

Raphaël Belfiore

Seven instantiation studies

for (C and B-flat) trumpet and trombone

revised score, may 2020

2020

written for Jens Bracher and
Stephen Menotti

The realization of a complex mathematical object is enacted seven times in a location. Five of the realizations are played successively by musicians while two others, printed on paper, are placed close to where the sounds are produced. What can be considered here as the artwork is not medium-specific: It is a series of arbitrary decisions resulting in parallel successions of numeric values. The different versions of this mathematical object can then be understood as equivalent versions of one artwork, regardless of how they appear.

The performed occurrences are composed of the same sonic material. The different components of the ideal object, assigned to different instrumental parameters, are systematically recombined in order to create new sonic results. However, listening here seems to be less the perception of auditory events than an ontological experience in which sounds indicate the virtual presence of their « conceptual » cause. Each sounding study is then better understood as a diachronic « object » than a musical piece.

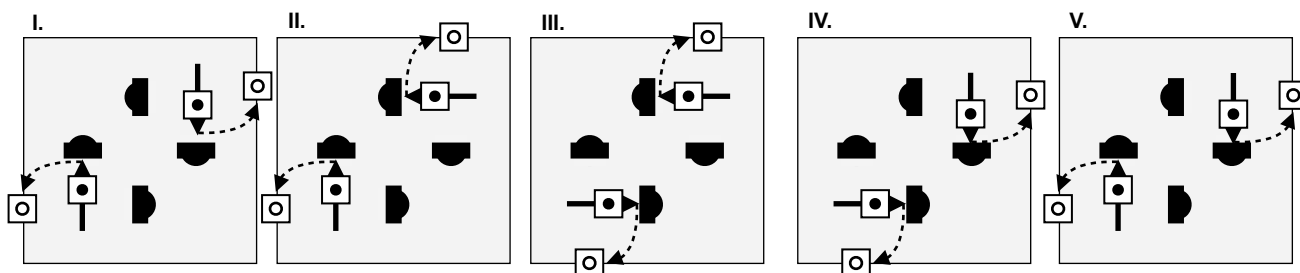
The term “instantiation” is a technical term in contemporary metaphysics describing the relationship between an universal property and its actualized and perceptible occurrences.

Material needed

- a tenor trombone and two trumpets: C and B-flat.
- for each player, two hat mutes with stands. If two hat mutes are not possible to find for each player, alternative solutions with everyday material can be found.
- 20 + 20 to 50 + 50 printed thin white card stock (a5) and various music stands (see the "Additional media » section below)

Concert situation

The piece has been conceived to be played in a medium-large open space with no stage. The performers are in the middle of the space. Around them are placed four hat mutes as shown in the diagrams below. Each diagram represents the position of the performers in every study as well as the direction in which they should move in order to create the timbral variation notated with the full, half-full and empty circles in the score.



Additional media

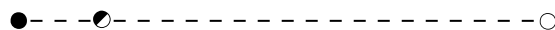
The six and seventh instantiation studies are not composed of sounds. Nonetheless, they still have to be present during the performance for the work to be complete. The recommended presentation is the following. Study VI (alphanumeric instantiation) and VII (graphic instantiation) should be printed on a5 sized thick paper (180 - 250 g/m²). Depending on the number of people, the number of copies of each study would be between 20 to 50. They are then presented (possibly on music stands) across the room with consideration for the site. The papers, not overwhelming the space, should remain a mere presence. They can be read or taken by members of the public. As they persist in time differently than sounds, they can be installed for some time before and after the performance of the sounding part of the work.

At the end of the score, a ready-to-print two sided (long edge) page is included. It should be printed or photocopied on a4 paper and cut in half.

Performance notes



These signs refer to two linked sonic effects: timbre variation (closed/half-closed/open) and the projection of sound in space (inside/outside). (See the "Concert situation" section above). One thing should be clear here: the half-open position refers to the timbre and must not be interpreted as an equidistant point between the "inside" and the "outside". The spatial movement should follow the following logic: the half-open position close to the mute and the open position clearly away from it (see graphic below).



n

"niente", no sound.



"split tone" and « flatterzunge/fluttertongue » ("fltz. " is always indicated with tremolo articulation.)



Indication of microtonal deviation, i.e. 10 means one hundredth of tone.



Indicates gradual transition between parameters. Without it, the parameter changes have to be made as fast as possible.



composed breathing. Ideally, there should be no breaths outside of these rests. Their duration is however relative and should not be taken too seriously. They should preferably begin early than end late.



The legato ties are dashed in order to differentiate them from the standard rhythmic ties.

