# Provoking Sound:
## Notation in the work of the Grúpat artists

*by*

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In the opening paragraph of *Envisioning Information*, Edward Tufte states

> *'The world is complex, dynamic, multidimensional; the paper is static, flat. How are we to represent the rich visual world of experience and measurement on mere flatland?'*[1]

This is the situation of much music notation, and one which the work of the South Dublin art collective Grúpat addresses. Through an extended study of the potential forms music notation might take, they consider ways in which images and objects may provoke sound making. Folded paper octahedrons; shrubbery; stones with written-on ukulele chord charts; a faux-fur box containing handwritten texts; and woven detritus: in an extension of Tufte's advocacy of dimensional illusion as a means to find greater depth on the page, work by the Grúpat artists considers the expansion of notation in space, and how it might negotiate the exchange of information from composer to performer.

Central to this exchange is the means by which notation is mapped to thought, action or sound when realizing a score. Musical notation can take many forms, but each is characterized by the conventions and rules that determine the way a particular score should, or could, be interpreted. Symbolic notations such as those used in stave, graphic, or kinetic scores require meaning to be attached to each symbol or movement; verbal scores require understanding of the language systems through which they are articulated. Without these points of reference, scores are images, not potential conveyors of directions for action. Sometimes these mappings are provided by the scorer, and in other cases they are not, leaving those realizing the score to determine a personal response. In many pieces by the Grúpat artists, a key principle is

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1 Edward R. Tufte, *Envisioning Information* (Cheshire: Graphics Press, 1990), p.9.

the lack of specific information regarding the way in which ideas about sound are mapped to actions and sounding results via notation. Such ambiguity is a deliberate strategy and has a long history, from Cornelius Cardew's instructionless 193-page graphic score *Treatise* (1967) to Manfred Werder's lists of unexplained nouns in his *2009* series. By not stating the way to use the notation, such scores rely on their internal logic, suggestive possibilities, and potential to open up associations and resonances with other situations. Elsewhere in Grúpat's work however, great precision can be found. Whilst the scores may be unusual in appearance, they share with stave notation a reliance on prescribed rules to shape certain actions by performers. Gaps are still apparent however; even where many of the parameters appear to be fixed, through employing detailed and clearly specified notation, other elements remain open, creating a strange mix of direction and openness.



Figure 1: Violetta Mahon, *The King, Poto and Deauville* (2008)

Perhaps the most ambiguous scores of the Grúpat artists are those by Violetta Mahon. Her series of 'clamors' are drawn from imagery generated by her dreams. Mahon has kept dream diaries since 1988, and extracts pertinent sonic references as starting points for making graphic scores in the form of watercolor collages. In *The King, Poto and Deauville* (2008), a photograph of a grazing horse wearing a stuck-on vastly oversized crown is surrounded by short

handwritten texts on small cards and fragments of music notation (see figure1). The combined image is then dotted with splashed watercolor paint. There are no instructions for these scores, although there are multiple points of reference: the horse may represent the importance of Deauville as a breeding area in France – it is also twinned with County Kildare; Poto may be one of the identical American twins who by the age of eight in the late 1970s had developed a private language. In realizations of the piece by the German ensemble ascolta, titled *Dream Diaries: 1988-2008*, miniature toy horses are used to act out dressage choreography, performers chant text related to Second Life subcultures and sail paper planes across the audience. The ensemble unpack this from the 'clamor' by decoding Mahon's use of Solresol – another invented language which uses permutations of seven unique syllables that can be articulated through, amongst other things, words, pitches and colors – as a means of mapping color to instructions. This is only one possible solution however. There are many ways to approach the scores, with each interpretation prioritizing the constituent information in a personal way. This is reinforced by the dual role of clamors as 'contemplative icons where the sounds described and images depicted reverberate through the imagination of the observer.'[2]

