

Clinamen or The Capacity to Swerve

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Origin

At the time of conceiving this project I was reading 'De Rerum Natura' (On the Nature of Things) written by the Roman Poet Philosopher Lucretius (c55BC). The Epicureanism that the poem elucidates is considered a key source for the origins of atomic theory, this prompted me to reread the writings of Epicurus particularly those sections dealing with his Physics. What particularly intrigued me was the speculative notion of *clinamen* (from which the word 'inclination' derives). Clinamen is postulated as the indeterminate swerve of atoms that causes them to collide and interact thus bringing the world (as we understand it) into existence: *'To these indeterminate swerves is due the creation of an infinite plurality of worlds and also free will.'* The supposition that atoms hold the potential to incline or move towards other atoms, suggests the action of a willed intent that appears to imbue them with a form of rudimentary consciousness. The question as to the limited degree of control of this ability to incline or swerve suggests degrees of unpredictability as to the consequences of the willed manoeuvring. This play between decision (decisive action) and unforeseen consequences brought to the fore issues of the play of chance which informs this project.

Flann O'Brien's novel 'The Third Policeman' provided an amusing literal illustration of atomic manoeuvrings, where, through the continuous bumping and shaking experienced when riding a bike an exchange of atoms occurs at the points of contact between the two 'bodies' causing their associated characteristics also to exchange; thus after some time a policeman gradually begins to adopt manners which are bike-like and the bicycle begins to behave like a policeman.

A third key reference was the game 'Rock, Paper, Scissors', where two contestants compete for dominance through the simultaneous 'throw' of one of three hand gestures: suggesting either a rock, a sheet of paper, or a pair of scissors. This contest can be used to progressively eliminate contestants and plays with 6 possible combinations or pairings RR, PP, SS, RP, RS, PS. Relative to one another rock, paper and scissors, depending on their combination are either dominant or submissive: Rock can blunt Scissors, Scissors can cut Paper, Paper can wrap Rock. I became interested in the different material characteristics of these three objects as encapsulating three key determinants of art making: mass/weight/solid (rock), plane/surface/sheet (paper) and line/point (scissors), crudely: sculpture (3D), painting/printmaking/photography (2D) and drawing.

Premise

The project operates like a game that depends on a chance element: traditionally requiring the throw of a dice or the call of a card, to propel the action. Such games though generally requiring skill to play are for the most part predicated on a chance component that can 'swing' a game to your advantage or impede your 'chances' of winning. In this instance the chance component is deployed to facilitate decisiveness: where deliberation is overridden by 'solutions' dictated by chance selections. Projects are generally slow to get underway: the dilemma of not knowing where to start, much time appears wasted prevaricating around options, the strategy here was to jump-start the project to deliver a more productive (and less predictable) outcome through the agency of chance.

The relevant quote from Lucretius concerning clinamen was offered initially as three subtly differing translations from the Latin into English. The sense of tripling or triplication reoccurs in different guises throughout the project (prompted by paper/rock/scissors). The concatenation of the 'carriages' of each phrase of the translation strung out in linear sequence, are stationed to 'bang up' against one another, as a play on the atomic exchanges of the policeman and the bicycle, allowing subtle differentiations to become evident.

The sense of play that permeates the project is also applied to suggested approaches to research: what might be useful to reference as part of the process. Fishing was used as an appropriate metaphor, again the combination of skill and chance, being in the right place at the right time with the right bait: 'a lucky catch', 'the one that got away' etc. Eight 'fish' were 'seeded' into the project. Participants were encouraged to go 'fishing' and see what they

