

Resonance:

Mystery Unfolding

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Preface

Introduction

Part One: Universal Resonance: It's Everywhere

1. **Physical Resonance and Mystery**
 - a) Fleeting Time
 - b) Immense Space
 - c) Scientific Community

2. **Chemical Resonance and Responsibility**
 - a) Chemical Structures
 - b) Magnetic Resonance Applications
 - c) Individual Citizens and Chemicals

3. **Biological and Acoustical Resonance**
 - a) Carbon and Bioresonance
 - b) Acoustical Resonance and Eco-Balance
 - c) Measurement and Control of Pollution

4. **Communicative Resonance and Equality**
 - a) Modern Communication
 - b) Education as Communication
 - c) Community Organizing and Enhancement

5. **Artistic Resonance as Expression**
 - a) Artistic Creativity
 - b) External Resonance
 - c) Social Artistic Resonance

6. **Musical Resonance as Togetherness**
 - a) Music Creation and Enhancement
 - b) Music Harmony
 - c) Music Universality

7. **Psychological and Compassionate Resonance**
 - a) Psychological Resonance
 - b) Compassionate Resonance
 - c) Suffering through the Ages Is Meaningful

8. **Resonance in Collaboration**

- a) Types of Collaborative Efforts
- b) Resonance in Ecological Collaboration
- c) Preserving and Enhancing Civilization

Conclusion: Part One

Part Two: Proclaiming Mystical Resonance

9. God Calls Us: Mystic Resonance

- a) Experiencing HERE
- b) Acknowledging NOW
- c) Incorporating WE

10. Restoration in Christ

- a) Creation as Blessing
- b) Restoration as a Privilege
- c) Effective Partakers in Salvation History

11. Holy Spirit Gives Life

- a) Spiritual Life and Enthusiasm
- b) Confronting Good Versus Evil
- c) Individual and Community Discernment

12. God is Triune

- a) The Mystery of the Trinity
- b) The Trinity Revealed
- c) Basic Trust in God

13. God Incarnate and Our Divinization

- a) Divine/Human Meeting
- b) Incarnate Sharing: God With Us
- c) Divinization: Invited into the Divine Family

14. God is Love: Eucharist as Divine Communication

- a) God's Love
- b) Eucharist as Nourishment
- c) Divine Liturgy as Celebration

15. Suffering Servants

- a) Compassionate Resonance Intensified
- b) Social and Ecological Way of the Cross
- c) Heart-to-Heart Reparation: No Suffering is Lost

16. Proclaiming Good News

- a) Trinitarian Community
- b) Global Resonance and Empowerment

c) Collaborative Service as Mystic Resonance

Conclusion: Urgency to Act

Acknowledgments

Preface

Several of us were hiking in the dense rain forest of British Columbia when suddenly there appeared some massive wet footprints. While no expert on animal tracks, I knew fresh marks when I saw them, and that meant something really big just ahead on the path. My vivid imagination presented danger -- possibly a bear? Upon rounding the bend our eyes beheld a massive St. Bernard wagging its tail and eager to jump up and greet us. Would that all authentic puzzles could be so happily resolved.

I prefer to deal with real puzzles; I am confronted by one which takes my recent free time: How does the Triune God show some mark on all the handiwork of creation, and especially on human activity? Esoteric? Perhaps, but I am finding in old age that my free time should be spent on more theological considerations, and this one has some real practical ramifications of which this book will try to unravel.

This personal "pastime" work has immediate application because it comes when I share an urgent concern with the broader environmental community: How do citizens address climate change in a forthright manner that will lead us to avoid a global catastrophe? My current personal puzzle (Triune God in our world) and the urgent public interest issue (effective action to combat climate change) may be seen as a fortuitous meeting of efforts. The Spirit speaks within in God's own good time; the need to break through the unwillingness to hasten the global adopting of a new energy economy may have a spiritual dimension that needs to be clarified. Believers have a role to play.

