

**COMPOSERS CAUGHT IN THE ACT:**  
Metronomes and Interpretation as Realized by Composers

by

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November 30, 2015

AN ABSTRACT OF

COMPOSERS CAUGHT IN THE ACT

There is hardly a topic which can become more quickly heated between orchestral conductors than that of metronome markings, and one's interpretation of them. The interpretation, and realization in performance, of a composer's intentions has been a polarizing issue since the invention of the metronome, if not before.

Over the last century, historical recordings have been presented to be revelatory of a given composer's intentions. The primary purpose of this research paper has been to examine the scores and associated historical performances of major orchestral works as realized and interpreted by their composers, most specifically with regards to observance of metronome markings. The performances, and associated scores, of 22 composers are analyzed, including Maurice Ravel, John Adams, Aaron Copland, Paul Hindemith, Sergei Rachmaninoff, Igor Stravinsky, Edward Elgar, Leonard Bernstein, and many others.

Concluding this work, the nature and goals of various interpretative philosophies are examined followed by a brief survey of various attitudes of contemporary and nineteenth century conductors and composers, including the words and opinions on metronome usage by Ludwig van Beethoven, Johannes Brahms, and Carl Maria von Weber.

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## Introduction and Methodology

Since the invention of the metronome, roughly two centuries ago, controversy and debate have flourished with regards to how musicians can best achieve a given composer's intentions in performance. There are those who take a fundamentalist approach to score reading and preparation, for whom every notation, tempo indication, and dynamic marking must be adhered to in the manner of a sacred religious text. And there are those at the other end of the spectrum, for whom each work performed is an opportunity for the individual performer to produce a personal expression, essentially irrespective of what the composer might have intended. In his book, *The Composer's Advocate: A Radical Orthodoxy for Musicians*, the legendary conductor Erich Leinsdorf alludes to this dichotomy thusly:

There is a large and influential school of thought whose adherents believe that compositions are merely vehicles for performers. It has existed at least since the days of Franz Liszt. Some critics subscribe to this philosophy, while others deplore it. My own conviction is that composers have very clear ideas about how they want their works performed, and they are more likely than anyone else to be correct.<sup>1</sup>

On the surface, Maestro Leinsdorf's assertion, "composers have very clear ideas about how they want their works performed," may seem self-evident. After all, these are the very creators, the origin and source of the sounds that we musicians endeavor to recreate. But does any single orchestral score contain enough information from which to realistically determine a composer's intentions? Maestro Leinsdorf would undoubtedly say, "No," prescribing in his book that a conductor, when preparing to rehearse a concerto of W.A. Mozart (for example), become well-acquainted with his operas, symphonies, and sonatas as well. For only then might one have an adequate understanding of Mozart's idiom, his particular musical vocabulary, if you

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<sup>1</sup> Erich Leinsdorf. *The Composer's Advocate: A Radical Orthodoxy for Musicians*. New Haven, CT, Yale University Press. 1981. 47

will. And what of the correct tempo, quite possibly the most important (or at least, foundational) decision towards the determination of a composer's intentions. Is it truly as simple as following the metronome markings, as laid down by the composer?

In probing the multitude of questions surrounding aspects of score interpretation, one could easily compose multiple volumes. For the purposes of this research paper, I hope to shed light on the nature of just one vital ambiguity faced by conductors/interpreters; are metronome indications a reliable source from which to derive the composer's intended tempo? My methodology was to collect and analyze a diverse group of composers' recordings wherein they lead professional ensembles in performances of their own compositions. For each work, I compared the tempo of the performance with the tempos as notated in each associated score, as well as any tempo relationships which followed (see Appendices A-W for detailed notes on each performance). The composers chosen span the entire twentieth century, from many diverse countries, traditions, and practices. Following this comparative analysis and selected commentary on representative performances, I will summarize statements made by prominent conductors and composers of the nineteenth century regarding tempo, metronome markings and usage, and musical performance.

## Performance Data and Analysis

The following spreadsheet (Figure 1.1) presents a detailed representation of each composer's performance in this study. (Again, please refer to Appendices A-W for notes on each performance, from which all of the following data was derived.) The column on the left lists the composers whose metronome markings are shown in pairs to the right. The *first* of each pair of numbers lists the tempo as marked in the score, and the *second* of each pair lists the tempo actually taken in each composer's performance.

Composer	Metronome Markings/Performance Tempi															
J. Adams	126/126	132/132	144/130	152/138	174/162	126/104	132/130	96/88								
	104/96	76/82	60/46	96/90	168/158	184/162	120/100	116/121								
M. Arnold	104/83	160/147	112/72	160/147	96/65	144/141										
L. Bernstein - Serenade	30/33	54/54	92/76	54/54	132/134											
L. Bernstein - Symphony	60/50	72/78	63/55	84/100												
F. Bridge	75/63	50/43	75/67	50/45	144/140	48/53	52/54	58/67	50/48	100/95	60/56	100/103				
B. Britten	72/60	165/112	58/39	172/165	80/77	172/155	121/106	88/106	104/92	54/49	50/43	180/166				
A. Copland	66/54	88/72	160/160	104/86	69/76	52/52	63/52	132/132	126/126							
	66/58	92/92	120/104	96/78	72/76	80/76	66/58	96/64	104/68	69/58						
E. Elgar	63/50	63/52	73/79	144/136	72/72	63/52	48/53	76/84								
	52/40	52/46	80/90	100/107	58/56	76/90	84/94	84/86								
L. Foss	60/56	90/85	120/126													
G. Gershwin	120/148	132/144	144/154	116/138	108/140	120/132	138/144	76/88	108/136	126/142						
	69/77	112/122	132/135	136/147	94/112	116/136	126/146	72/69	132/148	88/88						
H. Hanson	63/70	132/132	132/132	92/100	92/106	132/132	63/70	76/55								
	84/92	76/86	76/66	84/92	84/120	63/90	92/130	76/62								
P. Hindemith	66/48	110/110	66/50	54/40	176/176	60/52	144/142	100/78	144/144	80/80	40/40					
A. Honegger	60/54	80/100	152/154	144/144	138/126	132/126	126/112	126/82								
A. Hovhaness	66/67	80/78	108/96	88/98	72/88	72/84	76/93	116/131	72/70	88/72						
A. Khachaturian	46/42	72/72	90/90	102/114	69/62	106/114	78/74	90/92	98/113	106/112	46/56	94/100	60/62	94/98		
	62/60	96/100	104/122	69/65	69/54	96/104	114/134	148/148	114/134	72/72	112/112	82/64				
W. Lutoslawski	58/55	117/118	58/52	144/160	76/86	150/134	152/150	54/36	168/168							
D. Milhaud	54/66	62/82	54/66	62/74	96/58	104/124	92/74	108/106	80/74	88/78	80/82	108/91	62/73	54/63	62/77	
S. Prokofiev	50/46	100/91	54/82	100/90	144/132	84/74	124/124	144/134								
	60/58	54/57	164/150	80/70	50/50	72/76	60/66	80/64	52/52							
S. Rachmaninoff - Isle	60/60	66/74	76/60	76/86	60/56											
S. Rachmaninoff - Concerto	66/52	66/82	66/66	72/90	72/82	76/94	80/100	96/102	76/86	96/72	63/70					
M. Ravel	72/65															
D. Shostakovich	96/97	96/120	63/60	76/79	120/128	80/82	126/160	84/82	76/77	76/86	76/75	76/108				
I. Stravinsky - Le Sacre (1)	50/50	66/70	50/50	50/60	132/126	108/100	80/74	160/152	108/108	166/152	42/42	168/154				
	48/54	60/84	48/60	60/82	80/112	60/76	120/120	144/126	144/116	52/66	126/130	126/132				
I. Stravinsky - Le Sacre (2)	50/56	66/63	50/63	50/56	132/127	108/115	80/71	160/166	108/121	166/166	42/43	168/160				
	48/50	60/74	48/53	60/77	80/110	60/68	120/150	144/132	144/114	52/70	126/120	126/132				
R. Vaughan Williams	80/70	75/64	80/70	80/60	120/112	120/96	120/112	120/96	120/112							
	66/52	66/52	66/56	66/56	66/54	120/90	120/92	120/84								

Figure 1.1. Performance Data Chart #1, basic view



This next spreadsheet (Figure 1.2) is colored to highlight the frequency with which each composer has deviated from their own tempo markings, and to what degree. For deviations of less than  $\pm 5$  bpm (beats per minute), no shading has been used. Deviations from 6-10 bpm have been shaded **green**, from 11-15 bpm **yellow**, and deviations greater than  $\pm 15$  bpm have been shaded in **red**.

