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**Title**

Xenon

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**Author**

Lewis, Paul

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PAUL EDDISON LEWIS

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# Xenon

Solo Cello + Electronics

2019

ca. 14'

[www.eddisonstudios.com](http://www.eddisonstudios.com)

## **Xenon (2019)**

Paul Eddison Lewis

Duration ca. 14'

Eddison Music (ASCAP)

[www.eddisonstudios.com](http://www.eddisonstudios.com)

Dedicated to Eduard Teregulov

### Instrumentation

Cello + Live Electronics

### **Program Notes**

During the process of splitting uranium, the chemical element gives off extra neutrons and impacts a moderator, typically water. When in contact with the hydrogen nuclei, the neutrons start slowing down, eventually creating fission by hitting another uranium. This is the controlled chain reaction that takes place within a modern nuclear reactor. One method that will slow the reaction, is the use of control rods absorbing extra neutrons while others simply leak out of the reactor. This neutron dance is controlled to give a steady amount of fissions. Xenon is exceptional when absorbing neutrons. Known as a neutron poison, xenon becomes an alternative to controlling the chain reaction significantly decreasing the chances of calamity.

Although the piece *Xenon* itself is not a direct reflection of the literal neutron dance taken place within a reactor core, it is inspired by its process and the modern science that makes it possible. Effecting the population and environment, modern science plays a key role in our development towards the progression of energy consumption. It is vital to take into consideration the development of modern science over profit, creating a more environmental friendly, efficient, and cost effective livelihood for future generations. To quote a Greek proverb, "A society grows great when old men plant trees whose shade they know they shall never sit in."

## Performance Notes

### ***Technical Requirements:***

The performance of this work requires the use of a Pure Data patch created by the composer. During the performance, the cellist must switch scenes using a foot pedal, preferably connected through bluetooth. When Pure Data is activated, the computer must have a way to listen and interact in real time with the performer, therefore the cellist needs to be mic'd and amplified using a balanced stereo output. For the best results, use a dynamic mic during live performance to avoid feedback problems.

### ***Equipment List:***

- Computer with an installation of the Pure Data program
- Audio interface
- Xenon Pure Data patch and file
- Pedal
- Dynamic instrument mic (ex. SM57)
- Stereo splitter cables.

### ***Pure Data patch instructions:***

When the Pure Data patch is in use, the performer will see the GUI screen within the program. The patch has already installed a saved mix and to recall the mix for a performance, simply press the button that says "recall"

Using a pedal, each time it is pressed will activate the next scene.

Below is a brief description of each scene when activated.

**Scene 1:** activates the reverb

**Scene 2:** plays the first fixed media

**Scene 3:** kills the reverb and turns on the two second delay

**Scene 4:** kills the first playback and the two second delay. Turns on reverb

**Scene 5:** Plays the electronic *cadenza* and turns off reverb

**Scene 6:** fades the electronic *cadenza*, fades in the last fixed media playback and turns activates both ten and twenty second delay.

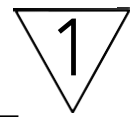
**Scene 7:** shuts off all effects and playbacks.

At anytime the performer needs to go back to a scene, press "R" to reset the patch.



Violoncello + Electronics

accordatura, sempre



# Xenon

Dedicated to Eduard Teregulov

Paul Eddison Lewis

Con Fuoco (♩=52)

(Written)

Violoncello

(Sounding)

(Wrtn)

Vc.

(Snd)

Rubato

Quasi Guitare Sempre

pizz.

mf

fp

ff

fp

ff

rall.

ff

mf

f

pizz.

(♩=52)

# Xenon

2

12

arco

(Wrtn)

Vc.

(Snd)

*fff* *p sub.* *fff* *pp* *fff*

15

(Wrtn)

Vc.

(Snd)

*p sub.* *fff* *p sub.* *fff* *fff* *mp*

(slow gliss.)

18

(Wrtn)

Vc.

(Snd)

*fff* *fff* *fp* *fff* *p* *fff*

G.P.

(slow gliss.)

# Xenon

(♩ = 46)

Vc.

Vc.

Vc.



# Xenon

4

Vc.

(♩ = 52)

rit.

(♩ = 37)

Vc.

2

Vc.

