FCJ-021 Rhythmic Parasites: A Virological Analysis of Sound and Dance

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Introduction

2 This paper sets out a conceptual analysis of rhythm as a force of disruption and of re-organisation. By disentangling rhythm from human corporeality, habits and purposes (rhythm as a prerogative of human movement), we will propose its re-qualification as an attribute of matter itself: rhythm as a galvanising current flowing in and between all human, animal and technological, animate and inanimate, organic and inorganic bodies, simultaneously dissolving their solid organisations and re-modelling their fluid exchanges. Being supported by an ontological dichotomy, most philosophical or musicological theories have perpetuated the difference between rhythm as a mechanical and broken repetition of units subject to physical laws (as in Plato's essentialist theory of rhythm), and rhythm as an organic, uncontrolled and continuously flowing expression of the natural world (coinciding with phenomenological notions such as Henri Bergson's 'duration'). [1] In order to escape this philosophical impasse, the aim of this paper is to unravel the relation between the cuts and flows, the breaks and continuities, the intensive and extensive moments which constitute the ontological and physical status of rhythm.

3 In the specific case of sound and dance, the rhythm of a dancing body (as a bio-physical, but also cultural and social entity) results from an immanent virtual state of dis-solution (the body as a fluid multiplicity of uncontrollable, infinitesimal particles intensively stimulated and excited) and a simultaneous solid state of re-shaping and re-structuring (the body as a solid whole extensively drawing space with its own steps). Working as a virus, rhythm disrupts linear bodily movements and clear perceptions, re-organising them after its own order. This paper will analyse rhythmic infection and its cohesive/dissolving effects in three directions. The first one is bio-physical: focusing on the biological, anatomical and perceptual dimensions of sound perception and movement, we will describe the spread of rhythm across the cellular population of a body, as a catalyst of biological and anatomical processes of disruption and reorganisation. The second is cultural: mapping the insertion of this bio-physical body/organisation into particular social and geographical contexts, we will consider rhythmic diffusion across spatial confines in and between human bodies and collective groups, as a catalyst for the weaving of autonomous rituals, contacts and relations. The third is technical: after a temporal leap (from old rituals to contemporary dance events), we will investigate contemporary rhythmic engineering through various digital machines directly plugging in the molecular composition of a dancing body, trying to understand how the new digital manipulation and diffusion of rhythm becomes a locus for the capitalist, biological and social control of bodily movements, but also for unpredictable self-organised events at both bio-physical and cultural levels.

Rhythmic trans-coding

4 The Platonic theorisation of rhythm as a repetition of elementary units (steps or beats) provided the philosophical basis for all future definitions of rhythm as a meter of mechanical measurement, comparison and judgement, and as an instrument of behavioural codification allowing the prediction, control and regulation of bodily movement.

5 Distinguishing the disciplinary nature of all metric practices aiming at the control and regimentation of movement from the undisciplined character of rhythm, Gilles Deleuze and Fèlix Guattari write:

> 6 It is well known that rhythm is not meter or cadence, even irregular meter or cadence: there is nothing less rhythmic than a military march. ' Meter, whether regular or not, assumes a coded form whose unit of measure may vary, but in a noncommunicating milieu, whereas rhythm is the Unequal or the Incommensurable that is always undergoing transcoding. Meter is dogmatic, but rhythm is critical; it ties together critical moments or ties itself up in passing from one milieu to another. It does not operate in a homogeneous space-time, but by heterogeneous blocks. It changes direction. (Deleuze and Guattari, 1992: 313)

7 Echoing Deleuze and Guattari's conceptualisation of this rhythmic 'trans-coding' force, we can start to delineate our definition of sound and dance rhythm as the spread of a physical and cultural

virus carried by sound molecules across and between different bodies and groups, and whose propagation is also able to undermine the linearity of all economic, cultural and political meters. For this purpose, it is of crucial importance to highlight the ambivalent nature of the rhythmic virus, and to grasp its double role as an agent of homogenisation and of 'heterogenisation'. By identifying the relation between meter and rhythm as an immanent one, we can start to grasp the inextricable link between two different but simultaneous processes of rhythmic dissolution and metric re-organisation. These coexistent processes characterise the capitalist commercialisation and control of sound through the diffusion, modulation and codification of rhythm, and through its transformation into music, but are also at the basis of an autonomous net of rhythmic self-organisations and of sound/dance events.

8 In Deleuze and Guattari's words, the periodic repetition of a unit realises a behavioural code, a metric reiteration which allows the disciplining of the body and its movements through identification, synchronisation and communication mechanisms. In other words, the homogeneous and specular reproduction of constant units or copies (as in the genetic, cultural or information codes) acts as an instrument for the bio-physical identification of a human body, for its regular functioning in a social environment and for its efficient control of cybernetic systems. Metric reiteration is the accurate clock which enables a body to recognise its organic and human identity (the biological code as based on genetic and cellular reproduction), to perform its ordered movements and interactions (the social code as based on rigid behavioural structures) and to adapt technology to its own aims (the digital code as based on clear information exchange). In this sense, meter would correspond to what Deleuze defines as 'generality', i.e. a set of immutable laws regulating the identity and resemblance of subjects and their equivalence to designated terms, while also allowing for political and economic control. (Deleuze, 2001) Isolating rhythm and limiting it to the field of human movement (intended as a linear sequence of positions and steps), Western science and philosophy have theorised a categorical difference between disciplined and undisciplined motion, reducing rhythm to a sort of motor regulator.