might catch or reel in. Two of the 'fish' are evidently related to the project and are explicitly alluded to in the project sheet issued: **Epicurus** and **Lucretius**. The remaining five are seeded cryptically as a test of the participant's capacity to make sense of their inclusion, to surmise why they are there. **Flann O'Brien**, as indicated, played with atomic theory to its logically absurd conclusion in 'The Third Policeman'. **Kepler's** discoveries in relation to the motions and trajectories of planets laid claim to eccentricity of manoeuvrings: cosmological pathways that were not simplistically concentric, but conveyed apparently distorted or stretched geometries, the gravitational forces generative of these parabolic curves (or swerves) existing as invisible presences that shape the orbit of any given planet. **Joseph Monier**, is an obscure reference to the Parisian gardener credited with the 'invention' of reinforced concrete (embedding iron mesh into his pots and tubs to strengthen them). Reinforced concrete materially combines the three elements: mass, surface and line (as the unseen linear steel mesh) – the trifecta of rock/paper/scissors. **Charles Edouard Jeanneret**, otherwise 'Le Corbusier', whose modernist architecture, asserted simple austere geometries expressed through a plain, largely unembellished formal language of mass, surface and line, were designs that relied heavily on reinforced concrete. **Hans Arp** developed a theory of 'concrete art' which had more to do with concrete poetry and a rebuttal to 'abstraction' than the sand and cement variety, he was also an active proponent of incorporating chance actions into creative process (I make reference to his writing on 'Concrete art' in the: 'Scissor – Left seat' section). I was considering making overt reference to a poem written by Arp: 'Child of a Dot' as it made an interesting connection to the atomic theory, in relation to the formation of identity as an anxiety of dispersal or anonymity, but the project was already overlaid with material and so I repositioned Arp amongst the 'fish' and omitted the poem.

The Child of a dot

He does not know what he looks like / For the thousandth time / He steps before the mirror in which / He cannot see himself / He must know what it's like / To look-like. / 'Do I look like / A spider spindly walking / The wavering wobbler / Tip-toe touching / The aerial tightrope. / Do I look like a tie / Silk smooth and suspended / Hung from taut resolute knot / I depend on. / Do I look like a rambling mad man / Forever digressing / Out-talking the babbler, / The brook that flees / To the sand seas silent absorption'. / Again and again he steps before the mirror / That mirrors the mirror that mirrors the mirror. / He howls in desperation: / 'I do not appear / I have no visibility / Less even than a dot / Perhaps an infant dot / Never to grow up / To appear. / He appears before the mirror again / Breathes on it, / Rubs it / But it's no good / It's no good / He can't see himself / No good / He will never appear / He sobs loudly / In a frenzy of despair / Rushing out onto the street / No one sees him.

Hans Arp (translated and adapted from the German)

The reference to **Antonin Artaud** is more obscure but particularly drew from his correspondence with Jacques Riviere.

A key motif chosen to animate the project was the Carousel: a rotating device, carrying three carriages ('scissors', 'sheet', 'solid') fixed equidistant from one another. In spinning the carousel the scissors would chase the sheet which would chase the solid which in turn would chase the scissors, each carriage simultaneously pursuing and being pursued. Participants would choose to situate themselves in one of the three 'carriages'. ('Scissors' was a two-seater, acknowledging the two blades, requiring a further choice: as to left or right seat). The requirement then was to accumulate a stock of relevant items, compatible with the 'carriage' chosen (as set down in the 'conditions of entry'), and devise a broad range of sorting procedures, each sort suggesting possibilities, these sorts would then be documented. The characteristic of each 'carriage' was then thoroughly explored in relation to both its capability and liability and this occurring within a revolving momentum that would generate 'spin offs': chance opportunities that could be absorbed into the process and precipitate unpredictable developments that would then guide the ensuing trajectory of the project.

Two prepared talks were offered as part of the project, the first concerned Epicurus and Atomic Theory (April 30th) and the second A short history of Kepler, the play between Logic and Analogic, and the issue of discernment (May 10th). (*For both refer manuscript notes*)

Clinamen or the Capacity to Swerve

“And the atoms move continuously for all time, some of them falling straight down, others swerving, and others recoiling from their collisions.”¹

In attempting to draw a straight line, without the aid of a ruler, invariably the line deviates from its intended path and wobbles to a greater or lesser degree....

