# System Theory And Choral Music

*by Aurelio Porfiri, composer, conductor, writer and educator*

In a world as connected as the one we are living in, it is not difficult to think in a connected way, rather than in tiny segments of knowledge. Knowledge is one, as affirmed by the internationally reknowned scholar and biologist Edward O. Wilson: *"I had experienced the Ionian Enchantment. That recently coined expression I borrow from the physicist and historian Gerald Holton. It means a belief in the unity of the sciences – a conviction, far deeper than a mere working proposition, that the world is orderly and can be explained by a small number of natural laws"* (Wilson, 1998, p. 4). I share this belief with the great biologist, and I am always the first one to recognize that, to be a good musician or a good choral director, you need to deepen your knowledge in many other cultural fields, where you may find unpredictable connections with you and your music making. Not only this, but I think that art and music indeed own a truth that is much higher than the truth of other disciplines, even scientific ones. I agree with Chesterton when, talking about poetry, he says that: *"The great error consists in supposing that poetry is an unnatural form of language. We should all like to speak poetry at the moment when we truly live, and if we do not speak, it is because we have an impediment in our speech. It is not song that is the narrow or artificial thing, it is conversation that is a broken and stammering attempt at song"* (Chesterton, 1905, p. 73). The conductor Stephen Layton, when asked about advice he give to a young conducting student, so affirms: *"It would probably be to study modern languages – don't study music in terms of a degree. Be a conductor and be a musician, but don't read music as a subject. Don't make that your complete thing, do something else. I read music – which I*

*thoroughly enjoyed – but if somebody got me doing German and Italian and speaking those fluently as a student that would have been fantastically helpful as a musician*" (Davis, 2015). I share the belief that in order to understand something, it is often good to look for other things; this is also a constant conviction in the tradition of scientific discoveries.

Having said that, I think one of the most promising ways of looking at choral music is by using some elements from system theory. System theory is a very complex concept, but using some features to make sense of things very dear to our hearts may be interesting and, somehow, revealing. The initiator of system theory is considered to be the biologist Ludwig von Bertalanffy (1901-1972): *"General systems theory is a series of related definitions, assumptions, and postulates about all levels of systems from atomic particles through atoms, molecules, crystals, viruses, cells, organs, individuals, small groups, societies, planets, solar systems, and galaxies"* (Miller, 1956). So a system is the way things or people organize themselves. It is the observation of complex phenomena as a whole. A choir is certainly a complex thing, made of people, interactions, languages, and much more. Very often, we look at these elements as separate segments, but this may be not a good idea according to the theory we are trying to apply: *"Systems theory is antireductionist; it asserts that no system can be adequately understood or totally explained once it has been broken down into its component parts"* (Zastrow, 2009, p. 49). So, to make sense of some phenomena, as for choral music, we should look at the bigger picture, rather than just simply looking for this or that element. There is no need to specify that this approach can not only be applied to choirs or orchestras, but also, looking at the bigger picture, to organizations that gather choirs or organize activities involving choirs, like competitions and the like. All in all, it is a new and fresh way to look at something we think we know very well.

The British conductor Stephen Layton

A choir is a small world. For this reason, every choir has to be understood in its own terms: *"The system, to a large extent, causes its own behavior"* (Meadows, 2009, p. 2). There is no choir outside of itself. What we call traditions are simply new systems' networks that, at the end, create a new system themselves. A tradition is a system, too. But first, we need to look at each individual choir as a system in itself: *"Once we see the relationship between structure and behavior, we can begin to understand how systems work, what makes them produce poor results, and how to shift them into better behavior patterns"* (Meadows, 2009, p. 1). Because we have said that systems often cause their own behavior, we need to put ourselves at the intersection of the different elements that shape what a choir is. Before being the people, the interactions, the languages, the feelings, the emotions, the psychological blocks and so on, we must try to analyze why our system, the choir, produces some result and not others. To give an example, is very utilitarian to think that intonation problems are just the outcome of specific faults, and can be solved by simply addressing the specific exercise. These problems, as others, are a sign of something to be addressed at the system level (intending the choir as a system, as I am repeating more and more). The Anglo-Saxon pragmatic approach may temporarily solve a specific issue but not address the problem in general. It is like having a runny nose and taking medicine to stop that specific symptom without considering that it may be a symptom of influenza or something bigger. So