Climate change calls for solutions within an ever-shortening window of time. Some 99% of climate scientists say this change is of human causation. The December, 2015 Paris Climate Change Conference agreements consented to by 196 nations presented the need for action to halt global temperature rise. Higher levels than 2.0 degrees Celsius rise will have awful consequences: melting ice sheets, rising oceans, extreme weather events and over 500 million displaced persons due to oceanic flooding. A few influential naysayers profit from the fossil fuel economy and spend large amounts of money to retain the

status quo and retard an emerging renewable energy economy. Recall Big Tobacco along with their paid "scientific" lackeys maneuvered a highly successful rear guard action as merchants of doubt. Postponing a renewable economy has far greater consequences, but how can we hasten it?

A subset to this problem is the question: Will a socially addicted consumer culture show willingness to change the economy without recourse to a higher power, or do people think it can be resolved in a purely secular fashion? On the other hand, believers wish to bring God into the picture. My proposed attempts are modest at this level: I seek to convince Christian believers that they have the power to present a coherent world view conformable to the physical world and also centered on the Triune God. This is why "resonance," the echo of divine unity, enters into every aspect of the world around us and must, to a certain degree, be championed by the general public. The fuller understanding makes this promotion of resonance a key to collaboration at a global level.

Theological advances move with human demands at a given time. Saving our wounded Earth enters us into Salvation History -- a more monumental advance in our divine and human cooperative efforts. Moreover, these Christian activists need to feel a grander effort on the part of all. Thus our immediate goal is practical, but this needs a theological foundation much as St. Augustine suggested one at the time of the spiraling collapse of the Roman Empire of his day. We need a comparable "City of God" today, a vision that will inspire people of faith to show ever greater enthusiasm to fellow concerned global citizenry for the mighty work that must be done, with all participating as much as possible. This involves an effort to gather a critical mass of believers to foment a revolution that touches an economy and ultimately our civilization.

My insight is that by pursuing the puzzle of the divine echo in our lives a small group of enthusiastic believers can help save our threatened Earth. A mere secularist answer devoid of "God talk" is sterile and cannot generate enthusiasm. By becoming servants of our God, Christian believers have a vital part to play. Inequality must be addressed and ushering in a new economy can happen and has been considered in my previous work "Healing Earth: Nine Reasons for Revolution." Real puzzles have engaged my hobby time for years: the amount of energy each American consumes (a 1970s fixation), and the ethnic composition of Appalachia morphing into that of the United States (1980s to 2010). However, this final truly complex puzzle demands collaboration, for it enters into a spiritual solution to the immense problem facing our world. It's a work-in-progress but invites your assistance. And it may add an element to the global collaboration that could save our Earth from massive destruction.

Introduction

I happened to read in late 2015 two books next to each other that gave insights into the vexing problems at hand (global ones needing spiritual assistance). One was fellow Jesuit Joe Bracken's "The World in the Trinity,"¹ which treats an open-ended Systems approach to science and theology. The other was Ilya Prigogine's "The End of Certainty,"² which tackles time, chaos and the laws of nature. One deals with the harmony within the Triune God and in much the same way the other with harmony in primitive matter. Amazingly, both showed deep respect for the process of creation. From an outsider's stance, the echo of the creator resonates within all creation, and herein rests some of the key to bringing us closer to God for companionship. God beckoning us to advance in a deeper mysticism while engaged in activism, truly a great challenge.

The successful solution to climate change requires an enthusiasm that burns deeply within us -- and this calls for a deeper spirituality. If all of us suffer from a social addiction mainly caused by the plethora of consumer products, then the dynamics needed to solve this major planetary problem cannot be achieved without a commitment to overcome the addiction and to trust in God. This book is not so much a way to convince deniers of climate change, or those who leave it to the experts, or even focusing the attention of the distracted folks bent on more air conditioners and electronic gadgets. In essence this book assumes others have convinced concerned citizens.

Collaboration involves a **resonance** among advocates for change who support each other in the long haul. The focus here is to help hasten the coming of that renewable energy economy beyond technical innovations and economic incentives now in vogue. Urgency impels this process forward even while practical reality tells us that it will take time to complete the process. This calls for sustaining collaborative endeavors at local, regional, national and global

levels in a process never before encountered in human history. For believers as agents of change this demands a deeper spirituality.