9 After the modern recuperation of Presocratic and atomistic ideas (such as Lucretius's 'clinamen'), rhythm becomes an imperceptible, quantic coagulation or dispersion of matter behind perceivable steps and beats. Rather than to equality and equivalence, the development of rhythm is more related to singularity and uniqueness, disruption and trans-coding. 'Effective but lacking content, the [rhythmic] 'transmission' is not a [linear, interceptable] communication. It is a 'transduction': a self-propagating movement seeding serial self-organizations, ". (Massumi, 2002: xxx) Linking together heterogeneous blocks (of molecules, human populations, information units), the transmission of rhythm opens every bio-physical, social or technical organisation to identity contaminations, synchronicity disruptions and communication disturbances. In this sense, we can define the disturbing spread of rhythm as a viral propagation infecting all biological, social or cybernetic bodies, engendering different material organisations where each body does not form a new world closed in on itself but, on the contrary, is constituted by coexistences and interactions of different kinds. (De Landa, 2001)

10 The first of these rhythmic organisations is bio-physical, coinciding with the constitution of the dancing body as a living, moving and perceiving organism. Considering rhythm as an attribute characterising the molecular, micro-physical dynamics of matter and its energetic vibrations (i.e. rhythm as a continuous qualitative emergence spreading from material, chemical reactions), the whole of matter loses its static appearance and becomes an ensemble of dancing molecules. This dancing matter becomes organised into inorganic or organic, moving and perceiving bodies through particular hierarchical and functional dispositions of elements. Sequences of molecules and cells, neuro/chemical paths and a multiplicity of particles/signals, organs, tissues and apparatuses align themselves in a particular order, building up the biological con-formation of an organism and its formal, anatomical structure, at the same time transforming it into a host of parasiting processes. The evolution of the human species happens then through a particular systematisation of organs and through particular morphological (arms, legs, head), postural (standing position) and kinetic features, gestures and movements, together with the development of a particular sensori-motor system and a perceptual/behavioural coordination.

11 At the same time, myriad molecular movements and relations perform their own schizo/rhythmic development, provoking a sort of micro-kin-aesthetics of imperceptible alterations and deviations.

The spread of intensive qualities from the movement of these particles is immanent to the harmonic and functional equilibrium of the whole organism. In other words, while the 'organic organisation' of a body is based on the formation, specialisation and communication of all its parts, at a microscopic level this organisation is continuously de-coded and dis-articulated. Acting as a sort of physiological viral development, the molecular propagation of energy (sound, light) across a living/moving body can be seen as following the same rhythmic patterns as those of an epidemic diffusion. This rhythmic vector of energetic spreading cuts across the very organisation of the body: the transversal weaving of intensive amplifications along the linear sensori-motor circuit decentralises and trans-forms the integrated image and coordinated actions of the body. In the muscular/skeletal apparatus, the spread of rhythm happens as a viral energetic diffusion through the nerves, in a sort of neural micro-dynamics fractally composing movement and dance as a series of involuntary jerks, variable speed relations and gravitational lines of flight. In the dancing body, the energetic dance of electromagnetic and acoustic matter produces a series of molecular alterations and generates multiple local realisations, dispersion and excesses.

12 After this transformation and passage of rhythm from sound and light waves to bodily movements, we can see how the performance of movement becomes culturally organised among different social groups. In its social dimension, dance is usually identified with the movement of a collective body according to a common rhythm, as the act of keeping time together for a prolonged period, "so as to establish a regular beat". [2] In evolutionary terms, this activity is associated with the enhancement of group homogenisation and with the dissipation of friction through imitation and synchronisation. In this sense, dance becomes a kinetic, cultural and social organisation aiming at the material preservation and cultural integrity of a collective body. Uniform kinetic habits and corporeal regulations, geographic confines and ethnic, sexual or class discriminations constitute the rigid grid which entraps and moulds the free circulation of rhythm inside and between social groups. At the same time, the kine-topology of rhythm reveals how solid and stable social structures are eroded by uncontrollable subterranean movements coinciding with a micro (or local) level of aggregation of crazy particles/people gathering or moving around particular speed attractors and drawing a schizo/rhythmic map across cities, states and continents. Rhythm's micro-physical turbulences determine a series of intensive alterations in the social field, gathering or scattering masses of people in crowds and tribes that move beyond the impermeable segmentations imposed by cultural and socio-kinetic discipline. Disturbing the social equilibrium of all identified groups, rhythm acts as a virus whose propagation is often historically and socially linked to epidemic diffusions along episodes of 'populational' contacts. As a viral spreading or transversal weaving of sounds and dances across cultural codes, rhythm galvanises the social organisation of life, while decentralising and de-forming every rigid cultural morphology or behavioural regularity through the molecular movements of a collective body in continuous passage and change. On this social layer, technological apparatuses emerge (from acoustic drums to digital sampling and mixing machines), provoking acoustic or electro-acoustic amplifications and turbulences that infect the bodily sensorium and corrode the borders of regimented social relationality, while freely travelling across time and space.

13 Beyond every metaphorical or analogical association, the definition of rhythm as a virus infecting all physical and cultural organisations beyond temporal and spatial confines is founded on the identification of a common viral behaviour: on one hand, viruses carried by pathogenic agents, breaking the linear genetic sequence and purity of biological communication; on the other hand, sound fostering promiscuous contacts between molecules, or between different populations and cultures, through the explosion of dance as an intensive alteration and metamorphosis of the physical and social body. Symbiosis constitutes the process common to these viral dynamics. In her Serial Endosymbiosis Theory (or SET), molecular biologist Lynn Margulis illustrates how heterogeneous contacts and assemblages of molecules and compounds, cells, bodies and species proliferate through a promiscuity which is at the very basis of life:

14 > The Darwinian logic of evolution, is substituted with a rhizomatic recombination of information expanding through viral hijacking of codes between singular machines of reproduction: a microbe and an insect, a bud and a flower, a toxin and a human. (Parisi, 2004: 16).