Composer	Metronome Markings/Performance Tempi														
J. Adams	126/126	132/132	144/130	152/138	174/162	126/104	132/130	96/88							
	104/96	76/82	60/46	96/90	168/158	184/162	120/100	116/121							
M. Arnold	104/83	160/147	112/72	160/147	96/65	144/141									
L. Bernstein - Serenade	30/33	54/54	92/76	54/54	132/134										
L. Bernstein - Symphony	60/50	72/78	63/55	84/100											
F. Bridge	75/63	50/43	75/67	50/45	144/140	48/53	52/54	58/67	50/48	100/95	60/56	100/103			
B. Britten	72/60	165/112	58/39	172/165	80/77	172/155	121/106	88/106	104/92	54/49	50/43	180/166			
A. Copland	66/54	88/72	160/160	104/86	69/76	52/52	63/52	132/132	126/126						
	66/58	92/92	120/104	96/78	72/76	80/76	66/58	96/64	104/68	69/58					
E. Elgar	63/50	63/52	73/79	144/136	72/72	63/52	48/53	76/84							
	52/40	52/46	80/90	100/107	58/56	76/90	84/94	84/86							
L. Foss	60/56	90/85	120/126												
G. Gershwin	120/148	132/144	144/154	116/138	108/140	120/132	138/144	76/88	108/136	126/142					
	69/77	112/122	132/135	136/147	94/112	116/136	126/146	72/69	132/148	88/88					
H. Hanson	63/70	132/132	132/132	92/100	92/106	132/132	63/70	76/55							
	84/92	76/86	76/66	84/92	84/120	63/90	92/130	76/62							
P. Hindemith	66/48	110/110	66/50	54/40	176/176	60/52	144/142	100/78	144/144	80/80	40/40				
A. Honegger	60/54	80/100	152/154	144/144	138/126	132/126	126/112	126/82							
A. Hovhaness	66/67	80/78	108/96	88/98	72/88	72/84	76/93	116/131	72/70	88/72					
A. Khachaturian	46/42	72/72	90/90	102/114	69/62	106/114	78/74	90/92	98/113	106/112	46/56	94/100	60/62	94/98	
	62/60	96/100	104/122	69/65	69/54	96/104	114/134	148/148	114/134	72/72	112/112	82/64			
W. Lutoslawski	58/55	117/118	58/52	144/160	76/86	150/134	152/150	54/36	168/168						
D. Milhaud	54/66	62/82	54/66	62/74	96/58	104/124	92/74	108/106	80/74	88/78	80/82	108/91	62/73	54/63	62/77
S. Prokofiev	50/46	100/91	54/82	100/90	144/132	84/74	124/124	144/134							
	60/58	54/57	164/150	80/70	80/110	60/68	72/76	60/66	80/64	52/52					
S. Rachmaninoff - Isle	60/60	66/74	76/60	76/86	60/56										
S. Rachmaninoff - Concerto	66/52	66/82	66/66	72/90	72/82	76/94	80/100	96/102	76/86	96/72	63/70				
M. Ravel	72/65														
D. Shostakovich	96/97	96/120	63/60	76/79	120/128	80/82	126/160	84/82	76/77	76/86	76/75	76/108			
I. Stravinsky - Le Sacre (1)	50/50	66/70	50/50	50/60	132/126	108/100	80/74	160/152	108/108	166/152	42/42	168/154			
	48/54	60/84	48/60	60/82	80/112	60/76	120/120	144/126	144/116	52/66	126/130	126/132			
I. Stravinsky - Le Sacre (2)	50/56	66/63	50/63	50/56	132/127	108/115	80/71	160/166	108/121	166/166	42/43	168/160			
	48/50	60/74	48/53	60/77	80/110	60/68	120/150	144/132	144/114	52/70	126/120	126/132			
R. Vaughan Williams	80/70	75/64	80/70	80/60	120/112	120/96	120/112	120/96	120/112						
	66/52	66/52	66/56	66/56	66/54	120/90	120/92	120/84							

Figure 1.2. Performance Data Chart #1, colored to illuminate degree of tempo deviation

This third spreadsheet (Figure 1.3) simply reorders the many pairs of numbers from chronological to shaded sections in groups. In this way we can more easily see to what degree each composer has adhered to or deviated from the metronome markings in their own scores, and with what frequency.

Composer	Metronome Markings/Performance Tempi														
J. Adams	126/126	132/132	132/130	96/88	144/130	152/138	174/162	126/104							
	104/96	76/82	96/90	116/121	60/46	168/158	184/162	120/100							
M. Arnold	144/141	160/147	160/147	104/83	112/72	96/65									
L. Bernstein - Serenade	30/33	54/54	54/54	132/134	92/76										
L. Bernstein - Symphony	72/78	63/55	60/50	84/100											
F. Bridge	50/45	144/140	48/53	52/54	50/48	100/95	60/56	100/103	50/43	58/67	75/67	75/63			
B. Britten	80/77	54/49	72/60	172/165	50/43	121/106	104/92	180/166	88/106	172/155	165/112	58/39			
A. Copland	160/160	52/52	132/132	126/126	69/76	63/52	66/54	88/72	104/86						
	92/92	72/76	80/76	66/58	66/58	69/58	120/104	96/78	96/64	104/68					
E. Elgar	72/72	48/53	73/79	144/136	76/84	63/50	63/52	63/52							
	58/56	84/86	52/40	52/46	80/90	100/107	84/94	76/90							
L. Foss	60/56	90/85	120/126												
G. Gershwin	144/154	138/144	132/144	120/132	76/88	120/148	116/138	108/140	108/136	126/142					
	132/135	72/69	88/88	69/77	112/122	136/147	94/112	116/136	126/146	132/148					
H. Hanson	132/132	132/132	132/132	63/70	92/100	63/70	92/106	76/55							
	84/92	76/86	76/66	84/92	76/62	84/120	63/90	92/130							
P. Hindemith	110/110	176/176	144/142	144/144	80/80	40/40	60/52	54/40	66/48	66/50	100/78				
A. Honegger	152/154	144/144	60/54	132/126	138/126	126/112	80/100	126/82							
A. Hovhaness	66/67	80/78	72/70	88/98	108/96	72/84	116/131	72/88	76/93	88/72					
A. Khachaturian	46/42	72/72	90/90	78/74	90/92	60/62	94/98	69/62	106/114	106/112	46/56	94/100	98/113	102/114	
	62/60	96/100	69/65	148/148	72/72	112/112	96/104	69/54	104/122	114/134	114/134	82/64			
W. Lutoslawski	58/55	117/118	152/150	168/168	58/52	76/86	144/160	150/134	54/36						
D. Milhaud	108/106	80/82	80/74	88/78	54/63	54/66	54/66	62/74	62/73	62/77	62/82	96/58	104/124	92/74	108/91
S. Prokofiev	50/46	124/124	100/91	100/90	84/74	144/134	144/132	54/82							
	60/58	54/57	50/50	72/76	52/52	80/70	60/66	164/150	80/64						
S. Rachmaninoff - Isle	60/60	60/56	66/74	76/86	76/60										
S. Rachmaninoff - Concerto	66/66	72/82	96/102	76/86	63/70	66/52	66/82	72/90	76/94	80/100	96/72				
M. Ravel	72/65														
D. Shostakovich	96/97	63/60	76/79	80/82	84/82	76/77	76/75	120/128	76/86	96/120	126/160	76/108			
I. Stravinsky - Le Sacre (1)	50/50	66/70	50/50	108/100	108/108	42/42	50/60	132/126	80/74	160/152	166/152	168/154			
	120/120	126/130	48/54	126/132	48/60	52/66	60/84	60/82	80/112	60/76	144/126	144/116			
I. Stravinsky - Le Sacre (2)	50/56	66/63	132/127	166/166	42/43	50/56	108/115	80/71	160/166	168/160	50/63	108/121			
	48/50	48/53	60/68	126/120	126/132	60/74	144/132	60/77	80/110	120/150	144/114	52/70			
R. Vaughan Williams	80/70	80/70	120/112	120/112	120/112	75/64	80/60	120/96	120/96						
	66/56	66/56	66/52	66/52	66/54	120/90	120/92	120/84							

