

Bedini's Discovery:

Extending The Porthole Concept and the Waddington Valley Cell Lineage Concept (With Proposed Reason Why Present Cloning Is So Inefficient)

Tom Bearden

28 November 2002

It is accented that a research procedure is being discussed, and no recommendation for medical treatment is intended. For medical treatment of a disease or disorder, the viewer is referred to a licensed medical practitioner formally licensed to practice medicine, and to procedures formally approved for such. No research procedure discussed is intended or recommended for any kind of usage in medical treatment until properly developed, tested, and approved by proper authorities and by the FDA for use by properly licensed and qualified medical practitioners.

We all exist in a very complex dense signal environment these days, with incredible numbers of weak EM signals bombarding us continuously, from EM sources everywhere. The electric power lines, e. g., act also as receiving long wire antennas for EM noise all along their routes, bringing it right along and into the home, where it broadcasts from gaps, switches, light bulbs, wiring connections, etc.

The highly nonlinear interactions of the dense signals with each other also result in some conditioning of the "infolded Whittaker structuring" of EM fields and potentials in the locality. That conditioning even includes the local vacuum itself (as Golden once proved rather conclusively). The vacuum after all can be represented as a tremendously strong scalar EM potential, in which case it is also comprised of Whittaker bidirectional EM longitudinal wavepair structuring and interactions.

So our local "environment" ---consisting of an altered local vacuum internal structure and an envelope of very dense weak EM signals in the normal background --- permeates the entire body and every cell in it. [We published the deep-penetration mechanism some time ago.](#) As an analogy, consider the body to be a sort of very porous boat (more like a fishnet) floating in the active ocean lashed with waves, so that the local environment of clashing and interacting water waves completely permeates us.

In the [Porthole method](#) I originally worked it out, I only considered the "textbook" perfect EM noise-free environment, which means an unconditioned vacuum (spacetime) and no deep environmental conditioning of the "infolded longitudinal EM wave electrodynamics" inside the signals and frequencies used in the Porthole method. So we worked out the "pristine laboratory" and "pristine environment" approach. That is certainly where any researcher must start. However, to make it truly effective and not variable in its effects on the recipients, Bedini has now shown that one must also condition the signals and frequencies used in the Porthole method so that their own internal environment and internal structuring corresponds to that of the local environment. That is a very

important new discovery by Bedini, and I think it eventually will revolutionize and change things such as cloning practices. In theory it should eliminate or materially improve cloning's very low efficiency demonstrated worldwide by many researchers in many laboratories.

Bedini discovered that one can condition the infolded dynamics environment inside the signals, waves, pulses, and fields by using electron tubes in a fairly straightforward manner, but in addition to their normal textbook operation the tubes must also be deliberately operated in a very unusual manner derived by Bedini. The second manner of how the tube is used is completely backwards from anything in present textbooks and scientific papers. However, it is possible to detect and measure when one has got it working correctly, and one can see on one's oscilloscope that it is working correctly. That is the process that Bedini discovered: "Adjusting and adapting the local inside environment of the EM signals utilized in the Porthole Process (or any other process applying or involving EM signals, fields, and radiations in or to the body to produce epigenetic reprogramming effects). Epigenetic reprogramming is changing the gene expression factors so that the genetics is reprogrammed back along the path formerly taken by the cells during their differentiation and development. The adaptation of the inside environment of the applied EM signals must exactly correspond to the inside environment of the local spacetime (local vacuum and local EM environment) to include both its altered inner structuring inside local EM fields, waves, and signals and its envelope "ordinary dense signal" environment.

Bedini's discovery also shows that every previous study done on long-term effects of EM radiation on biological systems is incomplete. The largest variable in the long-term effects of cloning and other epigenetic reprogramming trials has been completely bypassed and missed by previous researchers who used a theoretical EM model which does not even contain any conditioned internal structuring of its fields, potentials, waves, and signals. In short, a higher group symmetry electrodynamics must be used and understood, so that it can also simulate the vacuum's dynamics and spacetime dynamics infolded inside dense EM signals in the environments. The EM model used by present biological researchers erroneously assumes a perfectly flat spacetime, no active vacuum, no spacetime curvature dynamics engendered on the biology by the EM, and no active vacuum dynamics engendered on the biology by the EM.

