

**Rudy Percival**

**PROPAGATE**

For Four Modular Synthesizers  
& Prerecorded Audio  
(2020)

A score for the 1935 animation, *Propagate*,  
directed by Shigeji Ogino

*Propagate* should have been performed alongside Shigeji Ogino's animated film (of the same name) in the Barbican Cinema 1. This was cancelled due to the COVID-19 pandemic.

## Score in C

### Instrumentation

4 Modular Synthesizers

Prerecorded Audio Tracks & an in-ear Click Track\*

[\*=A stereo QLab file with the prerecorded audio tracks and click track can be found by following this link:  
[https://drive.google.com/file/d/1W2zwskfMj\\_QVm9RnPTnFea\\_jWD3mLbkh/view?usp=sharing](https://drive.google.com/file/d/1W2zwskfMj_QVm9RnPTnFea_jWD3mLbkh/view?usp=sharing)]

### Performance Notes

#### Tuning

All four Modular Synthesizers should be tuned to the following scale across the entire register, labeled here in cents:



If the equipment available to the performers does not allow for this adjustment, they may ignore this procedure. Alternatively, the performers can elect to use Virtual Studio Technology, and perform the piece using a Digital Audio Workstation, i.e. MainStage, where retuning in this way is possible.

Follow the link below for more information on how to control tuning in MainStage:  
[https://support.apple.com/kb/PH13557?locale=en\\_GB](https://support.apple.com/kb/PH13557?locale=en_GB)

#### Dynamics

The dynamics indicated on the score should be executed by making live adjustments to the volume of the modular synthesizers. This can be done with a free hand, or if the performer prefers, a volume pedal.

#### Timbre

It is recommended that all four synthesizers use two oscillators, set to 50% Saw and 50% Square.

The timbre of the synthesizers changes throughout the piece (excluding Modular Synthesizer 1). It is desirable that these alterations are made live, rather than with presets. Descriptions of each new timbre are provided in the score:

Release is described on a scale of 0-10 (shortest-longest)

Filter Cutoff has the same scale of 0-10 (shortest-longest).

Filter Resonance has the same same scale of 0-10 (nothing-maximum).

[NB: Attack remains very short (with two marked exceptions), Decay remains just slightly lower than the attack, and Sustain remains moderately short throughout].

These directions are just a guide; the final sound is at the discretion of the performers, and should be discussed during rehearsal.

**Duration: 4'13''**

## **Programme Note**

Shigeji Ogino's film *Propagate* seems like a piece of visual artwork, rather than a narrative-based animation. It is an animated interpretation of the way in which flowers propagate themselves, from a budding flower, all the way to a seedling growing in the ground. Each scene of the four-minute film contains an image (most of which are stylised with geometric shapes) that has been animated to move in a looping pattern.

To imitate these visual looping patterns, I decided to allow my score to draw heavily on the compositional style of minimalism. I reflect each change in scene with an addition, subtraction or alteration of the looping patterns that I am using (all of which are composed around the irregular time signature of 5/8), alongside timbral alterations.

# PROPAGATE

For Four Modular Synthesizers & Prerecorded Audio  
(2020)

RUDY PERCIVAL

Joyous! ♩ = 80

CLICK: Bars 0b-e cued.  
Mod. Synth. 1 Enters at bar 1.

**DIRECTOR: "OGINO"**

**A**  
Rel:1  
Cur:2  
Res:0

Modular Synthesizer 1

Modular Synthesizer 2

Modular Synthesizer 3

Modular Synthesizer 4

Synthesizer Track

Percussion Track

0a 0b 0c 0d 0e 1 2 3



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

4 5 6 7 8 9 10

**B** TITLE: "PROPAGATE"

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

Rel:2  
Cut:3  
Res:0

*mp*

4

Distorted Shaker

*mp*

11 12 13 14 15 16 17 18 19



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

2

20 21 22 23 24 25 26

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

27 28 29 30 31 32 33 34 35



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

2 2 2 2 2

White Noise

36 37 38 39 40 41 42 43 44 45

**C** SCENE 1: SUN AND FLOWERS

Mod. Synth. 1 *mf*

Mod. Synth. 2 *mf*

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr. *mf*

Perc. Tr. *mf* (Distorted Shaker)

46 47 48 49 50 51 52

Mod. Synth. 1 8

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr.

Perc. Tr. 8 12

53 54 55 56 57 58



**D** FLOWER GROWS

Musical score for measures 59-64. The score includes staves for Mod. Synth. 1, 2, 3, 4, Synth. Tr., and Perc. Tr. The key signature is D major. Mod. Synth. 1 and 2 play a rhythmic pattern of eighth notes. Synth. Tr. features a complex texture of overlapping notes with a *mf* dynamic. Perc. Tr. has rests with a '16' marking above measure 61. Measure numbers 59, 60, 61, 62, 63, and 64 are boxed at the bottom.



