

COMMENTARY

NON-ZERO SUMNESS IN PEDIATRIC RHEUMATOLOGY

My book club just finished discussing a fascinating book that may have some pertinence to pediatric rheumatology in 2004: *Nonzero: The Logic of Human Destiny* by Robert Wright (Pantheon, 2000). Wright sees a point, an arrow, and a direction to the biological universe and to human history. Henri Bergson thought that organic evolution is constantly driven forward by a mysterious “*élan vital*”, a vital force. Pierre Teilhard de Chardin favored human history moving towards point omega, “outside time and space”. Wright notes how both saw evolution creating forms of life of greater and greater complexity and social structures that have become also more impressively complex. In contrast, Wright uses game theory to explain his view of the direction of our world and our species, into a world of “zero-sum” and “non-zero-sum” games.

We are all familiar with zero-sum situations, win-lose. In most governance systems, zero-sum is the primary mechanism of electing officials and politicians. For elections of the presidency or for prime minister of a country, someone has to win, and someone has to lose. For elections and awards of the ACR, AAP, PRES, PANLAR, CARRA, EULAR, CPRS, APLAR, and other organizations, some win, others lose. In the Olympics, only one athlete can win the gold medal, others the silver or bronze. Most competitors win no medal and in effect, lose. For class president of a school class, someone has to win, someone lose.

Most of us are trained in that competitive mode of zero-sum, win-lose: wars, battles, class ranking in schools, lotteries, card-games, sports, politics, debate, contests, survival TV shows. It may be built into our genes and, to some extent, may be necessary for our survival. Watch our children play, compete, show sibling rivalry, and observe the zero-sum behavior. In other situations in nature and between people and organizations, there’s a pecking order that is more zero-sum. Who is more important? Who has more power or leadership skills?

So who cares? What does this have to do with pediatric rheumatology? Let me explain. Wright would suggest that human society and life on earth has advanced by “a kind of force-the non-zero dynamic”. Interactions are said to be non-zero when both parties benefit. Interactions can have both zero-sum and non-zero sum elements. A negotiated settlement between two parties can benefit both parties, but one may get a better-than-necessary price at the expense of the other person. Non-zero sum interactions may more likely have the effect of both parties prospering and working together again. But if the zero sum components are prominent, future interactions may not be likely.

Starting with primitive societies in the last 15,000 years, Wright maintains that humans have utilized non-zero-sumness to derive mostly positive sums of human development and that the area of non-zero-sumness increased over time. He describes such cooperation/collaboration in Native American hunter-gathers, Polynesian chiefdoms, Islamic commercial innovations, African kingdoms, Aztec justice, and amazing early Chinese technology. This non-zero-sumness progression has been advanced tremendously by the development of the printing press, the telegraph, aviation, and the internet. Wright suggests that it is the accumulation of these non-zero sumness games -- games upon game upon game - that has led to social and biological complexity and progress in humans. This non-zero sumness activity emphasizes non-competitive cooperation and collaboration within societies and organizations, and between societies and organizations.

Wright also sees the same non-zero sumness applying to biological evolution. Once life started, he suggests that it appeared to benefit organisms with identical DNA to act “altruistically” to each other, and eventually form multicellular organisms and later, support groups within kin groups. He suggests that biology can be viewed as information transfer and feedback, not unlike a financial system or an interaction that goes on over time between scientists and inventors via letters, manuscripts, and the internet.

With the arrival of air travel, then the internet and globalization, the world is suddenly much smaller. We, as pediatric rheumatologists, have an opportunity

to help our patients and develop our subspecialty locally, regionally, nationally, and internationally. I would suggest that it is our responsibility to help not only the kids with arthritis in our clinic but also the kids with arthritis in Bangladesh, Kenya, Pakistan, Samoa, Chile, Egypt, and all points distant from us. To accomplish this growth in pediatric rheumatology, I believe that it may require more of the non-zero sumness approach than the zero-sumness approach. Collaboration, cooperation, and a global perspective may need to prevail over competition, rivalry, jealousy, and the pecking order.

What's does this mean exactly? Spell it out. OK. I believe that it starts with a cooperative, equal relationship between our pediatric rheumatology leadership in councils and executive committees and in the general membership of our multiple organizations. The pediatric rheumatology leadership of ACR, the JPS (Japanese Pediatric Society), the BSR (British Society for Rheumatology), the AAP (American Academy of Pediatrics), CPS (Canadian Pediatric Society), SPR (Society for Pediatric Research), CARRA, EULAR, PRES, PRINTO, CPRA (Canadian Pediatric Rheumatology Association), ISR (Italian Society for Rheumatology), APLAR, PANLAR, parent organizations, and many other organizations should work to establish and maintain a level playing field of mutual respect and cooperation without a pecking order. Beliefs and behavior of elitism and superiority need to be minimized and rivalry between the organizations and individuals made unacceptable. We need to build each other up and verbally support each other. We need to follow these words of support with actions of support, cooperation, and collaboration. Each of our organizations has a niche, its own worth, and its place. Each has its own potential to benefit patients and our field in general.

