



## Readings II in Faith & Science

*Publication Year: 2003*

*ID: BK023*

*Note: This book is out of print.  
This is one article from the book. All the articles are available for  
download as pdf's from the ITEST web site. A complete listing of the  
articles available from this book is shown at the end of this document.*

## Altered Perceptions

*ID: BK023-036*

**Father Robert Brungs, SJ**  
**Director of ITEST**  
**Associate Professor (Emeritus) of Physics**  
**Saint Louis University**



**Institute for Theological Encounter with Science and Technology**

**Cardinal Rigali Center • 20 Archbishop May Drive • Suite 3400-A • St. Louis, Missouri 63119 • USA  
314.792.7220 • [www.faithscience.org](http://www.faithscience.org) • E-mail: [mariannepost@archstl.org](mailto:mariannepost@archstl.org)**

## Altered Perceptions

[Robert Brungs, SJ, Director of ITEST, received his AB in Classics from Bellarmine College, Plattsburgh, New York and a PhL. From Fordham University. He earned a PhD in Physics from Saint Louis University and a Licentiate in Sacred Theology (STL) from Woodstock College in Maryland. Father Brungs has served as a consultant for the Vatican Secretariat for Non-Believers and the Committee on Science and Human Values of the National Conference of Catholic Bishops. He has also held consultantships for several other organizations. He is the author of several books dealing with aspects of the faith/science relationship (see for example, **The Vineyard, Scientists in the Church**, co-edited with Eva-Maria Amrhein located on the ITEST website) and many articles on the same topic. He taught physics and theology at Saint Louis University for several years before assuming full time duties with ITEST.]

One temptation in theology/science deliberations is an over-concentration on areas of difficulties, problems and conflicts. While we can't ignore such areas, we should never lose sight of major areas where science/technology can give us insights into a deeper understanding of creation and of God's designs for creation.

This effort cannot be simplistic. A too-close equivalation of empirical data and revelation must be avoided. Some years ago a scientist I knew insisted that entropy was the "result of original sin." He insisted on calling entropy the "curse of Genesis." This type of empirical connection is far too simplistic, even deeply misleading. Nonetheless, there is much for theologians to ponder in the sweep of scientific development, ideas leading to a deeper understanding of creation, our place in it and its profound oneness.

We can begin a brief discussion of such positive contributions to our understanding of revelation by applying the notion of *elaboration* developed by Teilhard de Chardin in the *Phenomenon of Man*. The following ideas are an application of Teilhard's thought.

In the *Phenomenon*, Teilhard writes that we live in a world of *elaboration*, of unfolding. He notes that the whole of life lies in the verb "to see." "That," he said, "is why the history of the living world can be summarized as the *elaboration* of ever more perfect eyes within a cosmos in which there is always more to be seen." *Elaboration* has two stages, namely, process and event. For example, the perfecting of the eye and of the nervous system, of the human sensorium --including a bewildering array of instruments like microscopes, telescopes, ultra-violet and infrared detectors which help us see (or hear) more and farther -- would belong to evolution, to process. Teilhard uses physiology as an example of process. Anything, for instance, that scientists can develop to improve the human nervous system leads us farther along the path of evolution, a path not unlike that of scientific inquiry. In science there is research, experimentation, a closed door here, an open door there, a moving forward, even if in fits and starts.

The second stage in *elaboration* can be called "event." With the creation of man and woman a new reality came into the world, the ability consciously and deliberately to share in God's creative power; namely, our power to love God, love each other and all of creation. Characterized by the conscious power to bring forth new life, it is not situated simply within process, as is animal reproduction. This event-full power raises the giving of new life beyond reproduction to procreation. It bears a new reality, creative love which takes its place in the world of process.

In the Epilogue to the *Phenomenon of Man*, Teilhard speaks of the "Christian Phenomenon," the coming of the totally new reality of the Christian *agape*. St. Paul calls this the "new creation." Together with that most amazing of realities, the creation of human love between a woman and a man, Christian *agape* is the representation of God's own sharing (necessarily creative) love. Pope John Paul II insists that the connection between the creation of human beings in two sexes and the new Covenant is basic.

God's love, as revealed to us, establishes a covenant between himself and us, and with all of creation in us. Revelation describes this covenantal love as a two-in-one-flesh covenant. It describes the nature of the unity being

elaborated in process and event. “Event,” as covenant, clearly surpasses “process.” Human growth that attempts to bypass the “event aspect” of elaboration to promote a return simply to “process” is a destruction of the unity built into creation and redemption.