Musical score for measures 65-69. The score includes staves for Mod. Synth. 1, 2, 3, 4, Synth. Tr., and Perc. Tr. The key signature is D major. Mod. Synth. 3 and 4 play melodic lines with dynamics *f* and *mf*. Synth. Tr. has a complex texture. Perc. Tr. has rests with a '20' marking above measure 65 and a '24' marking above measure 69. Measure numbers 65, 66, 67, 68, and 69 are boxed at the bottom.

Mod. Synth. 3 parameters: Rel:3, Cut:4, Res:0

Mod. Synth. 4 parameters: Rel:10, Cut:3, Res:5



**E** SCENE 2: INSIDE THE FLOWER (SEED)

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

70 71 72 73



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

74 75 76 77 78 79 80 81

**F** GEOMETRIC CIRCLE GROWS

Mod. Synth. 1 *mp*

Mod. Synth. 2 *mp*

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr.

82 83 84 85 86 87 88 89



Mod. Synth. 1

Mod. Synth. 2 *mf*

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr.

90 91 92 93 94 95 96 97 98

**G** **CIRCULAR WAVES**

Mod. Synth. 1 *mf*

Mod. Synth. 2

Mod. Synth. 3 *f* Rel:0 Cut:3 Res:0

Mod. Synth. 4

Synth. Tr. *f*

99 100 101 102 103 104 105



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr.

106 107 108 109 110 111

**H** MULTIPLE CIRCULAR WAVES

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr.

Perc. Tr.

112 113 114 115 116 117



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr.

Perc. Tr.

118 119 120 121 122 123

**I** SCENE 3: CUT-AWAY TO BOUNCING SEEDS

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3 (Opt. turn down Filter Cutoff) *p* 4 8

Mod. Synth. 4 *p* (Opt. turn down Filter Cutoff)

Synth. Tr. *p* 4 8

Perc. Tr. *p* 4 8

124 125 126 127 128 129 130 131



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3 4

Mod. Synth. 4

Synth. Tr. 12

Perc. Tr. 12

132 133 134 135 136 137 138

**J** SCENE 4: CUT-BACK TO MULTIPLE CIRCULAR WAVES

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3 *f* (Opt. turn back up Filter Cutoff) 4

Mod. Synth. 4 *f* (Opt. turn back up Filter Cutoff)

Synth. Tr. *f* 4

Perc. Tr. *f* 4

139 140 141 142 143



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3 8

Mod. Synth. 4

Synth. Tr. 8

Perc. Tr. 8

144 145 146 147 148

Musical score for measures 149-155. The score includes staves for Mod. Synth. 1, 2, 3, 4, Synth. Tr., and Perc. Tr. Mod. Synth. 3 and Synth. Tr. have a dynamic marking of *f*. Perc. Tr. has a dynamic marking of *f*. Measure numbers 149, 150, 151, 152, 153, 154, and 155 are indicated at the bottom.



Musical score for measures 156-161. The score includes staves for Mod. Synth. 1, 2, 3, 4, Synth. Tr., and Perc. Tr. Mod. Synth. 3 and Synth. Tr. have a dynamic marking of *f*. Perc. Tr. has a dynamic marking of *ff*. Measure numbers 156, 157, 158, 159, 160, and 161 are indicated at the bottom.

L SCENE 5: ARROW

Propagate - Full Score

Mod. Synth. 1 *mf* (Sim.) 4

Mod. Synth. 2 *mf* Rel:1 Cut:3 Res:0

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr. *mf* 162 163 164 165 166 167 168



Mod. Synth. 1 8 12

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr. 169 170 171 172 173 174



Musical score for measures 175-181. The score includes five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, and Synth. Tr. (split into two staves).  
- Mod. Synth. 1: Starts with a melodic phrase in measure 175, followed by rests with slash marks. Dynamic: *(mf)*.  
- Mod. Synth. 2: Continues the melodic phrase from measure 175. Dynamic: *(mf)*.  
- Mod. Synth. 3: Rests throughout.  
- Mod. Synth. 4: Rests throughout.  
- Synth. Tr.: Features a rhythmic pattern of eighth notes in the upper staff and a complex, layered texture in the lower staff. Dynamic: *mp*.  
Measure numbers 175, 176, 177, 178, 179, 180, and 181 are indicated at the bottom.



