In connection with research about making music in connection with ZH

Zaha Hadid's life, as a person (from multiple sources, a main source being ZHA's website (https://www.zaha-hadid.com)

A simplified timeline taking in some important milestones (author's view).

1950 31st October birth in Baghdad, Iraq, only child to educated politically liberal family

1972 started at the AA (Architects' Association) where radical ideas were encouraged

1977 AA Diploma Prize. Started teaching whilst studying

1979 Started Zaha Hadid Architects (ZHA)

1982 The Peak, Hong Kong, a contract won yet not realised, a significant statement

1986 Kurfürstendamm 70, Berlin, unbuilt

1987 Finished teaching at AA. (Taught at Columbia, Harvard, Yale, Vienna, Cambridge)

1987 IBA Social Housing Block 2 Degewo, ZH stamp, women in architecture, resigned

1988 in Deconstructivism in Architecture, Museum of Modern Art, New York, art ideas

1993 Vitra Fire Station, Weil Am Rhein, her first real commission, innovative, a manifesto

1996 Cardiff Bay Opera House competition won (three times!); built by Rogers

1998 Honorary Member of the Bund Deutches Architekten

2000 Serpentine Gallery Pavilion, 1st June – 3rd September, folded plate triangular tent

2000 Honorary Member of the American Academy of Arts and Letters

2000 Honorary Fellow of the American Institute of Architecture

2001 Hoenheim-Nord Terminus and Car Park, Strasbourg, France, kinetic colour/light fields

2002 Bergisel Ski Jump, Innsbruck, visually arresting, new form

2002 CBE

2003 Rosenthal Centre for Contemporary Art, Cincinnati, USA

2003 Mies van der Rohe Award for Hoenheim-Nord Terminus

2004 The Pritzker Prize, arguably the highest award for architecture, first female recipient

2005 Phaeno Science Centre, Wolfsburg, Germany, sophisticated, complex, through access

2005 BMW Central Building, Leipzig, Germany, new concepts, egalitarian

2005 Hotel Puerta America interior, Madrid, Spain

2005 Ordrupgaard Museum Extension, Copenhagen, Denmark

- 2005 Spittelau Viaducts Housing, Vienna, Austria
- 2006 Maggie Centre, Kirkcaldy, Scotland, sensitive cancer recuperation
- 2006 New York Solomon R. Guggenheim Museum exhibition, design process art
- 2007 London Design Museum exhibition, vision for the east of London
- 2007 Nordpark Railway Stations, innovative concept, new use of materials
- 2010 RIBA Sterling Award for architecture for the MAXXI Museum, Rome
- 2010 Guangzhou Opera House, China, modelled on previous own Cardiff, attracting epigones
- 2011 RIBA Sterling Award for architecture for Evelyn Grace Academy, Brixton, London
- 2011 Riverside Museum, Glasgow, 'punk' jagged 'zig-zag' outline
- 2012 OBE
- 2012 Pierresvives, l'Hérault, France, 3-in-1 archive-library-sports facility, Zaha lines
- 2012 Aquatic Pool, Olympics, UK, despite cost and buildability helped create olympics
- 2012 Heydar Aliyev Center, Azerbaijan, flowing lines and innovative material use
- 2012 Galaxy SOHO, Beijing, China, futuristic blobby volumes, collaboration
- 2013 Sackler Gallery Extension, curvaceous, highlighting old and new
- 2014 The Design Museum, art, concept design, furniture
- 2014 Dongdaemun Design Plaza, Seoul, South Korea
- 2014 Wangjing SOHO, Beijing, China, daring enervating hi-rises, shopping malls
- 2014 Lingkong Sky SOHO, Shanghai, China, 11 storeys, bridges, some grassed areas
- 2015 St Petersburg State Hermitage Museum exhibition
- 2016 RIBA Royal Gold Medal, first female recipient
- 2016 Serpentine Gallery exhibition
- 2016 Port Antwerp, Belgium, stunning addition on top of rectangular building
- 2016 31st March fatal heart attack
- 2019 Leeza SOHO, Beijing, China—started by ZG, finished by ZHA, tallest atrium

Zaha Hadid's short bio and ideas (culled from several sources and produced as a synthesis here)

Starting from her life in Baghdad, she was an only daughter, with two brothers, of a well-connected bourgeois family, where her liberal father was involved in politics and her mother was an artist. She plainly inherited the artistic strain.

She was to remain neutral politically, at least as far as public statements went, including about the later wars in Iraq and construction worker deaths in Qatar for the 2022 world cup stadium, Al Wakrah, the latter for which she received some criticism—unjustly. Her project was safe and had no deaths.

As a female trying to stand up for workers' rights in the middle east, she would have upset people and undoubtedly have had little to no effect, possibly even made matters worse. It would not have been strictly in her role as architect. Two male architects stood up to voice their concern, Frank Gehry and Daniel Libeskind. This was right as men in a patriarchal world, although the situation in the Arab world is slowly changing where women are gradually becoming more emancipated (Sharp, 2005).

She developed a strong humanitarian passion which was a driving force in her architectural designs, was completely against war and stated the one type of project she would not design was a prison (McKenzie, 2013). This shows a liberated and enlightened approach not wishing to be associated with incarceration nor suffering of mankind. In fact she stated that her architecture was about the wellbeing of people. She can be heard saying this in *Space Machine*. Her successor Patrick Schumacher endorses this as an enduring legacy as a social function.

She suffered as a female, as a Iranian, and ironically as a Londoner when she settled there at the age of twenty two, when she won three times and was not accepted for the Cardiff Opera House project (Crickhowell, 1997; Deacon, 2020). She also had a similar experience of rejection by the London planning authorities; she knew about prejudice. Another factor working against her for about twelve years was the challenging nature of her designs, futuristic, structurally questioning and costly. There was bias as to the buildability of her designs. Nevertheless she persevered and eventually won to become widely acclaimed as a world leading architect, gaining numerous awards, the RIBA Sterling Award twice, the RIBA Gold Medal and the highest award, the Pritzker Prize, the first female to accomplish this. Amongst others, this is attested by the architects Richard Rogers, Piers Gough and Rem Koolhaas.