The problem of arousing the public to change has baffled those of us in public interest work for decades. Our books, talks and activities on secular levels for universal acceptance only work to a limited degree. More is needed, for time is short. The challenge is how can average citizens move from socially addictive consumer products to effective efforts that may involve both voluntary actions and governmental restrictions on resource waste? Description of simpler lifestyle techniques abound and will not be repeated here, even while governmental regulations must be coupled with the less universally effective voluntary actions. Here the focus is on more than conservation techniques that are well discussed elsewhere; rather the goal is to elicit all means at our disposal to work together to answer problems at hand. As in the first American Revolution with its trying moments, now global citizens must come together to find a solution but again, as in the eighteenth century's first revolution, in God is our trust.

This necessary collaborative effort includes all aspects at our disposal and involves a stepwise process involving physical, chemical and biological levels of resonance and continuing through various levels of human engagement in communications, art, music and compassionate caregiving; in the second part of the book the spiritual dimensions of these stepwise endeavors will be introduced. God is with us and source of the enthusiasm needed for completion of our work. What is expected is that agents of change will subsume all resonating effects of the various levels within the human person who is working for global collaboration.

A secularity that limits solutions to what people can do among themselves is sterile and devoid of continuity of effort. For believers, something is missing that was certainty there at the founding of the Republic, namely, a conscious trust in God. Being true to our own American traditions means not accepting the absence of God, but acknowledgement by agents of change that addictive behavior is overcome by recourse to a Higher Power. Citizens cannot do it all themselves; they need to look beyond. From a theological standpoint, this "beyond" means that an invitation to a new world, a fulfilled kingdom, becomes part of the energy it takes to persevere and solve problems, e.g., climate change.

This broader goal can only be reached if those setting the pace of change act in a Godlike manner -- and thus the need to delve into our spiritual relationships, for we are created in God's image -- and our good actions mirror the Almighty's. Thus a social resonance leading to global change is the point of

this book -- the resonance of God must be part of our own way of acting (Part Two).

Harmony within a Divine Community rings as an echo in our ears and vibrates throughout the universe. Openness to change is paramount, for prayer becomes a part of the believer's efforts. But the saving power of God is present to the believer, a power in which all share in being "other christs." One is empowered to speak through the Spirit in a lively enthusiastic fashion. Human empowerment is acknowledged; celebration is a harmony of the work of the people, compassion is intensified, and a mystical awareness of God's presence is forthcoming -- not by human efforts but the working of Salvation History.

The problem before us is complex. Along with 99% of climate scientists, we accept that an ecological catastrophe is in the offing if left unaddressed. However, terrorists threaten our civilization as well, but protecting Earth from climate change and protecting civilization merge as a single problem, for without a balanced Earth there is no civilization, and without civilized cooperation our threatened Earth cannot be saved. This goes beyond discussing "The Theory of Everything," that formula stamped on outworn T-shirts. We take this more seriously. Should a focus be to gather a critical mass to foment revolution leading to a renewable energy economy, but one where immense privilege to limited resources is curbed and inequality in its injustice is addressed?

Hurdles baffle us, especially in the form of paralyzing addictions (drugs, alcohol, etc.) that make collaborative reasoning difficult. A major, often unacknowledged, addiction is the lure of consumer products that socially affects virtually everyone within our modern culture. Knowing our condition that is better understood by ex-addicts is a humble start. Furthermore, refraining from compromising with confirmed secularists may be shortchanging our efforts for universal collaboration -- but that is a risk. Ex-addicts give witness to their recourse to a "Higher Power" as an essential element in their healing process. Secularists accept urgency and need for collaboration, but all must first find areas of common agreement (Part One of this book).

