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The Einstein Slide

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BRIAN CIACH

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# The Einstein Slide

for chamber orchestra

(2012)

full score



*The Einstein Slide* (2012)  
Addendum to *Collective Uncommon: Seven Orchestral Studies on Medical Oddities* (2010)

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**Winner of THE AMERICAN PRIZE in Composition—orchestral, professional division (2017-2018)**

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**Premiered by Alarm Will Sound at the 2012 Mizzou New Music Summer Festival, Missouri Theatre Centre for the Arts, Columbia Missouri**

Program Notes

*The Einstein Slide* is a short chamber concerto inspired by a medical slide of Albert Einstein's brain on display at the Mütter museum, a medical oddities museum in Philadelphia. Lucy Rorke-Adams, the neuropathologist who donated the slides to the museum, has found that Einstein's brain is remarkably youthful for a man aged 76. "The blood vessels are gorgeous", she says. To reflect this, the music is ever inspired and brilliant, undergoing constant shifts and a childlike exploration of material. Scientists have found that Einstein's brain was lacking a complete Sylvian fissure, a type of wall separating the parts of the brain responsible for mathematical ability, spatial reasoning and three-dimensional visualization. Some argue that the synergy of these diverse segments in Einstein's brain allowed him to think differently. *The Einstein Slide* evokes brain activity by swiftly shifting through different musical ideas. In my musical search for all things Einstein, I decided to begin the movement with a violin solo, an instrument that Einstein played. There is also the "musical equation" toward the middle of the movement, which is a musical representation of a mathematical formula in the form of a puzzle canon (see below).

***Einstein's Musical Equation: Puzzle Canon\****

Canon in seven parts at the unison, cancrizans, stretto, inversion, augmentation and octave

♩ = 88

The musical score consists of a single melodic line on a grand staff. It begins with a treble clef and a key signature of one sharp (F#). The tempo is marked as quarter note = 88. The dynamics start with a piano (*p*) marking, followed by a mezzo-piano (*mp*) marking. The score includes various musical notations such as slurs, ties, and a key signature change to one flat (Bb) at the end. Above the staff, there are seven numbered staves with instrument abbreviations: 1. pno, 2. tbn, vln, 3. ob, vla 1, 4. hn, vla 2, 5. Bb cl, vc, 6. fl, Eb cl, 7. bsn, tpt.

\* Realized on the following pages.

**Instrumentation:**

Flute

Oboe

E ♭ Clarinet

B ♭ Clarinet

Bassoon

F Horn

B ♭ Trumpet

Tenor Trombone

Percussion 1 (Large Tam Tam, Castenets, Low China Cymbal, Glockenspiel)

Percussion 2 (Tambourine, Concert Bass Drum, Medium Suspended Cymbal)

Piano

Violin I

Violin II

Viola

Violoncello

Contrabass (with C extension)

Commissioned by Alarm Will Sound for the 2012 Mizzou New Music Summer Festival  
Dedicated to the Mütter Museum: Of the College of Physicians of Philadelphia

SCORE IN C  
8 minutes in duration

# The Einstein Slide

(Chamber Concerto)

Inspired by a medical slide of Albert Einstein's brain found in the Mütter Museum in Philadelphia  
Winner of THE AMERICAN PRIZE in Composition--orchestral, professional division (2017-2018)

BRIAN CIACH  
(b. 1977)

Mysterious ♩ = 66

Flute

Oboe

E♭ Clarinet

B♭ Clarinet

Bassoon

F Horn

B♭ Trumpet

Trombone

Percussion 1

Percussion 2

Piano

(stopped with l.h. inside the piano)  
+ + + + simile  
*pp*  
una corda  
Ped. \* Ped. \*

Mysterious ♩ = 66

Violin 1

*molto sul tasto* *poco - a - poco ord.* *ord., solo, espressivo*  
*ppp* *p*

Violin 2

*molto sul tasto*  
*pp*

Viola

*molto sul tasto*  
*pp*

Violoncello

Contrabass (with C extension)