Treating “event” from the perspective of the new creation in Christ requires consideration of the covenant in the Body and Blood of Christ. The Bride image, expressive of the one-flesh theme, is a rich resource for this.

Science and technology are not to be considered simply as process. The interrelations between process and event are complex. Let’s look at some of these connections and at some of the new questions and avenues for doctrinal development that science and technology offer us. We can learn much here. Advances in science and technology provide us with powerful concepts to explore questions of unity. Our deeper understanding of physical creation allows us to raise new and formidable questions about ourselves, about the Incarnation, about the sacramental and covenantal nature of the “new creation” and so on.

Take a concrete example of how scientific/technological advance has altered our perception of what is important and has clarified (and enhanced) the state of the question. During my theological training in the early 1960s, the concept of “bodily integrity” was mentioned only in a moral theology discussion of mutilation. The word *mutilation* is used neutrally here, involving surgery, amputation or deliberate maiming. The principal question concerning “bodily integrity,” then, was: how much can one take away from the human body and still have a human body. We didn’t go into a significant theological discussion on the point; it was, if my memory is accurate, more or less left to some common-sense solution. It wasn’t a major moral issue in the mind of the professor. Look at how times have changed. In an age of in vitro fertilization and recombinant DNA, the primary question about “bodily integrity” is: how much can we add to the human body and still remain human. That question will be less amenable to “common sense.” This is an issue that will get more complex and demand an ever deeper Christian understanding of bodiedness.

Every Sunday, in proclaiming the Creed, we profess our faith (our belief) in the resurrection of our bodies. We proclaim that in our bodied state in glory we shall enjoy union (unity) with God for ages upon endless ages. Our destiny with and in God demands embodiment, as Christ is still embodied before the Father. St. Paul, in telling us that we, who possess the first-fruits of the Spirit, “groan inwardly as we wait for our bodies to be set free,” clearly does not say that we are waiting to be set free from our bodies. We are going to be transfigured, not disembodied. What does that mean in this life and in heaven?

In virtue of the Incarnation, is there something in our bodies, or something about our bodies that should not be altered? The Son of God did not assume some generalized humanity, a “one-size fits-all” body. He assumed a body specific enough to locate him uniquely in space, in time and in the history of Israel and of the human race. He conformed himself to our bodiedness so that our human bodies might be transfigured into copies of his glorified body. He truly became one with us so that we might be united to him in glory.

In the Eucharistic liturgy we pray that we may “come to share in the divinity of Christ who humbled himself to share in our humanity. This sharing in divinity is our Christian call. For us to share covenantally in the divinity of the Lord, we must somehow share in his bodiedness. We live in the covenant of the body and blood of the Lord. What does the conformity of our bodied form to his imply, in our use of new technologies to change that bodied form?

This is an area calling for a profound development of doctrine. Christ is now immanent to both evolutionary process and to event -- to use Teilhard’s vocabulary. Does Christ’s having assumed this bodily shape, texture and function determine anything about our present and future bodily shape and texture? Does the Incarnation say anything about the extent to which we can deliberately alter the body? There are faith limits and moral limits to living in the community of God. Are there also physical limits? We have little developed doctrinal thought to bear on such a question right now.

We are, and always will be, rooted in *this* specific body, being transformed through our death and resurrection

in Christ. We shall rise into glory recognizably ourselves -- an article of Catholic *belief*. Our self-recognition is based in our body, the source and repository of our history. Written into our flesh is the history of one line of the human race going back to human beginnings. To be recognizably ourselves, even to ourselves, that history must accompany us into glory.

Our conformity to Christ is sacramental (in material, fleshly sign) and covenantal (unifying). In Colossians, St. Paul says that God wanted all perfection to be found in Christ and all things to be reconciled through him and for him, everything in heaven and everything on earth. If everything in the created material universe is to be conformed to the human Son of God, clearly so are we. There is, then, an integrity in our bodies which is not to be manipulated, not to become subject to some "higher demand." If we are to be conformed to the body of Christ, there is an iconal quality to our bodily being. We are icons of the Lord Jesus. There is an iconal quality to our bodily being. We are living icons of the Lord Jesus. But there is another aspect to a doctrinal approach to direct and immediate technological intervention into the human body. I shall treat that aspect now.