Although similar in their absence of instructions, in scores by The Dowager Marchylove, the alter ego of performance artist Niall Quinlan, words are a starting point. Some of her recent work uses a mix of sound poetry and photography to create pieces that invite the viewer-listener to reflect upon the sonic traces of remembered locations. This is rooted in her practice as a flâneur, evident in earlier photographic works such as *It's Not You–It's Me* (1997) which comprises a series of photographs of 'locations where individuals had been "unceremoniously dumped"'[3], displayed alongside texts which provide further context. In her work since 2002, sound has been an increasingly important component however. The series *Flâneur du Klang* (2003- ) comprises polaroid photographs captioned with short texts reminiscent of haiku and often displayed as a framed grid (see figure 2). Here the texts suggest both the sound environment that envelops the pictured

2 'Violetta Mahon', in *Grúpat* (Dublin: Project Press, 2009)
3 'The Dowager Marchylove', in *Grúpat* (Dublin: Project Press, 2009)

location, and ways of reading the image. For example, a close-up photograph of cut flowers is labeled 'flowers gleam and pulse under a choir of humming wires', whilst a country path sheltered by small leafless trees is marked 'tears of wool stand sentinel over a fairy path'. Both texts contain references to what can be seen, and what might be imagined. Given the entirely visual domain of the work, sounds implicit in the situation depicted can only be imagined, whether the sources are apparent or not. These pieces function as scores in this respect. They attempt to engage the viewer in a consideration of the world beyond the boundaries of the frame. There is a corresponding invitation to realize the missing components, but this is not a requirement, simply an offer.



Figure 2: The Dowager Marchylove, *Flâneur du Klang* (2003- )

In contrast, The Dowager's recent series of sound poems, *The Wasistas of Thereswhere* and *Let's all Wake Brickfaced* (2008) reduce the use of imagery in favor of typographic layouts that suggest ways of reading the words. Although there are a few hand-drawn and photographic images, here most of the information is carried by the texts. They recall the Futurist[4] Filippo Marinetti's sound poems, such as *Dune, parole in libertà* (1914), with its

4 It is worth stating the link between Marinetti and fellow Futurist Luigi Russolo, another noted flâneur whose *Art of Noises* manifesto (1913) proclaims 'Let us cross a great modern capital with our ears more alert than our eyes, and we will get enjoyment from distinguishing the eddying of water, air and gas in metal pipes, the grumbling of noises that breathe and pulse with indisputable animality, the palpitation of valves, the coming and going of pistons, the howl of mechanical saws, the jolting of a tram on its rails, the cracking of whips, the flapping of curtains and flags..' Luigi Russolo, 'The Art of Noises: Futurist Manifesto', *The Art of Noises* (New York: Pendragon Press, 1986), p. 26.

use of multiple fonts, onomatopoeic words, and a complication of narrative structure through overlaying and interpenetrating sections of the text. When working through the text of The Dowager's *Let's all Wake Brickfaced* (see figure 3), readers need to find a way to negotiate the many possible routes it suggests. Although their form is very different, her sound poetry shares with Mahon's clamors the use of text and image to create an open situation, one in which the performer needs to determine a method for realizing each piece through interaction with the score.



Figure 3: The Dowager Marchylove, *Let's all Wake Brickfaced* (2008)

As is common amongst Grúpat members, The Dowager is a regular collaborator with her fellow artists. Her installation *The Kennels* (2008) with Bulletin M involved creating a geocache[5] containing

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5 Geocaching is the practice of hiding containers outdoors and posting their GPS coordinates online so that others might find them. Caches typically contain objects which may be taken by those that find them, with an implicit expectation that something is left in their place. For more information, see http://www.geocaching.com/ (accessed 03.11.10).

dice scores that could be collected by those seeking its location deep in the Dublin mountains (see figure 4). The dice themselves also use text as a scoring medium, with the faces presenting an idiom that must be deduced by the reader (see figure 5). Examples include 'warm dust wing', 'slow ooze close' and 'egg yolk glass'. This reliance on the reader's lexicon to establish meaning, and therefore inform a realization, is also found in some Fluxus event scores, such as George Brecht's *Bach* (1963), which comprises the word 'Brazil'. The potential for multiple readings created by the juxtaposition of the two words in the Brecht is extended in *The Kennels*, both through presenting groups of words on each face and the possibility of simultaneously reading the many faces that result from a throw of the dice. As such, a more complex set of interrelationships results.