Figure 1.3. Performance Data Chart #1, colored and grouped view

The following pie chart (Fig. 1.4 below) succinctly summarizes the frequency of metronome adherence for all of the composers analyzed as a group, as well as to what degree they deviated. It is notable that *less than a third* of the time did these composers' tempos fall within what this study considered to be the margin of error ( $\pm 5$  bpm). In the case of the top two tempo deviation ranges, shaded yellow and red, approximately 42% of the tempos taken were dissimilar enough from the printed metronome markings as to have noticeably altered the feel and character of the associated music.

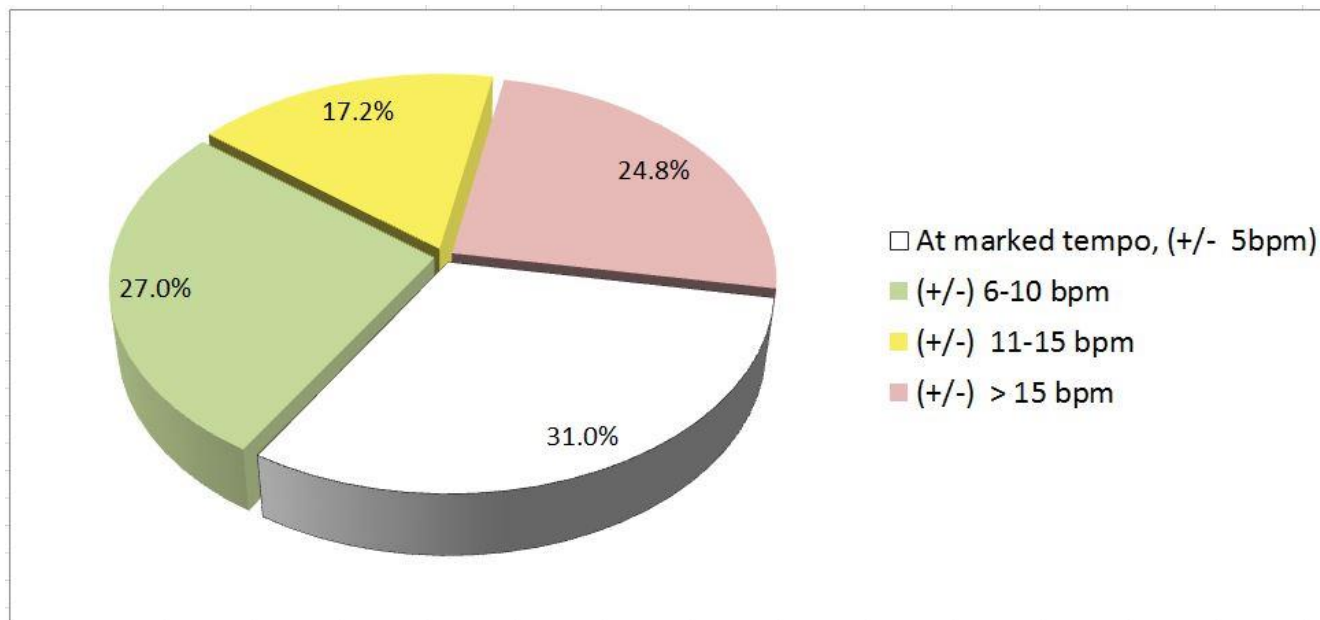


Figure 1.4. Pie chart derived from Data Chart #1



This final spreadsheet (Fig. 1.5) looks at the performance data from another, more simplified perspective. The question I wanted to answer was, “Do composers tend to take tempos slower than their markings? Or is there some other pattern?” Unfortunately, and contrary to my expectations, the percentage of times composers took tempos slower than their markings, shaded blue, is nearly equal to the percentage associate with faster tempos, shaded in orange. (Refer to the pie chart, Figure 1.6, on the following page for an illustration.)

Composer	Metronome Markings/Performance Tempi												
J. Adams	126/126	132/132	144/130	152/138	174/162	126/104	132/130	96/88					
	104/96	76/82	60/46	96/90	168/158	184/162	120/100	116/121					
M. Arnold	104/83	160/147	112/72	160/147	96/65	144/141							
L. Bernstein - Serenade	30/33	54/54	92/76	54/54	132/134								
L. Bernstein - Symphony	60/50	72/78	63/55	84/100									
F. Bridge	75/63	50/43	75/67	50/45	144/140	48/53	52/54	58/67	50/48	100/95	60/56	100/103	
B. Britten	72/60	165/112	58/39	172/165	80/77	172/155	121/106	88/106	104/92	54/49	50/43	180/166	
A. Copland	66/54	88/72	160/160	104/86	69/76	52/52	63/52	132/132	126/126				
	66/58	92/92	120/104	96/78	72/76	80/76	66/58	96/64	104/68	69/58			
E. Elgar	63/50	63/52	73/79	144/136	72/72	63/52	48/53	76/84					
	52/40	52/46	80/90	100/107	58/56	76/90	84/94	84/86					
L. Foss	60/56	90/85	120/126										
G. Gershwin	120/148	132/144	144/154	116/138	108/140	120/132	138/144	76/88	108/136	126/142			
	69/77	112/122	132/135	136/147	94/112	116/136	126/146	72/69	132/148	88/88			
H. Hanson	63/70	132/132	132/132	92/100	92/106	132/132	63/70	76/55					
	84/92	76/86	76/66	84/92	84/120	63/90	92/130	76/62					
P. Hindemith	66/48	110/110	66/50	54/40	176/176	60/52	144/142	100/78	144/144	80/80	40/40		
A. Honegger	60/54	80/100	152/154	144/144	138/126	132/126	126/112	126/82					
A. Hovhaness	66/67	80/78	108/96	88/98	72/88	72/84	76/93	116/131	72/70	88/72			
A. Khachaturian	46/42	72/72	90/90	102/114	69/62	106/114	78/74	90/92	98/113	106/112	46/56	94/100	60/62 94/98
	62/60	96/100	104/122	69/65	69/54	96/104	114/134	148/148	114/134	72/72	112/112	82/64	
W. Lutoslawski	58/55	117/118	58/52	144/160	76/86	150/134	152/150	54/36	168/168				
D. Milhaud	54/66	62/82	54/66	62/74	96/58	104/124	92/74	108/106	80/74	88/78	80/82	108/91	62/73 54/63 62/77
S. Prokofiev	50/46	100/91	54/82	100/90	144/132	84/74	124/124	144/134					
	60/58	54/57	164/150	80/70	50/50	72/76	60/66	80/64	52/52				
S. Rachmaninoff - Isle	60/60	66/74	76/60	76/86	60/56								
S. Rachmaninoff - Concerto	66/52	66/82	66/66	72/90	72/82	76/94	80/100	96/102	76/86	96/72	63/70		
M. Ravel	72/65												
D. Shostakovich	96/97	96/120	63/60	76/79	120/128	80/82	126/160	84/82	76/77	76/86	76/75	76/108	
I. Stravinsky - Le Sacre (1)	50/50	66/70	50/50	50/60	132/126	108/100	80/74	160/152	108/108	166/152	42/42	168/154	
	48/54	60/84	48/60	60/82	80/112	60/76	120/120	144/126	144/116	52/66	126/130	126/132	
I. Stravinsky - Le Sacre (2)	50/56	66/63	50/63	50/56	132/127	108/115	80/71	160/166	108/121	166/166	42/43	168/160	
	48/50	60/74	48/53	60/77	80/110	60/68	120/150	144/132	144/114	52/70	126/120	126/132	
R. Vaughan Williams	80/70	75/64	80/70	80/60	120/112	120/96	120/112	120/96	120/112				
	66/52	66/52	66/56	66/56	66/54	120/90	120/92	120/84					