So thanks to Bedini's important discovery, we now understand what the "missing ingredient" in [Rife's work](#) (completely unknown to Rife himself) and in Prioré's work (again, completely unknown to Prioré and all of the scientists who worked with him). It also is a missing ingredient in the "pristine" Porthole Concept I originally produced. Any application is "pristine" if it does not include Bedini's environmental adaptive and fitting process. One must think backwards! In this case, a pristine signal (with unstructured inner environment) actually transports a very noisy "infolded EM difference and jamming" into the targeted cells. Those cells do not have a pristine infolded EM environment, but have a specific one.

As shown in a paper by Evans et al., interference (scalar interferometry) between two such infolded environments does produce spurious unfolded (normal) EM signals in the zone of interference, resulting in electromagnetically jamming the cellular reprogramming process that is implemented. For proper results and to avoid this jamming, the application must not be pristine but must be environmentally fitted to the specific environment of the targeted cells. We are very happy to point

that out as real progress! We have congratulated Bedini on what we believe is a truly important discovery, which will eventually affect many elements of biology and medicine in presently unsuspected manner and degree.

Once the "causative" textbook signals are "force-fitted" rather strongly to the local vacuum environment's internal structuring and to the local complex dense weak signals EM environment, then the Porthole Concept will work as intended, as will a plasma tube concept such as Prioré's, etc. and a tube concept such as Rife's. All these experimenters used tubes, because transistors were either non-existent or not really too much in vogue when most of their formative work was done. What no one previously has known or recognized is Bedini's rather startling new way of using a tube in a manner completely unheard of. With the Bedini method, the tube will change the internal structuring of its processed signals, waves, fields, pulses, etc. so that they have a "internal infolded EM environment" rather perfectly matching --- and perfectly phased to --- the complete local EM environment, including both the environment's envelope transverse EM waves and internal infolded longitudinal EM waves.

As Whittaker showed in 1904, all EM fields, potentials, waves, etc. are comprised of differential functions imposed upon two scalar potentials. In 1903 he had already shown that a scalar potential decomposes into a harmonic series of bidirectional longitudinal EM wavepairs, where each wavepair is a phase conjugate pair. By combining the two Whittaker decompositions, then the dynamics of any EM signal environment whatsoever is comprised of the dynamics of differential functions imposed upon two harmonic sets of bidirectional EM longitudinal wavepairs.

Previously we slightly modified Whittaker's 1903 decomposition to agree with quantum field theory. In that theory, there are four polarizations of a photon, which are x, y, z, and t polarized. Polarization in x or y gives the familiar transverse photon. Polarization along the line of propagation, z, gives a longitudinal photon, where the EM energy is oscillating to and fro along the line of travel. Polarization on the 4th Minkowski axis, for the time-polarized or scalar photon, means that the EM energy is oscillating on the time axis, where time can be taken as spatial EM energy compressed by the factor c-squared. Hence time has the same energy density as mass. In quantum field theory, neither the longitudinal photon nor the scalar photon is individually observable. However, in the presence of charge, the combination of the scalar photon and the longitudinal photon gives the instantaneous scalar potential. To be consistent, Whittaker's bidirectional longitudinal EM wavepair must be interpreted as a paired scalar wave and longitudinal wave. After all, a scalar (time-polarized) EM wave is indeed a longitudinal wave, but on the 4th axis rather than in 3-space along the z axis.

With Bedini's signal environment conditioning, one then should get essentially flawless cellular time-reversal (physics terminology) --- which is epigenetic reprogramming, in biological terms --- when applying the Porthole Concept . Let me also try to put it into conventional biology terms for biologists.