Unity in collaboration. How can active believers in the future better resonate with each other? This is a goal of our discussion here. Urgency accompanies the rapid rise of greenhouse gases, and the inability to curb these in sufficient amounts. Few touch the hidden aspects of collaboration; too often the assumption is that harmony is automatic once we accept the critical nature of the problem. Global resonance involves a common goal achieved through successful collaboration, only fully possible if a basic inclusiveness of all citizens

is maintained; furthermore, financial and political privilege must be curbed, for billionaires are exclusive folks who champion an exceptionalism that creates immense divisions and areas of terroristic discontent.

The cynic challenges the activist: "Let it be;" "Eat, drink and be merry, for time is fleeting." Yes, the invitation to that final fling is utterly enticing but, in the moment of a down to Earth calling, something more enticing emerges as part of the puzzle-solving process -- a better, though unpredictable future. Far grander than selfish satisfaction is our acting together for a Common Good, joint actions of brothers and sisters within the human family. Yes, divisions exist but can be healed through harmonizing, and all of us learn to live together while tolerating some differences. But harmony is not a collection of good deeds when inequality exacerbated by Big Energy is allowed to continue.

Deeds speak louder than words; an activism of the scope that can overcome the incredible tasks before us calls for teamwork among people of faith in the future who are willing to work for social justice. Urgency drives this project in which emotion and intellect coalesce in an internal quest for a solid *modus operandi*. The urgent call is for all to resonate together, or else all is lost. Our hope is one of trust that a critical mass can be assembled to do just that. Note, this team is not denominationally based; recall that some Christians or Moslems or "nones" have no concern about our planet's future. Furthermore, the path ahead is uncertain, even for those believing in a successful conclusion. Invitation is to a collaborative venture even if uncertainties persist. Some time must be spent on the various forms of resonance and how each contributes to the ultimate collaborative process.

Orientation

Certainly every individual effort through citizen conservation of resources and modification of lifestyles ought to be encouraged. However, these worthwhile activities are not sufficient in themselves; voluntary efforts are inherently limited to the generous few. Many people think only for today and their personal benefit, and have little regard for future generations or distant neighbors. Failure of care for others, whether present or future generations, leads to the accelerating push to grab what is good for me and "to hell with the rest of the world;" this is a sure formula for further severe negative climate effects (rising oceans and temperatures, reduced glaciers and water sources, and droughts, floods and inundated island nations).

A **work-in-progress** is not a popular theme for a book, for people like definitive conclusions. However, this investigation involving the broadness of the metaphor of resonance is more a beginning than any conclusion. Perhaps

many want simple results and that is not forthcoming without long-term commitment on the part of many citizens -- and this takes time and effort. Since the book is directed to believers in the future, one needs to emphasize the certainty of a New Heaven and New Earth and what this implies for all engaged in saving our threatened Earth. Urgency both in the longer and shorter term motivates us.

A truly collaborative endeavor benefits the entire world community and not a privileged few. So much of the thrust in recent globalization efforts has resulted in instant billionaires who then can enhance their fortunes as they see fit; thus, their exercise of monetary power cripples citizen democracy and influences legal exemptions and their privileged tax havens. The autocratic decisions of the super-rich become the order of the day to the detriment of the multitudes who suffer from growing inequality. Instead of this temptation to self-centered benefits, the better the like-minded resonate together, the greater the benefit to Earth and its inhabitants. Diverse ways of thinking encourage meaningful collaborative endeavors, thus meaningful contributions can come from a variety of intellectual pursuits and walks of life.

Resonance in its broadest terms is a relationship between two parties or entities, or an action within one that gives expression of benefit to another when fully related. Thus, physical phenomenon has relationships through the universal vibrations occurring in all the particles that make up matter and forces (Theory of Resonance in Strings), wherein everything in the universe is comprised of tiny vibrating strings. Differences exist among particles in the vibrating resonant patterns of which examples will be introduced later. Thus resonance is always active and covers vast sets of phenomena that include natural and human interactions and affinities.

