

Worlds in Collision: Music and the Trauma of War

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TRANSCRIPT

Music and Trauma – Nigel Osborne

Good morning, ladies and gentlemen. My brief is to talk about music and trauma. I am very conscious that I am in a room of people who know far more about that than I do, from all sorts of points of view, so forgive me if I give a personal view of how I think that works. First of all, a little bit autobiographically, and then I will try and do something even more risky, I will try and talk a little science, so lots of dangerous ground for me today.

I first became involved in working with music and trauma, particularly in relation to children, totally by accident. In the early 90s, I became involved in a human rights campaign to try and stop genocide in Bosnia-Herzegovina. I could not watch my friends dying on television and also I knew the country well enough to know that the way it was being reported was inaccurate. It was not a civil war, it was a Ribbentrop-Molotov arrangement between Milošević and Tuđman to invade the country. There were no ancient ethnic hatreds, it was one ethnicity. There was no Muslim enclave in the centre of Europe – Bosnia's Muslims make most European Christian societies look illiberal and boring, so no, all of this was nonsense. So I decided to offer my services to try and help stop the war. That meant traveling to Sarajevo and I won't embarrass anyone in this room by saying how I got myself there, but I did, by fair means and foul, and I worked there a little bit directly with the Bosnian government. During that time, it became increasingly clear to me that we were failing at the political level. Maybe we could improve things at a later stage, but we were failing to stop the violence.

At the same time, as I walked around Sarajevo, I saw the situation of children. This was a medieval siege of a modern city. Shells landed at random, deliberately, to the extent that when people left their houses, they would say goodbye as if for the last time, that's not an exaggeration. It was a horrible situation and we never really got the full measure of it because most of the film ended up on the cutting room floor in our media. Then the food supply, which was technically to be supervised by the international community, was very poorly supervised. People had to get water from one or two Artesian wells, which meant risking the snipers and shells. Sarajevo is in a valley, and wherever you came to a crossroads where you were in sight of the mountains, we used to run at intervals; we would time it at random and run across. The situation for children was brutalising in every sense, I won't go into the more horrible details. So I said to my old Bosnian artist friends – I had known some of them for years and years – look, can we do something for the kids? There is no school or anything happening. Can we help them somehow? They said, we have been thinking about this for a long time, but look at us, we are walking skeletons, we would need to do this in collaboration. So we set about a modest collaboration to get some projects going for children. By that time, I had found my own legal way into the city; the Bosnian army had opened a drainage ditch underneath the airport and I got

permission to go through it. So I used to go over Mount Igman, then run like a bat out of hell from Butmir to the tunnel and then you would go through the tunnel and arrive in the city, so I had a way in and out. We worked with children in various activities, mostly creative: composing things, writing things, performing. I used to bring instruments in; I used to bring rucksacks full of percussion instruments. Walking over Igman I would play tunes to myself as I danced up and down with my rucksack!

So, we did lots of things, and it spread into quite a big operation. By the end, we even put on the first opera of the war during a ceasefire, with a load of children and the Sarajevo Philharmonic Orchestra. We were very proud of that. The President of Bosnia, Izetbegović, said that was a turning point in British-Bosnian relations. I am sure it was only a minor role we played but I am proud of the small role in improving relations in that way. Anyway, drawing on our projects, we were visited by what was left of the Ministry of Health and a doctor came along to one of our sessions, made a lot of notes, and came back and made a lot more notes and in the end he came in with his report and said, we'd like this as a therapeutic project. We had never used that word. I had only thought I was amusing and distracting the children. I had no specific therapeutic goals. But he said that we were therapeutic. So that kind of enabled us to start thinking about ourselves in a slightly different way, and indeed, we had seen massive inexplicable reactions in our children. There is a thing that happens if you make joyful music with a group of traumatised children, there is a wave of energy that hits you, which is almost palpable, almost physical. I don't know what it is, but it comes and hits you. We had been noticing all kinds of things and parents were telling us how much better their children were sleeping, and all this kind of stuff. So we had little anecdotal things happening.

