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Digital Technology Can Aid
in Bringing Music Back as a Part of Life

Once upon a time music technology was first envisioned by musicians of contemporary electronic music (E-Musik), designed and constructed by developers and restricted to small markets. With the first analog synthesizers, the developers, including Robert Moog and Donald Buchla, saw a means by which hardware could be produced for both contemporary musicians (E-Musiker) and those within the large worlds of popular music (U-Musik). Prices have dropped and products have become more and more affordable throughout the years. Today most – not all by any means – equipment produced, especially since the abbreviation MIDI entered our musical vocabulary, is commercially developed for the mass market in the first instance and is only of use to those in contemporary music who can accept what they offer (i. e., their specific often note-based restrictions). Perhaps digital recording and the sampler illustrate the most important developments currently useful to both markets.

In any event, today's digital musician has an enormous choice of instruments, sequencers, notation programs, sound modifiers and recording equipment from which to choose. Computer music as we know it is about 35 years young. Virtually every musician world-wide deals with electricity in some form or fashion regarding music. With all this in mind, it is perhaps a good moment to assess where we are and look into potential new musical roles for digital technology in the future. What I mean by »where we are« is: how music, plugged in or not, fits into today's and might fit into tomorrow's world.

The hypothesis of this article is: In the early 21st century, music will shift from primarily being a consumer product to its experiencing an increase in terms of performative activity. That is, music-making should become more central to our (read: anyone's) daily lives. Digital technology, combined with various developments in all forms of contemporary musics, can help facilitate more people's involvement and therefore appreciation of these musics.

In 1994 I hosted a conference at University College Bretton Hall in England entitled »Leaving the Twentieth Century: Ideas and Visions of New Musics«. The paper I wrote for this conference (Landy 1995 – this volume is also the conference's Proceedings) was an idealist paper which used a number of ideas I put forth as its framework. It might be seen to be a manifesto looking for a movement. I plan to return here both to its chronological approach and the ideas framework for a second time, recycling those key views which are relevant to this year's KlangArt theme.

Let's look back before looking forward

Our tale may begin around 1960 for two reasons. The computer was entering the world as a compositional tool and instrument (milestones include Hiller's *Illiac Suite*

composed in 1951 as well as Mathews' and others' early sound synthesis ca. 1960). Furthermore, the western world entered an exciting idealist age culminating in various alternative movements around 1968; and Woodstock took place in 1969. The economy was fairly healthy; there was an atmosphere of experimentation including those in music ranging from Cage and followers to the more technological including Xenakis.

In the 1970s, on the other hand, the economy swung the other way. Many Arts Councils suddenly saw their budgets drop significantly. Several artists composed ›safe‹ music.

Idea 1) *It is believed that the steps towards conservatism in the seventies were taken due primarily to a changing economic climate (i. e., there was little money for risk taking).* Oddly enough, with the little there was to give, it seems that large investments were allocated to a few of those ›safe‹ projects instead of that little money being spread around a diversity of proposals, be it more thinly.

Idea 2) *It seems that hero envy increased in the seventies.* This implies big names becoming more established in a world filled with record-breaking, mainly unknown, numbers of composers, young and old. Stockhausen *Formel*-ised, Berio put water in his experimental wine and explained to critics that he wanted to be better appreciated (as Stravinsky did around 1919), and so on. Meanwhile in the somewhat less well-funded 1970s, the civilised world entered what Tom Wolfe has called the ›Me Decade‹, pushing individualism at the cost of anything to the limit. This led to the fairly poorly funded ›No Nonsense 80s‹, a time when the orange had been squeezed and squeezed again, where we all thrived on not sharing that last drop. How little has changed in the first half of our current decade. Yet which ideas are being shared in today's contemporary music? Do we all need to create our own separate musical languages?

Idea 3) *There is an overabundance of musical languages today.* This is the result of individualism at all costs, leading to a contemporary music landscape where listeners are treated to ›multi-lingual‹ concerts, i. e., events where it is easy not to understand what is happening. Must music thrive on this lack of understanding?

Given the following three ideas, we are currently, unfortunately, at a relative weak point of history, a point where there is clearly room for improvement.