15 All 'symbiotic' relations between beings of different scales, species and worlds, and all webs of transversal relations continuing across linear transmission processes are carried by a viral and

rhythmic spread of vibrations 'inside and between' heterogeneous populations. At its molecular level, sound represents an example of symbiotic contact. Travelling across bodies, seas and historical eras, screens and sensorial surfaces, flows of sound particles are carried by rhythm as an energetic wave. Entering the body-organisation as a viral energetic flow, sonic rhythm opens it to multiple side communications between different particles. Generating symbiotic contacts and contagions between bodies (such as the impact of sound vibrations on the molecular constitution of a human body), rhythm becomes a viral catalyst of bodily movement and transformation. In this sense, it is crucial to note how, in order to realise and reproduce their mechanical energy, the replicating mechanisms of sonic vibrations utilise a series of host media: from air molecules to neural cells, the infection of sonic rhythm provokes dance as its main pathology and cure. The social spread of sound and dance in periods of epidemic diffusion makes the viral character of rhythm even more evident. From this point of view, the biological, anthropological and cybernetic dimensions of rhythm can be integrated with a study of acoustic and epidemic phenomena, allowing for a fractal understanding of sound and dance in terms of molecular packs, viral spreads and pathological behaviours.

Bio-physical rhythm: Neural infections of sound and the symptomatology of dance

16 > The discovery of the DNA code, for example, is focusing on how you can create different species of beings by starting from the very smallest particles and their components,' Karlheinz Stockhausen has said. 'That is why we are all part of the spirit of the atomic age. In music, we do exactly the same. (Eshun, 1993:02[013])

17 In his multidimensional and interdisciplinary analysis of electronic dance music, Kodwo Eshun describes the sound studio as a lab, a research centre for the breaking down of the beat as the infinitesimal sound molecule (Eshun, https://www.ccru.net/swarm3/3_abducted.htm).In the lab, the Breakbeat is isolated and replicated, becoming the DNA of rhythmic science and the matter of multiple sonic and cultural mixtures. Through the digital sampler, a sequence of sounds can be played for an infinite number of times, cut into small bits and re-ordered, accelerated or slowed down. The separation of singular elements and fragments forming the fabric of acoustic material is realised as a 'granulation' of sound.

18 When translated into sonic terms, meter becomes a 'standard unit ' that divides ' music; the ' rhythm ' counted evenly and stressed on every main beat.' (Davis, https://www.technosis.com/cyberconf.html) On the other hand, in the linear flowing of a 'pulsed' sequence, the viral behaviour of rhythm appears as a molecular web of relations between uniform metric lines, or as a swelling wave connecting different critical moments of qualitative acoustic change. As a rhythmic example, we can see (or hear) how the meter-grid of either classical music beats or electronic sound BPMs (beats per minute) is dis-organised by velocity or frequency shifts emerging as critical moments in-between the pulses and weaving their own organisation. At the same time, 'permanent conversations or cross-patterns [emerge] between each [line], a dialogue which is also a complex dimension of difference introduced between elements that are themselves often quite repetitive and simple.' (Davis, https://www.technosis.com/cyberconf.html) In this sense, the rhythm of a sound track is tied together as a continuous, intensive swelling or criss-crossing going on under the linear development of meter.

19 The viral diffusion of rhythm as an intensive, energetic sound wave across the body provokes a circulation of electrical signals via the nerves. This neural diffusion of energy/electricity is the source of a displaced and decentred movement, a multiplicity of 'local motions' and uncontrollable nervous jerks in the rhythmically contaminated body system. Every quantifiable, measurable and organisable succession of steps is fractally composed and de-composed by multiple micro-electroshocks leading the body across various critical points (such as sudden speed shifts or centrifugal and centripetal transitions).

20 > The first thing to do is to acknowledge that rhythm isn't really about notes or beats, it's about intensities, it's about crossing a series of thresholds across your body. ' When you hear a beat, a beat lands on your joints, it seizes a muscle, it gives you a tension, and suddenly you find your leg lifting despite your head. Sound moves faster than your head, sound moves faster than your body. What sound is doing is triggering impulses across your muscles. (Eshun, https://www.ccru.net/swarm3/3_abducted.htm)

21

According to Brian Massumi, movement is a continuous, qualitative change of the body, a passage across various intensive thresholds. A trajectory of successive displacements can only appear retrospectively, when movement stops and the occupied positions emerge, in a sort of progressive freeze-frame attempting to discipline and control the body between beginnings and endpoints but failing to bring to light its real changes. Steps and gestures, poses and positions can only be plotted by subtracting movement. Movement itself lies in the intervals, when the body in motion does not coincide with itself but is in transition, never in any point and always in passage. This transition is not decomposable into constituent parts: in Massumi's words, it is a dynamic unity which dissolves the stasis/motion binarism into a continuous emergence of different speeds. (Massumi, 2002: 8) Conceiving a body in terms of its rhythmic, intensive passages allows us to go beyond its lived, accomplished experiences (which are related, rather, to a phenomenology of movement), and to reach the very conditions of those experiences, the continuous qualitative metamorphoses which, once realised in space as positions and steps, represent the controllable and controlled actions of a bodily identity. Borrowing Deleuze's words, we can say that a body's rhythm or duration is realised in the process of its dissolving, showing how this body differs not only from other things, but first and foremost from itself.

22 Rather than metricising a reiteration of steps, rhythm delineates the elusive character of the body, its molecular self-differentiation, its continuous dis- and re-appearing after all perceptual and spatial changes. At this level, human perception, sensori-motor coordination and cognition are indistinguishable from trance and hallucination. The penetration and invasion of sonic timbres, pitches, textures and speeds strikes and affects the kinesic equilibrium of the dancing body, while the listener/dancer is in passage between different dimensions, trying 'to explore a complex space of beats [and] to follow any of a number of fluid, warping, and shifting lines of flight.' [3] The hindrance of rhythm puts gestures in a continuous variation, transforming dance from the observable and controllable movement of a single body/particle, to the unpredictable and imperceptible metamorphosis of the body as a population of particles. Rather than offering the body a regular hold to be followed with an ordered sequence of movements and steps, rhythm leads the body to total dis-orientation. It con-fuses its perceptual and motor capacities, breaking the coordination of its steps and opening its movements to unpredictable and involuntary realisations. Escaping the logic of mastery and organisation, the body gets entangled and crippled, interposing itself into the series of its continuous metamorphoses, forming and de-forming itself along a line of continuous variation. [4] Through rhythm, dance dissolves the system of power and dominance which organises it as an expression and communication of physical potency and as a tool for social control.