Her upbringing was happy. Her independence was encouraged by allowing her at a young age to design her bedroom, select fabrics and make her own clothes. There is a lasting influence upon clothes design as Nafady and Hussein attest specifically during the period they trace 1993-2016 (2020). This early formative period may have set the seeds for intricate detailing and an abiding interest in designing furniture, shoes and other artefacts ancillary to the main architectural project. The independent spirit was one of her hallmarks that remained, needed to see her through the testing times at the start of her career and to have the confidence to see through, what to many were, her outlandish designs and successfully deal with a range of clients on a global basis.

Some criticised her for working in China and other regimes where oppression occurs. Patrick Schumacher stated that they considered this and took a view that working with the respective countries would do more good than harm. He stated that there were double standards in condemnatory countries doing trade accepting silicone chips for machinery and computers, for example. Da Rocha (2019b) outlines a plain business case for ZHA to work in China after the 'Chairman Mao's Great Leap Forward' from 1959-1970s, then during the "open-door" policy of Deng Xiaoping in 1978. It seemed that this was just a huge market opening up where architects like TFP Farrells, Foster and Partners, Herzog and de Meuron, Coop Himmelb(l)au, Rem Koolhaas and many others were attracted to the clientele possibilities,

where classically architects, one learns in educational institutions, are interested predominantly in reputation, and traditionally, not as commercial as building contractors and developers. Naturally they like clients with whom they can work and get paid, so then meeting the wealthy and critically demanding Zhang Zin and her husband Pan Shiyi in 1995, where according to Da Rocha, Zin 'had good taste, ambition, and a lot of money' and 'loved Zaha's style', where the size of projects was suited to ZH's grand envisioning powers and creativity, which Zin recognised as "very important for [her] work". Zin stated that she did not just hand out the projects to ZH, she had to win them in competitions, which she invariably did. Zin said that "Zaha always came up with the best design". This is a plain case of client and architect getting on, respecting eachother and after all the lean years it makes complete business sense to seek lucrative contracts in order to pay all the bills. This is another side of ZH, the business woman, although only to an extent. From another source whilst Zin had great lasting admiration for ZH it was evident that both women were of very strong characters, that for ZH the prime factor was always the design and not so much the administrative side of running projects, which is where Schumacher stepped in. A simple, straightforward, yet complex person, a great artist.

Baghdad at the time of her childhood was urbane, with some evidence of modernism in the architecture, of Le Corbusier and Frank Lloyd Wright. This was an early introduction to modernism which stayed with her, although she was to progress further, to work in other dimensions, spatially and philosophically (almost an allegory for the theory, the ToT—see later). These two figures were to remain as architectural influences, amongst others she collected as she got older, such as Oscar Niemeyer, Frank Gehry, Peter Eisenman, Rem Koolhaas, Elia Zenghelis and many others.

An uncle brought over a scale model, whilst she was still a girl, of an intended architectural project which left an impression on her. This may at least partly explain a rather hands-on approach to design, starting with an insistence on manual drawing. This drawing was in many ways a key ingredient to developing her avant-garde designs, a skill she claims is largely now lost.

She experimented with perspective, multiple superpositions, the classic example being her final submission at the AA, for Hungerford Bridge, drawing on Kazimir Malevich's *Arkhitektons*, bringing a disruptive object into the field of the city in several perspectives, flying through the air, at oblique angles, abstract shapes, lines, then came curves, double curves, and quickly drawn squiggles according to Schumacher, later to become signatures of advanced architectural forms.

Referring back to the model making, many architects take a pride in this, Daniel Libeskind, for example, a fellow student at the AA, the Architects' Association, a hot bed of radicalism. One of her subsequent best friends, Norman Foster, this time, not a past AA alumnus, a graduate of Manchester and Yale architectural institutions, although having spoken at the AA (Foster, 1981), is a meticulous model maker. His architecture, whilst exhibiting many modernistic traits is at the other end of the spectrum of Zaha Hadid. Incidentally, he is opposite the ethic or aesthetic of the spontaneous 'one shot' (Kenneth Noland, Smedley, 2010; Taylor, 2017), explicitly countering this (Foster, 1981), liking to thoroughly test, retest and experiment as with background lighting and reflected sunlight (Foster, 1981). He is very hands-on with service provision, importing pods to plug in for bathroom facilities, whereas ZH tends to consult with specialists. His is like standard architecture, except of an extremely high quality (Foster, 2018; Art of Architecture, 2022), coherently rational talking of all the