Figure 1.5. Performance Data Chart #2, colored to highlight faster vs. slower tempi

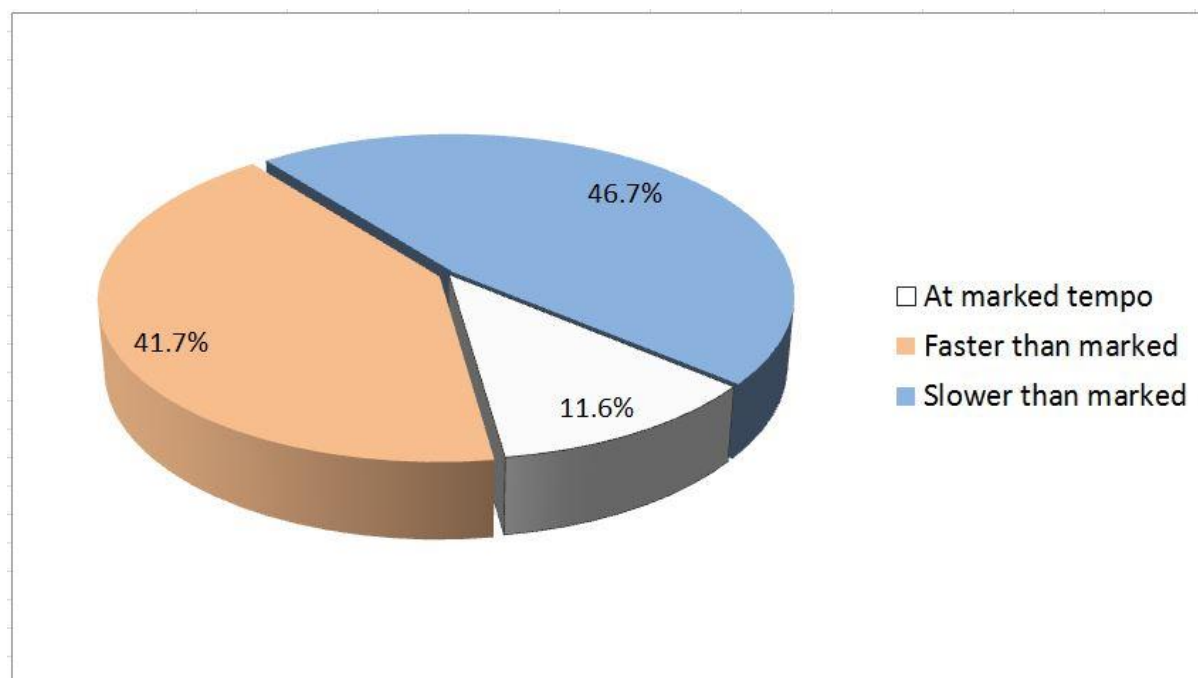


Figure 1.6. Pie chart derived from Data Chart #2

## Representative Commentary on Selected Performances from this Study

### A. John Adams, *Harmonium*

In general, the majority of his tempos are either just under, or quite a bit slower, than his metronome markings. The first poem setting is, more or less, one long and fairly continuous accelerando and crescendo to a climax, after which the very first tempo of the work is suddenly achieved by way of a very clever rhythmic relationship. Although Adams begins at approximately the tempo indicated in his score, his long accelerandi tended to level off about half-way through. He never achieves the blistering speeds indicated in his scores, and on occasion actually slows down rather than continue to increase the tempo. Accelerandi are exceedingly difficult to manage, and it is my instinct (as a conductor) that Maestro Adams may have lacked the skill as a conductor to pace his accelerandi fluidly. It is indeed quite common for even experienced professional conductors to reach a point where an accelerando simply turns into a crescendo, without any further increase in speed.

### C. Bernstein, *Serenade after Plato's 'Symposium': Movement V, "Socrates"*

I chose this particular excerpt because of the many unrelated tempo changes called for in the space of roughly 40 bars of music, all of which are orchestral (taking place before the solo violin enters). Although Maestro Bernstein takes most of the tempos as scored, in the most dramatic middle section, written at quarter=92, he suddenly deviates from what is written, taking a significantly slower tempo of 76bpm.

F. Copland, *Appalachian Spring* (original version for 13 instruments)

Copland begins his work noticeably slower than the tempo indicated. The result however, musically speaking, is quite effective. There is a real feeling of timelessness, and it makes the gradual increases in tempo which follow all the more joyous. It is worth noting that Copland not only rarely adheres to his own tempos, but in fact is usually performing markedly slower, at one point even taking a passage where his score called for quarter=96bpm at only 64bpm!

K. Hindemith, *Symphony-Mathis der Maler*

Like Copland, Hindemith begins his work markedly slower than the tempo indicated. It is even more striking in this case, as his score lists the tempo as dotted-half note="etwa 66", or "approximately 66bpm". In his own performance, it is nowhere near that tempo, but rather at only 48 bpm. The important point here being that this is a slow enough tempo that it is a truly different character than what the written faster tempo would produce. Continuing through the work, the faster sections are consistently at or near his metronome markings, but his slow sections are quite consistently slower in performance.

R. Rachmaninoff, *Piano Concerto No.2, first movement*

I can find no apparent pattern to Rachmaninoff's tempo choices, in relation to what is written. He begins the work noticeably slower than the tempo indicated, which is also frequently done by performers today. Then in faster, more technically demanding sections he generally takes a markedly brisker pace than his own metronome notations, the fastest of these sections increasing from the written 80bpm to the half note all the way up to 100bpm.

S. Ravel, *Bolero*

As this piece progresses at a steady tempo throughout, it is only of interest to know the first tempo, and whether or not the tempo indeed remains steady throughout. Ravel's score indicates a tempo of quarter=72, whereas (like the majority of the composers in this study) Ravel actually leads the work a touch slower at 64bpm. He does keep this slower tempo throughout.

U. Stravinsky, *The Rite of Spring* (the first recording of two)

Of all the composers surveyed in this paper, Stravinsky comes perhaps closest to his own written tempos. While there are certainly moments when he takes sections a bit slower, or faster, than his scores indicate, it is never so much as to change the character of the music. What is striking, however (and, if I may be so bold, characteristically indicative of a musician who is not a professional conductor) is that in every extended section of rhythmic complexity (literally, *every one*), the *Sacrificial Dance* at the end serving as a good example, Stravinsky increases the tempo steadily throughout – but not so much that it ever feels purposeful. As a conductor, I must admit that my instincts suggest that these tempo increases were indeed inadvertent.