figure 4: The Dowager Marchylove and Bulletin M, geocache location for *The Kennels* (2008)

Figure 5: The Dowager Marchylove and Bulletin M, dice scores for
*The Kennels* (2008)

Such collaborative approaches to score making are also apparent in work by both Flor Hartigan and Turf Boon. By opening up aspects of the creation of a piece to others, the multiple perspectives of other personalities seep in, allowing – from the composer's perspective – a more objective and moderated result. But this is not composing by committee: it creates the possibility of extremes, idiosyncrasies, and abuse. Hartigan's collaborative approach to score-making is evident in her piece *Telegraph* (2008), part of the series *re(Cycling)* (2003- )*,* which was installed during the Grúpat exhibition at Project Arts Centre, Dublin in February 2009. The work comprises a series of photographs of telegraph wires arranged in a mosaic-like manner on the gallery wall (see figure 6). Visitors were invited to add notations to the photographs; such annotations included musical notes, the anarchist circle-A, drawings of cakes and monsters, geometric doodling, scribbles, and stickers. The score was subsequently realized by the Wechsler-Ishikara piano duo with vocalist and regular Grúpat collaborator Jennifer Walshe in Barcelona, with the performers triangulating the contour of the wires, pseudo-stave markings, and subjective responses to the images to create sequences of pitches. These were then renotated as a series of stave notation panels, which were performed in sequences suggested by the relative position of the photos to each other in the original exhibition. Reference was also made to the similarity between the wires and the layout of the piano strings, with score markings being transferred to

carefully measured positions on each string and used as locations for inserting metal and wood preparations. A chain of events initiated by Hartigan's original proposal therefore establishes the final relationship between score and sounding result.



Figure 6: Flor Hartigan, installation of collaborative score for *Telegraph* (2008) at Project Arts Centre, Dublin
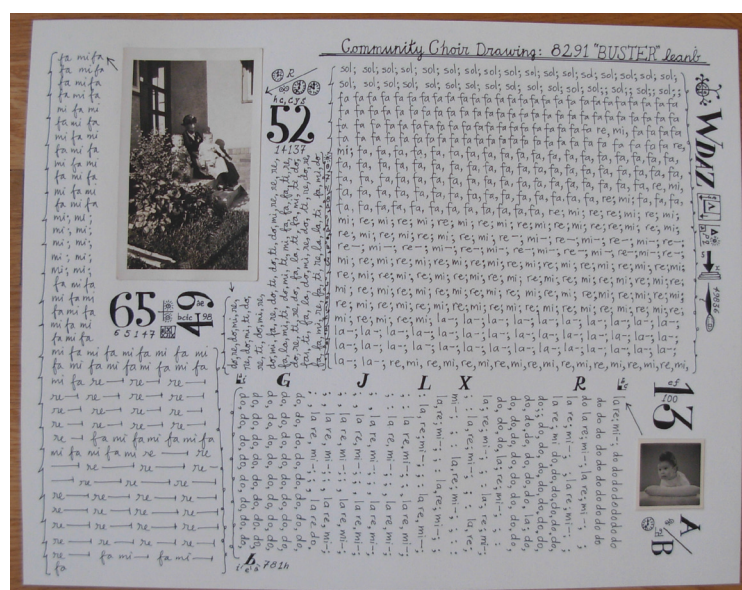


Figure 7: Turf Boon, Community Choir Drawing: 8291 "BUSTER" leanb (2006)

In Turf Boon's ongoing *Community Choir* series (2002- ), an expanding collection of 'drawing scores' are produced collaboratively with each performer. The scores comprise found photographs and handwritten solfège notation arranged in discrete blocks on a large sheet of paper (see figure 7). This material is initially sourced and selected by Boon, but arrangements are made with the performer, who may add additional words and images as required. Performers may also select which of a set of interpretative descriptors – symbols that suggest particular ways of reading the score – are embedded amongst the text and images. For example, in *Community Choir Drawing: 7212 ceann*, developed with New York vocalist Dieter Aherne, the juxtaposition of the number 64 with a grid of three clock faces was chosen to determine the points at which the repeating sequence 'fa-re-mi' may be used, and the number of times this may happen in a performance. This negotiated approach to scoring reduces Boon's sense of authorship in his work, marginalizing him as the work's creator and subsuming him in the loose collective of collaborators who have made versions of the piece. In this way, his work draws on the experience of others, mediated through the use of recycled materials. The photos are found not taken; the associations of others leave traces of personal histories. His embracing of freeganism, which espouses minimizing the consumption of resources, is central to this aesthetic. He comments