In the Constitution on the *Church in the Modern World* the Fathers of Vatican II stated (Number 34):

. . . to believers this point is settled: considered in itself, such human activity (including science and technology) accords with God's will. For man, created to God's image, received a mandate to subject to himself the earth and *all that it contains* (my emphasis), and to govern the world with justice and holiness; a mandate to relate himself and the totality of things to Him who was to be acknowledged as the Lord and Creator of all.

Vatican II gives no hint of recognizing the realities arising from the biosciences and biotechnologies. In treating things in *themselves* it gives a position but not a direction. Yet this position is important because it is authoritative and because it underscores a general Jewish perspective. God does not look upon human beings (or creation) as competitors for power. Rather, he calls his creatures (individually and collectively) to be co-laborers, collaborators, in building his Kingdom in its fullness. He is not diminished by our flawed human attempts to assume over his creation the mastery he himself commanded us to accept.

Mastery is, of course, not tyranny. We learn its meaning as revelation proceeds. It is fully explained in the 13th chapter of John's Gospel when Jesus tells his disciples: "You call me Lord and Master, and rightly; so I am. If I, then, the Lord and Master have washed your feet, you should wash each others feet." Mastery is loving service. We are to "wash the feet" of the creation over which we have been placed. The greater our power, the more awesome our responsibility to serve the Lord in governing the universe.

God, in creating and redeeming us in Christ, has given us the power, imagination and responsibility to transform the world and, now, to alter ourselves deliberately. In the humanity of Christ and in his integral union with Mary, all nature is introduced into and informed by and conformed to humanity. We never "play God." We always "play human." In Christ, this is now a human universe totally and completely. It is to be understood, appreciated, loved and even changed to satisfy our needs and desires -- by us. As Wisdom once rejoiced over the earth in its formation, so we must rejoice in our re-forming it.

God created a world-to-be-fulfilled. As part of that world we are also to be fulfilled. As St. Paul said in Philippians, we are waiting for our wretched bodies to be transformed into copies of Christ's glorified body. We cannot look back to Eden to discover the fullness of our identity. We struggle forward to learn who we are meant to be: we do not constitute an unchanging reality given from the beginning and frozen for eternity. We are radically incomplete.

Science and technology -- our wondrous ability to turn the environment given to us into a world more suitable for human living -- is one way we have to promote the growth of God's Kingdom. This ability, pursued morally and directed to God, is a significant (essential, even?) part of our worship. Our bodies certainly are perfectible, partly at least through our own initiative, on our own recognizance.

*Prima facie* at least, we are included in God's command to subdue and conquer the world. But, like Vatican II's statement, this notion provides only a position, not a direction. Biotechnology is a proper exercise of Christian stewardship; it is not warranted as an arbitrary, sky's-the-limit activity. There are limits built into our world, limits that are now definitive through the presence of Christ to us in this new creation arising out of the new covenant in his blood. These limitations on our use of biogenetic capability, for instance, are built on our spiritual and material conformity to the body of Christ, that is, on our iconal qualities. I would hazard that we may pursue the deliberate enhancement of our physical attributes, but only insofar as these enhancements focus on and enrich our conformity to the body of Christ. Here is the challenge facing Christianity today: which "improvements" fulfill our worshipful service of God and which do not?

Our "iconal qualities" -- which we must struggle on a profoundly doctrinal base to understand better and respect more fully -- impose boundary conditions, if you will, on our use of technological capabilities to alter ourselves. These limits, set by our conformity to the body of Christ, must be pondered and developed so that we may arrive at appropriate guidelines for developing criteria by which we may prudently judge, say, the making of genetic enhancements.

I shall present five questions which I think are a useful basis for developing these guidelines. They are, most likely, not the only questions to be asked, nor are they completely developed. They may, however, serve as a beginning of a doctrinal conversation that will inevitably occupy us for a very long time. Let me list these questions as they would apply particularly to genetic "enhancements," not to genetic therapy.

In the case of therapy, the criteria we have already established for direct and deliberate medical intervention are adequate at least in the case of "somatic" therapy. I will transmit questions about "germ cell" genetic therapy here. In any event I am considering here only genetic "enhancement" techniques -- "cosmetic" techniques, if I may use the term.