classical concepts and terminology that is taught in standard architectural institutions, such as 'plot to footprint [or density] ratio', the height of a building as a proportion of the base dimension. Perhaps over simplifying, ZH would be more interested in some esoteric geo morphic potentiality of the ground footprint. So, for Foster, it remains in the domain of what you see is what you get, buildings built on plots of land, albeit with much painstaking thought, encompassing sustainability and new ideas such as 'hi-rise' and the totemic CAD designed Gherkin building in the city of London, incorporating the concept of 'deep space' (where light and ventilation reach deep into the heart of the building) and an early exponent of 'open plan', not like ZH's full of abstract ideas pushing boundaries of possibilities, 'the street', the idea of accessibility from outside, typically within a city environment, journeying through a building, architectural objects drawing inspiration and refences from outside the frame of reference, enticing people into a traversing through architecture (although Foster can do this too, perhaps more deliberately (Foster, 1981)—perhaps it is just a matter of personal style), as her first really significant project, The Arts Center in Cincinnati, spontaneous, artistic, yet geometric, but of a modern fluid, lively, moving geometry. This speaks well for her that she could appreciate a different architecture to her own, although to be fair, there are similarities, as already hinted, such as moral or value-based concern for humanity and more prosaically, issues with clients, such as Foster outlines, philosophically and phlegmatically, regarding the Hong Kong and Shanghai Bank (Foster, 1981). Another excellent example of similarity is as regards Norman Foster and Partners' London Academy (2006) (2022b) and a similar earlier academy (2022a), which replaced a run-down school with a new academy utilising educational ideas where the built environment impacts behaviour and wellbeing, jetting the overall performance of students from the first quartile to the last quartile<sup>1</sup>: graphic evidence of the effect of architecture upon people. From a personal level one remembers unsuccessful hi-rise UK buildings of the 1960s and 1970s experiment for civic housing and oppressive buildings inducing feelings of ennui in the pit of one's stomach, sadness and alienation. Architecture is so vital to human living as to create a visceral link with human physiognomy. Brutalism such as of the Barbican Centre, or as hailed by Jonathan Meades (2021) can be questionable by some. Personally, it can be invigorating, similar to punk music. Georgian, Edwardian, Victorian and other styles bear detailed analysis as to appeal, sufficient here to attribute to personal preferences. Relevant to this thesis is the syndrome of London: a living cheek by jowl of old architecture against modern: a panoramic sweep of buildings lining the Thames, shows both, integrated. A personal view is that there is vibrancy, a symbiotic relationship where each period bounces off the other, ending with a net embellishment of the other and itself. This could be the view of ZH. She certainly sat the two side by side without interference, as with the Serpentine extension (Zaha Hadid Architects, 2009; Frearson, 2013) and relished the juxtaposition of conservation type building with the novel futuristic Bergisel ski jump in the background. Daniel Libeskind exemplified a similar idea of non-interference with the existing, yet somehow adding, by mere touching of the new adjacently, as with the Jewish Museum in Berlin (2001) (Studio Libeskind, 2022). This is a tension that arises musically and as such could be an embedded representation of ZH's view of ancient and modern. Returning to the educational establishments, although this could apply equally to many structures: layout, orientation (although Foster declares that he is happy to go against the grain and confound personal sense of orientation internally (Foster, 1981), so

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<sup>&</sup>lt;sup>1</sup> It is remembered when this occurred with this statistical fact, however, to find exact substantiating reference is difficult. However the citations provided tend to support this explicit notion.

here again there is a sort of rebelliousness that could be likened to ZH, perhaps in a different guise, more urbanely, perhaps), circulation space and many other design criteria can directly impact wellness and academic performance. Zaha Hadid, whether or not influenced by Norman Foster, similarly, created a school in Brixton, London, The Evelyn Grace Academy, 2018, (Etherington, 2010), with her emblematic zig-zag motif in the building façade, internally as well, continued with laned running tracks externally (with some overtones of the angled fire engine lanes outside the Vitra Fire Station); as with Foster's academy, a grown-up architecture, treating student as adults with qualitative architecture, light-filled and open nonthreatening spaces. For this ZHA won the RIBA Sterling Prize in 2011. (RIBA, 2022). The city was a major concern, as can be heard in *Space Machine*. This is obviously a testing field for modern life on earth, how cities are to function. Ove Arup considers highly integrated sustainable cities. Will Alsop another fellow student at the AA considered 'super cities' along 'super highways'. Patrick Schumacher controversially, whilst still holding a torch for the social wellbeing in all aspects of projects, considers that green areas should disappear and that urbanism should prevail. This may not have been the view of Zaha Hadid although she was concerned with sophisticated projects that promulgated consumerism, such as the Soho project in Hong Kong and she professed to not like 'nature', although she drew inspiration from nature in both a real and idealised way, and occasionally she allowed for some green areas in her schemes. This is an area for future exploration involving many topics, such as how to handle a global expanding population, the need for humans to connect with green nature and coupled issues to do with climate change and other ecological considerations. Both Schumacher and Hadid were and Schumacher continues to be interested in the big picture of master projects for city areas (as indeed Norman Foster too), such as Singapore, Barcelona and Hong Kong. These projects are so ideas laden that they cannot be held to be against green areas. It is their futuristic aspirations that conceive of cities with functions for all in what must be viewed as science fiction coming true in real life. ZH's view of sustainability was largely concerned with materials and processes, techniques of building, such as in the Heydar Aliyev Centre. When questioned about being labelled a 'starchitect' she did not demure; she accepted the mantle as a larger than life person. This could be a criticism, that she was not concerned with ethnic minor works hidden away for the wellbeing of small scale indigenous populations. There are many others doing this sort of work, often highlighted in *The Architectural Review*. Her Spittelau Viaduct Housing in Vienna project emphases this point. It is grand Zaha Hadid, upgrading a run-down former railway site combining flats, offices and artist studios. She claims to generally take in the vernacular. This is not the vernacular of bucolic buildings. It stays true to the ZH spirit of largesse and boundary pushing. There are outside areas, yet they are interwoven with bars and restaurants to create a lively cityscape.

From the many interviews on video, radio, and in print, a marked effect that possibly gained her a reputation as truculent was when interviewers insisted on asking questions designed to provoke, plainly obtuse, when if they had done their homework they would know her open opinion on certain matters, such as the deaths in Qatar, unless questioners were somehow trying to score points. On the whole she seemed most tolerant in handling questions of this nature, except on one occasion bringing a radio interview to an abrupt end. Her method of people management involved building up a team of highly skilled operatives, in widespread areas, architecture, computer skills in Revit, Maya, Grasshopper and other specialised fields, with the able assistance of Patrick Schumacher, involving some abrasive

comments plainly meant jocularly, an encouragement of a mix of autonomy and collaboration, above all much humour and a sense of fairness.

Her father took her to see various places visiting museums, taking in the architecture. It seems that she was destined to make a life dedicated to architecture. She did not marry and have children. She stated that she was married to architecture and lived it every waking moment and probably in many sleeping dreams too. She was an exhaustive worker, trying out numerous variations, a feature inherited by her design practice, sometimes late into the night; possibly some of her initial sketches are phantasmagoric as weird concoctions from a dream world. All her thousands of designs fit this description. Obvious examples are the Vitra Fire Station, Hong Kong Peak and her conceptions for extending London to the east.