23 This physical and anatomical level is then organised as a system of codified gestures and steps forming the traditional behavioural patterns of particular ethnic groups. At this level, the coherent physical organisation of the dancing body becomes the instrument for a linear, ordered sequence of gestural memes. As cultural units of information, memes are cognitive and behavioural patterns copied and replicated from one individual's memory to another. Habits and traditions (such as the steps of a dance) become independent creatures in symbiotic relationship with human cultures, replicating themselves by using human hosts and influencing their behaviour. According to the memetic model, social and cultural evolution work along the same principles of biological evolution. The system of linear memetic and cognitive communication between generations of the same group via a mechanism of vertical transmission (limiting for example the steps of a dance to a specific ethnic tradition) is nevertheless disrupted by a horizontal spread of qualitative traits (such as rhythm) between different individuals or populations. Ancient worldwide navigation and contemporary information vectors like radio or the Internet spread these cultural/rhythmic viruses all around the globe, making them increasingly invasive and able to influence a people's 'meme pool'. As highlighted by Reynolds, hybridity becomes a problem only when thinking in terms of purity and unnatural mixtures, when the physical (and metaphysical) dangers of artificial grafts threaten a presumed original cleanliness with the risk of infection, contamination and bastardisation. [5]

Ritual rhythm: Old infections and the becoming-animal of dance

24 As a space of physical and cultural contamination, the Mediterranean Sea has always been crossed by multiple vectors and exchanges of ships, bodies, musical instruments. [6] Across this woven

space, millennia of migration and colonisation have mixed not only people and cultures, habits and tales, but also sounds and bacteria, germs and animals (many of which, such as spiders, have never been domesticated) invading and conquering alien ecosystems. (De Landa, 2001: 20) One particular example of rhythmic spread across different times and places is the contagion and propagation from North-African drumming rituals to South Italy's Tarantella dances. From Southern to Northern Mediterranean, hallucinogenic sounds and poisonous Tarantulae travelled together with different instruments of perceptual amplification (such as drums), across several miles and centuries of rhythmic transmission.

25 After the first contacts with the Saracens (a North-African population coming from the Maghreb desert in the 11th and 12th centuries) and up to the 1960s, a dancing ritual spreads in the whole Mediterranean, together with the belief that the bite of a particular spider (the Taranta) provokes an illness which can only be cured through music and dancing. Although the reactions to the Taranta's poison can be very different according to the disposition and physical constitution of the poisoned person and also to the weather and the geographic area, after the tarantula's bite the Tarantata (the person possessed by the Taranta, usually a woman) falls into a state of catatonia and disordered bodily movements, accompanied by other symptoms such as convulsions, fainting and even delirium.

26 If the irruption of a physical and psychological crisis can be considered as the manifestation of a disturbance in the usual flow of life, a cure is needed to re-establish the natural cosmic order and bring back the person to a healthy state. This cure is obtained through a ritual in which the sounds of the tarantella, together with the contemplation of particular colours, incite the Tarantata to evoke and exorcise the force of the spider's poison through dance. In the magic and sonic machine of this dance rite, the image of a Spider's Web is echoed by the position of the Tarantata as a central Black Body surrounded by sounding and rotating atoms like thin layers describing a vibrant multicoloured web. Depersonalising the subject as an element of the cosmic whole, the Taranta ritual intervenes on the irruption of subjective and personal feelings of sadness and exhaustion by assembling an animistic-sonic machine, a microcosm where the orchestra, the sick person, sounds and colours contribute to the reconfiguration of bodily and social relations and to the restoration of the shattered equilibrium. Reconfiguring the disordered agitations of the body, the intensive rhythms of the tambourines and their dialogue with violins, guitars and street-organs organise a multicoloured dance where the link between sequences of neural excitations and affects provokes a continuous passage from compact and crystallised identities to progressive states of dissolution. Like a virus, sonic vibrations are transmitted to the body and spread according to laws that establish different power relations. In this sense, the tarantella dance performs a sort of rhythmic bodily contamination, while social integration and physical recovery can only be obtained, paradoxically, through the movements of the infected and possessed body in a multifaceted 'viral' and 'medicinal' dance. Accordingly, the contagious spread of tarantella's rhythm across both physical and social levels of the contaminated body determines a series of unnatural participations troubling and re-organising social life in an autonomous, local way.

27 According to Ernesto De Martino, Tarantism must be read as a cultural-religious phenomenon going beyond its medical interpretation as a 'real' illness (arachnidism [spider's poisoning], psychical disorder or even sun stroke).(Milano, 2002) [7] In De Martino's analysis, the main element which contradicts the medical interpretation is the annual repetition of seasonal crisis and musical therapy: after a first bite and after its cure through music, dance and colours, the crisis and cure cycle is renewed every year, producing a regular series of bites and de-toxifications which could not be reduced to any toxic syndrome. Rather, this re-lapse and repetition appears connected to the respect of a tradition and to a seasonal repetition in which Christianity plays a fundamental role, by bending a pagan event to its religious calendar and by disciplining the emergence of the crisis through the introduction of a more precise temporal cadence. De Martino's interpretation gives the bite, poison, crisis and cure cycle the character of mythic-ritual symbols culturally conditioned in their functioning and efficacy, explaining how possessed people totally invent (or add to a real toxic syndrome) a series of behaviours modelled by Tarantism and imitating the real symptoms of a poisonous bite. The symbolic crisis becomes autonomous from real intoxication in the course of a cultural and religious history, exploding as a culturally shaped event in particular critical moments of life such as epidemics, famine and death.