**Question 1:** Does a particular genetic alteration enrich our innate, internal dignity, or does it set up external criteria by which we are judged to be worthy human beings? Does our perceived human dignity derive from our being human and from our conformity to Christ, or does it find its major justification in our success in functioning in society? Does the alteration enhance our being the person desired by God, or does it look to our fitting in better with someone else's notion of social need and social desirability?

**Question 2:** Does the proposed alteration of the human body foster personal freedom or does it tend toward creating expectations, the fulfillment of which would be coercive? Does it, in other words, foster genuine difference or does it tend toward the creation either of exotic or of standardized human beings? Does it foster either greater personal freedom and responsibility or does it look to easier *control*? The Church has a highly nuanced doctrinal position on dignity and freedom that need only be applied directly to issues raised by the life-sciences and life-technologies to be adequate to approach these issues.

**Question 3:** Does the proposed alteration preserve and increase "bodily integrity"? Does it enhance our conformity to the body of Christ? It's quite difficult to approach this idea and I, at least, cannot be more specific about it than I have been. That vagueness arises from our not having considered such issues as seriously as we should have. Christian intuition tells me that it's a vitally important issue. It is precisely here that we need a significant development in doctrinal thought on *the body*. How can we begin developing such a doctrinal tract for an essentially mysterious future, since we shall not know who we are until we are definitively united to Christ? Perhaps we may specify crucial aspects of "bodily integrity" with two further questions.

**Question 4:** Does the proposed enhancement promote a closer integration into the human community? Does it develop communal living? For a Catholic this question can be further refined: does the enhancement promote sacramental living and the growth of the covenantal community? Is the change so designed that the one "created" is so elite or so exotic (so physically, psychologically or intellectually different) as to fit in with the

rest of the human community no longer? If we alter humans to look like the denizens of the cantina in *Star Wars*, we will almost certainly shun these “products,” or at least isolate them from ourselves.

**Question 5:** Does the enhancement proposed promote the sacramental and covenantal worship of God? Does it lead away from that worship? Cloning is an example of the latter. It is a flight from the sacramental gift of oneself to another. It is, in the ultimate analysis, a clutching of oneself to oneself for the re-creation of oneself. It escapes the newness that is at the heart of the creation in Christ. It is a radical denial of the sacramental and covenantal worship we owe to God. These questions have a common thread. They implicitly reject the consideration of the body’s role in our salvation and glorification by itself. We cannot judge the value of genetic enhancement from the “inside out,” that is, by deciding *a priori* what the body is or should be. The covenant with God determines the criteria for judgment about deliberate alterations of the human composite.

Coming to a deeper understanding of our bodiedness is a glorious challenge, one from which the Church will emerge incredibly richer in understanding and in holiness. The Creed, which we rather blithely proclaim on Sunday, arose out of more than a century and a half of doctrinal struggle. Our struggle is like that. In the midst of struggle and weakness the Church most truly finds the Lord and is enlightened by his Spirit.

The present challenge will lead Christianity to a deeper self-understanding and to a clearer understanding of the marvels God has wrought. We have the great privilege, if I may revert to Teilhard’s language, to work toward the enlightening and to the directing of evolutionary “process” by the evolutionary “event” that is Christ. This is a glorious moment in the history of salvation.

We can all contribute both to “process” and to “event” by enhancing that growth in understanding and appreciation through our concern, our wisdom and, above all, our holiness.

## Questions

Catholic dogma tells us we shall rise physically, recognizably ourselves. Do we hear that preached? What might it mean? Do we have to believe it? Why don’t we believe it more vividly? Will being conscious of it help us in our scientific and technological lives? How?

Are the five proposed criteria for biogenetic science and technological advance helpful? Are they important? Are there others? If so, what might they be?

Can Christianity be, at the same time and for the same reasons, both an “earthly” and an “otherworldly” faith? It seems that this discussion assumes that it is both. What is the connection between these two “worlds” in which, it is said here, that Christianity is based?

“We are living icons of Christ.” What is an icon? What alterations are allowed in artistically reproducing an icon? What does this mean for changing ourselves? What, indeed, might iconal qualities be?

## Recommended Scriptural Reading and Meditation

Romans 8: 17-25.

Romano Guardini, *The Lord*.