Idea 4) *Most of today's contemporary music is completely marginalised in society.*

Idea 5) *Our culture's appreciation of the art music of dead composers far exceeds that of living ones.* With all respect, this is quite bizarre.

Idea 6) *Given the success of Britain's Classic FM and other nations' equivalent radio stations, art music has been ›promoted‹ to the level of furniture music, easy listening (or not listened to music) for the masses, digestible five minute titbits with advertisements providing a change of pace.*

These thoughts have been formulated based on the fact that we are suffering through a third meagre decade: meagre in the sense of support, but more importantly in terms of a dynamic towards discovery in sound organisation. Do note, economic trends are currently pointing upwards. This may lead towards a surge similar to the 1910s – early 1920s and the 1950s – 1960s. What may this mean in terms of music's development? Before looking into this and given the general context as described above, let's return to the subject of digital music and see how it fits into the picture we are portraying.

Surprisingly, the picture is perhaps not as bad as the more general musical one. It is clear that the marginalisation of electroacoustic music is as acute as contemporary music in general (with the exception of minimal music, electroacoustic or not, which – for better or worse – only befits the name ›contemporary‹ due to its age); nevertheless, our technological society is obsessive in terms of technological development. A relatively stagnant atmosphere in terms of contemporary music appreciation has by no means stood in the way of digital music technology's rapidly changing products. Allow me to state the obvious: the quantum leap between yesteryear's mainframes and enormous waiting times to today's extremely fast, if not real-time equipment and related software is astonishing. Equally fascinating is the fact that there are ›stayers‹, e. g., the often-used program C-Sound and equivalents (previously known as Music 4 and the like in the 1960s and 70s). In other words, we find today ›old‹ approaches, such as musique concrète techniques, additive and FM synthesis, which have found a place in the spectrum of means by which one creates and manipulates sounds. This is quite important as many technological forms of ›progress‹ imply learning new instruments (almost) from scratch instead of allowing users to become more virtuosic on old ones. Apparently, this staying power allows time to gain virtuosity. In any event, the fact that the old unaffordable studio at work has now become for many an affordable home studio is perhaps the best news of all.

Still, one must not become too excited by all these developments, for, as said, the music is still marginal. Few works have been able to creep into whatever mainstream contemporary music seems to offer. An old adage of mine seems relevant here, namely:

Idea 7) *music Technology seems to attract more attention than Music technology.* Perhaps this is in need of a rethink.

Before we look into the crystal ball of the future, we must honour what was promised in the introduction and briefly summarise how music fits into today's world. Through the myriad of possibilities of approaching this enormous question, I choose one which will prove pertinent to the remainder of my arguments, namely:

Idea 8) *The twentieth century has seen the most radical decline of active music-making – not necessarily passive music-taking – of any period of world music history.* Many cultures have watched a majority, if not all of their folk music traditions disappear in the last hundred years. The surge of popular musics has possibly replaced a good deal of this. Nevertheless, many, especially young potential musicians hesitate to make music after constantly being bombarded with ›perfect‹ CD recordings on a daily basis. They become afraid to make music as they might not be ›good enough‹. This is particularly true in any area of art music as one gets the feeling that the highest form of virtuosity (read: musicians *never* make mistakes) is necessary to enjoy the music performance experience. However, music remains a part of daily life in today's world; of course its position has been largely redefined.

Idea 9) *Music is currently primarily a consumer product, usually based on fashion.*

These two ideas summarise the briefest manner in which I can describe how music fits into today's society. Let's leave this, knowing that generalisations have been made and that there are important exceptions, and return to it later. My goal here is to suggest possible changes, not to rejoice in today's exceptions.

An attempt to look forward

Now we can look into a scenario for the future. Where might one go from here?

Idea 10) *The technological twenty-first century is going to see an end to most forms of toil.* Herbert Marcuse (1966) sees the end of toil as symbolising the end of struggle, which, in terms of time, is primarily dependent upon the fluctuations of that economic vector's pointing, going up or coming down. The effective use of the free time that a toilless society would provide would be reflected in the quality of culture, a central notion to any idealist view of musics and their cultural contexts in the coming decades.