28

'It has been shown, ', that being possessed derives from a training; that the gestures, words, or cries of the possessed are coded; that the beginning of the crisis is governed by a set of rules.' (Gil, 1998: 136-7) In Josè Gil's anthropological analysis of dance rites, cultural training codifies the behaviour of dancers, but it is not enough to explain the mysterious trance of the possessed body: how can a discourse act on a body and its organs in such a powerful way? How is this 'remote control' possible? In Gil's words, what transforms a ritual into something more than a symbolic structure is the link between signs and forces, and the investment of energy which the body imposes on symbols. In this sense, being possessed by a spider derives from the transmission of a force (rhythm) infecting the body and provoking a pathological condition physically and socially realised and resolved through dance. The symbolic imitation of a poisoned person or of the spider's movements dissolves then into an energetic contamination relating the dancer to the qualitative traits of a particular Taranta, i.e. to the particular colours and sounds by which she is possessed.

29 On the same theoretical line, Deleuze and Guattari oppose to cultural symbolism and imitation the notion of 'becoming' as an alliance, an energetic symbiosis between beings of totally different scales, species, worlds (from sound molecules and human cells to animal and human bodies). (Deleuze and Guattari, 1992) From this point of view, the Taranta rite appears as a 'becoming', a transversal communication or a contagious event. Beyond human identification and beyond cultural resemblance or imitation, the 'becoming-spider' of the dancing body lies in itself, in the metamorphic process cutting across all fixed positions (woman-tarantula). Deleuze and Guattari's notion of 'becoming' highlights the modes of expansion, occupation and contagion of a body as a molecular population. Through its becoming-spider, and then its becoming-sound and colour, the fascinated and possessed self of the Tarantata reaches a molecular dimension of imperceptible sound and light molecules. (Deleuze and Guattari, 1992: 248) Following a continuous line of energetic (chromatic, acoustic) waves and vibrations, she stretches from human to animal, from animal to molecules, from molecules to particles, up to the imperceptible:

30 > It is already going too far to postulate an order descending from the animal to the vegetable, then to molecules, to particles. Each multiplicity is symbiotic; its becoming ties together animals, plants, microorganisms, mad particles, a whole galaxy. Nor is there a preformed logical order to these heterogeneities. ' That is how ' sorcerers operate. Not following a logical order, but following alogical consistencies or compatibilities. (Deleuze and Guattari, 1992: 250)

31 Beyond essential forms and determined subjects (human-animal), the Tarantata is subject to different degrees (of heat, color, speed etc), where each degree gives her a distinct individuality and puts her into composition with other degrees and other individualities. The constituent particles of a Tarantata's body are only distinguished by relations of movement and rest and by degrees of speed and slowness which determine its continuous becoming. In this way, the sonic and dancing assemblage of the tarantella ritual weaved a series of social relations 'prior to' the separation between individual members or different groupings and to the creation of a subjective identity and space. Compared to the rigid and closed borders and to the individual cubicles of the social gridlock, the kinetopology of the Taranta rituals worked as a much more wide-mesh filter, allowing uncontrollable rhythmic contaminations among people and between different territories, overcoming institutional as well as perceptual apparatuses of subjectification.

Cybernetic rhythm: contemporary becomings-digital of sound and dance

32 From acoustic drumming to contemporary electronic drumming, the assemblage of the 21st Century dance ritual (made of digital sonic machines and dancing bodies, sounds and colours) realises a different depersonalising and de-subjectifying becoming of the physical and social dancing body, this time through perceptual and kinetic amplifications which undergo the codifying and de-codifying effect of digitalisation. In these modern dance rituals, digital machines work at both bio-physical and cultural levels, provoking physical turbulences and speed amplifications which infect bodily sensorial systems and cross the borders of social relationality. By re-enacting the exorcisms once accomplished by the Tarantella, rave parties represent new dance rituals with their own rhythmic qualities, as particular forms of technological becoming triggered into the body by its simultaneous passage across acoustic cyberspace and across the molecularisation of new chemical substances such as Ecstasy or Speed. The main aspect of the twenty-four hour plus rave

experience appears then as a state of trance in which the dancer is totally possessed by a rhythm which catalyses her energies as a way to access unknown parts of her body-mind.

33 With their combinations of acoustic amplifications, visuals, techno sounds and drugs, techno-parties give the sound/colour ritual assemblage a new realisation, technologically amplifying the possession and trance state of tribal dance.

34 > This [is] music as a matter of modifying states of mind, perceptions, bodies, brains; ' music that remember[s] the techniques of dance and drumming, rhythm and trance, and anticipate[s] the sense that music has more to do with sound and frequency than with melody and meaning. ' the drug [is] the music, and the music w[as] a means to engineering and exploring its effects. (Plant, 1998: 166)

35 Chemically speaking, the effect of Ecstasy is an increase in the production of dopamine and serotonin, the neurotransmitters conducting electrical impulses between neurons. An excess of dopamine stimulates locomotor activity and creates a state of euphoria, while excessive serotonin intensifies sensorial perception, almost to the point of hallucination. [8] Transforming the body into a hyper-sensitised membrane responding to certain frequencies and degrees, Ecstasy amplifies the infinitesimal, affective potential of technology. In Eshun's words, you are 'drugged' by the beat and beaten by the drug', while your body is totally fascinated and possessed. Rather than escaping the body, the sound-drug experience allows the body to escape the structures and boundaries that keep it organised.