I did develop the project further, and chose Mostar, the reason being that it's an area I knew well, and also the Washington peace agreement had just taken place, which meant that most hostilities had settled down, and schools were being re-opened. In fact, one of the achievements of the European Union, under Hans Koschnick, was getting those schools up and running pretty quickly. I went to the Ministry of Education for the eastern canton where most of the victims were, east Mostar, and I said, I know you have got no arts teachers in the schools, can I have your arts hours in school? I will deliver your national curriculum but I will deliver something else as well. So we began in a kind of general outreach.

I would like to give you a little bit of a flavour of that time, I will show you a bit of a film made by Australian television, this is just after the end of the war. By this time, I had gone into collaboration with a charity called War Child, who had been at that point baking bread in Mostar, and were headed towards trying to do something in music. Bread and music seemed to me to be a very good combination, so we bread-and-musicked our way through Mostar.

[Plays film.]

For Mostar, this summer has seen a return to the good times, a respite, however fragile and temporary, from a tragic and complicated war that's torn apart the young lives of the country's children. A festival called Happy Street, designed to bring a little normality back to the lives of the children of Mostar. Allen lived through the war. "During the war, for that four years, the people was like going crazy, they like

didn't care about if they are going to live or die. It was like, I don't know, it was like everybody is going crazy".

Now at the age of 14, he is a reporter, working for children's radio and TV programmes, sponsored by UNICEF, which wants to help children rebuild their lives. At Happy Street, Allen meets the festival's organiser, Nigel Osborne, a Scottish professor of music and professional optimist.

"Well, this is something that a group from War Child have put together".

Osborne is in Mostar for the charity War Child and his plans, including the building of an international music centre, depend on continuing political harmony. Without it, the future is uncertain.

"Yes, it is just beginning, we are beginning to develop the methods, and the idea is that it is a new music centre in Mostar, we will get an international centre to develop that. Not to patronise, to attempt to be curing Bosnians, it's not that, it's to use some of the negative experiences here for something positive for the future".

At the centre of Osborne's work are Bosnia's schools, like this one in Drežnica. None of these kids had ever seen a puppet show before. Drežnica, where they live, is isolated in the hills further up the Neretva valley from Mostar. War Child music teachers come up here weekly as part of the new post-war school curriculum. The puppets are a bit of a bonus. Nigel Osborne sees the programme as part of reconstructing young minds that war has scarred.

"I think an enormous amount of pain and suffering Drežnica had suffered from the Yugoslav army at the beginning of the war coming through and then when the incredibly unfortunate Croat war began, this place got hammered from the Croatian side, very, very heavily".

Though he is a distinguished composer and professor of music now, it's not hard to see that at one stage of his life, Nigel Osborne was a primary school teacher.

"We get the children to make up some words, and then we generate a rhythm, and then a melody. What was funny today was that they immediately made up their own melody spontaneously. It is the sort of activity that at this age you do in a group in preparation for later on, children sitting individually with an instrument and picking out notes to be able to construct a melody but by doing it in a group, you can show how easy it is, it's just a case of trying things out until you are satisfied".

It is all part of a network of projects threatened by the political breakdown in Mostar, a breakdown in which the certainties of the old are threatening the future of the young.

"The kids are extraordinary. Their maturity, the depth of their thinking. I mean, it seems to me to be up to us to find some way of helping them to direct that knowledge, energy and thought. I mean, it is something extraordinary about them. And of course that could go totally wrong, it's one of the situations in life where one has something extraordinary and either it can be turned to something strong, but if it's not, that

energy will go to hell and could shoot off in directions that could be quite damaging, so it's our job".

The drama of the children of Mostar and the outsiders like Nigel Osborne who want to help them is being played out against a ravaged backdrop. At different stages of the war, Serbs from the heights on one side and Croats from the hills on the other poured artillery fire down into this valley town. There was hand to hand fighting too, for months. The hardest being in the Muslim enclave in what is largely the Croat end of the city.

[Film ends.]

