

GUEST EDITOR

Artificial Life Revisited

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Artificial Life implies that an extension beyond natural life has occurred.

Some find this concept sacreligious and are willing to state that life beyond that of natural life is also God's will and that we are all tools of God simply carrying out that will.

I have no intention of presenting a theological discussion in this area of artificial life. My mission is to look at that quality of the life we have been a part of extending and seek improvement. We must first of all be aware of the power of our tools. As the Indian would say we are dealing with "heap big medicine". Indeed the artificial kidney and the pump oxygenator are big medicine. They fall into a category at least comparable to insulin and penicillin. The artificial kidney with all its problems is probably the single largest break we have had in the medical profession since penicillin. With these tools then we do intervene between the patient and his grave.

Any person or group of persons willing to tread on this ground must be aware of its implications. Is it any wonder then that things don't always go well? Must we not be ready and even expect an occasional "shock wave"? I constantly tell my staff that if we are going to intervene in this area we must be prepared for problems. There are a few basic truths in life and one is that all things are *not* going to go well at this level.

Basically then we are looking at a very powerful tool and expecting things to happen that are not planned. We feel this stress. Be that as it may, let us look at what we have done with our new-found, powerful tools in the last ten years.

In the field of pump oxygenators we made great strides in the past. The latest big area of expansion is that of coronary artery bypass. We have done in excess of 24,000 of these procedures at a national level now. We can state that as a result of the procedure we can reduce the subjective complaint of angina and objectively the hemodynamics of myocardial contractility are improved. We don't know yet whether or not we are increasing longevity. It is even too late now to do a well controlled study to answer this question. It should be apparent to us, though. We are doing a lot of surgery on people and our results are not bad.

In the field of the artificial kidney and kidney transplant I can be a little bit more scrutinizing because this is the area with which I'm more familiar. We are building bigger machines with more bed capacity and treating more people. Sixteen thousand patients on dialysis was the last estimate and approximately 10,000 transplants were recorded in one of our larger registries. There really hasn't been a big break in ten years in this area, either, except in the area of larger numbers in the game.

All of this may sound pessimistic to you but it is not intended to be. So far, no other field of medicine has progressed at a rate even approximating our own. Yet there is an area within our speciality that can present a great void every day. This area that needs attention and offers the greatest hope for advancement is the area of patient support as a human being. The patient needs us! He needs us in more ways than we possibly can be aware. Certainly he needs us to run his pumps, but what about his emotional needs.

Could you for just a moment imagine yourself going on a pump oxygenator or an artificial kidney. Maybe your knowledge in this area would lessen your anxiety or possibly even enhance it. But consider the patient. He does not have that knowledge. Can you imagine the anxiety titer he must be running? He is frightened out of his mind. In our society we don't permit people to express fear because we may be considered as "chickens". So our patients must muster up an over-compensated denial mechanism that would bring down the walls of Jericho if properly directed. Even with this massive suppression of fear and denial he still lacks the security he needs. He must therefore turn to those taking care of him.

By being part of the team, he views you as part of this thing and, therefore, as something just short of a god. He is willing to entrust his only life to your technology and ability. He is facing death in our area of artificial life. We can no longer neglect his needs in this area; anymore than we can fail to run his equipment properly.

This area, above all others, then possesses the greatest void and yet it can be filled the easiest. It can be filled by you. You being just short of a god can solve this problem by getting involved.

Those things hooked up to our machines are people too. Relate to them like people. Be a friend, be a teacher, be a listener, give a damn.

It is presumed by many that the physician does all of this. It is well documented that very few do, however. In this day of massive programs there is simply no way a physician can meet all of the emotional needs in all of his patients. The patient, therefore, needs *you* as a person. Not the plumber nor the pipe fitter. Not you the pump operator or the guy with the big needle. He needs you, the person, to help meet his emotional needs.

How then do you get involved? Simple. Take advantage of your situation to talk to the patient. Introduce yourself. Express an interest in your patient as a fellow human being. Find out what he likes. Tell him about your machines—not to the point to impressing him with your importance but to explain to him how the damn thing works and reassure him that it doesn't feed on human flesh. Get involved. But I must in all fairness warn you about over involvement.