Introduce a qualitative change in the technological continuity: namely, production toward the satisfaction of freely developing human needs. (Marcuse: 23)

... and isn't that >up< a bit overdue? Are we in for neo-post and post-post movements or might the ball roll forward in the coming years, i. e., similar to the two adventurous periods mentioned above? Isn't it about time for the third revolution in a century? To realise this:

Idea 11) *Societies' interest in things contemporary must increase.* If a country's football coach or major figure skater has a hangover, the entire country knows about it the following day at the latest. This fact is as ridiculous as today's non-popular musician's obscurity. However, looking at how things are developing in the theatre, dance, film and literature fields, there is reason for hope. If so:

Idea 12) *One should be wondering more about tomorrow's new musics.* In other words, what kinds of new can we expect? Also, why are we ignoring this question and swimming in our status quo? Why do most music (higher education) courses, radio and television programmes and music conferences skate around this fundamental question? Anyway, whichever way one goes, the word >discovery< just might play a role here. On the other hand:

Idea 13) *Tomorrow's composer need not expect to be added to the list of Wagners and Stockhausens and other Helden of music history, not because she or he is inferior, but instead due to tomorrow's world's not needing mega-composers.* I realise many will find this idea difficult to digest in the age of Madonna and Michael Jackson. But today's consumer fashion is hindering music's dynamicism and its diversity. We will return to this shortly with respect to tomorrow's communities. Furthermore:

Idea 14) (Failed, I truly hope): *Musics which are virtually impossible to understand will see their demise in terms of appreciation (sic!).* There was a time when operas were watched (or not) because one was supposed to be there, where few understood the libretto. Today there exist works too complex to permit the listener to grab on to anything but the complexity itself. Music of confusion is due for a decline of interest. It would be preferable to have user-friendliness (i. e., sharing) reign, which of course does not have to mean that a work must be friendly to the user.

Idea 15): *After thesis (600 years of European music history) and antithesis (the two periods of revolution in music of the last hundred years), the time for Hegelian synthesis is now due. This should characterise tomorrow's new music.* Synthesis is used here in terms of marrying the old to the new as well as in terms of fusions of currently separate styles of any genre of music, and finally and perhaps most importantly in terms of merging various practices within the performing arts. Quite frankly, many forms of contemporary music independently exist as separate >columns< supporting a small

building called >Contemporary Music<, which itself is but a >column< of a larger building called >Music<, which in turn is but a >column< of a building called >Today's Time-based Arts<. In the age of the >image culture<, this seems a bit counter-productive. Clearly there is a diversity of interest groups of whatever size within the realms contemporary musics. These need to be nurtured when common interest groups share a common approach. As musics fuse as is clearly the case in most minimal music and a number of new approaches to music theatre, interest groups have a chance to merge as well. This is in stark contrast to the >each to his or her own unique personal language< syndrome described previously. Therefore:

Idea 16) *There will be a great deal of space for individual creativity in tomorrow's music as long as the huge diversity of >languages< is brought back into some coherency.* This sounds more conservative than is meant. The idea pertains to some people's creating compositional approaches and selling them as being at least as important as the end product which has rarely aided music's moving forward. (Perhaps the analogy algorithmic Music and not just Algorithmic music is of relevance here. Wishart describes my view as follows: >Compositional virtue does not lie in the determinism [or even descriptibility] of the compositional method, but in the control of the perceived results and their perceptual connectedness<. (Wishart: 80) Conversely, future musics should be much more >why< orientated. When music has its dramaturgy explained, it is expected that the breadth of music in turn will become more coherent. This might just offer the new listener something to hold on to.

Idea 17): *For the above six points to take place, educating the young in terms of the discovery of musics available today will have to be greatly modernised.* The earlier one starts, the better. This is self-evident. As will be made clear below, digital technology can aid in redirecting and modernising music education. Furthermore:

Idea 18): *The concept of >communities< in the sense of groups with similar interests however large or small-scale will take on a new role as our technology will allow much greater contact of community members.* Just as in traditional cultures, music for and in the community will become a household word. A community may be local or spread out nationally or even internationally. A community may only be accessible by way of the Internet. Some will embrace existent values; more progressive ones will question, that is react against established values. As a consequence:

Idea 19): *Participation will return to music making. It will no longer be music equals tell people what to do; it will be music made through a collective evaluative process of devising.* This process is known as the workshop approach. As contemporary musics are increasingly made with people and not at them, the notions of sharing and communicating will increase as well as the sense of community. I realise that the *Einzelgänger* of electroacoustic music, those people who prefer to work independently in studios creating tape works will not mind being offered exceptional status here.