# Xenon

(♩ = 33)

41

*mp sub.* *ff*

3 3 3 5

6 6 6 6 6 6 6 6 6

Detailed description: This system covers measures 41 to 45. It features two staves for the Violoncello (Vc.). The music is in a minor key, indicated by a flat sign on the bass clef. The tempo is marked as quarter note = 33. The piece is titled 'Xenon'. The first staff begins at measure 41. The first three measures (41-43) are marked *mp sub.* and feature sixteenth-note triplets of sixteenth notes, each with a '6' above it. The next two measures (44-45) are marked *ff* and feature sixteenth-note triplets of sixteenth notes, each with a '6' above it. The final measure (45) is marked with a '5' above it. The second staff mirrors the first staff's rhythmic pattern.

42

6 6 6 6 6 6 6 6 6

3 3 3

Detailed description: This system covers measures 42 to 45. It features two staves for the Violoncello (Vc.). The music continues from the previous system. The first three measures (42-44) feature sixteenth-note triplets of sixteenth notes, each with a '6' above it. The last two measures (45-46) feature sixteenth-note triplets of sixteenth notes, each with a '6' above it. The second staff mirrors the first staff's rhythmic pattern.

43

*Simile*

*Simile*

6 6 6 6 6 6 6 6 6

3 3 3

Detailed description: This system covers measures 43 to 46. It features two staves for the Violoncello (Vc.). The music continues from the previous system. The first three measures (43-45) are marked *Simile* and feature sixteenth-note triplets of sixteenth notes, each with a '6' above it. The last two measures (46-47) are marked *Simile* and feature sixteenth-note triplets of sixteenth notes, each with a '6' above it. The second staff mirrors the first staff's rhythmic pattern.

# Xenon

6

44

Vc.

45

Vc.

rall.

46

Vc.

# Xenon

(♩ = 40)

Vc.

*ppp* *mp*

*simile*

Vc.

*mf* *ff*

Vc.

*p sub.* *ff sub.*

# Xenon

8

50 *sul pont.*

Vc.

*p sub.* *fff* *p sub.*

51 *ord.*

Vc.

*f* *p sub.*

52

Vc.

*ff sub.* *p sub.*

# Xenon

53

Vc.

*ff* *P sub.* *ff sub.*

54

Vc.

*p* *sul pont.* *fff*

55

Vc.

*mf* *ord.* *ff*

# Xenon

10

56 *ord.*

Vc.

*ff* *mp*

*ord.*

57

Vc.

*mf* *ff*

58

Vc.

*fff*

# Xenon

Vc.

59

3

*p sub.*

3

*ff sub.*

3

Detailed description: This system contains measures 59 and 60. The top staff has a treble clef and the bottom staff has a bass clef. Both staves feature a continuous pattern of eighth-note triplets. Measure 59 starts with a sharp sign above the first triplet. Measure 60 has sharp signs above the first and third triplets. Dynamics include *p sub.* and *ff sub.* with accents.

Vc.

60

*p sub.*

3

*ff sub.*

3

3

Detailed description: This system contains measures 60 and 61. The top staff has a treble clef and the bottom staff has a bass clef. Both staves feature a continuous pattern of eighth-note triplets. Measure 60 starts with a sharp sign above the first triplet. Measure 61 has sharp signs above the first and third triplets. Dynamics include *p sub.* and *ff sub.* with accents.

Vc.

61

*fff sub.*

3

3

*fff*

4

sul I

Detailed description: This system contains measures 61 and 62. The top staff has a treble clef and the bottom staff has a bass clef. Both staves feature a continuous pattern of eighth-note triplets. Measure 61 starts with a sharp sign above the first triplet. Measure 62 has sharp signs above the first and third triplets. Dynamics include *fff sub.* and *fff* with accents. A triangle containing the number 4 is positioned above the end of the system. The instruction 'sul I' is written at the end of the system.



# Xenon

12

62

Vc.

*f* < *fff*    *f* < *fff*    *fff*    *fff*    *f*    *fp* < *fff*

(slow gliss.)

67

5 Rubato

Electronics Cadenza (ca. 2'00")

Repeat ad libitum for 1'35"

6

Repeat ad libitum for 1'35"

69

Repeat ad libitum until the scene completely changes

Grave rubato (♩=35)

*mf*    *mp*

# Xenon

73

Vc.

77

Vc.

83

Vc.

\* for each ceasura, hold the whole note before it until the electronic loop begins.  
Continue by syncing up with electronic loop.