The Vitra Fire Station was her very first project, pared back, as with Occam's razor, bold, innovative, with masses simplified, sliding, coalescing, as architectural theory made real, a line being a plane when viewed from another perspective. This was her manifesto and calling card to the world. The drawings showed the workings and the realisation showed that her imaginings could be made in the real world.

Her designs apart from being innovative in an almost impossible way—taking the years in the wilderness already mentioned before gaining acceptance, were geometric, again as already mentioned, but in the mode of challenging accepted mores of modernism, fragmented, antigravity, developing in fluidity, organicism, topography, topology, experimenting with the ground footprint in a different way to Norman Foster, looking to the site that could speak of ideas. Initially she would do what architects are taught to do, to explore the surrounding area, existing buildings, access routes, then latterly ecology and so on, but this became more abstracted, leading to cubist-like conceptions such as the Hong Kong Peak drawings, then taking advantage of the possibilities of computer aided design to realise what was hitherto unthinkable. This led to parametricism, which is claimed as initially unique to ZHA (Zaha Hadid Architects) now widespread (Day, 2012). Her nearest similes architecturally of world renown are Daniel Libeskind, Frank Gehry and Oscar Niemeyer, also Rem Koolhaas with whom she studied then worked as a colleague at OMA (Office for Metropolitan Architecture), then competed against and won the Cincinnati contract.

Certainly this is continued under the aegis of Patrick Schumacher (2019, 2022), full parametrisation, although he now says that they as a practice are wanting to push through this boundary, still utilising parametric techniques, yet looking for new concepts connected with the social function. In other words it is not just a complete computerisation. It may have seemed initially after ZH died, that an essential ingredient of her lifeblood had drained from designs to become space-like, dream-like, functional, satisfying of client requirements, yet devoid of that serious, to borrow from the stage, tragi-comic, rigour of ZH, a particular trademark, but it appears that her legacy of questing beyond is still alive. An example is the conception for the Sverdlovsk Philharmonic Concert Hall, in Yekaterinburg, Russia. Undoubtedly good acoustics will have been designed into the very fabric and shaping of the auditoria areas, taking the inceptive ideas of Iannis Xenakis and Edgar Varèse, sonically, and Le Corbusier, conceptually, in the 1957 Philips Pavilion (Steiner, 1999; Godman, 2018) to a new extreme. This is a benefit of full integrated parametricism where there are many instances of other concert halls falling short in this respect often needing remedial sound engineering to rectify the audio performance.

It seems highly reasonable that her early background as a Muslim, yet in Baghdad going to a Catholic school, the Moorish architectural influence, the calligraphic squiggles, related to the

squiggles mentioned earlier that eschewed representation, her first degree in mathematics, all lead to her fascination with abstraction. This was also fostered at the AA where a new direction was sought to counter the post-modern return to historicism and disillusion with early modernism of the twentieth century . In particular, once she was introduced to the Suprematism of Kazimir Malevich at the AA and all the others of Russia, Germany and France, there was no going back.

(Leading sources: Amatalraof et al, 2016; Anatole, 2014); Antwerp Port House / Zaha Hadid Architects, 2016; Aram, 2107; Architectuul, 2022; Artsy, 2022; Arup, 2022; Barba, 2012; Blackwood, 2004; Brewer, 2016; Bright Side, 2022; Condé Nast, 2022; CW, 2018; Davies, Booth and Brown, 2016; Da Rocha, 2019a&b; Davies, 2016; Deacon, 2020; Elkann, 2015; Etherington, 2010, 2011; Fairs, 2014; Fiederer 2016a&b; Finch, 2013; Frearson, 2011; GCR Staff, 2020; Gehry, 2016; Giannotti, 2012; Gonzales, 2012; Hadid, Rana, 2016; Hadid, Zaha, 2006; Hadid, Zaha, 2014a&b; Hadid and Schumacher, 2015; Kanter and Kimberley, 2019; Keskeys, 2016; Kim, 2016; Lomholt, 2021; Lowe, 2022; Lush, 2019; Macdonald, 2019; Mafi, 2019; Mairs, 2018; Margolin, 1998; Mendelsohn, 2016; Obrist, 2016-2017, 2020; Périer, 2017; Pet Shop Boys, 2010; Pet Shop Boys Community, 2016; RA, 2017; Ravenscroft, 2018, 2021; Razian, 2014; Red Star Over Russia, 2017; Schumacher, 2017; Serpentine, 2022; Sharp, 2005; Stathaki, 2013; Sudjic, 2020; Tentler-Krylov, 2020; The Art of Architecture, 2022; The Art Story, 2022b; Tupitsyn and Kiaer, 2009; WA Contents, 2015; Wadhwa, 2020, 2021, 2022a&b; Warmann, 2010; Williamson, 2022; Winston, 2016; Wood, 2012; Yentob, 2013, 2016; Zaha Hadid, 1997; Zaha Hadid, 2012, 2013; Zaha Hadid Architects, 2017, 2019, 2022; Zaha Hadid Foundation, 2016; Zeynep, 2019; Zukowsky, 2022).

### Commentary upon Zaha Hadid's biography as affecting musical interpretation

There are several factors that cannot be ignored when translating ZH's architecture. The case has already been made for including her character, life information about her. To recapitulate the reasoning here. It is a reintroduction of 'the man and his music<sup>2</sup> where in modern musicology the back story is seen as irrelevant to an analysis of the music. This is endorsed by the theory used throughout here, the ToT (theory off everything). Also, the arts-based research (ABR) approach allows for the personal, the subjective to be a centre of the research.

Personality points that emerge that need bringing out in such a personal representation are:

- Vulnerability. Admitted shyness, with a veneer of assertiveness
- Passion, for life, people and architecture
- Dedication and persistence, to see through ideas and designs even over years
- Single-mindedness, although open to intelligent suggestions and debate
- Abrasiveness, apparent, yet contradictorily, of good humour and beneficence
- Intelligence and ability to think outside the box—true creativity
- Flexibility, interest in constant evolution of ideas, knowledge and use of technology
- Artistry, manual drawing and painting skill, envisioning in fantastic original forms
- Self-belief despite setbacks and prejudice, positive can-do attitude
- Communication, sometimes deprecating, though actually affectionate

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<sup>&</sup>lt;sup>2</sup> The word 'man' here is used in the original context of Charles Myers (1948).