Does that mean that I believe that there is some rivalry, competitiveness, elitism, and pecking order in our field? We are no different than other fields of medicine. I've observed that there are some zero-sum characteristics in our field. I personally have been competitive all my life. Ask my family. Have I interacted with peers in a zero-sum way? Absolutely. But I think that all of us can do better

in developing pediatric rheumatology if we embrace more non-zero-sumness-cooperation and collaboration.

Within organizations and countries, as well as internationally, we should avoid as much as possible personal rivalries and animosity, and minimize the competition between centers. We should also try to rid ourselves of attitudes focused on who is best, who has the best treatment approach or most impressive CV, and who is more important, and using non-zero-sumness, work for the common good of our field and our kids.

Most importantly, we should focus on the work we can do together to improve pediatric rheumatology all over the world over the next few decades. As I have mentioned before, in any one country, we are a small group, but internationally we are much stronger. So more than most other pediatric subspecialties, it is crucial that we band together in a collaborative group of professionals to advance our field.

I believe that we should also utilize equally both adult and pediatric organizations. Many of us have identified ourselves as *pediatric RHEUMATOLOGISTS* where we may feel more a rheumatologist than a pediatrician, relate more to rheumatologists than pediatricians, and embrace the ACR, EULAR, Canadian Arthritis Network (CAN), and other adult rheumatology organizations more than pediatric organizations. Others, at times, may identify themselves more as a *PEDIATRIC rheumatologist* where their relationships to pediatricians, pediatric subspecialists, and pediatric organizations (e.g. American Academy of Pediatrics, Society of Pediatric Research in the US, Pediatric Rheumatology European Society in Europe) are more important than their relationships to adult rheumatologists and their organizations.

I would suggest that pediatric rheumatology needs all these organizations to help us develop and provide good care for children with rheumatic disease. We should endeavor to be *PEDIATRIC RHEUMATOLOGISTS*, focusing on both our pediatric and rheumatology halves. We can obtain much help and support from adult rheumatology groups and organizations and we should utilize them to the fullest.

Yet, they will never provide all that we need. It is unfortunate but, in my opinion, it is undeniable. Adult rheumatologists have their agendas and pediatric rheumatology is often peripheral to their interests. From my observations, internists as a group do not always consider pediatricians to be their peers and our patients are as important as their patients. Plus there is a built in competition for patients. Many adult rheumatologists may feel that they can care for children in the second decade of life, and even children in the first decade of life, as well as we do. Do they really believe in our niche?...many do, but not all.

There is another possible inherent conflict of interest. I believe that it is our job to build up pediatric rheumatology in the next 50 years to the point that adult rheumatologists do not have to see any children with rheumatic disease at all- that in every country there will be sufficient pediatric rheumatologists. Could you imagine suggesting that children with congenital heart disease or brain tumors can be adequately cared for by adult cardiologists or neurosurgeons in the future? I doubt very seriously that the leadership of adult rheumatology and the average rheumatologist have these goals in their agenda or even would agree to them. So, we can obtain help from the adult rheumatologists and their organizations, but there are limits to that help.

Similarly, we can work within pediatric organizations to advance our field and help our patients. After years of volunteering for the Academy of Pediatrics in the US, it is obvious to me that other pediatric subspecialty groups have experienced problems very similar to our problems and their responses may instruct us on how to adapt. These organizations give us access to pediatric generalists and opportunities to teach physicians who are primary referral source. Who really needs to see the children with mild joint pains and an ANA positive at a titer of 1:40? Conversely, should primary pediatricians care for some pauciarticular arthritis patients alone, without consultation to a pediatric rheumatologist. These pediatric organizations provide us with opportunities to gradually to improve and develop appropriate referral patterns. These organizations also provide chances to link up with other medical and surgical subspecialists.

International pediatric organizations may help us develop our subspecialty around the world. Pediatric research organizations may allow us to interact more with subspecialists and researchers who are not part of the rheumatology universe. Working in these pediatric research groups may allow us to appear more on the radar of pediatric departmental chairmen who often may seem to undervalue pediatric rheumatology and not provide us with sufficient help and resources.

Therefore, I believe that it is just as important for us to join and participate in pediatric organizations as rheumatology organizations. We need to join and work hard in PRES, AAP, PRINTO, Canadian Pediatric Rheumatology Society (CPRS), SPR, and international pediatric societies just as much as we join and work in the ACR, EULAR, PANLAR, and APLAR. We should build up pediatric organizations for pediatric rheumatology everywhere, particularly for research grants, basic research and clinical trial collaborative groups, center funding, and philanthropy. We need to limit bias and elitism as well, recognizing all the organizations and the work in each organization as equal and praiseworthy. We should *join* both adult and pediatric focused organizations and support them financially. We need all the help we get from both universes. Each can give us something we can not get from the other.

So I would suggest to you that we have our work cut out for us in developing pediatric rheumatology in the 21st century. I would urge us to embrace Wright's non-zero-sumness collaboration and cooperation strategies and limit zero-sum competition as best we can. We need to work hard within both adult and pediatric organizations, national and organizational. In my opinion, this approach offers to us our best chance of developing pediatric rheumatology, sooner rather than later, and helping the millions of children with rheumatic disease in our own and other countries and regions who still suffer from significant illness without pediatric rheumatology expertise.

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