This was the rather general outreach that we did to all schools and kids' centres. We developed a team from local people: demobilised soldiers, young people out of the war, many who had had their educations interrupted by the war; we trained them to work with children in things they could do safely. The therapeutic methods we adopted were ones that were not therapy, they were therapeutic, and we adopted them so that the people we were training could implement them well; singing songs, composing, dancing, moving, all of these things we did. I would never again do it like that, it was too hard, but I'm glad we did it at least once.

Then we did build a music therapy centre, the Pavarotti Centre in Mostar, and some people in this room were absolutely key to that: the director of the City of London Festival, Ian Ritchie. Thank you, Ian. His vision and fantastic capacity to make things happen well got the centre going. People like Julie Sutton who will be with us later on, Lis Murphy who will also be here later, a whole list of people; there would be too long a list to credit them all here, forgive me for not mentioning everybody, but there were many people who worked very hard on this. We did therefore move towards being able to do proper focused clinical music therapy and then had a very, very important pyramid. At the top was clinical music therapy, at the bottom, a general outreach. We could refer both ways. That was the model, and as it worked, it worked well. So we were able to do that.

Then our methods went elsewhere, which I'll describe. We were invited to Kosovo, we have worked in Chechnya, a lot in Palestine, as you will see later, with child soldiers in East Africa. The methods spread. I must say quickly before we get on to some of the science behind this, as we have members of the Army here, I just wanted to thank – I wanted do this more formally tomorrow – but we had fantastic support from the Army, as aid workers. I did not envy the situation the Army had been put into. I thought that it behaved within that difficult situation with tremendous honour. We never lacked a guard for a convoy. We never lacked the means to build things, to move things. Everybody was fantastically on the ball. Whereas many of the military units of other countries, in Bosnia-Herzegovina, were engaging with the Mafia and paramilitaries, covertly or overtly, the British Army kept its nose completely clean with great dignity. Congratulations on that, I'm very proud of that. Thank you to the Army musicians. The Band of the Green Jackets worked with us and with the children in a place that was quite dangerous at that time, to do wonderful things with us. I will make a more formal thanks tomorrow. Nobody has told this story and there is a big vote of thanks going to individual soldiers who served in Bosnia-Herzegovina.

So moving on to the bit that is really dangerous for me, the science! I'm an amateur scientist. The origin of the word of course is "love". I do love science. I'm also not particularly competent at it. First of all we needed to reflect on what we had done. Practice went ahead of theory here very much so. We were achieving things and doing things that were clearly working but we didn't know why. We had a responsibility to find out why. The conventional diagnoses – I'm sure we will come across this many times today – was post-traumatic stress disorder, from the DSM-IV (the Diagnostic and Statistical Manual of Mental Disorders) from the American Psychiatric Association. There is now the DSM-V and we were working from IV. There are four diagnostic criteria: one is to have had a traumatising experience; the second is to have traumatising recall; the third is to have a kind of numbing or avoidance perhaps of emotional issues and people and contact; the seemingly paradoxical fourth one is hyperarousal, being always on alert. We obviously had no way of diagnosing what we were doing, but diagnoses came later. For example as a very important study from the Harvard School of Social Medicine, 1997, who did a longitudinal study of children, of the precise population we were working with and found 94% of the children satisfied these criteria for trauma.

I also regard it as a wider thing as well. This is where the humble musician just has to apologise for being grandiose. But there is a wider context of human experience that this belongs in and for the sake of musicians and practitioners I prefer to look at it in the traditional biopsychosocial model. But for music would I add, tremendously important, psychobiological, what is happening where the brain and body meet. Psychosocial, that is very obvious, where the mind and society meets. And the one everybody forgets about, biosocial, very important, where our biology is affected by social experiences. That is the model I work on theoretically. I will go through what we have found.

So, biological concerns: here is some work in north Uganda. This is the Kitgum and this is very recently, but fortunately a situation that has now improved considerably since we were working. This is the Lord's Resistance Army campaign, Joseph Kony, from the forest of the Congo in north Uganda. A terrible experience for north Ugandans, because on the one hand the LRA is a kind of liberation army, on the other hand, of course, it was a partner in massive brutalisation of the villages with the Ugandan People's Defence Forces. Child abductions, prostitution into soldiering, massive movements of populations. What you see here on the top is displaced children, we are having some fun with them. I'm working with musicians of the Ugandan Dance Academy there. This is an ex-child soldier, we are working with some painting and music there.