- Business flair, evidenced with multiple interests, clothes fashion, shoes, furniture
- Loyalty to her background ...

... Arabic, and Islamic influences such as calligraphy (partly explaining her avoidance of interfering in Arabic politics—see also the discussion above) and geometrical patterning, refraining from symbolic referencing, leading to broad abstract statements, reinforced by Kazimir Malevich and other Suprematists, with mathematics being a logical step, then mixed with embracing of western culture, including her Roman Catholic early schooling, though after a while permitted to avoid prayer meetings for compliance with her family's Muslim faith, all accepted in her stride without any clashes, bespeaking her family's liberalism, before finally the call for art and architecture took hold, leading to the seminal change and baptism of fire in the AA, English weather and the three day week of the then Prime Minister Ted Heath (commented upon by ZH not with political overtones, merely the inconvenience of energy privations, redolent of current times, and having to constantly move around to find colleagues with suitably warm office space for creating architecture).

Exaggerations such as *enfant terrible*, 'diva', precocious misunderstood genius, trailblazing woman out on her own just trying to think ahead of her time not trying to be a feminist, yet accepting the mantle to an extent, be a role model, totally serious about architecture, whilst sometimes presenting an acerbic wit (a parallel could be Wolfgang Amadeus Mozart who indulged in a childish and scatological sense of humour, yet outpoured some sublime music of exceptional genius—Hildesheimer (1983) who consummately analysed Mozart's music and life, left the question open, yet the answer was plainly that whatever genius is, Mozart was one. The question could be left open here, however to attempt to assault the Eiger or Everest that peeps above the clouds it is necessary to understand both weaknesses, foibles and sheer outstanding quality and ability wrapped up in one noisy yet unassuming person, whose legacy *is* great) what it can do topologically in the world, what it can do to shake up outdated ideas, do what noone has done before, drawing from the 'cosmos' (as mentioned in *Space Machine*) are hyperbole, yet with a measure of truth.

The task: to capture all of this in music is daunting. It could be easy to write some algorithms and let them follow some of the lines, curves and shapes of ZH, but here the task is to try to enter the world of ZH and give voice to her unique spirit. This is applied ABR.

Collecting together ideas, theories, influences

#### Suprematism

Briefly, suprematism consists of a concatenation of various European, mainly Russian, artistic, poetic, political and theoretical schools of thought and art leading up to the Russian Revolution of 2017, then Bolshevism, initially helpful, then turning and leading to the repressive social realism of Stalin: constructivism, futurism, cubism, nonobjectivity, dadaism for some, leading eventually to abstract expressionism of Kandinsky, the Bauhaus, affecting amongst others, Mies van der Rohe, an influence upon ZH, and the New York School, an influence upon the author as a means of creating spontaneously and abstractly, notably Kenneth Noland (Smedley, 2010; Taylor, 2017) with his 'one shot' rule, derived from 'colour

field painting', read as intuitive, spontaneous, unedited, subjective, unconscious-conscious, abstract expressionist mark making translated to note making, also with the liberty of adding in some representation, perhaps in the mode of some suprematists. Representational reality is supervened by objectivity. However, Malevich wanted both objectivity and expressionism. His idea of objectivity was gained from flying over fields seeing abstract patterns and swathes of colour at different angles, the world objectified. At the same time there was an intimacy almost hidden where his feelings were imbued into the shapes and colours, mystically. Like ZH his early religious influence was Catholic and a spiritual element remained with him, which resonated with ZH. He experimented with lines, circles, arcs, squares and rectangles and colours, red, white, black, blue, yellow. This for ZH was the beginning of fragmentation. For Malevich this led to his White on White painting which was an extremely radical statement as the beginning of a new way in art. The infinite was there, yet the white square in the middle possessed texture. The world was somehow still just there, just visible and whilst of two dimensions, the plane of representation, the paper, the canvas, with the added dimension just protruding from the surface. This was something tangible. Reality reduced. A colleague Rodchenko had friendly battles with him producing competing similar paintings where he wanted some kinetic happening, especially of rotating circles, and a practical approach to the materiality of the paint, called *faktura*, also a concern of others in the painterly circle, such as Liubov Popova (Chlenova, 2019), and Vladimir Tatlin (Cordray, 2022) who extended his 2D texture to outright 3D projections from his canvas and even construction as in his tower. In the end Rodchenko and Malevich had a rapprochement of a kind and collaborated. These nuances of interpretation are helpful for musical evocation of ZH, they allow latitude, non-rigid rules.

A dual point emerges, in influences upon ZH, and whilst carrying out researches, influences upon the author, that might help provide a distinctive voice for representing ZH in music. These coalesce. In ZH the Life (to be analysed in a separate later chapter), there is a section devoted to mimicking Malevich by repetitive mention of his name, also reading some text about him that is lost in the music, a trope that recurs in *Space Machine* about ZH where she is explaining her architecture, theory, ideas, actual projects. She weaves in and out of the texture of the music, eventually joining the cosmos, as ZH the Life ends too. Malevich started with representational art then proceeded via constructivism to suprematism. Not all artists in the Russian Suprematist school, as already stated, completely abandoned representation. This is a concern for this research, where there are frequent tensions, often played as a pulling and stretching, as traditional music, and modern experimentation: concrete versus abstraction, organisation versus abandon, deterministic methodology versus chaos, or randomness, or indeterminism, tonality versus atonality, form versus some destruction of form, like ZH's deconstructivism gained primarily from Malevich. His famous two paintings of *Black on White* (2015), the first statement of the end of traditional art, then the White on White (2018), celebrate many things at the same time. The black square on a black background is a revolutionary subsuming of perspective and picture planes to be nothing on an infinite white background. Some say that it is the beginning of abstraction, although it might well have been pre-empted by the Swede, Hilma af Klint in 1906. Abstraction within an eclectic mix is a means of communication within this research. This could be the rallying call of the suprematist collective that came and went, apart from those already mentioned, artists like Kseniya Boguslavskaya, Ivan Klyun, Mikhail Menkov, Ivan Puni, Olga Rozanova and El Lissitzky.