1. Preamble: Slowing down for safety reasons: delays expected

Project developments are normally subject to delay, schedules rarely met. All projects serve to stimulate opportunities, but in so doing create a problematical situation of what to choose to do and how to go about it. Numerous possibilities occur and come under consideration. Through the process of deliberation, attempts are made to untangle this knot of options. During such periods the participant's progress is stalled, they experience a 'stumbling block' of 'being stuck', 'being bogged down'. A cross-road of options has been reached with no clear direction which way to go. This stage of anxious indecision is usually pressured into 'making the right choice', 'choosing the right track'. Because choice in such circumstances is clouded by uncertainty the tendency is to choose an option, the direction of which can be partly anticipated, that is 'the safer bet', rather than an option whose direction is largely unfamiliar and unpredictable (thereby entailing risks). In electing for 'safety' the participant works with what is already, to some extent, recognisable – a familiar pattern – something that 'works' and as such adopts a revisionist attitude that involves only marginal modifications to an already existent mode of operating, thus by-passing the 'unexpected'.

2. Premise: Taking one's chances

This project has been conceived in part to counter delay: the doldrums of indecision, by removing 'difficulty' (the difficulties of choosing) from the decision making, through the creating of a situation where choices will be made randomly by the direct intervention – as intrusions – of chance. The ensuing decisiveness should both accelerate developments and redirect them along channels of greater unpredictability.

It needs to be emphasised that choice is not entirely outlawed within the project but rather that it has an obligation to dialogue with chance (remain in radio contact at all times). The intent here is to establish an operating mode that pivots between choice and chance.

In essence then the project requires that the deliberations that normally accompany and ferment a project (more usually an aimlessly concentric circling) be dislodged in favour of an orbiting that is both erratic in being eccentric and unpredictable in relation to outcome. (An orbit that is jostled, jolted and generally aggravated by chance.)

3. Clinamen text: The trains are late at the station²

“In this connection there is another fact that I want you to grasp; this point too here in we wish you to apprehend: There is another thing I must tell you. When the atoms are travelling straight down through empty space by their own weight. When bodies are borne downwards sheer through void by their own weights. When the atoms are being carried down through the void by their own weight, at quite indeterminate times and places they swerve ever so little from their course, at quite uncertain times and uncertain spots they push themselves a little from their course: then it comes about at some unpredictable time and place they make a slight movement to one side, just so much you can call it a change of direction. You just and only just can call it a change of inclination. Just enough to be called a change of direction. If it were not for this swerve, everything would fall downwards like raindrops through the abyss of space. If they were not used to swerve, they would all fall down, like drops of rain, through the deep void, if they did not do this they would all fall down through the bottomless void in straight lines like drops of rain; No collision would take place and no impact of atom on atom would be created. And no clashing would have been begotten nor blow produced among the first beginnings: They would never meet or clash. Thus nature would never have created anything. Thus nature would never have produced aught. And nature could never have brought anything to birth.”³

¹ Epicurus: Letter to Herodotus c 270BC

² 'Clinamen': a word invented by Lucretius to describe each atom's capacity to swerve from which the word 'inclination' derives.

³ Three parallel translations from "On the Nature of Things" after the Latin of Lucretius c55BC.

4. Research: A Pretty Kettle of Fish

The indeterminate nature of this project precludes any clear ruling as to what constitutes appropriate research, the over-riding opportunism – the opportunities arising out of chance – to a large extent will determine this. An undercurrent, however, is provided as a ‘groundswell’ that may as an area of ‘fishing’ catch by chance choice items Eight ‘fish’ have been seeded into the project, to swim at random and occasionally be caught. Catching any one of the eight, let alone more than one will be more a matter of luck and good fortune than cunning – happening to be in the right place at the right time. Though choosing the most appropriate bait in each instance will significantly enhance the chance of capture.

The eight fish are as follows: EPICURUS, the Greek philosopher, TITUS LUCRETIUS CARUS, the Roman poet, FLANN O'BRIEN, the Irish novelist and Third Policeman, CHARLES EDOUARD JEANNERET, the Swiss architect, HANS ARP, the German sculptor and poet, ANTONIN ARTAUD, the French playwright, actor and occasional madman, JOHANNES KEPLER, the German astronomer, and JOSEPH MONIER, the Parisian gardener.