What about the biology? First of all, I'm very interested in the physiological symptoms. Having observed my children, I see these in their behaviour. We all know that trauma has an effect on heart rate. This is largely from research in the American military, but on the whole, 5-7 beats a minute faster the heart goes when you are traumatised chronically. Of course heart rate varies, we are talking about averages here. A varying heart rate is a healthy one, but one that gets stuck or permanently registers on average 6 or 7 beats a minute faster is a problem. Now, to put this very briefly, music is very interactive with the autonomic nervous system and with the heart. There is a mass of evidence suggesting that music can speed up and slow down your heart. And our hypothesis, which has yet to be disproven, is that for musical

exercises we can help in regulating the behaviour of the heart. You don't even have to move. If I had time we would demonstrate it right now. For children who are traumatised physically, it doesn't even depend on being able to move. It can be activating your motor cortex, or activating your autonomic nervous system, it is highly interactive, both sympathetic and parasympathetic. Music on the whole is parasympathetic, it can arouse and put tone into the sympathetic division but the overall long-term is usually parasympathetic.

We can exercise children's hearts; how do we do it? With music that changes tempo and feeling, fluid journeys in tempo and feeling for children. It is a prosthetic of our heart that human beings invented at their emergence as a species; so we should use the heart prosthetic music as we can. By the way, this is not all pie in the sky, this is meta-analysis, we can quote this over and over again, there is no question about it, these are replicated experiments peer reviewed over and over again. Breathing, this is very poorly reported in the literature on trauma, but anybody who has worked with children in the field knows about this effect in children. We know the reasons for this, it is to do with vagal pathways and anxiety and so on. With music we have a totally magic bullet for breathing. On the one hand the circuits and neurons in the medulla oblongata that we think control, and the feedback mechanisms with the walls of lungs and breathing are highly interactive with music. There is very strong research on this. When you are unconscious of breathing, not aware of your breathing speed, music will probably alter it to what tempo the music is. We can exercise in that way. But more important is this: when we are sitting here we are using 20-30% of the capacity of our lungs, when we are working hard 60-70% if we are lucky. But there is one activity that uses 100% of the lungs: singing, if you sing well, oboe playing too by the way, but singing. And so we do a lot of work on singing with children, we can help with control of breath. So for example, working with children in Bosnia, a typical song I would use goes like this:

[singing]

We can teach and encourage breath control and we've had some great results with this. This is a part of trauma research, which is in my mind underreported - breath, breathing - but it is very important and we have some nice results with music. We can't heal anything. We can heal nothing. We can help with the symptoms a little bit, that is what we can do. We can't heal it.

These regulation movement repertoires; anybody who has worked with children with trauma knows there are different sorts of repertoires. There is the sluggish repertoire, the head down, the avoidance, and then there is the full on ADHD repertoire. Only recently has the comorbidity of ADHD and PTSD been recognised in literature. Any practitioner knows it well. So what do we do? We help the children regulate themselves through music itself. Music has a very direct contact with our capacity to move. From the most primitive level, BAH, thank you for blinking - the acoustic startle response. Sudden sound will make us jump. But to much more sophisticated relationships as brain scanning has shown, activation of the premotor cortex, things of this kind where we have music having a strong relationship with movement. And we can use this for children, so what do we do?

With children who are hyperactive we do kick-arse djembe. We work with the highest kind of energy [makes drum noises] we really go for it, and believe me I haven't even begun! We bombard them with fabulous energy that they join in with. For the children who are withdrawn, we can start with the simplest of sounds: "ssssss". Lots of things we can do, every music therapist knows this. This regulation, the systems of stress and relaxation. Music is very, very interactive with, of course, all of the hormonal endocrine systems and neurotransmitter circuits.