<b>Readings II in Faith and Science</b>		
<b>ID</b>	<b>Article Title</b>	<b>Author</b>
BK023-001	Table of Contents	
BK023-002	Foreword	Father Robert Brungs, SJ
BK023-003	Campus Ministry Involvement	Father Vincent E. Krische
BK023-004	A History of Science and Faith	Father William A. Wallace, OP
BK023-005	Letter of Pope John Paul II	
BK023-006	The Church & Scientists: 1977 Synod of Bishops	
BK023-007	Religion and Science: Must There Be A Conflict?	Father William A. Wallace, OP
BK023-008	The Christian Notion of Freedom	Bishop John Sheets, SJ
BK023-009	The Worldview of Genesis 1-11	Reverend Hugh Beck
BK023-010	Contemporary Biotechnology in The Context of Conflicting Theological Perspectives	Donald Demarco, PhD
BK023-011	What is Science? What is Theology?	Sister Carla Mae Streeter, OP
BK023-012	Science/Religion Not on Speaking Terms in Today's World	David Byers, PhD
BK023-013	Neutrality or Alliance	Father Robert Brungs, SJ
BK023-014	Apostleship	Father Robert Brungs, SJ
BK023-015	Science Versus Religion: A Conflict of Ideas or a Clash of Wills	Richard Blackwell, PhD
BK023-016	Some Elements of the Faith/Science Apostolate	Father Robert Brungs, SJ
BK023-017	Some Historical Items	Father Robert Brungs, SJ
BK023-018	And I Will Make You Fishers of Men...	Evelyn Crump, PhD
BK023-019	The Spirituality of The Scientist	Evelyn Crump, PhD
BK023-020	An Intellectual Gap	Father Robert Brungs, SJ
BK023-021	Literalness	Father Robert Brungs, SJ
BK023-022	Praise	Father Robert Brungs, SJ
BK023-023	The Theological Task	Father Robert Brungs, SJ
BK023-024	History and Myth: The Inquisition	Robert P. Lockwood
BK023-025	Galileo and The Catholic Church	Robert P. Lockwood
BK023-026	When Faith and Reason Clash: Evolution and The Bible	Alvin Plantinga, PhD
BK023-027	Christianity and Modern Science	Rudolf Brun, PhD
BK023-028	Reflections on the Mission of a Catholic Scientist	Lucien Morren, PhD
BK023-029	Sociology	William Monahan, PhD
BK023-030	Truth for an Artist	Leonard Buckley
BK023-031	Issues of Concern	Father Robert Brungs, SJ
BK023-032	Environment and the Believer	Father Albert Fritsch, SJ
BK023-033	What Kind of Salvation?	Father Robert Brungs, SJ
BK023-034	Some Environmental Issues	Father Robert Brungs, SJ
BK023-035	The Freelands Project	Father Robert Brungs, SJ
BK023-036	Altered Perception	Father Robert Brungs, SJ
BK023-037	Theologians Visit the Environment	John Kinney, PE, DEE
BK023-038	Consumption of Natural Resources	Gregory Pouch, PhD
BK023-039	Reproductive Biology	Allyson Chavez Larkin, MD
BK023-040	Holistic Sexuality: A Proper Focus for the Scientist	Hanna Klaus, MD, FACOG
BK023-041	Sociobiology: The New Religion	Richard Blackwell, PhD
BK023-042	Animal Research	Father Robert Brungs, SJ

BK023-043	Patenting of Biological Materials	David Saliwanchik, Esq.
BK023-044	The Inner Environment	Robert Z. Greenley, PhD
BK023-045	What are the Possibilities of Human Cloning?	Robert Collier, PhD
BK023-046	Cloning	Father Robert Brungs, SJ
BK023-047	Human Embryonic Stem Cell Research Ethics in The Face Of Uncertainty	Father Kevin Fitzgerald, SJ
BK023-048	Time: The Falsest God Of All	Thomas Sheahen, PhD
BK023-049	Six Magic Numbers in Physics	Thomas Sheahen, PhD
BK023-050	On The Domestication Of Science	John Matschiner, PhD
BK023-051	Chance/Chaos Versus A Planned Design in The Universe: Pointers To God?	Robert Z. Greenley, PhD
BK023-052	Nuclear Waste	Father Robert Brungs, SJ
BK023-053	Seeming Discovery On Mars	Father Robert Brungs, SJ
BK023-054	The Information Superhighway	Bishop Mark Hurley
BK023-055	Is Secular Education Adequate for the Pursuit of Truth in Science?	Robert Z. Greenley, PhD