Musical score for measures 182-188. The score includes five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, and Synth. Tr. (split into two staves).  
- Mod. Synth. 1: Rests with slash marks until measure 187, then a melodic phrase. Dynamic: *mp*.  
- Mod. Synth. 2: Continues the melodic phrase from measure 187. Dynamic: *mp*.  
- Mod. Synth. 3: Rests throughout.  
- Mod. Synth. 4: Rests throughout.  
- Synth. Tr.: Features a rhythmic pattern of eighth notes in the upper staff and a complex, layered texture in the lower staff. Dynamic: *mp*.  
Measure numbers 182, 183, 184, 185, 186, 187, and 188 are indicated at the bottom.

**N** SCENE 7: LIGHT REFRACTING

Mod. Synth. 1 *(mf)* 4

Mod. Synth. 2 *(mf)*

Mod. Synth. 3 *mf* 4

Mod. Synth. 4

Synth. Tr. *mp*

189 190 191 192 193

*Slightly Slower Attack*  
Rel:2  
Cut:5  
Res:0



Mod. Synth. 1 8

Mod. Synth. 2

Mod. Synth. 3 8

Mod. Synth. 4

Synth. Tr.

194 195 196 197 198

**O** SCENE 8: "RESIST"

Mod. Synth. 1 *mf* (Sim.)

Mod. Synth. 2 *mf* (Sim.)

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr. *p* *mp*

Perc. Tr. *p*

199 200 201 202 203 204 205 206 207 208 209

Detailed description: This block contains the musical score for Scene 8, 'RESIST', measures 199-209. It features five staves: four for Modified Synths (1-4) and one for Synthesizer and Percussion. Mod. Synth. 1 and 2 play a simple melodic line starting at measure 209 with a mezzo-forte (mf) dynamic. Mod. Synth. 3 and 4 are silent. The Synthesizer and Percussion tracks play a rhythmic pattern of eighth notes from measure 199 to 209, starting with a piano (p) dynamic and ending with a mezzo-piano (mp) dynamic. There are repeat signs in measures 202, 203, 204, 205, 206, 207, and 208. Measure numbers 199-209 are boxed at the bottom.



**P** SCENE 9: LIGHT REFRACTING

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3 *mf* (Sim.)

Mod. Synth. 4

Synth. Tr. *mp*

210 211 212 213 214 215 216

Detailed description: This block contains the musical score for Scene 9, 'LIGHT REFRACTING', measures 210-216. It features five staves: four for Modified Synths (1-4) and one for Synthesizer and Percussion. Mod. Synth. 1 plays a melodic line with a dynamic of mezzo-forte (mf) and a 'Sim.' (simulated) marking. Mod. Synth. 2 plays a similar melodic line. Mod. Synth. 3 plays a rhythmic pattern with a dynamic of mezzo-forte (mf) and a 'Sim.' marking. Mod. Synth. 4 is silent. The Synthesizer and Percussion tracks play a complex, layered texture of chords and notes, starting with a mezzo-piano (mp) dynamic. There are repeat signs in measures 211, 212, 213, 214, and 215. Measure numbers 210-216 are boxed at the bottom.

**Q** SCENE 10: "GRAVITATION"

Musical score for measures 217-221. The score consists of five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, and Synth. Tr. (Synthesizer Trumpet).  
- Mod. Synth. 1: Treble clef, contains notes with a '7' and rests with a '4' above.  
- Mod. Synth. 2: Treble clef, contains a melodic line.  
- Mod. Synth. 3: Treble clef, contains notes with a '7' and rests with a '4' above.  
- Mod. Synth. 4: Treble clef, contains whole rests.  
- Synth. Tr.: Bass clef, contains a glissando line starting at measure 217 and a series of notes with a '7' below.  
Measures 217, 218, 219, 220, and 221 are labeled at the bottom.



Musical score for measures 222-227. The score consists of five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, and Synth. Tr. (Synthesizer Trumpet).  
- Mod. Synth. 1: Treble clef, contains rests with an '8' above.  
- Mod. Synth. 2: Treble clef, contains a melodic line ending with a forte (*f*) dynamic.  
- Mod. Synth. 3: Treble clef, contains rests with an '8' above.  
- Mod. Synth. 4: Treble clef, contains whole rests.  
- Synth. Tr.: Bass clef, contains a series of notes with a '7' below.  
Measures 222, 223, 224, 225, 226, and 227 are labeled at the bottom.