In trauma there are many that are all disregulated, the one that is most talked about is the HPA - hypothalamic-pituitary-adrenal – axis. Cortisol basically, and there was a very interesting paradox here, in that when people are first traumatized, of course cortisol levels jump sky high, but what happens then is that they sink lower than they should. This is the paradox. This is really important to understand; it begins to get you inside the mind of a child or an adult who is traumatised, having an autonomic system on high alert, and failing the biochemical resources to support it in the balance of the body. These are synergetic, these systems - one can understand the feelings of a child in this situation. The theory is adrenal exhaustion, but it is far more likely to do with the glucocorticoid consistency of cortisol and the effect on the hippocampus, which is a regulatory organ. And the incapacity to regulate the HPA axis is the cause of this loss.

What can we do with music? Well, as it happens music is highly interactive with cortisol, so much so that we can show it up on saliva spectrograms, very interactive so we can exercise the system. We have yet to find the evidence to say we can permanently alter that relationship, but we are trying. I think that the evidence points towards some small effects. We can do something with the hormonal neurotransferal systems with all of them, music is highly interactive with dopamine, Robert Zatorre's research on that was announced at a previous Musical Brain conference, the convergence of using scanning and other FRMI simultaneously in order to get the fine positioning and the timing as the proof of music and release of dopamine, that might also explain its effectiveness in helping with Parkinson's disease as well. All of these things have a small mild effect.

Moving on - psychobiological and psychological concerns. Nablus, this is Balata Camp. I worked very closely with Colin Trevathan in Edinburgh who is a very close friend of Tony Wigram, some of his pupils are here, on the theory of community musicality. We are looking around the world seeing and examining the relationships between mothers and children and the sounds that they make to one another and finding that there is an interesting musical narrative logic in that. Finding it is the dialogues of the first stimulus of co-ordinated movement, that they are certainly the generators of some of the most profound empathy, that the sound signals also have their neural correlates in the brain. If we are making the separation cry "ahh", we are not only firing the separation cryoneuron to recognise it but we are also releasing a whole load of neurotransmitters to support our preparedness to act upon that signal.

So we work with that, with children, in this situation, and by that, a direct traumatising experience, we work a great deal with intimate empathetic communication in music. Music is the machine of human empathy. If I come and sing to you, you know I mean you no harm. If I sing to you, I open to a certain extent an information about me. "Ahh-ahh." I just confessed a huge amount more than I could

ever say with words, about who I am, what I feel. So we use that to transfer feeling, to share feeling, to communicate it, and to help with feeling.

Then finally, psychosocial, social and biosocial concerns. I have chosen something quite different to illustrate this. This is Khlong Loi in south Thailand, on the border with Myanmar, and this is where a part of Myanmar over the border that the British annexed, did a deal with the Thai King for ivory, but actually in the process trapped within Myanmar (Burma) a large Thai population, Thai speaking and Thai thinking and behaving. And over the last years there has been a seepage over the border of these young Thai people through the forests. There is a big problem for everybody, because the Thai government can't grant them rights, if they did, there would be a war, because everybody would march over, so they are drip feeding them rights, and what we are doing with this group is actually using music to help them get their message across. We are writing songs about their predicament, with them, and getting them broadcast on Thai radio, advertising who they are and what they think, and we are using music as an agent for social change through the things music can do, relaxation, joy, trust, individual creativity, self-expression, self-belief, self-respect, socialisation, social communication, collective creativity, social identity, reconciliation even, and certainly social reconstruction.

We have a big project at the moment in Srebrenica, based on social reconstruction through the creative arts. It is the only possibility. With the Mafia and the paramilitaries in charge, the only weapon is culture. And we are getting somewhere with that, great success. I have half of the young people in Srebrenica with me in a camp next week, investigating how we investigate the joy of culture, and how we transform a godforsaken town into a joyful one. That is what we want to do.

I rest my case on music and trauma, with apologies to the good scientists, with my amateur exposé, but I am happy to say that there is a great role for science here. I have to say, as a practitioner, I find that recent developments in neurophysiology and neuroscience have been tremendously helpful to me and my practice, not only in confirming things I always knew but needed a scientific confirmation of, but also in pointing to new things I might do, might work to ensure. So thank you very much, and I am looking forward to the rest of the day.