### **Metronome Markings and Historical Controversy**

The most oft-quoted example of metronome dispute is of course the tempo indications of Beethoven, and most frequently those of his nine symphonies. Today, nearly two hundred years since the completion of his final work, there are still respected and learned conductors who will argue vehemently for either side of this eternal debate. For example, Maestros David Zinman, Paavo Järvi, and Riccardo Chailly have all recorded full cycles of the Beethoven symphonies in recent years making particular effort to adhere as closely as possible to the metronome markings



indicated by Beethoven. On the other hand, there is far from any shortage of those who dispute the validity (or even the authenticity) of these tempo markings.<sup>2</sup> The disparate views of conductors regarding the metronome markings can be read in entertaining detail within Jeannine Wagar's excellent text, *Conductors in Conversation*, in which she interviews fifteen well-known conductors of international acclaim, and makes a point of asking each one of them for their opinion on this stubborn matter. In one interview, Leonard Slatkin points to the recorded evidence of modern composers disregarding their own tempo markings (a statement which helped to bring about this study). Interestingly, Slatkin also points out that Leonard Bernstein conducted his own works far more slowly in his later years than he did in his youth.<sup>3</sup>

In reality, there is plenty of evidence to support the assertion that metronome markings could be considered to be little more than a composer's suggested tempo. And this evidence dates from the device's earliest usage. Anton Schindler's book, *Beethoven As I Knew Him*, contains the following statement, which has been infamously cited by conductors for generations as valid justification to disregard Beethoven's metronome markings:

Beethoven asked me to make a copy for London of the metronome notations he had a few days before made for Mainz, but the list had been mislaid and we could not find it. London was waiting and there was no time to lose, so the master had to undertake the unpleasant task all over again. But lo! No sooner had he finished than I found the first version. A comparison between the two showed a difference in all the movements. Then the master, losing patience, exclaimed: 'No more metronome! Anyone who can feel the music right does

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<sup>2</sup> I witnessed a conversation in 1996, at the College-Conservatory of Music in Cincinnati, OH, between Peter Oundjian, Music Director of the Toronto Symphony Orchestra, and Christopher Zimmerman, Music Director of the Fairfax Symphony Orchestra. While Maestro Zimmerman was, and continues to be, a follower of Beethoven's metronome markings, Maestro Oundjian prefers to take a less orthodox approach. Oundjian stated that it was his admittedly unscientific belief that Beethoven purposefully marked his tempos higher than he wanted because orchestras at the time made a habit of performing his works under-tempo due to the level of technical difficulty for the contemporary orchestral musicians.

<sup>3</sup> Jeannine Wagar. *Conductors in Conversation*. Boston, MA. G.K. Hall & Co. 1991. 266

not need it, and for anyone who can't, nothing is of any use; he runs away with the whole orchestra anyway!<sup>4</sup>

One of the most compelling statements regarding the suitable use of the metronome during the early nineteenth century was made in an article published in 1824, in the *Berliner Musik-Zeitung*, by none other than the composer Carl Maria von Weber. In this article he emphatically states that the purpose of the metronome markings in scores are far from a definitive tempo, but rather serve, “only to prevent the grossest misunderstandings”.<sup>5</sup> Later in the nineteenth century, Brahms would relate a response to the conductor of the Boston Symphony, who while in preparation to perform the *German Requiem* asked for clarification of the composer's metronome markings:

I think... that the metronome is of no value. As far as at least my experience goes, everybody has, sooner or later, withdrawn his metronome marks.... The so-called ‘elastic’ tempo is moreover not a new invention. ‘Con discrezione’ should be added to that as to many other things. Is this an answer? I know no better one; but what I do know is that I indicate (without figures) my tempi, modestly to be sure, but with the greatest care and clearness.<sup>6</sup>

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<sup>4</sup> Anton Felix Schindler. *Beethoven as I Knew Him*. New York, NY. Courier Dover Publications. 1996. 425-426

<sup>5</sup> Anton Felix Schindler. *Beethoven as I Knew Him*. New York, NY. Courier Dover Publications. 1996. 410

<sup>6</sup> George Henschel. *Personal Recollections of Johannes Brahms*. Boston, MA. Gorham Press. 1907. 78-79

## Conclusions and Final Commentary

No two performances are alike, whether separated by mere moments or millennia. One need look no further than the two performances by Stravinsky detailed in this study as evidence. As musicians, we bring an entire pantheon of personal and emotional complexity to every musical presentation. This is as true of the great composers as it is for all orchestral musicians. Thus, while the many performances referenced in this work surely provide further evidence to what each composer's intentions might have been, none of their recorded performances should be taken as singularly definitive or instructive, necessarily. The fact that almost every composer analyzed herein deviated significantly from his metronome markings neither gives us license as performers to do whatever we please with regards to tempo, nor does it condemn the numbers printed in black and white on the top left of orchestral scores as flawed in any way. It is this conductor's assertion that the printed score, and all indications and notations within, are the beginning of building an interpretation rather than the end. In a pursuit to fathom the depths of human expression through music, we would be wise to consider the words of C.M von Weber. "The beat, the tempo, must not be a controlling tyrant nor a mechanical driving hammer; it should be to a piece of music what the pulse beat is to the life of man... In music we have no way of indicating all this. It resides only in the feelings of the human heart."<sup>7</sup> And this, in conclusion, is what I believe this study has illuminated to be the best advice: as a performing artist, follow your heart.

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<sup>7</sup> Anton Felix Schindler. *Beethoven as I Knew Him*. New York, NY. Courier Dover Publications. 1996. 410

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## Appendix A

### Adams - Harmonium

\*Donne – Negative Love\*

Beg, half note=126 and “gradually and constantly accelerating”; *Adams begins roughly as marked in score*

Bar 110 “steady tempo” at half=132

Bar 191 “begin gradually accelerating”; *Bar 239 is marked at 144, but Adams actually slows down to 132 before then slowing back to 128!*

Bar 311, half=152 “steady tempo”; *Adams seems to be completely ignoring his own accelerando markings, here only going to 138!*

Bar 405, “gradually increasing speed and amplitude” (174 marked); *Starts at a slower tempo..., only gets to about 162*

Bar 501, dotted-half=126 --- Bar 507, half=126 (should be same as opening tempo.); *Dotted-half =104, -- sudden return to opening tempo is, however, very close at roughly 130*

\*Dickinson – Because I Could Not Stop for Death\*

Eighth = 96; *begins at 88 or so*

Bar 29, eighth=104; *composer at 96*

Bar 69, eighth (then quarter)=76; *fairly close, at 82*

Bar 106, quarter=60; *Adams much slower, at 46*

Bar 211, Tempo I (eighth=96) (then gradual accelerando); *Composer nearly there, at 90*

Bar 350, quarter=160

\*Dickinson - Wild Nights!\*

Quarter=168; *Composer at approx, 158*

Bar 143 with accelerando to quarter=184; *Nope – still at about 162, like many conductors he gets louder, but not always faster*

Bar 168 = dotted-half=80; *nope...*

Bar 196, sign post says dotted-half=120; *Adams is at 100*

Molto Accel.... To Bar 233, Slow, half=48

Bar 245, half=116 “Steady tempo”; *Accurate beginning, but gets faster to 126, through to the end... despite his marking of “steady tempo”.*



## Appendix B

### Arnold - Scottish Dances Op. 59

N.1 Pesante qt=104; *composer at 83*

N.2 Vivace qt=160; *composer at 147*

Meno mosso qt=112; *composer at 72*

Tempo primo qt=160; *composer at 147*

N.3 Allegretto qt=96; *composer significantly slower at 65*

N.4 Con brio qt=144; *composer at 141*

## Appendix C

### **Bernstein – Serenade after Plato’s Symposium, Intro. to Mvt. V, ‘Socrates’**

This passage was chosen because it is a purely orchestral introduction (before the solo violin enters), and there are many different metronome indications in the space of only a few pages of the score.

Beg. Half-note=30; *Bernstein at half=32-34.*

Reh1 quarter=54; *Bernstein roughly as marked.*

Reh2 quarter=92; *Bernstein at only 76.*

Reh3 quarter=54; *Bernstein spot on, at 54.*

Reh8 dotted-quarter=132; *Bernstein and Kremer as marked in score, if not just a touch faster.*

### **Bernstein - Symphony No.1, "Jeremiah"**

\*Mvt I "Prophecy"\*

Largamente qt=60; *composer at 50*

Reh7, Poco più mosso qt=72; *composer at approx. 78*

Reh9, Molto calmo qt=63; *composer at approx. 55*

\*Mvt II "Profanation"\*

Vivace con brio, dotted-qt=84; *composer at approx. 100*

\*Mvt III "Lamentation"