Fl

Ob

B♭ Cl

Bsn

Pno

Vln 1

Vln 2

Vla



Ethereal ♩ = 88

solo, dolce, freely expressive

Fl

Ob

B♭ Cl

Bsn

Perc 1

Pno

Vln 1

Vln 2

Vla

Vc

Cb

Ethereal ♩ = 88

Vln 1

Vln 2

Vla

Vc

Cb

8 3

Fl *mf*

B♭ Cl *solo, dolce, freely expressive*  
*p*

Vln 2

Vla *5*

Vc *6*

Cb *6* *gliss.*

10

Fl *p* *3* *mf* *tr*

E♭ Cl *solo, dolce, freely expressive*  
*p* *3* *mf* *b* *tr*

B♭ Cl *mf* *p* *3* *pp* *mf*

Vln 2

Vla

Vc

Cb



rit. \* *p*

Fl 13

Ob

E♭ Cl

B♭ Cl

Pno

rit. \*

Vln 2

Vla

Vc

Cb

*♩* = 60 **accel.** [B] *♩* = 88

Fl

Ob

E♭ Cl

B♭ Cl

Bsn

Pno

*pp* *ff* *mf* *f* *p*

*pp* *ff* *p* *mf* *p*

*pp* *ff* *mp* *f* *p*

*pp* *pp* *mf*

*p* *mf* *p*

*mp* *ord. 5* *\*Ped.* *\*Ped.* *\*Ped.* *\*Ped.* *\*Ped.* *\*Ped.*

*solo, dolce, freely expressive*

[B] *♩* = 60 **accel.** *♩* = 88

Vln 1

Vln 2

Vla

Vc

Cb

*mp* *f* *p*

*mp* *f* *p*

*p* *mf* *p*

*p* *mf*

*p* *mf*

Piano score, measures 19-20. *f* to *p*. *9* fingering.

Piano score, measures 21-22. *pp una corda*. *9* fingering.

Piano score, measures 23-24. *10* fingering. *tre corde*. *f*.

Orchestral score, measures 24-26. *C* *♩ = 60*. *solo, noble*. *sf pp mp* dynamics. *molto legato mp mf mp mf* piano dynamics. *♩ = 60* tempo marking.

Piano score, measures 27-28. *mp mf* dynamics. *♩ = 60* tempo marking.

String score (Vln 1, Vln 2, Vla, Vc, Cb), measures 27-28. *p mf p* dynamics. *♩ = 60* tempo marking.

30 **D**

Ob *p* *pp* 6

E♭ Cl *p*

B♭ Cl *p* *pp* 6

Bsn *pp* *ppp*

Hn *ppp*

Tbn *pp* *ppp*

Pno *p*

ℳℓℓ \*

32

Fl *mp* *mf* *f* 6

Ob *mp* *mf* *f* 6

E♭ Cl *mp* *mf* *f* 6

B♭ Cl *mp* *mf* *f* 6

34 ♩ = 168

B♭ Cl *mp* *mf* *solo* 3 6/16

Bsn *mp* *mf* 3 6/16

Hn *mp* *mf* 3 6/16

Tpt *mp* *mf* 3 6/16

Tbn *mp* *mf* 3 6/16

Perc 1 **Castanets** *mp* *mf* 3 6/16

Pno *mp* *mf* 3 6/16

ℳℓℓ \*

**E**  
37 ♩. = 168

Fl  
Ob  
Eb Cl  
Bsn  
Tpt  
Pno  
Vln 1  
Vln 2  
Vla  
Vc  
Cb

*ff*  
*ff*  
*ff*  
*p*  
*pizz.*  
*p*  
*pizz.*  
*p*  
*pizz.*  
*p*  
*arco*  
*ff*

**E**  
♩. = 168

44

The musical score is arranged in a standard orchestral format with the following parts from top to bottom:

- Flute (Fl)
- Oboe (Ob)
- Eb Clarinet (Cl)
- Bb Clarinet (Cl) with dynamic *f*
- Bassoon (Bsn) with dynamic *f*
- Horn (Hn) with dynamic *f*
- Trumpet (Tpt)
- Trombone (Tbn) with dynamic *f*
- Percussion 2 (Perc 2) labeled "Tambourine hands" with dynamics *sfp* and *sf*
- Violin 1 (Vln 1)
- Violin 2 (Vln 2)
- Viola (Vla) with *arco* and dynamic *f*
- Violoncello (Vc) with *arco* and dynamic *f*
- Contrabass (Cb) with *arco* and dynamic *f*

The score consists of seven measures. The percussion part shows a dynamic progression from *sfp* to *sf* in alternating measures. The strings and woodwinds play rhythmic patterns consistent with the 12/8 meter.



60

Ob

E♭ Cl

B♭ Cl

Bsn

Hn

Tpt

Tbn

(Bass Drum)  
damped with l.h.

Perc 2

Pno

Vin 2

Vla

Vc

*mp* *f*

*ff* *ff*

*8va* *Red.* \*

*sul III feroce*  
*f*

65

Ob

E♭ Cl

B♭ Cl

Bsn

Hn

Tpt

Tbn

(Bass Drum)  
damped with l.h.

Perc 2

Pno

Vin 2

Vla

Vc

*p* *f*

*f* *feroce*

*Red.* \*

*3 2 1*

70

Ob

E♭ Cl

B♭ Cl

Bsn

Hn

Tpt

Tbn

(Bass Drum)  
ord.

Perc 2

Pno

Vln 1

Vln 2

Vla

Vc

*p*

*f*

*feroce*

*Ped.*

*8va Ped.*

*\**

73

Ob

E♭ Cl

B♭ Cl

Bsn

Hn

Tpt

Tbn

Pno

Vln 1

Vln 2

Vla

Vc

*ff*

*fff*

*Ped.*

*8va Ped.*

*\**



**G**  
♩ = 54  
cantabile  
pp

Ob  
B♭ Cl  
Bsn  
Hn  
Tpt  
Tbn

**G**  
sul tasto, cantabile  
pp

Vln 1  
Vln 2  
Vla  
Vc  
Cb

mf  
pp

### Einstein's Musical Equation: Puzzle Canon\*

**||**  
Canon in seven parts at the unison, cancrizans, stretto, inversion, augmentation and octave  
♩ = 88

7 pno  
6 fl, E♭ cl  
4 hn, vla  
5 B♭ cl, vc  
2 tbn, vln 1  
3 ob, vln 2

p mp

\* Realized on the following pages.

**H**  
83  $\text{♩} = 88$

Ob *ppp* *p*  
B♭ Cl *ppp*  
Bsn *p* *mp* *p*  
Hn *ppp*  
Tpt *p* *mp* *p*  
Tbn *ppp* *p* *mp*

**H**  
83  $\text{♩} = 88$

Vln 1 *ppp* *p* *ord.* *mp*  
Vln 2 *ppp* *ord.* *p*  
Vla *ppp*  
Vc *ppp*

97

Ob *mp* *p*  
B♭ Cl *mp*  
Bsn *mp* *p*  
Hn *p*  
Tpt *mp* *p*  
Tbn *p* *mp* *p*

111

Vln 1 *p* *mp* *p*  
Vln 2 *mp* *p*  
Vla *mp* *p* *ord.* *p*  
Vc *ppp* *ord.* *p*