There are limits to involvement. I have seen professional staff get too involved, even consumed. Every person, including yourselves, has a need for emotional support. I like to refer to this as the minimal daily requirement (MDR) of the "milk of human kindness". The F.D.A. has established the M.D.R. for the milk of human kindness. It is one pint per day. You may find some people who need a quart. Some require as much as a gallon and some are best described as a bottomless pit. In some of our patients this need for the milk of human kindness simply cannot be met. They can and they will totally consume you. The symptoms of this syndrome are well documented. You will begin to feel drained emotionally and actually repelled by the patient. You will find yourself avoiding the patient and trying not to have any contact with him.

If you elect to get involved in this area it is essential that I tell you, then, how not to be consumed. When you have the feelings of the syndrome described above, simply tell the patient you cannot meet his emotional need. You will feel it. Be honest with yourself and the patient. Tell them, "I simply cannot meet all of your needs". This does not by any means say that you have to sever your professional relationship

with that person. You can still function in a professional roll and contribute significantly to his management without being consumed.

Many staff members at this stage feel quite guilty when they attempt to avoid a patient. Some will not permit themselves to consider that they don't like a patient or they don't care for a patient. There is no rule that says you must love all your patients. As an example of this, I can remember one night getting an emergency call from the evening shift. Mr. Johnson, a would be socialite, was giving the 3-11 shift a nasty evening. She was extremely upset. I went to see this lady and sure enough she was upset. She stated immediately that I must fire my head nurse. "Your head nurse called me a son-of-bitch". My first response was shock but within a few moments I asked the patient, "Did you thank her?". I then proceeded to explain to the patient that the nurse had cared enough to tell her how she felt. I agreed whole-heartedly with the nurse. She indeed was right, the patient was conducting herself in a manner described by the nurse.

She could have been ignored—the worst fate in the world that can become a patient. Try it some time and watch the patient die. I have seen it happen many times. The point is that the nurse cared enough to be honest and tell her how she felt. This is essential to the emotional stability of the staff as well as the patient. There is no greater fallacy in the world than the concept that you must love all of your patients. The guilt that can be generated in a staff by this concept is great. It can destroy you, your unit, and your patients. This doesn't mean, however, that you should not continue to function as a professional person. You do have the right to hate a person just so long as you know it. What we have just described is a very big job.

It is well known that the technologist does all the work in the kidney unit anyway. Now I'm asking that you get involved with the patient emotionally. You thought that wasn't within your job description. The question of—why me? That must be a job for a psychiatrist, you'll say. It most certainly is not. The psychiatrist cannot do this for many reasons. First a psychiatrist knows nothing about what you do and probably could not learn if he wanted to. Secondly there are too many patients and there just isn't enough psychiatric couchtime. Thirdly, it is well documented that the psychiatrist cannot benefit the average patient in this environment. He knows this if he is a learned observer and he will readily admit that with your exposure to the patient you are in a much better position to function in this capacity.

The psychiatrist does have a role, however, in this area. He should see your patients with overt emotional problems. His main function, however, is to help you help that patient and teach you the mechanism of just being a friend. The psychiatrist is supposed to be the expert in relating to people but his main role is to help you to relate to people and teach you how to help a friend—not a patient, who is undergoing tremendous stress. Only you have the ability to make this contribution. This, then, is the next area for great scientific advance.

We have indeed come a long way in our technology. We are out there running beyond the grave. Technically speaking, however, we haven't had a big break or a great improvement in our field of artificial organs in ten years that matches the pump oxygenator or the artificial kidney. You do however have a greater scientific break sitting on your front door step.

Only you can make this next break. This is the recognition that our technology is just short of a miracle. Our technology is good and it is capable. Our decision now is to apply it to human beings. These things at the end of our polyethylene tubing are people. People like you. They feel and they hurt. Only people can relate to people. *You* are the only person who can make this next break and give artificial life its true meaning.

No machine can or will replace you, the person, in human relations.