-- no metronome indications in score

## Appendix D

### Bridge - The Sea

#### \*Mvt I. "Seascape"\*

Allegro, Dotted-qt=72-78; *composer at 63*

Reh6 Allargando dotted-qt=50; *composer at 43*

Reh7 dotted-qt=72-78; *composer at approx. 67*

Reh8 Allargando dotted-qt=50; *composer at 45*

#### \*Mvt II. "Sea-foam"\*

Allegro vivo qt=144; *composer at approx. 140*

#### \*Mvt III. "Moonlight"\*

Adagio ma non troppo qt=48; *composer at 53*

Reh1 qt=52; *composer at 54*

Reh4 qt=58; *composer at 67*

Reh6 qt=50; *composer at approx. 48*

#### \*Mvt IV. "Storm"\*

Allegro energico dotted-qt=100; *composer at approx. 95*

Reh11 dotted-qt=60; *composer at 56*

Reh11 mm5 Tempo I (dotted-qt=100); *composer at approx. 103*

## Appendix E

### **Britten - Variations on a Theme of Frank Bridge Op. 10**

Intro & Theme Lento maestoso qt=69-76; *composer at approx. 60*

Reh1 mm3 Allegro poco lento qt=160-170; *composer at 112*

Adagio dotted-qt=56-60; *composer at approx. 39 to the dotted-qt*

March, Presto alla marcia qt=168-176; *composer at approx. 165*

Romance, allegretto grazioso qt=76-84; *composer at 77*

Aria Italiana, Allegro brillante qt=168-176; *composer at 155*

Bourrée Classique, allegro e pesante half=116-126; *composer at 106*

Wiener Walzer, Vivace dotted-half=84-92; *composer at 106*

Moto Perpetuo, Allegro molto half=100-108; *composer at 92*

Funeral March, Andante ritmico qt=52-56; *composer at 49*

Chant, Lento qt=48-52; *composer at approx. 43*

Fugue & Finale, Allegro molto vivace dotted-qt=176-184; *composers tempo in this movement begins at 166 and gradually settles to around 155 by Reh.31.*

## Appendix F

### Copland – Appalachian Spring Suite (original version for 13 instruments)

Very slowly, quarter=66; *Copland at roughly quarter=54*

Reh 1, quarter=88; *Copland at quarter=72*

Reh 6, quarter=160; *As written*

Reh16, quarter=104; *Copland at quarter=86*

Reh 19, quarter=69; *Copland at quarter=76*

After 21, quarter=52; *First time he has taken tempo marked, quarter=52*

After 22, “As before” meaning quarter=63; *Copland doesn't follow this change in tempo, but rather sustains the slower tempo at quarter=52*

Reh 23, quarter=132; *As written*

Reh 28, quarter=126; *Approx. as written...*

Reh 33, quarter=66; *Copland at quarter=58*

Reh 37, half=92; *As written*

Reh 50, quarter=120; *Copland at 104*

Reh 51, quarter=96; *Copland at quarter=78*

Reh 55, quarter=72; *Copland at roughly quarter=76*

Reh 57, quarter=80 “A trifle faster”; *Tempo unchanged, despite score indications*

Reh 64, half=66; *Copland at half=58*

Reh 67, quarter=96; *Copland is much slower, at quarter=64*

Reh 69, quarter=104; *Relatively unchanged, at quarter=68*

Reh 71, half=69; *Copland at roughly half=58*

## Appendix G

### Elgar - Enigma Variations

Andante, qt=63; *composer much slower at approx. 50*

I. ("CAE") L'istesso tempo qt=63; *composer at 52*

II. ("HDS-P") dotted-qt=73; *composer at 78-80*

III. ("RBT") 8th=144; *composer at 136*

IV. ("WMB") dotted-half=72; *composer at 72*

V. ("RPA") dotted-qt=63; *composer at 52*

VI. ("Ysobel") half=48; *composer at 53*

VII. ("Troyte") while=76; *compose at 84*

VIII. ("WN") dotted-qt=52; *composer at 40*

IX. ("Nimrod") qt=52; *composer at 44-48*

X. ("Dorabella") qt=80; *composer at 90*

XI. ("GRS") half=100; *composer at 107*

XII. ("BGN") qt=58; *compose at 56*

XIII. Romanza qt=76; *composer at 90*

XIV. ("EDU") half=84; *composer at 94*

Presto (1mm before Reh79) "whole=half", meaning whole=84; *composer at 86*

## Appendix H

### **Foss - Baroque Variations**

- I. On a Handel Largetto qt=60; *composer at approx. 56*
- II. On a Scarlatti Sonata qt=90; *composer at 84-86*
- III. On a Bach Prelude qt=120; *composer at approx. 126*

## Appendix I

### **Gershwin - Second Rhapsody**

A piacere qt=120; *composer at 148*

Mm7 Allegro qt=132; *composer closer to 144*

Reh1 Allegro assai qt=144; *composer at 154*

5mm before Reh11 Cantabile con allegrezza qt=116; *composer at 136-140*

6mm before Reh12 Allegretto qt=108; *composer continues at approx. 140*

Reh13 Allegretto animato qt=120; *composer at 132*

Reh17 Allegro qt=138; *composer at 144*

Reh21 Sostenuto e con moto qt=76; *composer at 88*

Reh27 Allegretto qt=108; *composer at approx. 136*

Reh31 Allegro qt=126; *composer at approx. 142*

Reh33 mm3 Andantino qt=69; *composer at 77*

Reh34 Allegretto qt=112; *composer at 122*

Reh37 Allegro qt=132; *composer at 135*

Reh38 Animato qt=136; *composer at 147*

Reh39 Moderato qt=94; *composer at 112*

Reh40 Subito Allegretto qt=116; *composer at 136*

Reh41 Animato, qt=126; *composer at approx. 146*

Reh43 Andante half=72; *composer at 69*

Reh44 Allegro qt=132; *composer at 148*

Reh46 Moderato qt=88; *composer at approx. 88*



## Appendix J

### Hanson - Symphony No.1 in e, "Nordic"

#### \*Mvt 1\*

Andante Solenne qt=63; *composer's performance tempo is at 70*

Allegro con Forza (6mm before RehB) qt=132; *composer at 132*

RehF, Più animato qt=132; *composer at 132*

RehH, Poco meno mosso qt=92; *composer at 100*

RehN, Meno mosso qt=92; *composer at 106*

RehR, Animato qt=132; *composer at 132*

Molto meno mosso (3mm before RehV) qt=63; *composer at 70*

#### \*Mvt 2\*

Andante generate the qt=76; *composer is much slower at 54-56*

#### \*Mvt 3\*

Allegro con fuoco half=84; *composer at 92*

RehG, half=76; *composer at 86*

RehJ, Molto meno mosso qt=76; *composer at 66*

RehM, Half=84; *composer at 92*

RehQ, qt=half (qt=84); *composer takes tempo of qt=120*

RehS qt=63; *composer's tempo is 90*

RehT, Più mosso qt=92; *composer at 130*

Molto meno mosso (3mm before RehV) qt=76; *composer at 62*

## Appendix K

### Hindemith – Symphony Mathis der Maler

#### \*Mvt I\*

Beginning, dotted half = etwa (“about”) 66, Ruhig bewegt (“moving calmly”); *Hindemith’s own tempo is closer to 48!*

Just before Reh 3, Ziemlich lebhaft halbe, half note = 108-112; *composer is as written in score*

Just before Reh 6, einleiten...Ruhig (introduce/transition to... Calmly)

Reh 17, verbreitern (broaden/widen)

Breit, (“broadly”)

Zurückhalten (“gradually slower”)

Reh 18, Ruhiger (“calmly”)

Noch ruhiger (“still/yet”)

Reh 20, HauptzemaB (“original tempo”); *composer back to approx. 50*

#### \*Mvt II\*

Sehr langsam, roughly quarter=54 (“very slowly”); *Hindemith’s tempo is around 40 throughout!*

#### \*Mvt III\*

Sehr langsam, frei im ZeitmaB (very slowly, free in time”)

Sehr lebhaft, quarter = 176 (“very quickly”); *Hindemith performs as written*

Reh 10, Ein wenig breiter, (“a bit more broadly”)

Im ZeitmaB (“in time”)

After Reh 13, scores is quarter=60; *Hindemith at around 52*

Reh16, eilen (“hasten”), then zurückhalten (rit.) ... Lebhaft (lively, quarter =144); *Hindemith at 142*