36 > Dancers do not dream or trip but are possessed, faceless and anonymous, by rhythms and speeds, disorganised and dispersed beyond individuation, overwhelmed by connectivity. The techno-Ecstasy combination steals identity away, but it also throws its users into new connective tissues of dance, movement, rhythm, sound, '. It [is] the interior technology for the digital age, ' the molecular adjustment that allow[s] a generation to explore the new machine interface. (Plant, 1999: 168)

37 As in old drumming techniques, the repetitive and regular meter of contemporary techno unfolds an important relation with the irregular and intensive character of rhythm: techno rhythm swells in virtual amplification under each beat and propagates itself in the lines of flight between different sequences, or in the affective encounters between sound and chemical drugs. At a perceptual level, the combined effects of drugs and of sampling and mixing techniques elude any cognitive and decoding attempt made on the basis of a Cartesian interpretative reason, disrupting the listener's and dancer's subjective perceptual states (stratified visions, hearings and organised motions) into a collective web of multiple sensations. Electronic sound runs as a flow through the body: not an equilibrated, ordered and harmonic sequence but a mutating and non-hierarchical plateau of rhythms never totally measurable, fully organizable or perceivable from a unique static point. By electronically blinding, jamming, deceiving, overloading and intruding into the conscious circuits of subjectivity, these technologies trigger a resonant mechanism which complicates the linearity of subjective processes. It is no longer a matter of a listening subject tending his ear towards the linear development of musical sequences from a determinate point in space, but of a multiplicity of 'ambient sounds' coming from all directions, sensations crossing the whole body and dispersing it into scattered sensations. In these apparently chaotic and disordered movements, the sonic-machine system (or sound-system of organic membranes, electric sensors, electronic or computer screens, drugs) produces its own self-organisations. Contemporary electronic sound as an 'on going event' implies autonomous processes of destratification and deterritorialisation that disentangle it from its historical, geographical and musical identifications and from recognizable causes or origins. Its unfinished, unfixed and contingent character gives the machinic sound system the character of an independently living and changing cosmos, as the enveloping reality of a new technological ritualisation.

38 Beyond their apparent function of formal copy and reproduction, the amplifications performed by digital machines generate a fundamental process of bodily re-qualification and re-invention. Catalysing a series of infinite multiplications and proliferations of sounds, these machines contaminate the sacred, untouchable realm of the human body, liberating it from the essentialist idea of a pre-determined organic, cultural and technological originality. At the same time, unleashing an unlimited potential for corporeal metamorphosis and 'mediatic parthenogenesis', digital technology allies itself with the invasive and subliminal power of contemporary capitalism.

39

As Luciana Parisi argues, by spreading and modulating a proliferating flow of (genetic, cultural, cybernetic) information, digital machines trace a hazy line which reconciles the rigidity of control strategies and total incorporation with absolute speed and uncontrollable diffusion. 'Bio-informatic' capitalism generates an assemblage of communication modalities and a multiplication of transmission lines between different beings such as genes and human bodies, animals and computers. Without replicating whole bodies/images in order to produce an integrated ideology, technology intervenes on their microscopic variations, at the same time multiplying and re-mixing them. The molecular control-net woven by contemporary capitalism does not oppose but feeds on the proliferation of information, at the same time capturing, selecting and optimising it through a modulation of the intervals (i.e. the instants of virtual and potential states, of creative and affective tendency) between information units (genes, images, bits). [9] The aim of this capitalist modulation is to reach an absolute predictability of physical and cultural behaviours through a minute control of potentials and through multiple technical manipulations directly intervening on bodily flesh, from its embryonic stage to its more specialised dynamic functions.

40 As a technique for deciphering, re-ordering and re-combining the genetic material of bodies, key elements of bio-technology emerged in the late '70s and early '80s (for example with Herbert Boyer and Stanley Cohen's experiments on the recombination of DNA molecules) as a way to map genetic sequences and make them manipulatable and reproducible ad infinitum. By replicating pieces of DNA and by combining them among each other, bio-technologies of genetic manipulation intervene in the genetic and biological rhythms of the organism, opening up a vast field of repercussions and effects that resonate at the molecular and cellular level of bodily organisation. The alteration of adrenal gland activity, enzyme levels and other hormonal functions and the consequent changes in physical and behavioural characteristics, capacities and performances (such as sensitivity, or the velocity and resistance of the body in motion) constitute an example of the transformative potential unleashed by such rhythmic manipulations. Transplants, prostheses and, more recently, telerobotics and the realisation of bodily remote-control constitute another modality of technological intervention on the anatomical and kinetic organisation of a body and on its dynamic performances. Directly tapping into the level of neural transmission and sensori-motor coordination, these technologies influence the physiological basis of human rhythm and motion, behaviour and social relationality, transferring them to a more complex dimension of electro-digital stimulation and de-centred control. Contemporary technologies of acoustic amplification then institute a further level of bio-digital modulation. By digitally generating, manipulating and reproducing sound, these technologies (from synthesisers, mixers and turntables to sonic composition software) allow us to perform infinitesimal rhythmic alterations on the soundscape and the acoustic sensosphere, redefining the perceptual experience and intensifying the sensations and motions of the human body. Simultaneously multiplying and modulating infinitesimal variables of behaviour, bio-informatic capitalism is founded on a double articulation, an immanent condition between decodification and metricisation, between the liberation and acceleration of uncoded information flows, and the continuous attempt at quantification, measure and control. On one hand, the transmission of information at both macroscopic (images and sounds, people and goods) and microscopic levels (genes and bacteria, memes, bits) happens as an epidemic spread and a simultaneous modulation of physical and cultural contagions (from diseases to pop music), delineating the viral rhythm of contemporary capitalism. On the other hand, a meter of biological and economic, social and political exchanges and equivalencies acts as a control and measurement grid on the combinatorial and transformative potential of all bodies, limiting bodily capacities and tastes and blocking their actual behaviours and movements.

41 According to Jacques Attali, sound/noise participates in the capitalist process as an orderable and codifiable matter. Becoming an undifferentiated and anonymous commodity, sound follows the social and economic dynamics of capitalisation, where 'its appropriation and control is a reflection of power.' (Attali, 1996: 6) Power (and the possibility of subversion) are generated together with music, i.e. with the writing of codes which analyse, restrain and repress the disordered sounds of bodies and tools (i.e. noise).

42 > All music, any organization of sounds is then a tool for the creation or consolidation of a community, of a totality. It is what links a power center to its subjects, and thus, more generally, it is an attribute of power in all of its forms. ' noise and its endowment with form. Among birds a tool for

> marking territorial boundaries, ' it indicates the limits of a territory and the way to make oneself heard within it, '. (Attali, 1996: 6).