In its most elementary levels, resonance could be called a **sound** to hear and a **vibration** to feel; it is a vibrational effect produced by one with another and having a pronounced effect. As for physical results, *resonance* is an oscillation of an atomic, acoustic, electric, mechanical or other system at its natural frequency of vibration, enabling a large output to be produced by a comparatively small input.³ Here the physical phenomenon is extended to human relationships: basic communication, successful teaching, caregiving and forms of teamwork and collaboration among ever widening circles of human beings. Critics might say the use here is so extensive that it lacks precise meaning -- and this is both its weakness and strength. Resonance admits of degrees of interaction and association. If a new resonance (global collaboration) must emerge to solve modern urgent problems, then characteristics of affinity, clarity, expressiveness, interaction, and harmony are expected and their roots found at lower levels.

For those unfamiliar with the term *resonance* as a natural phenomenon, consider the ordinary example of the natural frequency of the pendulum; a child's swing. When our push is in natural sync, the swing moves with greater sweeping arches, with gleeful shouts of enjoyment and harmony on part of both pushed and exerting pusher. A form of resonance that is physical is morphed to humans involved -- and all resonate together. When the swing is no longer pushed it returns through friction to a motionless state and the action ends. One component is physical, for it involves an external force (pusher) driving a system (swing) to oscillate with greater amplitude at a specific preferential frequency; but an added human aspect is resounding enjoyment of pushed and pusher.

This resonance project includes a sense of mystery, increase of intensity of sound by sympathetic vibration, importance of communicating partners, art and music appreciation, social communication and interaction of humans, psychological growth and maturity with others, compassionate care, and an entire collaborative enterprise at various levels and through cooperative endeavors that address global concerns such as environment and preservation of civilization.

Differences and similarities exist in resonance, each level from the elemental physical to the interactivity of human beings in collaboration adding to a total awareness that is emerging through our human contributions. Greater human sensitivity occurs when aware of the beauty and power of various levels of resonance. Authentic human resonance has immense power to join, uplift, educate, show compassion and become of one mind. All of us soon discover the root Latin word *resonantia*, meaning an "echo;" citizen's collaboration becomes an echo of the whole of the cosmos in its natural flow and, when that flow is disturbed by greed and ignorance, the resonance needs to be reestablished. If humans cause these difficulties, those seeking social responsibility are called to make correctives. But this cannot be done at the human unaided level alone. In God we trust!

Audience

Believing in the future does not mean specifying what is that "future," for its characteristics may differ among well-meaning individuals. Working for generations beyond involves a willingness to pass on a fruitful legacy. Hope and confidence replaces desolation, despair and a dysfunctional status quo that denies climate change and its severe effects on others and especially the world's poor. Activists know our Earth and civilization are worth saving, but forming a workable team is still challenging. Fairness says all must participate, not be

mere spectators. This takes commitment to action, not just verbal expression (a noun) but participative change (a verb).

Collaboration yields to a future that awaits specification. All are invited but many will not come. Ideally the target audience is believing activists willing to form a **critical mass**, a close community of believers who reinforce each other through shared communication and prayerful harmony. This need not be limited to Christian activists, for all believers are invited. It is true that committed secularists would not find this inviting, but they are not meant to be excluded. However, God is with us here and now.

Limitations

Openness is welcome for softening our rigidity that makes some feel excluded; their presence and contributions would actually be universally beneficial. In this regard, a believer whose content of belief is not yet specified may enter into the process with a positive sense of good will that constitutes positive vibes needed for health and change.

Teamwork is problematic because some do not pull their weight. Leadership and enthusiasm are key components. The immense troubles facing humanity and Earth herself demands collaborative effort, and yet all of us are socially addicted people with inherent limitations in varying degrees. Over the past two decades this stumbling block has emerged ever larger, and seems at times impossible to overcome. Powerlessness confronts many of us, but deep, deep down a sense of hope to find solutions contains a latent power, a spiritual dimension, a Higher Power calling us to deeper harmonious collaboration. The practical aspects of different forms of resonance may scare some and turn off those knowing a particular field with greater depth. Note that this book is a beginning and not a last word, and the confidence is here that those knowing more will be able to contribute much to this work-in-progress.

