# First Deconstruction (in Plastic) 

Percussion Duo
for John Cage
(2005)

John Kennedy

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First Deconstruction (in Plastic) is a $21^{\text {st }}$ Century homage to the found-object percussion music and series of "constructions" made by John Cage about 50 years ago.

Today, plastic is everywhere, with shopping bag and packaging material sightings in remote wilderness areas, carried by winds and tides. It is an ubiquitous material that depending on its type, decomposes slowly if at all.

The sound properties of plastics vary in quality, and one of the challenges of this piece is for the performers to find plastics that make the most interesting sounds and are durable enough for the work - and to and recycle them as music. Experimenting with options, even changing sets used within a piece is acceptable (such as having more than one set of "drums" in a part). The "scraped plastic" section might also include twisting corrugated plastic water bottles - experimentation with sounds and materials is encouraged. The sets of instruments should travel easily and fit inside the largest drums.

## Major Plastic Materials

Plastic molecules are made of long chains of repeating units called monomers. The atoms that make up a plastic's monomers and the arrangement of the monomers within the molecule both determine many of the plastic's properties. The following list details the monomers for several major plastics, as well as the properties and uses of each type of plastic.

Polyethylene (PE)

- CH 2- CH 2-

Film, bags, pipe and tubing, insulating sleeves, bottle stoppers, lids, plastic wrap, toys
Polypropylene (PP)
CH31-CH 2-CH-
Household items, plastic wrap, automobile parts, batteries, bumpers, garden furniture, syringes, bottles, appliances

Polystyrene (PS)
C6H5 - - CH 2- CH -
Plastic wrap, kitchen utensils, furniture covers, thermal insulation, toys, office supplies, disposable razors

Polyvinyl Chloride (PVC)
$\mathrm{Cl} \mid-\mathrm{CH} 2-\mathrm{CH}$ -
Household items, electric wire insulation, water pipes, floor coverings, window and door coverings, baggage, vinyl, sport and camping gear, items for chemical and automobile industries

Polytetrafluoroethylene (PTFE) or Teflon

- CF 2- CF 2-

Orthopedic and prosthetic appliances, hearing aids, joints, upholstery, corrosion-resistant mechanical parts, electrical insulation, frying pan coatings

Polymethyl Methacrylate (PMMA) or Plexiglas
CH 3 |-CH 2- C - | OCOCH 3
Glass substitute, neon signs, windows, portholes, optical fibers, dentistry, appliances, contact lenses

Polyamides (PA) (example: Nylon)

- NH - (CH 2)a- CO -

Food wrap, counters, gas, electricity, fuel pipes, shoes, ski bindings, bicycle seats
Silicone
R|-O-Si-|R
Fluid for electrical transformers, putty, molding, antiadhesive coverings, varnish, wax, burn treatments, cosmetic surgery

Polyesters
-R C - O-R' - O-C - R-I| || O O
Textiles, plastic wrap, bottles, switches, electric sockets and fuses, appliances

## Each player has instruments as notated below:

- 4 plastic shakers: plastic bottles filled with plastic beads (found at a hobby shop), large (liter) to small
- 4 graduated plastic containers (such as salad bar containers) scraped with a plastic device such as a comb
- 5 graduated plastic "drums": joint compound buckets (large) to thick plant pots or food containers
- a plastic shopping bag played by rustling it in the hands
if possible, mallets should be plastic such as thin, firm PVC tubing
The degradation of a set of instruments during rehearsal is to be expected, and their regular replacement is a feature of plastics.



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A
B



206
A


211
A
B



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