All this and more was grist to the mill for ZH. Malevich, generally the central figure in the Russian suprematist movement, graduated to experimenting with architecture, with scale models, which he called *Arkhitektons*, becoming the inspiring model for ZH in her final AA submission. This is explained by Zaha Hadid and others, Deyan Sudjic, Achim Borchardt-

Hume and John Milner, in a video in two parts (Zaha Hadid, 2014a&b<sup>3</sup>). It is recommended that the reader take time out to watch these as they are instructive of the thinking of ZH and Malevich. ZH explains the project on Hungerford bridge, where her Tectonic sits in the middle in 3D, with shadow. She mentions an aerial view. At another time she explains that she started with axonometric perspectives, which are based upon 45 degree angles, essentially box-like where one can look down into the architectural space, often used by interior designers. Then she said that she moved away from this looking at more oblique views, in fact any view that could have a strange twist on how an architectural object is seen. While she was at OMA she had obtained the jocular epithet of something like queen of 89 degrees. This was because usual degrees in buildings are at 90 degrees, forming orthogonal bases. The 89 degrees shows the beginning of searching for anything other than the usual, how to see into the reality of architectural space in a non-conformal way. Returning to her Tectonic project she mentions both plan view and the other views flying around. This is her continuing a new beginning of looking at perspective, an extension of cubism, which looked at reality from different aspects all in the one picture plane, in 2D, trying to achieve the impossible of seeing all round an object in one drawing or painting. This is the terrain of the theory, the ToT. Then in architecture she was to create multiple such possibilities, the first being the Peak competition entry for the Hong Kong sports project, which she won, yet was not built, which then miraculously, after much scepticism, finally, became reality in a plethora of subsequent projects to the amazement of viewers, visitors and inhabitants. Some of these buildings are shown in the videos (as footnote 3): the Serpentine Gallery extension, where she left the existing historical building intact, a ploy she invariably adopted where classical buildings were to be extended, situating her newness adjacently. Musically, the analogy is of a historical piece, baroque, or romantic, or classical, juxtaposed immediately with something modern of a completely different language, a quantum jump almost, without any explanatory bridging piece as occurs in pop music, a sudden transition from one mode of being in space to another, yet she understood and invariably they worked. Daniel Libeskind was to do similarly with the Jewish Museum in Berlin (Astbury, 2022). Another building in the video is a SOHO building in China. Another: the Aquatics Centre, London for the 2012 olympics. The final shot in Part I is an unusual one of the Heydar Aliyev in Azerbaijan. This is a culmination of developing ideas, from lines, triangles and simple curves, to swirling shapes, complex curviform lines, and like the apotheosis of Malevich, pure white. It also used tessellated small scale-like material pieces, demonstrating her adoption of new technology, to obtain the long sweeping curves, the structural elements integrated, as for some time in her projects such as the Phaeno, into walls and enclosing elements to create the unobstructed supranormal exterior and astounding interior vistas presenting bewildering planes, levels and staircases. It is a bold statement in the middle of the city.

Malevich was interested in space, space travel as in H. G. Wells and Jules Verne and ZH sees in his work much about 'worlds', a 'galaxy', a 'universe', at different 'scales', inferring 'buildings', 'moving objects in space', 'a wall, 'a desk' 'a chair'. This instant extrapolation to outer space finds its way into both electronic pieces, *The Life ZH* and *Space Machine* depicting ZH and her world.

ZH saw that Malevich and his entourage were inventing a new language of architecture which they could not build in reality, in the *Arkhitektons*, like her for the first few years, until she broke through the glass ceiling. Also, she saw in his early suprematist works, apart from the abstract building blocks, lines, colours and shapes, a floating quality, which must be the antecedent to her idea of anti-gravity, so evident in her early work.

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<sup>&</sup>lt;sup>3</sup> Here: https://www.youtube.com/watch?v=yye33DucQvw and https://www.youtube.com/watch?v=Lg1b\_n9IKUo.

(Encyclopaedia Britannica, 1998; Chlenova, 2019; Cordray, 2022; Drutt, 2003; Fabrizi, 2015; Razian, 2014; Red Star Over Russia, 2017; The Art Story, 2022a&b; Tupitsyn and Kiaer, 2009; Wolfe, 2015).

# Discussion upon Suprematism in ZH's art and architecture and in musical realisation

In terms of bullet points that can be extricated from the suprematism synthesis:

- Lines, circles, arcs, squares, blocks, all supersede figurative art
- Superposition becomes possible (as ZH)
- Abstraction is the logical outcome (Malevich and all the others to varying extents)
- Spirituality (certainly as regards Malevich and for many if not all)
- Colours leading to monochrome (analogy for ZH)
- Architecture of the Russians, Malevich, Tatlin—true modernism begins (ZH)
- The colour black is the death of everything, the beginning of modernity (Malevich)
- The colour white is the pathway to infinity (Malevich)
- Emotion varies according to the proponents and is generally present
- Philosophically objects have different functionality (Wolfe, 2015).