Reh20, Ein wenig breiter (a bit more broadly); *Hindemith at 78, far more than “ein wenig breiter”, rather nearly half tempo*

Reh21, Im ZeitmaB, (“in time”); *Returns to previous tempo (144), though not necessarily indicated in score*

After Reh 27, Sehr lebhaft (dotted-half note = 80), (“very quickly”); *composer at approx. 80*

Reh 34, verbreitern (“broaden”)... Breite halbe (“half broad”, if half tempo, meaning half=40); *composer is indeed at approx. 40*

## Appendix L

### **Honegger - Pacific 231**

Opening marked at half=60; *Composer takes tempo of half=54.*

Mm12 ("Rythmique"), marking is half=80; *composer takes tempo of half=100*

Mm73 marked at quarter = 152; *composer is at 154*

Mm118 marked at quarter = 144; *composer is at 144*

Mm147 marked at quarter = 138; *composer is slower at quarter = 126*

Mm169, marked slightly slower to 132; *no change in tempo apparent in performance*

Mm201, marked at quarter = 126, tempo taken is 112; *No further tempo change is indicated in the score, though the composer continues to slow the tempo significantly through to the end. Composer's performance is at mm209 is at quarter=82, and by mm214 is down to quarter=64.*

## Appendix M

### **Hovhaness - Symphony No.6, Op.173 ("Celestial Gate")**

Andante qt=66; *composer at 67*

Reh2 mm5 qt=76-84; *composer at 78*

Reh7 qt=108; *composer at 96*

Reh12 Allargando qt=88; *composer at 98*

Reh13 qt=72; *composer at 88*

Reh15 qt=72; *composer at 84*

Reh20 mm2 qt=76; *composer at 93*

Reh23 mm9 qt=116; *composer at 131*

Reh31 mm4 qt=72; *composer at 70*

Reh32 qt=88; *composer at 72*

## Appendix N

### Khachaturian - Symphony No.2

#### \*Mvt 1\*

Andante maestoso qt=46; *composer at 42*

Reh3, molto tranquillo qt=72; *composer at precisely 72*

Reh6, poco più mosso qt=88-92; *composer at marked tempo*

Reh8, più mosso agitato qt=100-104; *composer at 114*

Reh 13 Molto meno mosso qt=69; *composer at 62*

Reh17, allegro agitato qt=104-108; *composer at 114*

Reh29, Largamente qt=76-80; *composer at 74*

Reh37, Poco più mosso qt=88-92; *composer at 92*

Reh38, poco più mosso qt=96-100; *composer at 112-114*

Reh45, Allegro Deciso qt=104-108; *composer at 112*

Reh53, qt=46; *composer at 56*

#### \*Mvt 2\*

Allegro Risoluto, dotted-qt=92-96; *composer at 100*

Reh35, Andante con passione qt=60; *composer at approx. 62*

Reh38, A tempo (qt=92-96); *composer at 98*

#### \*Mvt 3\*

Andante sostenuto, qt=60-63; *composer at 60*

Reh28, Poco più mosso qt=96; *composer at 110*

Reh31, qt=104; *composer at 122*

Reh33, Maestoso qt=69; *composer at 65.*

At Reh36, no tempo change marked; *composer slows to qt=54.*

#### \*Mvt 4\*

Andante mosso, qt=96; *composer at 104*

Reh5, qt=112-116; *composer much faster at 134*

Reh32, qt=144-152; *composer at 148*

Reh44, qt=112-116; *composer at 134*

Reh55, Andante qt=72; *composer at approx. 72*

Reh60, Più mosso e rubato qt=112; *composer at approx. 112*

Reh61, A tempo qt=80-84; *composer at 64.*

## Appendix O

### Lutoslawski - Les Espaces du Sommeil

Beg. qt=58; *composer at approx. 55*

Reh3 qt=117; *composer at approx. 118*

Reh5 qt=58; *composer at approx. 52*

Reh14 8th=144; *composer is closer to 160 in performance*

Reh23 qt=76; *composer is at 86*

Reh33 8th=150; *composer at approx. 134*

Reh83 qt=152; *composer at approx 150*

Reh98 half=54; *composer's performance is significantly slower at approx. half=36*

Allegro, 3mm before Reh105 qt=168; *composers tempo is approx. 168.*

## Appendix P

### **Milhaud - La Création du Monde, Op.81a**

Modéré half=54; *composer at 66*

I. Half=62; *composer at 82*

II. Half=54; *composer at 66*

Reh20 mm3, half=62; *composer at 74*

Reh25 Animez beaucoup half=96; *composer at half=58!*

III. Vif half=104; *composer at 124*

Reh33 Moins vif, half=92; *composer at 74*

IV. Half=108; *composer at approx. 106*

Reh41, half=80; *composer at 74*

Reh 42 mm6, half=88; *composer at 78*

Reh43 half=80; *composer at 82*

Reh46 half=108; *composer at approx. 91*

V. Half=62; *composer at 73*

Reh52 mm6 half=54; *composer at 63*

Reh53 mm9 half=62; *composer at 77*

## Appendix Q

### **Prokofiev - Romeo & Juliet, Suite No.2**

Montages and Capulets, Andante, qt=50; *composer only slightly slower at 46*

Reh2, Allegro Pesante qt=100; *composer at 90-92*

Reh7, Moderato tranquillo qt=54; *composer is at qt=82!*

Reh9, Allegro Pesante; *composer's tempo back at 90*

The Child Juliet, Vivace qt=144; *composer at 132*

Reh16, Quasi andantino qt=84; *composer at 74*

Reh18, Più animate at=124; *composer at approx. 124*

Reh19, "Vivace I" (qt=144); *composer at 134*

Reh20, Andante dolente qt=60; *composer at approx. 58*

Friar Lawrence, Andante espressivo qt=54; *composer a bit faster at 60 at beginning but slows throughout the performance to 54*

Dance, Vivo qt=160-168; *composer at 150*

Romeo at Juliet's, Lento 8th=80; *composer at 70*

Reh41, Andante qt=50; *composer at approx. 50*

Reh42, Adagio 8th=72; *composer at approx 76*

Reh46, Adagio 8th=60; *composer at 66*

Reh49, Andante 8th=80; *composer at 94*

Dance of the Antilles Girls, Andante con eleganza qt=52; *composer at 52*

Romeo at the Grave of Juliet -- no metronome markings indicated.



## Appendix R

### **Rachmaninoff - Isle of the Dead**

Lento qt=60; *composer precisely at 60*

\*Rachmaninov placed a cut from Reh5 Mm3 to Reh6\*

Reh14 mm16 qt=66; *composer at 74*

Reh19 mm2 Meno mosso qt=76; *composer at 60, then two measures later jumps to 86*

Reh23 mm15 Tempo I (qt=60); *composer at 56*

### **Rachmaninoff – Piano Concerto No. 2 (first movement only)**

Beg. Half=66; *Rachmaninoff plays at half=52 in the solo opening, then orchestra in at half=82*

After Reh 4 – Tempo I, half=66; *Roughly as written in score, but almost too much rubato to discern*

After Reh 6, un poco piu mosso, half=72; *Rachmaninoff play at roughly half=90*

Moto precedente, half=72; *Stokowski/Rachmaninoff takes this orchestral section at half=82*

Reh 8, half=76; *Rachmaninoff at roughly half=94*

Piu vivo after 8, half=80; *Rach. at roughly half=100*

Reh 9, poco a poco accel to...m225, half=96; *Almost the same tempo (accelerandi didn't take place), at half=102*

Reh 11, half=76; *Rach. at half=86*

Reh 12, poco a poco calando... 13, half=96; *Stokowski/Rachmaninoff at half=72*

Reh 16, half=63; *Rach. at half=70*

Reh 14 just before end... poco a poco accel...; *Observed, as written*

## Appendix S

### **Ravel – Bolero**

Quarter=72; *tempo taken is 64, and only slightly fluctuates, between 64-66 throughout*