Seven instantiation studies (2020) - I

Raphaël Belfiore

♩ = 80

Trp.

Tbn.

ord. fitz. spl. n

ppp pp

ppp pp

ppp pp

n

5

ppp pp n ppp

ppp pp ppp pp pp

9

n ppp pp ppp pp

ppp pp n pp ppp

13

System 1 (Measures 13-16):

- Staff 1 (Treble Clef):
 - Measure 13: *ord.*, *fltz.*, *splt.* (3), *fltz.*, *ord.*, *fltz.* (5)
 - Measure 14: *fltz.*, *splt.* (3), *fltz.*
 - Measure 15: *fltz.*
 - Measure 16: *fltz.*
- Staff 2 (Bass Clef):
 - Measure 13: *ppp*, *pp*, *ppp*, *pp*
 - Measure 14: *ppp*, *pp*
 - Measure 15: *n*, *ppp*, *pp*
 - Measure 16: *ppp*

17

System 2 (Measures 17-20):

- Staff 1 (Treble Clef):
 - Measure 17: *ord.*, *fltz.*, *splt.*
 - Measure 18: *fltz.*
 - Measure 19: *splt.* (3), *fltz.*
 - Measure 20: *fltz.*
- Staff 2 (Bass Clef):
 - Measure 17: *ppp*, *pp*
 - Measure 18: *ppp*
 - Measure 19: *n*, *ppp*, *pp*
 - Measure 20: *n*

21

System 3 (Measures 21-24):

- Staff 1 (Treble Clef):
 - Measure 21: *ord.*
 - Measure 22: *fltz.*, *splt.* (3), *fltz.* (3), *ord.*
 - Measure 23: *fltz.*, *splt.*
 - Measure 24: *fltz.*, *ord.*
- Staff 2 (Bass Clef):
 - Measure 21: *ppp*, *pp*
 - Measure 22: *ppp*, *n*
 - Measure 23: *ppp*, *pp*
 - Measure 24: *n*

15"

Raphaël Belfiore

13

Musical score for measures 13-16. The score is written for two staves. The top staff has a treble clef and a key signature of one flat. The bottom staff has a bass clef and a key signature of one flat. The score includes dynamic markings (*p*, *mf*, *n*, *p*, *mp*) and articulation markings (*fltz.*). Measure 13 starts with a *p* dynamic and a *fltz.* marking. Measure 14 has a *mf* dynamic and a *fltz.* marking. Measure 15 has a *n* dynamic and a *fltz.* marking. Measure 16 has a *p* dynamic and a *fltz.* marking. The score also includes a *5* measure rest in measure 15 and a *3* measure rest in measure 16.

17

Musical score for measures 17-20. The score is written for two staves. The top staff has a treble clef and a key signature of one flat. The bottom staff has a bass clef and a key signature of one flat. The score includes dynamic markings (*p*, *mf*, *mp*, *n*, *mp*, *mf*) and articulation markings (*fltz.*). Measure 17 starts with a *p* dynamic and a *fltz.* marking. Measure 18 has a *mf* dynamic and a *fltz.* marking. Measure 19 has a *mp* dynamic and a *fltz.* marking. Measure 20 has a *n* dynamic and a *fltz.* marking. The score also includes a *3* measure rest in measure 19 and a *3* measure rest in measure 20.

21

Musical score for measures 21-24. The score is written for two staves. The top staff has a treble clef and a key signature of one flat. The bottom staff has a bass clef and a key signature of one flat. The score includes dynamic markings (*p*, *mf*, *n*, *p*, *mf*, *n*) and articulation markings (*fltz.*). Measure 21 starts with a *p* dynamic and a *fltz.* marking. Measure 22 has a *mf* dynamic and a *fltz.* marking. Measure 23 has a *n* dynamic and a *fltz.* marking. Measure 24 has a *p* dynamic and a *fltz.* marking. The score also includes a *3* measure rest in measure 22 and a *3* measure rest in measure 23.

15"

[.]

Seven instantiation studies (2020) - III

Raphaël Belfiore

* The dashed crescendo represents the general dynamic direction of the sounds. The "poco de-/cresc." are to be understood as steps between the two dynamic indications and not as a specific point in time in which the intensity increases. In practice, the effect desired would be a very gradual crescendo-decrescendo independent of the breaths. The standard crescendo marks are then just articulation indication: Nothing should stand out because of an accentuation.

♩ = 80

Trp.

Tbn.

ord.

pp*

n

poco cresc.

fitz.

splt.

pp*

poco cresc.

5

Trp.

Tbn.

ord.

poco cresc.

mp

fitz.

poco cresc.

mp

9

Trp.