Resonance can be hindered. If free agents can participate in solving our crises, so can free individuals decide to stifle or retard what others want to build. People acting as free agents can construct or obstruct. A contrarian spirit is possible (note climate change deniers); one can say "no" and act as a spoiler. Much of the battle of ISIS terrorism today is one of turning what could be beneficial efforts of building a neighborhood into a destructive act of tearing down. A higher quality of resonance on the part of people occurs in an atmosphere of freely saying "yes," and to work in an affirmative atmosphere. This is a subject for further reflection.

Qualifications. Is a generalist qualified to speak? Perhaps elders with no pressure to produce specified results have the extra freedom to grasp and discuss connections that younger workers with specialties in particular fields tend to avoid. But what if no one is fully qualified? Does a matter go undiscussed? Rather, it is my belief that qualifications may rest in a lifetime specialty, "public interest science," or the intersection of scientific knowledge and human day-to-day practical aspirations for a better quality of life (food, lodging, fuel, etc.). The goals of this science are a higher quality and environmentally benign future, while confronting the addictive barriers faced at this time. One is never too old to hope to realize the potential active characteristics of numerous individuals who work together for a common achievable goal.

Personal Experiences

The highlighted paragraphs at the beginning of each chapter sub-sections may jar some of the academically-oriented. These examples involve a personal experience of forms of resonance that invite readers to identify through their own experiences. Resonating together is a process, calling each of us to participate in the way deemed best according to our talent and energy. It is an invitation to participate more fully in a global healing process by reflecting on current personal experience. In the act of focusing first on internal resonance, a respect for others with whom we share is recognized and appreciated; this is an essential ingredient for true community. Global resonance is not yet learned and so we all are in process of being taught. The hope is deeper collaboration within a troubled world.

My choice of common areas of agreement is the many ways one can speak of extended harmony -- physical, chemical, biological, communicative, artistic, musical, psychological and collaborative. In so doing, an emerging similarity is discovered that becomes ever more inclusive when engaging in areas of greater global cooperation. The process opens up: all of us begin to discover a common goal of a higher quality of life, all achieved through a process of real puzzle-solving. For the Christian believer, a "Higher Power" is a Triune God, a community of persons whose harmony extends throughout all created matter.

References Introduction

1. Joseph A. Bracken, SJ, *The World in the Trinity: Open-Ended Systems for Science and Religion*, (Fortress Press, 2014).
2. Ilya Prigogine. *The End of Certainty: Time, Chaos and the New Laws of Nature* (New York: The Free Press, 1996).
3. Thomas Crump. *A Brief History of Science*, (New York: Carroll & Graf Publishers, 2001), p. 396.

Resonance

*It's in no place yet it's all around,
breaking, quaking moments, sure rebound;
Does it ring forth from a distant chime --
Big Bang that lighted our span of time?*

*I feel deep harmony e'er so fine:
yellow-colored, scented dandelion,
flitting mockingbird about to play,
gentle breeze, late winter's sunlit day.*

*I find it all so baffling, so quaint,
it confounds my deafness, oh so faint;
Yet it gives me presence with others
adding "and" to sisters and brothers.*

*All respond in varied cults and tribes
to groomed, bloomed, heirloomed vibes
that make us truly a special stand;
yes, spawn from that mighty creative hand.*

*We yearn for a moment when pulled and swayed,
attracting, resisting, staid and flayed;
Echoes perhaps, but who only knows,
Trinity dancing on their toes.* AF 2015

Part One: Universal Resonance: It's Everywhere

We elders are supposed to dream dreams while young men see visions (Joel 2:28). Actually our dream world includes a world of better quality of life for all, even when our energy as activists seem to wane and our mobility becomes more impaired. Rather when our visions tend to fade, still the scope of our work is one of vibrations that shake our dream world and call our attention to a cursory succession of sensations leading to a better future. In each of the forthcoming chapters we discover resonances that point to greater things to follow and become cumulative clues to the characteristics of a collaboration that must start now.