## Appendix T

### **Shostakovich - 12 Preludes Op.34**

N.8 Andante qt=96; *composer at approx. 97*

N.8 Andante separate recording; *composer at 120*

N.14 Adagio qt=63; *composer at 60*

N.15 Allegretto dotted-half=76; *composer at 79*

N.16 Andantino qt=120; *composer at 128*

N.17 Largo qt=80; *composer at 82*

N.18 Allegretto qt=126; *composer at approx. 160*

N.19 Andantino dotted-qt=84; *composer at approx. 82*

N.22 Adagio qt=76; *composer at approx. 76-78*

N.22 (separate recording); *composer at 86*

N.23 Moderato dotted-qt=76; *composer at 75*

N.24 Allegretto half=76; *composer at 108*

## Appendix U

### **Stravinsky – The Rite of Spring (Recording #1 - Columbia Symphony Orchestra)**

#### ADORATION OF THE EARTH

Beg, quarter=50; *Approx. as indicated in score*

Reh 3, quarter=66; *Approx. as indicated in score, but then gradually increases speed to around quarter=74*

Reh 12, quarter=50; *Approx. as indicated in score*

#### DANCE OF THE YOUNG GIRLS

Half=50 (sixteenth=eighth); *slightly faster than indicated, at half=60*

#### RITUAL OF ABDUCTION

Dotted-quarter=132; *A valiant effort – but still only at 126*

#### SPRING ROUNDS

Quarter=108; *Stravinsky roughly at 100*

Reh 49, quarter=80; *Stravinsky at quarter=74*

Reh 54, Vivo, quarter=160; *Stravinsky at 152*

Reh 56, Tranquillo, quarter=108; *Approx. as written...*

#### RITUAL OF THE RIVAL TRIBES

Quarter=166; *Stravinsky at 152*

#### PROCESSION OF THE SAGE

*(same)*

#### THE SAGE

Lento, quarter=42; *Stravinsky, roughly as indicated in score*

#### DANCE OF THE EARTH

Prestissimo, quarter=168; *Stravinsky at 154*

## THE SACRIFICE

Quarter=48; *Stravinsky, roughly as written, though he keeps getting faster throughout, up to over 60 bpm*

Reh 89, quarter=60; *Stravinsky, quarter=84*

Reh 90, quarter=48; *Stravinsky, quarter=60*

## MYSTIC CIRCLE OF THE YOUNG GIRLS

Quarter=60; *Stravinsky begins at tempo, but increases the tempo to roughly quarter=82*

Reh 93, quarter=80; *Stravinsky at quarter=112*

Reh 97, Tempo I, quarter=60; *Stravinsky at quarter=76*

Poco a poco accel, to 103, quarter=120; *Stravinsky, close to tempo marked in score*

## GLORIFICATION OF THE CHOSEN ONE

Quarter=144; *Stravinsky, close to tempo marked in score, but gets slower to roughly 126 by end of section*

## EVOCATION OF THE ANCESTORS

“L'istesso movimento”, keep the same speed (half=144); *Stravinsky does not keep the “stesso” tempo, but slows to nearly 116*

## RITUAL ACTION OF THE ANCESTORS

Quarter=52; *Stravinsky quite a bit faster, at quarter=66*

## SACRIFICIAL DANCE

Eighth=126; *Damn near spot on! (rushes ahead a bit afterwards, upwards of 132)*

Reh 174, eighth=quarter=126 (to the end); *Stravinsky slightly faster, at roughly 132*

## Appendix V

### **Stravinsky – The Rite of Spring (Recording #2 - Philharmonic Symphony Orchestra of New York)**

#### ADORATION OF THE EARTH

Beg, quarter=50; *composer at approx. 56*

Reh 3, quarter=66; *composer at 63*

Reh 12, quarter=50; *composer at 63*

#### DANCE OF THE YOUNG GIRLS

Half=50 (sixteenth=eighth); *composer at 56 (from here to end of scene speed increases gradually to 60, back to 53, and back to 60 again)*

#### RITUAL OF ABDUCTION

Dotted-quarter=132; *composer at 127*

#### SPRING ROUNDS

Quarter=108; *composer at 115*

Reh 49, quarter=80; *composer at 71*

Reh 54, Vivo, quarter=160; *composer at 166*

Reh 56, Tranquillo, quarter=108; *composer at 121*

#### RITUAL OF THE RIVAL TRIBES

Quarter=166; *composer at approx. 166*

#### PROCESSION OF THE SAGE

*(same)*

#### THE SAGE

Lento, quarter=42; *composer at 43*

#### DANCE OF THE EARTH

Prestissimo, quarter=168; *composer at 160*

## THE SACRIFICE

Quarter=48; *composer at 50*

Reh 89, quarter=60; *composer at 74*

Reh 90, quarter=48; *composer at 53*

## MYSTIC CIRCLE OF THE YOUNG GIRLS

Quarter=60; *composer at 77*

Reh 93, quarter=80; *composer at 110*

Reh 97, Tempo I, quarter=60; *composer at 68*

Poco a poco accel from Reh102 to Reh103, then quarter=120; *composer at 150*

## GLORIFICATION OF THE CHOSEN ONE

Quarter=144; *composer at 132*

## EVOCAION OF THE ANCESTORS

“L’istesso movimento”, keep the same speed (half=144); *composer slows to approx. 114*

## RITUAL ACTION OF THE ANCESTORS

Quarter=52; *composer at 70*

## SACRIFICIAL DANCE

Eighth=126; *composer at approx. 120, gradually accelerates to 148*

Reh 174, eighth=quarter=126; *composer at 132*

## Appendix W

### Vaughan Williams – Symphony No. 5 in D Maj:

#### \*Mvt 1\*

Beg marked quarter at 80; *performance is at 70*  
 Allegro (4mm before 7) marked at half=75; *tempo taken is closer to 64,*  
 Tempo I (Reh. 11); *is back to performance tempo of roughly 70*  
 Tutta Forza (4mm before 13) where no tempo change is indicated; *suddenly slows to quarter = 60, and gradually increases to back to 70*

#### \*Mvt 2\*

Presto at dotted half = 120; *tempo taken is only 112*  
 Btwn Reh 8-14 (no tempo change indicated); *tempo gradually drops to 96.*  
 Dbl bar (10mm after 14); *composer returns to opening performance tempo of 112*  
 At 3mm after 21; *composer takes a sudden meno mosso as the pulse drops to 96.*  
 At bassoon entrance 8mm before 22; *composer takes subito Tempo I at 112.*

#### \*Mvt 3\*

Lento at quarter = 66; *composers takes it much slower at 52.*  
 At Un Pochino più movimento; *pulse increases to 66.*  
 Tempo I after Reh 2; *returns to 52.*  
 At Reh 3 again Un Pochino più movimento; *pulse increases only to 56.*  
 Animato (6mm after Reh 5); *composers takes tempo of quarter = 96.*  
 Poco meno mosso at Reh 7; *composer takes quarter at 68.*  
 Poco più mosso (6mm before 8); *composer takes quarter at 98*  
 Tempo I (Reh 8); *composer returns to his opening tempo (approx. quarter = 56)*  
 Pochino più movimento at Reh 9; *is at quarter = 60.*  
 Tempo I at Reh 11; *composer is at quarter = 54*

#### \*Mvt 4\*

Moderato marked at quarter = 120; *Composers tempo is quarter = 90.*  
 Allergo (5mm before Reh 5), *score calls for a tempo of dotted-half = 60, whereby a relationship to the half-note of the previous section should be equal to a dotted-half in the Allegro. If this relationship were to be followed, the Allegro should be at a dotted-half=45. In this performance the composer takes a*



*Subito tempo of dotted-half = 60, which is the tempo indicated in the score. While the tempo is indeed what is indicated, the tempo relationship suggested in the score is not at all apparent to the listener.*

*Tempo Primo (9mm before Reh 7); composer returns to quarter = approx. 92*

*Tempo Del Preludio (4mm before Reh 14); composer takes a tempo yet even more slowly than his opening tempo; now at quarter = 84*

*Tranquillo (4mm before Reh 15); composer is at quarter = 74 through to the end.*