> *"I don't buy materials if I can avoid it. When I do buy materials they come from charity shops or jumble sales, places where my money will be recycled into the system in a humane way. I want to use what's there …The everyday, the detritus, the debris, old buttons, harmonicas, slideshows and mix-tapes… these are emotional and textural fingerprints we leave behind. They give us the possibility to be archaeologists in and of the present."[6]*

While Boon's recycling of found objects is the focus of much of his instrument making[7], he also uses found materials to make scores. When preparing *The Sacred Geometries* (2007), Boon

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6 Turf Boon, 'Creative Freeganism' in Michael Sand (ed.), Frozen (Berlin: Galerie Fleisch Verlag, 2008), p. 81.
7 Examples include the soft-toy marimba of *Kuscheltiermarimbaphon* (2006) and *Shoepipes* (2005).

spent the periods of Ordinary Time[8] in 2007 sourcing sheet music from church jumble sales in Tallaght. Pages of these scores were then cut down and folded into octahedra[9] (see figure 8). The origami pattern used required four separate pieces of paper to be folded together, resulting in a collage-like distribution of the images across the eight faces of the solid. This creates many discontinuities in the way the original scores intersect with each other; when the octahedra are placed together, the flow is further complicated. Boon does not provide instructions for realizing these scores however, simply making them available for use by performers. Realizations by Grúpat member The Parks Service have used the solids as eight-sided dice, cast afresh for each iteration of the piece, whilst the Belgium-based Next Ensemble made precise measurements of each face and used the data to determine a time structure for controlling the duration of each reading. In both cases, the fragmentary nature of the composite images resulted in a filmic cutting between sounds.



Figure 8: Turf Boon, *The Sacred Geometries* (2007)

Found materials can also be seen in the work of Detleva Verens. In *The Cabinet of Dr. O'Mahony* (2006) for string quartet, the players are presented with three cabinets, each containing miniature

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8 Ordinary Time is the period in the Christian calendar that falls outside of the main seasons of Advent, Christmas, Lent and Easter.

9 An octahedron is one of the five Platonic solids, and was associated with the element air. Plato related each of the solids to one of the four elements, with the fifth – the icosahedron – being reserved for god. The solids later formed the basis of *Johannes Kepler's Mysterium Cosmographicum* (1596), which used them as a way to describe astronomical proportions in relation to the positioning of planets.

artificial plants, music notation (including stave fragments and chord charts), representations of dance steps and images from Robert Louis Stevenson's *Treasure Island* (see figure 9)*.* Whilst there is a relatively free association between the original materials and the resultant score in both Boon and Hartigan's work, Verens' background in cybernetics, phonetics and speech technology infuses her more rigorously empirical approach to scoring. When preparing the cabinets, Verens 'traced Stevenson's map onto South Dublin County via matrix transposition equations, and arranged the objects within the cabinets into tableaux according to geometries derived from these equations.'[10] Their arrangement is therefore not arbitrary, and the requirements for realizing the scores are correspondingly precise. The equations are also used to determine very short time windows in which the players act, sometimes requiring complex sequences of foot movements prescribed by the dance notation[11] to be placed within, for example, the space of 0.23 seconds. Equally, the variations in color of the foliage placed in the glass receptacles governs the density of noise tones. Color charts, similar to those used for choosing household paint colors, are provided to enable accurate mapping of leaf color to bowing techniques so as to help the players produce the correct sound; recordings with sonogram analyses are appended to the score in order to further clarify what is required.



Figure 9: Detleva Verens, one of the cabinets from *The Cabinet of Dr. O'Mahony* (2006)

10 'Detleva Verens', in *Grúpat* (Dublin: Project Press, 2009)
11 All four string players, including the cellist, must stand throughout the performance.