43 By transmitting and recording noise, sound technology manipulates and channels culture, realising a significant political concern for tonalism and melody and a distrust for new languages, codes, instruments. Bio-informatic capitalism captures, modulates and sells sound through a double system of record companies and private dance clubs, cutting the rhythmic flow at both its producing and receiving ends. By regimenting sonic experimentation, production and purchase costs and pirate trading, corporate music producers create an ordered flow of music and money. On the other hand, a parasitic world of dance clubs constitutes another grid of regulation and control, capturing the sonic, chemical and social alterations provoked by the free flowing of sounds, drugs and people through systems of volume control and through identification and personal search procedures. In this way, the high-tech apparatus of clubs inserts itself into the capitalist dynamics of a regulated physical, social and economic exchange. Digital machines (amplification systems, electronic I.D. control and personal data processing) become fundamental for the capitalist control and exchange net, by allowing the control but also the modulation and combination of infinitesimal components (from low frequency sounds to dangerous chemical molecules and human bodies) and, consequently, to commercialise affective responses, movements and transformations. Oppression, as Gilles Deleuze argues, is not a violation of our eternal values but a restriction of our movements. Blocking and re-territorialising the intensive potentials of sound and dance, various strategies of control and management are promoted, trying to entrap movement (as either dance or nomadism) into predictable deterministic trajectories, trajectories of migration enclosed between starting and arriving points, and also capitalist trajectories in which music and dance become innocuous exchange products.

44 These strategies of physical, social and economic control are nevertheless undermined by subterranean forces which do not simply resist the capitalist biopower but re-organise its own processes:

45 > The process of stratification points to the molecular constitution of the hierarchical organizations, the continual flow of variation that runs beneath molar aggregations. The "apparatuses of information-capture run parallel to the mesh-works or autocatalytic loops of " reproduction ceaselessly declining from stationary states. (Parisi, 2004: 143)

46 A multiplicity of microscopic and virulent parasites infest their host capitalist body, a swarm of micro-physical, molecular forces constructing an alternative organisation of flows and moving at their own rhythm, producing random trajectories and virally infecting the 'distributed nervous system of cybernetic capital.' (Goodman, 2004) The very dynamics of capitalisation is linked to the capacity of its constituent particles (sound molecules, human bodies or information units alike) to organise themselves autonomously, and the emergence of a hierarchical capitalization does not eliminate the micro-organisations at the basis of its macro-order of exchange. Sound and dance are an example of this alternative, autonomous organisation. At a microscopic, bio-physical level, sonic and bodily rhythm-analysis shows the diffusion of rhythm beyond grids and meters and in 'new, non-Newtonian terms that are incompatible with a trajectory description and instead require a statistical, probabilistic description': at every step the probability is ½ that the particle will go to the left and ½ that it will go to the right. At every step, the future is uncertain.' (Prigogine, 1997:42-43) [10]

47 At the same time, the rhythmic relation between technology, techno and dance and the continuous movements of the ravers-travellers across nations transforms the party scene into a social nomadic practice or a combination of extensive and intensive random voyages. The old public/private confusion and ritual convergence is re-embodied through the contemporary overcoming of the private dimension and the emergence of moving assemblages or sound-system tribes with their unfaithful followers travelling and dancing while spreading the rhythmic contagion all around the world. Beyond styles and divisions, rave parties unite generations, classes and races, all inextricably bound by sound, drug and technology. Putting to an end four hundred years of bourgeois individualism in music, techno-parties also cause an economic stir in the music industry. Famous DJs condemn them as a virus, a contagious illness, a bubonic plague of the record industry which cannot find in raves those charismatic leaders or guitar heroes, those recognisable faces and motives indispensable for the sale of its products. Rather, the de-

individualising experience of electrified techno multiplies the number of possessed and infected bodies wandering in the autonomous, collective and independent microcosm of the rave, as a prolonged pause and a temporary upsetting of social and economic rules.

Conclusion

48 Around the idea of sound and noise as 'unformed matter' musically codified in the cultural and economic organisation of society, this article has woven a theoretical net of biological/philosophical relations. Considering the record industry and dance clubs as the main corporate institutions using high-tech apparatuses for the physical and social disciplining of sound and dance and for their transformation into exchange commodities, rhythm appears as a double conceptual axis of simultaneous regimentation and subversion. On one hand, the definition of rhythm as sonic and behavioural meter is revealed as the philosophical tool for the discipline and commercialisation of sound and dance. On the other hand, identifying rhythm with a viral spread allows us to grasp its contaminating character, illustrating how both capitalist organisation and subversive re-organisations capture and modulate a proliferation of rhythmic viruses by respectively blocking or feeding them.

49 Drawing on Gilles Deleuze and Fèlix Guattari's differentiation between meter and rhythm, this viral analysis of rhythm illuminates its functioning in the organisation of linear communication systems, but also its viral action of disruption and interruption in contemporary capitalism: rhythm as a physical, cultural and economic virus. This epidemiological behaviour of rhythm cannot be interpreted through any simple metaphorical reading of formal analogies and similarities; rather, it emerges from an interdisciplinary connection between philosophical and biological research. Bringing to light the common behaviour of biological and sonic viruses, the relation between Deleuze and Guattari's philosophical notion of rhythm and Lynn Margulis' scientific theory of symbiosis explains the viral contamination of sound and dance as a symbiotic merging between particles, molecules, people and cultures along a continuous line of transmission and modulation working at different levels.