Idea 20): *In the future workshop approaches to music will again be the norm, not the exception. This is already true as far as a good deal of popular music and jazz is concerned, but it will also take precedence in tomorrow's >serious< music. The workshop approach will be applied to music technological development as well.* Certainly hierarchies will be broken down in the future, anti-hierarchical thinking being a remnant of the idealism of the sixties. In principle, the workshop approach to music recognises every person's individual talents and technological needs. This represents a

true, as opposed to pie-in-the-sky, return to participation and community. In this way self-serving artists' ghettos and the 'more fun to play than to hear' syndrome of a good deal of contemporary music will become past tense as workshop participants will have already offered feedback before the birth of a work and continue to do so afterwards. One might call this a kind of quality control. Consequently new forms as well as revised, more mature, old forms of experimentalism will represent ways to bring some excitement and discovery back into music making alongside traditional performance practices.

Idea 21) (By the way, in a highly technological world): *Live music may not disappear as so many believe; instead it will take on a new role in the community and find a balance with high tech music dissemination.* Live music need not necessarily mean symphony orchestras and brass bands, but can also refer to that group of musicians and composers (ideally, they would be the same people) preparing workshop compositions for their community of listeners and similar communities in their own as well as in other geographical areas. But after our years' experience of playbacking, will we still know how to sing?

Idea 22) *The word 'quantity' has become associated with representing products for the masses in the latter half of the twentieth century. Tomorrow it will also represent choice.*

Idea 23) *Although mass culture is most likely here to stay, it may become less massive as the media offer the consumer more choice. As the price of providing that choice drops, those involved in producing culture will be free to spend more energy on the quality of what they offer as this will attract a targeted community of interested people.* In a dog-eat-dog media world, money and listeners/viewers count. Quantity must dominate quality; Marcuse's notion of 'unfreedom' through media manipulation reigns supreme. In a greater media network where fibre optic cables will provide the eyes and ears with more than they could ever want and where home technology will become increasingly sophisticated in terms of its applications, special interests will grow and quality will consequently become the common denominator. A higher quality of media content will walk hand in hand with a higher quality of life. Communities will become more diverse than they are currently; quality and quantity will find synergy.

Idea 24) *The word 'marginal' will be ready for the rubbish heap of history some day as each artist should slot into at least one community theoretically easily. This infers that we turn the word 'marginal' into 'acceptable'.*

Idea 25) *As a reaction to the growing reality of the 'Global Village', there will be a return to and a modernisation of a number of local values in order to retain international diversification before it's too late. The danger of the disappearance of the local is not to be underestimated.*

Idea 26) (Combining a number of the above ideas): *There will certainly always be room for music as entertainment, including the mass cultural versions (and why not?). However, with more firmly defined communities emerging, there will be different roles for music as an art form than is currently the case. This role change will reflect the move away from dead towards living culture. The concept of music as consumer product in the first instance must be shelved. Furthermore, there will be a renaissance of music-making and music-taking as a part of life.* The latter point is based on the

premise that most people will have much more free time. Music as part of one's daily life has been fundamental to most societies throughout history and is a serious candidate to be brought back a.s.a.p. This music-making can be private, collective or made in some formal connection. It will be promoted from what one does when there is nothing else to do or from the above-mentioned furniture music to ... an integral part of life where it duly belongs. As technology becomes more affordable, reliance on state or private funding will eventually diminish. Musicians of all tastes will have more freedom to develop what they please in their communities as opposed to feeling a sense of compromise in order to meet competitive funding criteria upon which they are dependent. Museum culture – music of past ages, including the late twentieth century – will coexist with the more vital contemporary cultures of the future. It will find a different balance than the current one of at least 95% broadcast time for deceased composers on art music stations and a market-based lobby highly influencing programmes on most popular music stations.