These nominated ‘fish’ should not be exhaustively researched in the conventional bibliographical sense. They should serve a more incidental function – as a chance occurrence come across in conversation, picked up and put in the pocket. At a later stage they may accidentally pop up inopportunely as a leavening ingredient in a mixture of events already well underway.

5. Plot: The scissors chasing the sheet chasing the solid chasing the scissors

Running around in a circle a pair of scissors, a sheet of paper and a solid stone chasing and being chased by each other. In chasing, each has the capacity to subjugate their captor should they catch up with them: SCISSORS CUTTING PAPER, PAPER WRAPPING SOLID, SOLID BLUNTING SCISSORS. But in being chased each discloses a liability to which it is vulnerable should itself be caught: SCISSORS CAN BE BLUNTED, PAPER CAN BE CUT, SOLID CAN BE WRAPPED.

6. Prop: The carousel and its arousal

The scenario of pursuing and being pursued, a situation analogous to that of riding a carousel, underwrites the project as a whole. The carousel used in this case carries three carriages, each suspended equidistant from the other in a circle. Emblazoned on each carriage a word: “SCISSORS”, “SHEET”, “SOLID”. As the carousel begins to revolve so the three carriages appear to chase one another. The motion of the carousel motivating the chase.

7. Riding the carousel: Bordering on boarding

You are asked to join one of the three carriages. This is then ‘ridden’ for the project’s duration. Each carriage is posted with ‘conditions of entry’. These are different in every case and should be read carefully prior to choosing. The choice having been made and being now ‘seated’ within the appropriate carriage-of-intent, you are obliged from thence forward to view ensuing events from the vantage points that that carriage makes available (i.e. from the point of view of the scissors, the sheet or the solid.) In each case you will be both pursuing and pursued. Your choice will determine who you pursue and by whom you are pursued.

8. Conditions of entry: Carrying the right change

Common to each of the three carriages is a condition or mechanism that brings into contact two oppositions – similar to the drawing towards and pushing away con-fusion experienced by magnets. In each case a capability is opposed to or polarised against a liability, creating both *capable* liabilities and *liable* capacities.

This double-sidedness can be viewed as a coin-like amalgam: the price of entry. Each coin-carriage carries a different denomination – this distinguishes the three sets of conditions, their differing predicaments, such that each is qualified in certain respects both positively and negatively.

9. Loading the Carousel: An assortment of sortings

Each carriage should be packed with a different sort of luggage that will then need to be methodically arranged and organised such as to create space for the passenger to sit down in.

“But sensation gives rise to the mental activity of sorting out, comparing, arranging. Hence arise the general ideas to which we attach names. They are gradually acquired as the result of repeated sensations; but, once acquired, they exist in our minds as ready-made categories for arranging the data of experience. In this sense they are ‘anticipations’. ‘Anticipations’ do not precede all experience; but they do precede all systematic observation and scientific discussion, and all rational practical activity. Again they denote the activity of the subject in the acquisition of knowledge.”⁴

10. The Machinery of Chance: knocking opportunity

At the point of mobilisation the carousel moves out of the realm of choice and into the realm of chance. The common agency of motion – the motivator – is chance. It might be said that the project is bounded by chance and the opportunities that chance presents.

“As to chance, do not regard it as a god as most men do, nor as an uncertain cause of all things, but that opportunities for great good and evil are afforded by it. Therefore think it better to be unfortunate in reasonable action than to prosper in unreason. For it is better that what is well chosen should fail, rather than that what is ill chosen should be successful owing to chance.”⁵

Having chosen your carriage and having loaded it with a store of sorted provisions, the machinery of chance should be started up thereby stirring the carousel into motion – an irregularity of fits and starts that will career erratically – a rhythm you will need to attune to.