50 At a physical level, the viral propagation of rhythm works through an energetic diffusion across the body's neural system. This electrification/infection of neural cells by sound provokes a series of continuous qualitative passages and metamorphoses of the body along its measurable and quantifiable movements. Involuntary jerks and speed variations constitute then the symptomatic picture of a rhythmically incited, pathological behaviour as the sub-stratum of synchronised and organised dance as a kinetic power system, delineating dance as a bodily becoming along the affects of different intensive (chromatic and acoustic) traits. The cultural organisation of dance as a system of precise postures and traits, gestures and steps (or kinetic habits) characterising an ethnic group happens then through the codification of particular behavioural patterns, where every ordered sequence of steps is simultaneously composed and microscopically dis-organised by a multiplicity of micro-gestures incited by rhythmic contamination.

51 Travelling across continents, seas and millennia, the speeds and kinetic traits of different dances carry the viral diffusion of rhythm between different communities, where the social organisation of local and national life is disrupted by the explosion and travelling of rhythmic viruses and by the ab-normal behaviour of dancing bodies. Crossed by simultaneous waves of sound, ships and pieces of technical equipment such as drums or computers, the Mediterranean Sea becomes the host of political and commercial routes, but also of subterranean rhythmic transmission. The rhythmic passage from African drumming and dancing rituals to the North Mediterranean Tarantella dance, up to contemporary rave parties, represents one of the vectors of this epidemiological rhythmicity, carrying across the waves a microphysical environment of bodies, tales, beliefs, animals, chemical substances and musical instruments flowing across time and space and transversally crossing the capitalist grid.

52 Rather than simply identifying the viral diffusion of rhythm with a liberating and revolutionary movement opposed to the ordered, metric structures of capitalism, this paper has tried to highlight how, depending on the concrete conditions of its realisation, the viral behaviour of rhythm is simultaneously organised by practices of potential modulation and total control, censorship and commercialisation, or by a different, alternative ecology of biological and cultural transmission through the forces of sound and dance.

Author's Biography

Stamatia Portanova is a PhD candidate at the East London University. Her article "Tessiture digitali" ("Digital Textures") has been published in Donne e multiculturalismo (Women and Multiculturalism), Naples, Liguori,
2004. The subject of Stamatia's research is the relation between rhythm,
dance and technology in all its forms, from tribal rituals and rave parties to contemporary cyberdance performances and video dance.

Notes

[1] In its pre-socratic etymology, 'rhythm' is the emergence of a shape out of a flow, or the improvised, momentary and modifiable pattern realised by every living organism. Restoring order and rigidity in this too fluid etymology, Plato's philosophical theory intervenes to restrict the rhythmic quality to the performance of human movement and, in particular, to those continuous activities (like walking or working) which can be divided into elementary units (or steps) and rigidly ordered according to the regular meter of an alternate timing, as in a military march. For a historical and philosophical analysis of the notion of rhythm (from the pre-socratics and Plato to contemporary philosophy), see Paul Fraisse, Psicologia del ritmo (Milano. Armando, 1996).

[back]

[2] According to William Mc Neill, in-between animal and human species, certain animals like chimpanzees have acquired the same patterns of behaviour (bipedal posture, foot stamping, arms and face gestures) which are typical of human dance. See Mc Neill, Keeping together in Time. Dance and Drill in Human Evolution (Cambridge and Massachusetts, Harvard U.P., 1995).

[back]

[3] This is an additive 'polyrhythm' or 'interdimensional play of milieus – a mutating array of splices folds and fusions, an acoustic hyperspace. In Deleuze and Guattari's words, 'One milieu serves as the basis for another, or conversely is established atop another milieu, dissipates in it or is constituted in it.' (Deleuze and Guattari, 1992: 313)

[back]

[4] For an analysis of bodily performance as continuous bodily variation, see Carmelo Bene and Gilles Deleuze, Sovrapposizioni (Macerata, Quodlibet, 2002).

[back]

[5] See Simon Reynolds, 'Pure Fusion. Multiculture versus Monoculture', in https://members.aol.com/blissout/purefusion.htm

[back]

[6] The image of a criss-crossed Mediterranean derives from Paul Gilroy's notion of the 'Black Atlantic', as one of its cultural and geographic ramifications. To denote the 'webbed network' of the African diasporic culture that penetrates the United States, the Caribbean and, by the end of the twentieth century, the UK, Gilroy considers the Black Atlantic as a modernist countercultural space, a space that, for all the claims of black cultural nationalists, is not organised by African roots but by a 'rhizomorphic, routed' set of vectors and exchanges: ships, migrations, creoles, phonographs, European miscegenations, expatriot flights, dreams of repatriation. The image of the criss-crossed Atlantic ocean is essential for Gilroy's purpose, which is to erode the monolithic notion of roots and tradition by emphasising the 'restless, recombinant' qualities of Afrodiasporic culture as it simultaneously explores, exploits, and resists the spaces of modernity. For an interpretation of Gilroy's notion of the 'Black Atlantic', see Davis, 'Roots and Wires'.

[back]

[7] For a symbolic interpretation of Tarantism in Southern Italy, see De Martino, La terra del rimorso. Il Sud tra religione e magia (Milano, Il Saggiatore, 2002).

[back]

[8] 'All music sounds better on E – crisper and more distinct, but also engulfing in its immediacy. House and techno sound especially fabulous. The music's emphasis on texture and timbre enhances the drug's mildly synaesthetic effects, so that sounds seem to caress the listener's skin. You feel like you're dancing inside the music; sound becomes a fluid medium in which you're

immersed.' Simon Reynolds, Energy Flash (London, Picador, 1998), XXVI [19] On the copy/ simulation difference, see Brian Massumi, 'Realer than the Real: The Simulacrum According to Deleuze and Guattari', https://www.anu.edu.au/HRC/first_and_last/works/realer.htm

[back]

[9] See Luciana Parisi, Abstract Sex: Philosophy, Bio-Technology and the Mutations of Desire (London, Continuum, 2004), 129.

[back]

[10] At this level, resonances are not local (i.e. occurring at a given spatial point or instant and with a predictable trajectory) but diffusive. See Ilya Prigogine, The End of Certainty. Time, Chaos and the New Laws of Nature (New York, The Free Press, 1997), 42-43.

[back]

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