Idea 27) *Music as celebration will take on a range of new forms. It may still take place in a church or disco, at a rave or any other form of concert, in the community or even in the CD-ROMed and Internetted home or anywhere with tomorrow's walkman. Each community will be able to define its own celebration(s).* This is a traditional element of music that even the Muzak corporation cannot kill. Obviously tomorrow's form of the Internet will influence the 'being there' part of live music making.

Idea 28) *In terms of tomorrow's technology we can expect new developments where interactive feedback is possible and individual human taste is taken into account. This makes technology less impersonal and will broaden applications enormously.* Nicholas Negroponte of the MIT Media Lab speaks of the 'personalisation' of future technology, of smart technologies that interact more intuitively with the user than is currently the case. This idea illustrates why virtual reality is thriving in its current primitive forms as the user is back in the picture. Along these lines, electroacoustic algorithmic music is here to stay. Children manipulate their compositions and even choose their musical atmosphere in today's Nintendo computer games. And of course the algorithmic jukebox will also be with us soon enough. It will help a user avoid boredom from hearing a piece too often, by newly composing music for every mood. Furthermore tomorrow's performer will jam interactively with a personally programmed digital back-up band or, as said, on the tomorrow's Internet.

As children seem to have no difficulty in mastering those Nintendo games, one can see a variety of ways of creating music using the potential of music technology. They seem to be more spontaneous improvising sounds on instruments, many digital, that are 'here and now' than notes on traditional ones as the above-mentioned threshold tends to get in the way with respect to those traditional instruments. The more education can make people feel at home in terms of music-making, especially through the workshop approach (see Landy 1994, Chapter VI), the more the performers' sensitivity and awareness become, the more these people have the freedom to develop their own personal tastes. This can lead to a greater desire to discover, both in terms of performance as in terms of reception. Consequently our demand grows, our communities become better defined and grow accordingly, and a much more healthy mosaic of the new and old, exotic and local, improvised and interpreted, electro and acoustic will

emerge. This mosaic will represent tomorrow's contemporary musics, which if introduced to all (at a young age), will be available to all in the communities of their choice and by way of the media, reflecting many of the ideas introduced above.

These are but a few ideas of how we can fuse musical with technological, socio-cultural and economic developments in such a way that we might be able to put that word ›positive‹ back on the map. Surely it will be difficult breaking down the capitalist barriers that stand like the old Berlin Wall, but almost all the technology exists which is necessary to assist in the proposed changes. Isn't it about time that Marcuse's ›unfreedom‹ die a quiet death, where choice (i. e., quantity) and quality merge?

A few final words

Dead culture is dead, long live the deceased! If our societies can refocus attention on today's and tomorrow's art and recognise a good deal of contemporary work that has been thus far virtually ignored, words like ›coexistence‹ and ›better balance‹ will seem appropriate. In this way new performance practices will emerge which can embrace existent ones and, who knows, possibly use existent instruments as well. If we acknowledge the possibilities described above, become part of the democratic process of righting the wrongs (i. e., let more people dictate their own fashions – not the other way around), there will be more coherence in tomorrow's music and music appreciation. The role of information technology in this scenario is by no means to be underestimated. First of all, as said, a vast majority of today's music is plugged in in one way or another. Furthermore, the potential for creating new sounds and musics in new ways without that impossible perfection threshold standing in the non-professional musician's way, will grow as our digital music applications grow. This will coexist with unplugged music as there is no competition involved. Cage's emancipated world of music of organised sounds including notes will come. Time and technological development will take us there.

We will therefore continue along our current non-path unless we move forward, a need in a dynamic culture. This need necessitates experimentalism and development; it respects vision. There must be idealism and, more fundamentally, there must be ideas to move our cultures forward. They redefine themselves constantly at present through rapid acculturation and assimilation. It is incorporating the old with the new, synthesis, that helps us to evolve in this ever-changing world. Ideas are necessary for synthesis.

It is hoped that the reader has been provided with a few useful thoughts here. This writer will attempt to be among those idea-hunters (read: composer/musicians experimenting) in the future. In spite of the current 1970–1995 lull, experimentalism as a way of life (or however you want to call that particular drive to move forward, discover, try out ideas) is alive and well and here to stay as far as at least a few of us are concerned. The potential roles for digital technology in terms of this sense of dynamic, in terms of helping to mould music's future, is up to all of us to define.

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