Other found materials can be seen in Verens' *Scintillia* (2007) for solo voice, which comprise three wicker and bamboo constructions (see figure 10). These are based on satellite photographs of a forest in South Dublin County as well as constellation positions and satellite orbits in the sky over Tallaght on 15 March 2007. Verens notes the influence of the stick charts of the Marshall Islanders in both the method of construction and interpretation of the scores. The Marshallese use their charts as a means to map the wave patterns around their island group. The two principal types of chart, the *rebbelib* and *wappepe*, were used to relate the movement of waves to specific islands, with the orientation of a chart being altered dependent upon location. The charts are used to show relationships: they are not maps in the sense that they depict absolute positions of fixed objects.[12] Although Verens' scores have a different purpose and bear only superficial resemblance to the stick charts (they could not be used for navigation), they share this characteristic, allowing the reader to make relationships between the elements they represent. Verens explains that 'The stick charts fascinate me because they are a completely different way of thinking about mapping, being concerned with patterns and flows or energy and how these flows are affected by objects that exist within them. This mapping methodology seemed perfectly suited to sound.'[13] Her reference to Hermann Hesse's *Das Glasperlenspiel* is apposite in this respect. As the game players in Hesse's novel make relationships between multidisciplinary ideas in order to create ever-deepening associations between them, so must the performers who realize *Scintillia* highlight 'connections between constellations, geography, sound and energy, and promot[e] a very unique type of musical harmony.'[14]

12 For a full discussion of the role of stick charts in establishing methods of communication in the Marshall Islands, see Dirk HR Spennemann, 'Traditional and Nineteenth Century Communication Patterns in the Marshall Islands', *Micronesian Journal of the Humanities and Social Sciences,* vol 4, no 1, Dry Season Issue (June 2005): 25-52.
13 Detleva Verens, 'Pattern Mapping', *The Journal of Relational Cartography, vol 4, #6* (Winter 2009): 36.
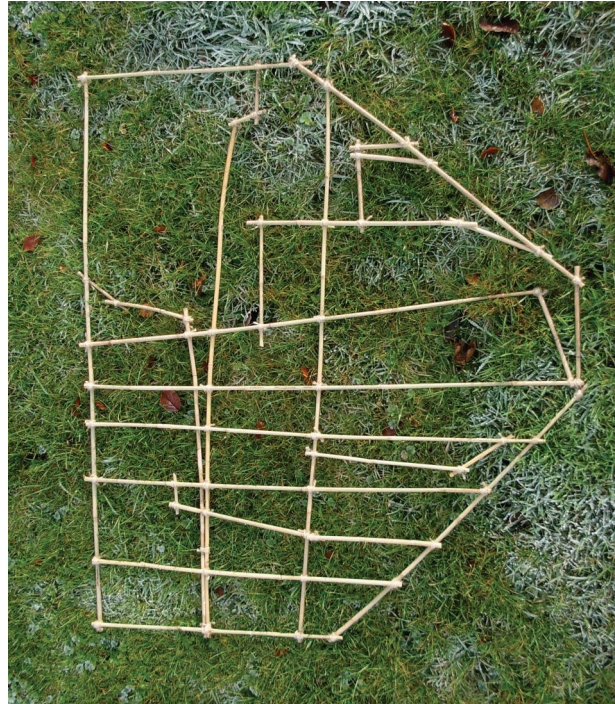14 'Detleva Verens', in *Grúpat* (Dublin: Project Press, 2009)

Figure 10: Detleva Verens, one of the three scores for *Scintillia* (2007)

Two other aspects of the Marshallese charts are of direct relevance to Verens's scores for *Scintillia*. Firstly, the charts were not used on voyages but served as memory aids when preparing for a trip. Although not explicitly stated in the instructions for *Scintillia*, the possibility of memorizing the scores in advance, a common practice in musical performance, reinforces the analogy with their source. Secondly, the charts were generally only able to be read by the chart maker. Their uniqueness may be seen therefore as a barrier to widespread use, but as Verens explains, in her piece the performers must develop their own strategy for mapping the score-objects to sound structures:

> *Mappings are open, interpretable according to each person's perspective in time and space; they can be interpreted from any direction, any dimension. What is important is flows of energy, systems of tendencies which the performer must internalize so that the score is just a reminder of a physical experience of frequency in space. The dimensions of the score become represented as a unique geology within the performer's brain, as synapses form replicating a neural version of the score structure.[15]*

15 Detleva Verens, Kurt Mathers, email correspondence, 10.11.10.

In reading the score then, all that exists is a set of relationships which are contextualized by the performer and the situation of performance.
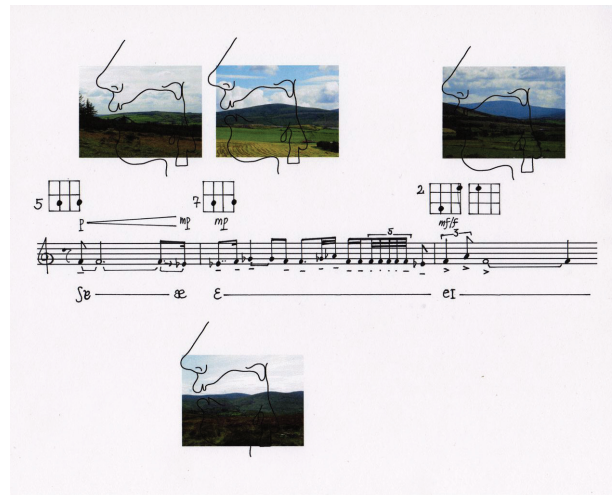


Figure 11: Ukeoirn O'Connor, excerpt from *Three Songs* (2007)

At the other extreme, Ukeoirn O'Connor's scores contain the clearest references to conventional stave notation amongst the Grúpat artists. In O'Connor's work, staves generally form only one element of the notation at any one time. In his *Three Songs* (2007) for voice and ukulele there are five discernible streams of information[16]. In addition to a melody on a stave, there are a series of vocal sounds notated using the International Phonetic Alphabet, ukulele chord symbols, diagrams showing cross sections of the vocal tract to indicate specific tongue-positions, and photographs of the landscape around South Dublin County (see figure 11). Whilst the stave may form only one layer of notation in the score, it is the principal way in which time is delineated. The rhythmic notation and metric segmentation of the vocal line controls the placing of the other elements. The chord symbols are placed at points of harmonic change as might be expected, but they are matched by the vocal tract diagrams and landscape photographs. These too are placed at points of change, determining the timbre of the voice in the same way that the chords define the harmony. Their size relative to the other elements on the page makes their

16 For a detailed discussion of O'Connor's notation, see Erwin Schwender, 'Crossing Streams: parametric dissonance in the recent music of Ukeoirn O'Connor', *complexityNOW,* vol. 13, no. 3 (Summer, 2000): 35-62.

temporal location less clear though. Whilst the smaller chord symbols can be related directly to individual points in the bar, the larger photographs have a more general placement. This has a considerable impact on their role in the music, relegating them to a slower rate of change given the horizontal space they occupy.

The precision of the notation in *Three Songs* is perhaps unusual amongst Grúpat scores, constraining mappings between image and sound rather than opening them up. O'Connor's use of International Phonetic Alphabet symbols is significant. The symbols have fixed meanings and as such may be easily replicated despite their distribution across a wide variety of languages, reference to which he makes in sourcing particular vocal sounds for the piece. The use of phonetics in *Three Songs* is modified by the other streams of diagrammatic information, however. The tongue positions may contradict the means of producing the required sound indicated by the phonetic symbol, and the landscape photographs' less explicit meaning opens up a degree of interpretative openness.

The examples presented here only give a flavor of the variety of approaches to notation taken by the Grúpat artists. The mix of graphic and verbal notation, photographs, objects, and carefully crafted assemblages, as well as instances of stave notation, point to the rich diversity found in their work. By seeking to extend the expressive and instructive potential of notation as a means to suggest an inherent performance practice, their scores attempt to embody the conceptual basis for the work. The range of freedoms given to interpreters also points to a genuinely investigative and collaborative attitude to making.