It is necessary with each turn for the passenger to make available a multiplicity of options (trajectories) from which the eyes of chance can then make an arbitrary selection; and that by increasing the choices you increase the chances. The systems invented to generate the irregularities of randomness, whether numerical or otherwise are the responsibility of each participant concerned.

11. First Carriage: Scissors (Two-Seater)

Right Seat: Conditions of Entry.

Accumulate

A collection of linear items, remembering that the spectrum is extensive: from a fine thread of cotton through to telegraph poles. Consider: **Hard lines**: rods, poles, sticks, rails, pins, posts, stakes, slats, pipes etc. **Soft lines**: cotton, cable, cord, string, wool, wire, etc. as well as **Intermediary lines**: chain, straw, snakes, spaghetti, sausages, ladders, Lebanese cucumbers, etc.

Sort

Line up and categorise your collected lines in a number of different ways: from the longest to the shortest, from the thickest to the thinnest, from the softest to the hardest, from the sharpest to the bluntest, from the straightest to the curviest etc. Document each arrangement photographically.

Capability

Explore each line's capacity to divide space, its capacity to cut across itself, to cut corners, remembering the drawn line.

Liability

Explore the line's liability to division, its ease of measurement, its vulnerability to chopping and splitting, and through repeated division its loss of direction in diminishment: the blunting of its pointing (pointedness). The line's 'disappointment' should be noted. In being split and broken up into 'bits' the resultant elements should then be reconsidered as assemblable components of a solid.

⁴ From 'The Faith of Epicurus' – Benjamin Farrington (1967)

⁵ Epicurus 'Letter to Menocleus' (c270BC)

An alternative exploration of the solidification or blunting of the line could be pursued through the process of knotting – a line turned tightly in on itself and binding – a line attempting to cover itself.

12. First Carriage: Scissors (Two Seater)

Left Seat: Conditions of Entry

Accumulate Pattern Lines

Through the use of a line of black thread generate a sequence of random patterns (from old French: *random*: headlong rush) through the action of variable landings. Essentially the held-up thread should be released to gravity and allowed to impact onto a white surface. It is necessary to explore the various ways in which this might occur – such co-ordinates as distance (height of descent?), velocity (whether thrown or gently lowered?), trajectory (the curvature of its flight), the means of catapulting (as a screwed ball from the palm, or a limp snake from the finger and thumb?) etc.

Sorting Out and Storing

Each pattern line should be copied as accurately as possible – as a continuous ink line on a sheet of paper. Your line of thread should be marked such that the two ends can be distinguished from one another. One end should be designated the 'beginning end'. In copying each pattern always start at the 'beginning end' of each pattern. You should generate a set of at least twenty of these pattern lines, each should approximate to the actual size of the original.

Writing Lines

Each pattern line in the set then needs to be recopied in a reduced form such that it appears written rather than drawn – as such the speed of handwriting should prevail in the copying. This reduced set should be spaced across a single sheet of paper.

Aerials and Aerial Concretion

Through chance selection allow a number of these pattern lines to undergo spatial transformation, such that through the interaction of wires and pliers (looping, twisting, bending and weaving) the pattern lines will appear 'woven' through space – an aerial manoeuvring akin to aerobatics. These 'aerials' should be no larger than twice the size of the original patterns.

“ ‘Concretion’ describes the natural processes of concentration, solidification, coagulation, thickening, growing together. ‘Concretion’ describes the process of the hardening of the mass. ‘Concretion’ describes the concentration, the mass of the stone, of the plant, of the animal, of man. ‘Concretion’ is something that has grown.”⁶

Either literally or through analogy employ the process of 'concretion' to coagulate occurrences stemming from your evolving pattern-line images. Endeavour to activate a solidification (consolidation) of the aerials.

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13. Second Carriage: Sheet

Conditions of Entry:

Accumulate

A pile or stack of sheets. A sheet is anything that has 'spread' and the capacity to cover. The spectrum is extensive: sheets of tissue paper, polythene sheeting, sheets of cloth, sheets of newspaper, sheets of cardboard, sheets of foil, plastic sheeting, sheets of timber, plate glass, steel plate, slate, lead. In your search for sheets remember that fabricated boxes, cartons and packages of every description are readily available for reversing back into their original flattened sheet state.