this is one lesson we learn from system theory: problems have to be addressed in a connective way; once identified, the segment that has the issue (for example, intonation or poor expression) has to then be recomposed in the totality of the system: *"The behavior of a system cannot be known just by knowing the elements of which the system is made"* (Meadows, 2009, p. 8). This total connectivity is indeed peculiar to systems: "*Systems happen all at once. They are connected not just in one direction, but in many directions simultaneously. To discuss them properly, it is necessary somehow to use a language that shares some of the same properties as the phenomena under discussion*" (Meadows, 2009, p. 4).

A system needs three things to run correctly: elements, interconnections, and purpose. We know the elements of a choir to be the people, the musical parts, and all the technique connected with that. But even if seems easy to know about this, and many handbooks of choral music give us a lot of information about what you need to know, we do not frequently find people who stop to look at interconnections. Indeed, and this is also true for bigger systems like the ones I mentioned at the beginning, we should not forget the golden rule: what makes the choir what it is, is the way people are able to interact meaningfully with each other and the way they are able to produce meaning together (and not "for") with the conductor. Many books about choral music teach the conductor to produce different effect using a variety of methods, but this is something that betrays the deep nature of choral music, which is the ability to listen and give back together under the coordination of the conductor. The Israeli conductor Itay Talgam has indeed made the process of applying one discipline to others using conducting to be translated to business, military or other fields. Analyzing the style of several conductors, he was able to present different models of leadership relevant for businessmen, generals, and more in his book (Talgam, 2015). So, if you read Talgam's interesting and entertaining book, or you are able to see some of his video

presentations online, you will notice how the ability of the conductor to create these interconnections and to assure that the system is filled with energy is always being shared among the members guarantees the good state of the system itself.

But what is the purpose of doing this? Why does a system exist in the first place? *"An important function of almost every system is to ensure its own perpetuation"* (Meadows, 2009, p. 15). Now, is this not evident? A system wants to live. So, together with making music, the reasons of a choir-system existence have to be found in the willingness of the elements of the system (people) to find meaning in what they are doing freely (for most of the non-professional choirs) to justify their participation. The meaning is helped by the music but must not be the music itself; it can be for personal growth, to alleviate loneliness, a desire to socialize, and so on. I think that is important to keep in mind that the perpetuation of the system also means the perpetuation of its member's purposes, which are often existential. This has to be considered when talking about the bigger organizations – choral, musical, artistic – whose goals, often non-declared and hidden behind noble purposes, are the survival of the organization itself and the protection of those members that guarantee the purpose stated above (or similar purposes that have to do more with personal ambitions and the like). I think that when one looks at things with this particular point of view, one is able to see things – choirs, associations, foundations – in a better and more healthy perspective. I am emphasizing this because often these true purposes are not so straightforward: *"The least obvious part of the system, its function or purpose, is often the most crucial determinant of the system's behavior"* (Meadows, 2009, p. 16).

It would be interesting to continue this analysis following system theory and apply it to choral music. There are so many more things that can be said, but the space here is only to give a little introduction to the potential of this kind of

investigation to make us look at choirs not as a bunch of disconnected elements coming together through the demiurgic work of an all powerful conductor, but a complex system working at a much more subtle level, where different parts influence each other, and how one thing happening in one section can be solved in other sections of the choir (a quasi-quantitative appraisal of choral music). As I have mentioned before, being able to walk these paths will help good and willing conductors to see things in the right perspective in their own system as well as in bigger systems, and will give them the tools to manage the problem in a more honest and effective way.

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