Tbn.

splt.

fitz.

poco cresc.

mf

poco decresc.

13

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

611

612

613

614

615

616

617

618

619

620

621

622

623

624

625

626

627

628

629

630

631

632

633

634

635

636

637

638

639

640

641

642

643

644

645

646

647

648

649

650

651

652

653

654

655

656

657

658

659

660

661

662

663

664

665

666

667

668

669

670

671

672

673

674

675

676

677

678

679

680

681

682

683

684

685

686

687

688

689

690

691

692

693

694

695

696

697

698

699

700

701

702

703

704

705

706

707

708

709

710

711

712

713

714

715

716

717

718

719

720

721

722

723

724

725

726

727

728

729

730

731

732

733

734

735

736

737

738

739

740

741

742

743

744

745

746

747

748

749

750

751

752

753

754

755

756

757

758

759

760

761

762

763

764

765

766

767

768

769

770

771

772

773

774

775

776

777

778

779

780

781

782

783

784

785

786

787

788

789

790

791

792

793

794

795

796

797

798

799

800

801

802

803

804

805

806

807

808

809

810

811

812

813

814

815

816

817

818

819

820

821

822

823

824

825

826

827

828

829

830

831

832

833

834

835

836

837

838

839

840

841

842

843

844

845

846

847

848

849

850

851

852

853

854

855

856

857

858

859

860

861

862

863

864

865

866

867

868

869

870

871

872

873

874

875

876

877

878

879

880

881

882

883

884

885

886

887

888

889

890

891

892

893

894

895

896

897

898

899

900

901

902

903

904

905

906

907

908

909

910

911

912

913

914

915

916

917

918

919

920

921

922

923

924

925

926

927

928

929

930

931

932

933

934

935

936

937

938

939

940

941

942

943

944

945

946

947

948

949

950

951

952

953

954

955

956

957

958

959

960

961

962

963

964

965

966

967

968

969

970

971

972

973

974

975

976

977

978

979

980

981

982

983

984

985

986

987

988

989

990

991

992

993

994

995

996

997

998

999

1000

17

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

3

Seven instantiation studies (2020) - IV

Raphaël Belfiore

♩ = 80

Trp.

Tbn.

p

p

n

n *mp*

Measure 1: Trp. half note Bb (*p*), Tbn. half note Bb (*p*).
Measure 2: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 3: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 4: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.

5

mf

p

n

mp

mf

n

mf

Measure 5: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 6: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 7: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 8: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.

9

n

mp

n

p

n

Measure 9: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 10: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 11: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.
Measure 12: Trp. eighth notes Bb, A, G, F, E, D, C, Bb. Tbn. eighth notes Bb, A, G, F, E, D, C, Bb.

13

13

mf

mp

n

mf

n

p

17

17

17

n

mp

mf

n

15"

21

21

mf

mp

n

mp

Seven instantiation studies (2020) - V

Raphaël Belfiore

♩ = 80

Trp.

Tbn.

fitz.

ord.

3

mp

5

fitz.

3

n

5

split.

ord.

3

fitz.

split.

n mp

60ø

115ø

65ø

70ø

mp

9

120ø

20ø

120ø

fitz.

3

3

n mp

120ø

80ø

70ø

120ø

ord.

3

3

n mp

n

13

Musical score for measures 13-16. The score is written for two staves. The top staff features a melodic line with a 'split' (spl.) instruction and a triplet of eighth notes. The bottom staff features a bass line with a 'flut.' (flute) instruction and a triplet of eighth notes. Dynamic markings include *mp* (mezzo-piano) and *n* (normal). Performance instructions include *ord.* (order) and *mp*. Numerical values in boxes indicate specific points: -125, -60, -130, and -30.

17

Musical score for measures 17-20. The score is written for two staves. The top staff features a melodic line with a 'split' (spl.) instruction and a triplet of eighth notes. The bottom staff features a bass line with a 'flut.' (flute) instruction and a triplet of eighth notes. Dynamic markings include *mp* (mezzo-piano) and *n* (normal). Performance instructions include *ord.* (order) and *mp*. Numerical values in boxes indicate specific points: -70, -15, -120, and -115.

21

Musical score for measures 21-24. The score is written for two staves. The top staff features a melodic line with a 'split' (spl.) instruction and a triplet of eighth notes. The bottom staff features a bass line with a 'flut.' (flute) instruction and a triplet of eighth notes. Dynamic markings include *mp* (mezzo-piano) and *n* (normal). Performance instructions include *ord.* (order) and *mp*. Numerical values in boxes indicate specific points: -110, -10, -100, and -50.

[illegible]