#### Ross Wolfe:

Extending upon the last point, Wolfe (2015) analyses suprematism as being one of several schools, such as cubism [French], with which he is mainly concerned (this author concurs) and futurism [Italian, Marinetti, 2009—misogynistic, violent, breaking with past], [conjoined as Cubo-Futurism], all as 'non-objective', starting off as 'figurative' art concerned with a 'model' or 'object' (or 'subject') existing "as such", that is 'as is' (author's paraphrase, also, square brackets indicating author's interjections), where this provides a 'means of communication' for the artist', 'unified by the tone passing through'. This last point can be better understood in terms of the theory (ToT), where all things are related; also, ZH, where the 'tone passing through' could be analogous to her preoccupation with through access. This can be seen at both a local and all-encompassing level (See later section on ToT). He ascribes the concepts of containment as being of [Weltanschauung] (worldview) or [Weltenfänger] (world reception, as Collins online dictionary), where both are connected, the individual artist's viewpoint, projected outwardly to the world. He concentrates upon the individual artist. He then states that the [Weltenfänger] 'disintegrates into cubism with the 'artistic deformation of phenomena'. At this stage he says the 'object' is not considered "as such" as only to do with "artistic skill", existing 'only as a sum of unorganised painterly elements' and 'sensation in a phenomenal world'. The object at this point is [totally eclipsed] and exists only as 'pure painterly [Weltenfänger]' and as 'revelation of artistic [Weltenfänger], 'also' in 'a whole series of the dynamic, static, magnetic, and other elements which exist in nature.'. These latter could be described as contingent properties of existence for artists to expound. These, then could be elements of music to be used as 'painting' ZH in sound, although for ZH, an important aspect is the non-static, the kinetic in architecture, within elements, within buildings, buildings within cities. Where there are obvious correlates with music, the term' magnetic' is taken to mean as related to scientific gravitational attraction, also an esoteric reading of conjunctions of cubist elements. Both of these meanings could, again, be understood through a full application of the theory (ToT). Wolfe elicits a

range of concepts to denote objects such as 'table, house, motor, wedding, marriage' as functional and non-artistic, which need stripping of 'ideologies and the material side of life'. This then leads to a problem, or paradox, or simply a duality, where by developing the material exploration with real materials, forming at the basic level of figuration, everything, the faktura, alluded to earlier (and incidentally related to a subsequent fascination with new materialism, as of Jane Bennett (2010), Estelle Barrett and Barbara Bolt (2012) and Petra Lange-Berndt (2015), looking into artistic properties of materials beyond the obvious and scientific). Wolfe sees that by emptying artists' 'objects', or subjects, of functionality, where sensation rules, he has to square this with his assertion that 'every object is abstract and demands concrete artistic definition in a work of art' for it to work. He then subdivides this state of cubism into 'spatial' and 'easel painting'. This is where the material comes back into the equation. All materials are part of the 'artist's palette'. For ZH this could be concrete, steel, glass, ceramics and modern plastics. This leads to an exploration of the interrelation of materials. This then becomes 'collage', which could provide substance for film making (Pomerance and Palmer, 2015) and music making too. It becomes another string to the bow or part of the armoury from which to draw for composing and depicting ZH. Combining 'collage' with 'space' (where space and movement through space are drawn from Futurism) allows all the materials to be united 'in one manifestation'. Space Machine is seen as a grand such combination of many elements. The duality is the concrete materiality, as it were, disavowed, yet existing side by side with the necessary 'forming agent' element. When this material element is taken further to have a 3D construction, this leads to Constructivism and the use of technology. For ZH this is a starting point which rapidly leads to deconstructivism, fragmentation, anti-gravity, fluidity, organicism, topological experimentation, and finally parametricism (Amatalraof et al, 2016), all of which are subjects for musical transformation or translation. Amatalraof et al outline the structuralist element in architectural deconstruction as derived from Jacques Derrida, a text based analysis where opposites are posited such as space and absence. In Wolke's view, without some degree of Constructivism it would be impossible to define the elements of materialism for 'each type of artistic form'. In a crude sense, at its most basic level, the stuff of construction is material for manipulating for musical evocations in regard to ZH. In a philosophical sense he, Wolfe, in his description, destroys 'form' then brings it back in as a necessary component yet different to traditional conception. This is analogous to the modernist debate at large and an ongoing internal debate within the musical exposition here. Summarising, this section on Wolfe's notion of Suprematism, the artistic world of perception and the functional world of construction are combined. Also, there is a merging of emotion, and abstraction and objectivity as claimed earlier in regard to Malevich, his removed aerial view combined with his intense feelings. So, the nonobjective, which in other words, is the subjective, is combined with the objective. Perhaps this should be renamed as non-objective-objective. Wolfe claims that in the

Perhaps this should be renamed as non-objective-objective. Wolfe claims that in the mode as analysed, 'form' "as such" and "as a reflection of artistic perception" are not discussed, thus leaving the way open for 'abstract Constructivism'. Again, this makes sense within the framework of the theory (ToT). Certainly, however it is looked at within the context of this discussion, abstraction is a mechanism open for use in formulating architectural 'objects' as artistically rendered as music and for ZH this is the prime medium within which to think and create. She professed that she is not interested in plumbing, although once projects were won she readily collaborated, interacted and learnt from consultants, engineers and such like. From her various talks

and her vivid drawings, it can be seen that her mind works with abstraction as a starting point, in fact it seems like a melding of mathematics, artistry and ontological considerations as perhaps scientists and mathematicians consider when describing space, contortions, mobius strips, convolutions, transforms, vectors, scalars and dimensions.

This all illuminates the difficulties and possibilities in exposing the many-sided facets of ZH and her music within a context of her philosophy and that of the composer-author in realising musical expositions. Suprematism can help by (a) utilising whatever its form is in musical construction or constructivism, (b) colouring the music evoking ZH with one of her favourite and certainly initial prime influences, and (c) of itself be represented as an object. The various shadings of Suprematism can add nuance and chiaroscuro.

## Classification of trends and styles of ZH to epitomise in music

#### Culled from the foregoing:

#### Trends and Styles:

- Deconstruction
  - Fragmentation
  - Anti-gravity
  - Exterior/interior, space/absence, light/dark, contrasting material textures (Derridean structuralism, Amatalraof et al, 2015)
  - Suprematism including Cubism, lines, arcs, circles, abstraction, emotionalism, blocks, triangular shapes, colour, monochrome
  - Modern form, new technology
  - Zig-zag shapes
  - Layers
  - Superposition
  - Programme of the city incorporated into buildings
  - Kineticism
  - Overthrow of existing rules
- Fluidity. Flowing lines, curves, arcs, circles, compound curves, squiggles
- Organicism. Incorporation of technology and integrated approach
- Topography. In various ways interacting with the ground, conventionally and innovatively abstractly for design inspiration
- Nature (ZH averred not to like nature per se as gratuitous 'shrubs' and only
  occasionally incorporated green areas into her schemes, yet in a theoretical way
  derived great inspiration from 'nature' in a topological way)
- Parametricism. From initial hand-drawn sketches and paintings working up via computer experimentations

# Drawing together conclusions about ZH's ideas and styles as material for musical composition

As Malevich and other artists have started off including ZH as an artist and architectural designer, the first tools are simply sketches, then lines, then angular relationships, then curves

of a sort, arcs, then increasingly more extended curvaceous forms, leading ultimately to compound curves and the squiggles that Schumacher described (2017).