What is necessary is to temporarily move the cells back (reprogram the cellular genetics expression) toward what is called totipotency --- a nascent state the newly fertilized egg in the early embryo achieves. The biological term for this is epigenetic reprogramming --- resetting the gene-expression programs of specialized cells, in a similar way to how sperm and egg combine and change to form

embryonic cells that are undifferentiated.

In physics terms, that is a "time reversal" of the cell back over its previous cellular differentiation pathway, back down what is called the Waddington cell lineage path in biology. Waddington compared the "forward differentiation" of cells to a ball rolling down a sloping set of branching valleys, one must seek to "dedifferentiate" the cells by moving them precisely back up the path previously taken downward, in Waddington's analogy. Becker already showed that red blood cells, for example, can be dedifferentiated and then redifferentiated by applying scalar potentials (or other signals) to otherwise intractable bone fractures. So the part played by the potential (involving scalar and longitudinal photons) in differentiation and redifferentiation has been experimentally demonstrated for some time, at least in overall terms.

Any EM noise introduced into the cellular dedifferentiation or "gene-expression resetting" procedure's electrodynamics is obviously a corruption of the procedure, whether in a healing attempt by the body (cellular regeneration) or a cloning attempt. Such corruption in the actual EM control signals involved, will result in corrupting the end result achieved. At base level, all cellular EM signals, waves, fields, and pulses are comprised of paired couplets of a scalar EM wave and a longitudinal EM wave (scalar photons and longitudinal photons) comprising each couplet. Hence any corruption of any of this internal longitudinal EM wave structure inside the cloning or healing process is a noise jamming process at the most fundamental biocontrol and biodynamics level.

The dedifferentiation or time reversal of the cell back along its exact Waddington lineage path is part of the requirement, in biological terms. The other part involves transdifferentiation, where one attempts to just "jump" the cells (Waddington's ball) from one erroneously branched valley it previously took, over the intervening mountainside to the adjacent "correct" or "normal" valley. For the layman, "transdifferentiation" roughly means "jumping across the intervening gap between two adjacent Waddington valleys (cell paths) the cell took as it developed. The Porthole Concept is designed to continuously "eliminate the delta" between the Waddington valley a diseased or disordered cell is actually in, and the adjacent Waddington valley it would be in if it were a normal cell. In that way, the Porthole Concept also strongly focused on transdifferentiation as well as dedifferentiation.

As an example, something like cancer is a deviation from the proper cell lineage (Waddington differentiation valley) to a side-valley that is off-course from the "healthy, normal" Waddington lineage.

All of that is familiar to the biologist in those terms, particularly those working in cloning, which does require efficiently resetting the gene-expression programs, essentially back to totipotency. In cloning, one introduces somatic nuclei into eggs, for example, and these nuclei introduced into the eggs must undergo epigenetic reprogramming along with the egg, to thus approximate closely the totipotency state of the usual sperm and egg fertilization and early embryonic cell.

The thing that makes such epigenetic reprogramming possible is that the differences in gene expression are fairly well known to occur without DNA sequence change. Gordon in fact did the pioneering experiments which showed that the DNA sequence did not change. Successful cloning

itself is such a demonstration.

However, the efficiency of cloning is well-known to be low worldwide. We believe that Bedini has now uncovered either the total reason or the major reason for that low efficiency. Heretofore no biological researcher considering EM effects in cells has considered the higher group symmetry EM effects that occur and are involved in both the infolded and outfolded cellular EM environments, whether one is speaking of differentiation, dedifferentiation, epigenetic reprogramming, or cloning. The internalized longitudinal EM wave dynamics inside all fields, potentials, signals, pulses, etc. has been completely ignored. Normal egg fertilization by sperm usually occurs under conditions between two mating bodies where both bodies -- to include both the egg and the sperm --- are already thoroughly conditioned to both the envelope "dense EM signal" environment and the infolded longitudinal EM wave dynamics environment inside all the biological EM signals that the biologists study.

So a major variable in present cloning experiments has been ignored. It has also been ignored unwittingly by researchers experimenting with environmental EM bioeffects and with the possible use of EM signals in healing processes. We suspect it eventually may prove to be a factor in the progressive development of disease agents into resistant strains, that occurs in our hospitals and treatment facilities.