Sorting

As the sheets accumulate, you should sort and categorise them through the various processes of layering (laminating) and overlapping: from the smoothest to the coarsest, from the toughest to the flimsiest, from the densest to the lightest, from the most transparent to the most opaque, from the most absorbent to the least absorbent, from the most expansive to the

⁶ From 'Concrete Art' by Hans Arp ('*Unsern Taglichen Traum*' 1955) Collected in 'Hans Arp: The Poet of Dadaism' by R.W.Last (1969) p 74-7

⁷ From 'The Third Policemen' by Flann O'Brien (1967)

most diminutive, from the blackest to the whitest etc. All sheets should be stacked, unfolded and uncomfortably large sheets should be divided up rather than folded within the stack. Photograph each assortment.

Capability

The sheet's capacity to cover and uncover should be explored, its capacity to both fold and unfold (*plicare*: to fold – explicate, implicate, complicate, duplicate, perplex). Its 'masking' ability: to shield and expose. Each sheet's essential four-sidedness and encircling edge. Its complicity in the mechanics of mimicry and disguise: now a wall, now a floor, now a ceiling (the petals of a butterfly). The sheet's disembodied surface, of being 'flush' with, its dexterity in assuming 'shape' and conjuring solids, in the absence of mass. Its ability to laminate: the book, the sandwich, the toilet roll, the leaves of lettuce. Its front/back turnover condition and its 'veiling' through degrees of transparency/opacity. Can a spreading pool of water on the floor be a sheet?

Liability

The transforming agent is the 'cutter' (scissors, saw, scalpel, guillotine, glass-cutter, pastry cutter, blow torches etc.) The hand also can be used to 'cut': through the gestures of tearing, ripping and scratching. A sheet can be cut to pieces, at what point does a sheet become a piece? Sheets can be cut up into strips – lines of various persuasions (combs, combing and raking). There should be ample opportunity to explore this transformation: peeling 'skins' of apples, 'leaving' lettuces out of books, think pastry, think pasta. A stencil can be viewed as a cutter – shapes can be 'stamped out' of sheets: the sheet of stamps, the dotted line. The sheet's capacity to fray and wear through exhaustive manipulation could also be examined.

14. Third Carriage: Solid

Conditions of Entry

Accumulate

A collection of solid objects. In the context of this project a solid can be defined as that which appears not in the least sheet-like, nor that which inclines towards the linear. A further qualifying factor is that appearances of 'solidity' – as in the case of shapes surrounding hollows e.g. tennis balls, should be excluded as pretend-solids. For the purposes of this project air is considered a void.

With these qualifications in mind such solids as: a bucket of water (in the absence of the bucket), a bag of sugar (in the absence of the bag), a jar of honey (in the absence of the jar) etc. can be legitimately included alongside the more familiar: stones, bricks, wooden blocks, earth clods, paperweights, dictionaries, ice-cubes and batteries etc.

Sort

As the solids accumulate you should sort them into rows. This can be done in a number of different ways. Each variant should be documented photographically, eg: from the heaviest to the lightest, from the biggest to the smallest, from the tallest to the shortest, from the lightest to the darkest, from the shiniest to the dullest etc.

Capability

The solid's capacity to blunt: through the percussion of its dense mass, should be explored in relation to the processes of wearing down. This can be achieved through the various actions of abrasion and friction (rubbing, sanding, filing, crumbling, shattering etc.) The collision of solids should be examined. All fragments/dust/grit resulting from this attrition should be retained.

Liability

The solid's susceptibility to being wrapped up or contained should be explored and the transformations that occur through loss of identity. Not only can things be literally 'wrapped' in a variety of 'sheets', but also through the processes of dipping or immersion can the solid's appearance be modified and hidden (covered for example by a coat of white emulsion, or encased in lead, or dipped in chocolate, or coated in oil etc.)