123

Fl

Ob

E♭ Cl

B♭ Cl

Bsn

Hn

Tpt

Tbn

Vln 1

Vln 2

Vla

Vc

*mp* *p*

135

Fl

Ob

E♭ Cl

B♭ Cl

Bsn

Hn

Tpt

Tbn

Pno

Vln 1

Vln 2

Vla

Vc

*mp* *p* *ff*

15<sup>ma</sup>

8<sup>va</sup>

Ped

148

Fl *mp* *p* *pp*

Ob *p* *pp*

E♭ Cl *mp* *p*

B♭ Cl *mp* *p* *pp*

Bsn *mp* *p* *p*

Hn *mp* *p*

Tpt *mp* *p*

Tbn *mp* *p*

Pno *p*

Vln 1 *mp* *p* *pp* *strum pizz.*

Vln 2 *p* *pp* *pizz.*

Vla *mp* *p* *pp*

Vc *mp* *p*

*15<sup>th</sup>* *8<sup>th</sup>* *\*15<sup>th</sup>* *8<sup>th</sup>* *\**

162

Fl *ff subito* *fff* *rit.*

Ob *ff subito* *fff*

E♭ Cl *ff subito* *fff*

B♭ Cl *ff subito* *fff*

Bsn *pp* *ff subito* *fff*

Hn *ff subito* *fff*

Tpt *ff subito* *fff*

Tbn *ff subito* *fff*

Perc 1 Low China Cymbal medium yarn beaters *p* *fff*

Perc 2 Medium Suspended Cymbal medium yarn beaters *p* *fff*

Pno *ff subito* *fff*

Vin 1 *arco* *ff subito* *fff* *rit.*

Vin 2 *arco* *ff subito* *fff*

Vla *arco* *ff subito* *fff*

Vc *subito* *ff* *fff*

Cb *ord.* *ff subito* *fff*

**J**  
169 ♩ = 40 *accel.* ..... ♩ = 66

B♭ Cl

Hn

Pno  
*pp*  
 (stopped with l.h. inside the piano)  
 + + + + + *simile*  
*una corda*  
 Ped. \* Ped. \* Ped. \*

**J**  
 ♩ = 40 *accel.* ..... ♩ = 66  
 solo, espressivo

Vln 1  
*p* *mp* 3 *mf*

Vln 2  
*molto sul tasto*  
*pp*

Vla  
*molto sul tasto*  
*pp*

173

Fl

B♭ Cl

Hn

Pno  
 Ped. \* Ped. \*

Vln 1  
*rit.* .....  
*mp* *p*

Vln 2  
*p* *pp*

Vla  
*p* *pp*

K

176 ♩ = 54

Bsn *pp* *p* *pp*

Tbn *pp*

Pno *p* *mf* *p* *mp* *p* *mp* *p*

*tre corde*  
Ped. \* Ped. \* Ped. \* Ped. \* Ped. \*

*solo, ord., molto legato e rubato*

K

♩ = 54

Vln 1 *pp* *ord.*

Vln 2 *pp* *ord.*

Vla *pp*

Vc *pp*

Cb *pp*

*gli altri*



Pno *p* *mf* *f*

Ped. \* Ped. \* Ped. \* Ped. \*



L

182

Fl *p* *mp*

Ob *p* *mp*

E♭ Cl *p* *mp*

Bsn *p* *mp*

Pno *mp* *pp* *mp*

Ped. \* Ped. \* Ped. \* Ped. \*

Vln 1 *pp* *mp*

Vln 2 *pp* *mp*

Vla *pp* *mp*

Vc *pp*

185

Fl

Ob

E $\flat$  Cl

B $\flat$  Cl

Bsn

Hn

Tbn

Pno

Red. \* Red. \* Red. \* Red. \* Red. \* Red. \* Red. \* Red. \* Red.

189

Fl

Ob

E $\flat$  Cl

B $\flat$  Cl

Bsn

Hn

Tpt

Tbn

Perc 1

Pno

Glockenspiel plastic mallets

Vln 1

Vln 2

Vla

Vc

Cb

M

M

solo, cantabile

\* Red. \* Red. \* Red. \* Red. \* Red. \*





197

Ob *pp*

E♭ Cl *pp*

Bsn

Hn

Tpt

Tbn

Perc 1 *p* *pp*

Pno *mp*  
Ped. \* Ped. \* Ped. \* Ped. \*

Vln 1

Vln 2

Vla

Vc *pp* *mp*

Cb

201

Bsn

Perc 2 **Concert Bass Drum**  
wood sticks on rim and side  
(quasi clockwork) *pp*

Pno *ff* *p* *pp*  
Ped. \* Ped. \* Ped. \* Ped. \*

Vln 1

Vln 2

Vla

Vc *pp*

Cb