	0	1	-1	0	1	2	-1	0	-1	0	-2	2	0	0	0	0	0	0	0	-1	1	0	4	-2
B25	-2	1	1	2	-1	-1	0	1	-1	0	0	0	0	0	0	0	0	0	0	-1	1	0	0	0
B26	0	-1	1	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	1	0	0

Table A7.2.4: ANOVA summary computed using *Psy 32 for Windows Version 2.0*.

Summary of Analysis of Variance					Source	SS	df	MS	F
Source	SS	df	MS	F	B14	0.202	1	0.202	0.048
A1	6.856	1	6.856	2.378	A1B14	0.316	1	0.316	0.074
Error	57.663	20	2.883		Error	84.753	20	4.238	
					B15	17.962	1	17.962	6.684
					A1B15	4.776	1	4.776	1.777
Within					Error	53.745	20	2.687	
					B16	0.551	1	0.551	0.279
B1	14.645	1	14.645	7.733	A1B16	1.528	1	1.528	0.774
A1B1	0.002	1	0.002	0.001	Error	39.478	20	1.974	
Error	37.878	20	1.894		B17	0.642	1	0.642	0.428
B2	1.958	1	1.958	0.984	A1B17	9.357	1	9.357	6.240
A1B2	1.162	1	1.162	0.584	Error	29.990	20	1.499	
Error	39.797	20	1.990		B18	0.004	1	0.004	0.001
B3	10.170	1	10.170	5.937	A1B18	0.117	1	0.117	0.024
A1B3	1.035	1	1.035	0.604	Error	97.527	20	4.876	
Error	34.260	20	1.713		B19	3.394	1	3.394	1.450
B4	3.367	1	3.367	1.159	A1B19	1.546	1	1.546	0.660
A1B4	0.008	1	0.008	0.003	Error	46.818	20	2.341	
Error	58.086	20	2.904		B20	6.426	1	6.426	3.413
B5	431.152	1	431.152	212.750	A1B20	0.523	1	0.523	0.278
A1B5	8.182	1	8.182	4.038	Error	37.655	20	1.883	
Error	40.531	20	2.027		B21	2.951	1	2.951	1.338
B6	130.268	1	130.268	79.788	A1B21	0.415	1	0.415	0.188
A1B6	3.927	1	3.927	2.405	Error	44.124	20	2.206	
Error	32.653	20	1.633		B22	2.243	1	2.243	0.877
B7	6.585	1	6.585	3.433	A1B22	1.355	1	1.355	0.530
A1B7	3.035	1	3.035	1.582	Error	51.136	20	2.557	
Error	38.364	20	1.918		B23	2.383	1	2.383	1.046
B8	7.075	1	7.075	2.500	A1B23	2.135	1	2.135	0.937
A1B8	2.037	1	2.037	0.720	Error	45.573	20	2.279	
Error	56.598	20	2.830		B24	15.438	1	15.438	7.208
B9	68.456	1	68.456	50.224	A1B24	4.284	1	4.284	2.000
A1B9	0.001	1	0.001	0.001	Error	42.831	20	2.142	
Error	27.260	20	1.363		B25	0.247	1	0.247	0.184
B10	26.269	1	26.269	7.723	A1B25	1.468	1	1.468	1.095
A1B10	3.787	1	3.787	1.113	Error	26.827	20	1.341	
Error	68.029	20	3.401		B26	0.040	1	0.040	0.015
B11	18.057	1	18.057	5.814	A1B26	0.296	1	0.296	0.108
A1B11	0.026	1	0.026	0.008	Error	54.682	20	2.734	
Error	62.119	20	3.106						
B12	6.679	1	6.679	1.823					
A1B12	0.202	1	0.202	0.055					
Error	73.295	20	3.665						
B13	0.596	1	0.596	0.256					
A1B13	2.823	1	2.823	1.215					
Error	46.478	20	2.324						