**R** SCENE II: SEEDS FALLING

Musical score for measures 228-234. The score includes staves for Mod. Synth. 1, 2, 3, 4, Synth. Tr., and Perc. Tr. Mod. Synth. 1 is silent. Mod. Synth. 2 plays a melodic line. Mod. Synth. 3 has a forte (*f*) chord at the start and then rests with repeat signs. Mod. Synth. 4 is silent. Synth. Tr. plays a bass line with a forte (*f*) dynamic. Perc. Tr. has a rhythmic pattern with repeat signs. Measure numbers 228, 229, 230, 231, 232, 233, and 234 are indicated at the bottom.



Musical score for measures 235-240. The score includes staves for Mod. Synth. 1, 2, 3, 4, Synth. Tr., and Perc. Tr. Mod. Synth. 1 is silent. Mod. Synth. 2 continues its melodic line. Mod. Synth. 3 has a forte (*f*) chord at the start and then rests with repeat signs. Mod. Synth. 4 is silent. Synth. Tr. continues its bass line. Perc. Tr. has a rhythmic pattern with repeat signs. Measure numbers 235, 236, 237, 238, 239, and 240 are indicated at the bottom.

**S** SCENE 12: UNDULATING WAVES

Mod. Synth. 1

Mod. Synth. 2 *(f)*

Mod. Synth. 3 *(f)*

Mod. Synth. 4 *f*

Synth. Tr.

Perc. Tr.

*Slightly Slower Attack*  
Rel:2  
Cut:4  
Res:4

4

4

16

241 242 243 244 245 246



Mod. Synth. 1

Mod. Synth. 2 *ff*

Mod. Synth. 3 *ff*

Mod. Synth. 4 *ff*

Synth. Tr. *ff*

Perc. Tr.

8

8

20 24

247 248 249 250 251 252

T

SCENE 13: SEEDS FALL TO THE GROUND

Propagate - Full Score

(Sim.)

Mod. Synth. 1 *mp*

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr. *mp*

253 254 255 256 257



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

258 259 260 261 262

Musical score for measures 263-267. The score consists of five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, and Perc. Tr. Mod. Synth. 1 has a melodic line with eighth notes and rests. Mod. Synth. 2, 3, and 4 are silent. Perc. Tr. has a rhythmic pattern of eighth notes with accents in measures 263-265, followed by rests in 266 and 267.



Musical score for measures 268-274. The score consists of six staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, Synth. Tr., and Perc. Tr. Mod. Synth. 1 has a melodic line with eighth notes and rests. Mod. Synth. 2, 3, and 4 are silent. Synth. Tr. has a melodic line with eighth notes and rests, with some notes beamed together. Perc. Tr. has a rhythmic pattern of eighth notes with accents in measures 268-270, followed by rests in 271-274.



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

275 276 277 278 279 280 281 282



**U** SCENE 14: "HEAT, WATER - BUD"

Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

Short Attack  
Rel:1  
Cut:3  
Res:0

*mp*

Short Attack  
Rel:5  
Cut:3  
Res:0

*mp*

283 284 285 286 287 288 289

Mod. Synth. 1 *(mp)*

Mod. Synth. 2

Mod. Synth. 3 *(mp)*

Mod. Synth. 4 *(mp)*

Perc. Tr.

290 291 292 293 294 295 296 297



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Perc. Tr.

298 299 300 301 302 303 304 305 306

V SCENE 15: GROW

Mod. Synth. 1 *ff*

Mod. Synth. 2 *ff*

Mod. Synth. 3 *ff*

Mod. Synth. 4 *ff*

Synth. Tr. *ff*

Perc. Tr. *ff*

Rel:1  
Cur:2  
Res:0

4

4

2

2

307 308 309 310 311 312



Mod. Synth. 1

Mod. Synth. 2

Mod. Synth. 3

Mod. Synth. 4

Synth. Tr. *ff*

Perc. Tr.

8

8

2

2

2

313 314 315 316 317 318

Musical score for measures 319-325. The score includes five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, Synth. Tr., and Perc. Tr. Mod. Synth. 1 and 2 play eighth-note patterns with a flat. Mod. Synth. 3 and 4 have rests with bar numbers 12 and 16. Synth. Tr. features a complex texture with a *ff* dynamic marking. Perc. Tr. has two-measure rests followed by a rhythmic pattern. Measure numbers 319-325 are indicated below the staves.



Musical score for measures 326-332. The score includes five staves: Mod. Synth. 1, Mod. Synth. 2, Mod. Synth. 3, Mod. Synth. 4, Synth. Tr., and Perc. Tr. A box labeled **W** "END" is positioned above the first staff. A text box explains: "\* = Use pitch bender to gliss downward. If unavailable, come off on the downbeat of bar 331." The staves for Mod. Synth. 1-4 and Synth. Tr. end with glissando markings. Perc. Tr. includes a "Subsonic Boom" marking. Measure numbers 326-332 are indicated below the staves.