Lines dominate in the preliminary pieces, ZH lines perspectives~ and ~distortions, also to a degree in XYZ. These will be analysed in more detail during their respective chapters. Literal zig-zag sounds appear at the start of ZH The Life. In the same piece mimetic evocation of Kazimir Malevich occurs. Again, this will be elaborated in the appropriate dedicated chapter. Deconstruction appears in many forms, for instance, in hesitations and filmic jump cuts in Space Machine. Also, in this piece is a homage to overthrowing existing rules, in several ways, with dysphasic timing and distortion, for example. The city is directly referenced in this piece too. There is generally much kineticism, movement, especially in Space Machine. This provides a flavour of the sort of ideas which become embedded in the musical pieces about ZH. The styles of fluidity, organicism, topography, nature to the extent that she used and incorporated it and everything to do with computerisation in music and parametricism in architecture will emerge.

The case having been made, interwoven will be actual and referential material about ZH as a person, her ideas and abstraction of her architectural ideas which are quite theory based, in fact abstract in themselves, hence suiting abstract musical treatment.

Her sense of humour if not sometimes verging on the absurd show in  $XYZ^4$ .

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<sup>&</sup>lt;sup>4</sup> XYZ is not included in the final version of the thesis because it has not been recorded and the criteria for inclusion in the final version is simply whether compositions are either electronic, in which case they are autonomous as from electronic generative material, or, have been recorded from a live session. For any who wish to have an idea of what is intended in *XYZ* the score is shown in the following Appendix.

#### Appendix

# XxYxZ

A set of seven miniatures which can be played independently, in groups and in any order although it is scored (e.g. *pizzicato* and *arco* which if played in a different order may need editing, also bar numbering) and intended to be played in the order as shown.

| For five instruments and optional electronic set-up (computer keyboard, synthesizer and accessorie  |
|---|
| Bassoon   |
| Bass Clarinet   |
| Double Bass   |
| Piano   |
| Percussion (side and or snare drum and in miniature VII where improvisation is possible any set of percussion instruments)  |
| Electronic set-up (optional)  |
| I: An evocation of space as in Cornelia Parker's Cold Dark Matter: An Exploded View (1991) or matter in architectural objects with a nodding reference to Anton Webern. |
| II. Atonal interlude.   |
| III. Sit-com sketch snatch.   |
| IV. Hurry to the station Charlie Chaplin (Scherzo snatch).  |
| V. Repetiteurism à la Modest Mussorgsky.  |
| VI. A parlay of instruments in the manner of viols and piano with electronic sounds.  |
| VII. Repetition ad collapsicum.   |
|   |
|   |
| By: Grant Gover   |
| Duration: 3:49 minutes  |
| Today's Date: 20.11.2019  |

### XxYxZ

Notes to players in order of miniature numbers in Roman numerals:

- I. The aim is to show the 'woodiness' of the wind instruments and to let the double bass resonate. The piano is minimalistic and where plucking inside the piano (a John Cage or Mathias Spahlinger touch) is shown this could be substituted by a 'crunch' chord played on the piano keys as shown, but plucking inside the piano is preferred. A second player could do this. The drumming is subtle.
- II. Is self explanatory. The rubbing on the drum should create a nice soft abrasive sound.
  It is intended that the rubbing motion should be circular, not too fast, in time with the beat.
- III. Slurred notes are shown. Otherwise notes are separated, detached. This is the same throughout. The quasi premuto for the cello means half digging in the bow, not fully and quasi here means half, not in the manner of.
- IV. Dashed slurs are to show the phrase shape but not to be joined as in one bow legato. The drummer can have a free hand to provide a soft classic jazz club type riff.
- V. The pianist has it all here in octaves and can shape and use dynamics to assist as felt necessary at the time. It can be quite loud as shown or more sotto voce. The ending to this section consists of rolling detached notes like a murmur.
- VI. Provides a gentle Renaissance type sound where the notes are let to play gently contrasting with the other more modern idioms of before. The introduction of electronic sounds can undermine this feeling and create tension. However, it is hoped that the sounds can embellish rather than subvert, merely providing a modern touch here and there. This is a matter of balance and taste. Wishing for a fresh improvisatory feel here the choice of actual sound is left to the operator of the electronic equipment. The piano can slightly let rip in bars 56 & 57 with a Baroque Romantic feel.
- VII. Whilst this section could be played on its own it is actually a continuation of VI but as a denouement. It is also intended to sort of self destruct in that the gradual ad hoc changes to notes should introduce an element of chaos and things breaking up. This depends on what changes are made. It might sound pretty consonant to the end. In this way an aleatoric element is intended. Where the choice is left to players whether to go for an overall crescendo or decrescendo it would work either way. A simple solution would be to opt for descrescendo and to let the piece fall away to nothingness. The number of repeats is left to players' preference, again providing another indeterministic element. Also, it is admitted that involvement of players is sought for their creative input, a collaboration. If players feel that they want to continue after the last repeat then that would be encouraged, but if the playing to al niente is chosen this would obviate carrying on. The option is provided for the electronic music to continue during this last section or the drums can come back in with any improvisation including any other percussive instrument or both could play together, drums and electronic sounds. It is envisaged that drums and electronic music do not play for this last section, but in the spirit of invention and indeterminism then if players choose to carry on this would be welcomed.





XxYxZ 5







Perc.

To record riffs and play back as loops and apply effects electronically live



XxYxZ 9







XxYxZ II