The Porthole Concept is intended to be a research method for deliberately using the highly nonlinear characteristics of the cell and all its parts, to electromagnetically recondition the internal infolded EM environment of the cells as well as the internal infolded environment of the cells' own ordinary EM signals, potentials, and fields. In short, the Porthole Concept is a research process for epigenetic reprogramming, as well as transdifferentiation controlled by the exact difference between the Waddington valley previously taken (cell lineage actually followed to develop the disease or disorder) and the normal disease-free and disorder-free Waddington valley that ideally should have been taken.

Now Bedini has added a major improvement to the "pristine" Porthole process and to many other processes, by showing the importance of first "fitting" the external signals used in the Porthole concept so that their inner EM dynamics content precisely matches the local environment's inner EM dynamics. Otherwise, one is adding signals which externally appear to be "pure signals", but which internally contain a great deal of "infolded inner EM noise" with respect to the local inner EM environment of the targeted cells.

So Bedini may well have found why present cloning is so inefficient and difficult. The cloning procedures followed by the biologists have been unwittingly applying a great deal of infolded inner noise to the infolded internal EM environment of the egg cells, etc. The scalar interferometry between the input signals "environmental inner electrodynamics" and the receiving cell's "environmental inner electrodynamics" generates overt EM jamming signals that jam, distort, and alter the intended epigenetic reprogramming. In essence, researchers have not been considering all the major variables that condition and affect epigenetic reprogramming and transdifferentiation; specifically, they have not considered infolded EM environment mismatch between the somatic nucleus and the egg cell, and the resulting interferometry due to two differing infolded electromagnetic environments. And so

the results of cloning experiments worldwide do indicate that something major is wrong, and that one or more major variables profoundly affecting the success or failure of the cloning process is missing from the present biology literature entirely.

At any rate, we are very happy to point out the necessity to adapt the Porthole Process to the local environments as stated, using Bedini's newly discovered method of "local Waddington valley environment matching" both in the inner EM environment and the outer EM environment. In that manner, the cellular reversal (epigenetic reprogramming) can be made true to the real Waddington valley or cell lineage that was actually followed.

The main point is Bedini's EM extension to Waddington's fundamental work: Not only are there Waddington valleys to be considered, but one must also consider and adapt the experiments to the exact cellular EM environment --- both infolded and outfolded --- existing in all these valleys when the differentiation cell route (valleys) were previously taken. So one must consider both the Waddington valley and its infolded EM environment. Epigenetic reprogramming and transdifferentiation --- by whatever means it is to be obtained --- must be extended to add Bedini's EM environmental conditioning so that the exact Waddington valleys and environments previously taken by the cell are the valleys and environments now retraced back toward totipotency. The key addition is the phrase "valleys and environments" that replaces the former "valleys".

The reader will carefully note that we have not revealed the actual mechanism and process that Bedini uses in his startling new method of using tubes. Instead, we have released only the overall description of how the process works in general. No specifics have been released, so we have not altered the proprietary intellectual property rights John possesses because of his very important discovery.

References:

1. T. E. Bearden. [Provisional Patent Application - December 2001. Method, System and Apparatus for Conditioning Electromagnetic Potentials, Fields, and Waves to Treat and Alter Matter.](#)
2. E. T. Whittaker, "On the Partial Differential Equations of Mathematical Physics," *Mathematische Annalen*, Vol. 57, 1903, p. 333-355.
3. E. T. Whittaker, "On an Expression of the Electromagnetic Field Due to Electrons by Means of Two Scalar Potential Functions," *Proc. Lond. Math. Soc., Series 2*, Vol. 1, 1904, p. 367-372.
4. Wolf Reik and Wendy Dean, "Back to the Beginning," *Nature*, Vol. 420, 14 Nov. 2002, p. 127.
5. W. Reik, W. Dean, and J. Walter, "Epigenetic Reprogramming in Mammalian Development," *Science*, vol. 293, 2001, p. 1089-1093.
6. H. M. Blau, "A twist of fate," *Nature*, Vol. 419, 3 Oct. 2002, p. 437.
7. C. H. Waddington, *Organisers and Genes*, Cambridge University Press, Cambridge, 1940.
8. J. B. Gordon and V. Uehlinger, "'Fertile' intestine nuclei," *Nature*, Vol. 210, 1966, p. 1240-1241.
9. Antoine Prioré, Antoine, "Method of producing radiations for penetrating living cells," U.S. Patent No. 3,280,816, Oct. 25, 1966.
10. Antoine Prioré, "Apparatus for producing radiations penetrating living cells," U.S. Patent No. 3,368,155, Feb. 6, 1968.
11. Antoine Prioré, "Procédé et dispositif de production de rayonnements utilisables notamment pour

- le traitement de cellules vivantes," [Procedure and Assemblage for Production of Radiation Especially Serviceable for the Treatment of Living Cells], Republique Francais Brevet d'Invention P. V. No. 899.414, No. 1,342,772, Oct. 7, 1963.
11. R. Courrier, "Exposé par M. le Professeur R. Courrier, Secrétaire Perpetuel de L'Académie des Sciences fait au cours d'une réunion à L'Institut sur les effets de la Machine de M. A. Prioré le 26 Avril 1977," [Presentation by Professeur R. Courrier, Perpetual Secretary of the Academy of Sciences, made at the meeting of the Academy on the effects of the machine of M. A. Prioré.]
 13. A. Prioré, Guérison de la Trypanosomiase Expérimentale Aiguë et Chronique par L'action Combinée de Champs Magnétiques et D'Ondes Electromagnétiques Modulés. [Healing of intense and chronic experimental trypanosomiasis by the combined action of magnetic fields and modulated electromagnetic waves], thesis submitted in candidacy for the doctoral degree, 1973. Prioré's doctoral thesis (which was rejected when the project was suppressed).
 14. D. Solter, "Mammalian cloning: advances and limitations," *Nat. Rev. Gen.*, Vol. 1(3), 2000, p. 199-207.
 15. F. Mandl and G. Shaw, *Quantum Field Theory*, Wiley, 1984, Revised Edition 1993, under the heading "5.2 Covariant Quantization" and "5.3 The Photon Propagator" in Chapter 5.
 16. Richard W. Ziolkowski, "Exact Solutions of the Wave Equation With Complex Source Locations," *Journal of Mathematical Physics*, 26(4), April 1985, p. 861-863.
 17. I.M. Besieris, A.M. Shaarawi, and R. W. Ziolkowski, "A bidirectional travelling plane wave representation of exact solutions of the scalar wave equation," *Journal of Mathematical Physics*, 30 (6), 1989, p. 1254-1269.
 18. Rod Donnelly and Richard Ziolkowski, "A method for constructing solutions of homogeneous partial differential equations: localized waves," *Proceedings of the Royal Society of London A.*, Vol. 437, 1992, p. 673-692.
 19. R. O. Becker and David G. Murray, "The electrical control system regulating fracture healing in amphibians," *Clinical Orthopaedics and Related Research*, No. 73, Nov.-Dec. 1970, p. 169-198.
 20. R. O. Becker and David G. Murray, "A method for producing cellular dedifferentiation by means of very small electrical currents," *Transactions, New York Academy of Sciences*, 29(5), Mar. 1967, p. 606-615.
 21. R. O. Becker, Carlton F. Hazlewood, Abraham R. Liboff, and Jan Walleczek, *Electromagnetic Applications In Medicine*, NIH-OAM Electromagnetics Panel Report, Jan. 15, 1993.
 22. M. W. Evans et al., "On Whittaker's Representation of the Electromagnetic Entity in Vacuo, Part V: The Production of Transverse Fields and Energy by Scalar Interferometry," *Journal of New Energy*, 4(3), Special Issue, Winter 1999, p. 76-78.