1. Physical Resonance in the most elementary level presents a mystery of a world with some answered and many more unanswered questions. The physical components of our world contain their own resonating characteristics for all entities contain forms of resonances, some interacting at various levels at the same time. The interactions of the microcosm of entities resonating with others produce an arrow of time moving irreversibly forward. The **Big Bang** event (about 13.7 billion years ago) is detected today by a cosmic microwave background. Adding to the scientific mystery is the "dark matter" that exists, but remains intellectually unconquered. Light travels through unimaginable distances; the shape of space and time boggles the mind. All the while physical scientists resonate within an intellectual community to probe natural mysteries that deepen even while enlightening. Resonance among those probing these mysteries gives us a deeper sense of awe and respect for the cosmos.

2. Chemical Resonance at an elementary level refers to multiple Lewis structures that allow us to describe molecules that contain fractional bonds and charges; this useful imagery assists in understanding the chemical reactivity of specific compounds when under certain conditions, and thus allows the transformation to useful products to enhance our ordinary lives. Further usefulness results through Nuclear Magnetic Resonance, a phenomenon that plays a major role today in scientific and medical analysis (MRI). People resonate with chemical products, though many do so improperly and no longer respect the power of chemicals to do both good and harm. Substance abuse can easily result. The chemical profession has a duty to speak out in the public interest about how science used in commercial ventures affects the lives of people; it is a duty to speak of using materials in moderation.

3. Biological and Acoustical Resonance influence human action. Earth's living residents result from ancient origins still its own mystery. This life force is

truly fragile and worthy of respect and care by us with power to improve quality or snuff out living species. Our sensate life is shared with other animals, but also demanding free choices that make for a better or worse quality of life for all. From within the sensations of life we acquire an acoustical resonance; this involves sound that can be controlled in intensity and duration to achieve ecological balance. To some degree, we can overcome noise and visual and other forms of pollution and establish compromises in ways that all can live higher quality lives within community.

4. Communicative Resonance is the dynamic resonance of two or more parties seeking a beneficial relationship through personal exchange or presentation of information. Human communication expands the simplest forms of communication in the animal kingdom (proximity, security, etc.); social media participants experience resonance through *electronic mail/Internet* connections. Furthermore, a form of this resonance of an educational nature involves transmitting knowledge and simultaneous learning through classroom exercises, research and teamwork. Community organizing and advancement succeeds when parties can go beyond material and cultural inequality, for equality enhances the quality of resonance. Through this form of resonance, people sense their connectedness and are aware of the need to grow intellectually and socially when working for common goals.

5. Artistic Resonance includes several aspects: interior creativity of the artist producing an artifact; resonance of art materials with the creator and the store of experiences of the artist; and the interaction of creator and participants affected in some way by the artifact. Most artists desire public approval by exposing the intensity and richness of their works. Art in all its many varied forms highlights that truly human genius in creating a work and allowing others to appreciate art through and beyond the artist's life span. Immense satisfaction comes to the artist through treasured creativity that has its own social impact with those who appreciate the produced art.

6. Musical Resonance electrifies the world around us, touching our souls and offering opportunities to celebrate through making or listening to agreeable sounds. We are amazed that through proper musical language the transmission of musical compositions of former ages can be effectively communicated to us today; a Mozart concerto can be performed with much the same vigor and style over two centuries after creation -- by talented folks. This and all of the created harmony in music adds to the sense of mystery in human creativity. This extends beyond our own individual and cultural musical choices; it extends to other cultures ushering in greater tolerance of the universality of the human music venture. We are invited to celebrate together.

7. Psychological Resonance focuses on an internal balance needed to afford an opportunity to assist others. Understanding our internal troubles and being able to live with them and to retain physical and mental health is a goal that helps us relate in a social fashion with our neighbor, and to engage more fully in the life of the community.

Here the resonance of compassion reveals itself within the social structures where we find true human needs. The glue needed to bind us with others within the human family is this sense of suffering with them in a very intimate manner where the victim and caregiver become one. We resonate beyond proximate kinship and can bridge distance by coming in contact with suffering either directly or through social media contact; this compassion is practiced by caregivers and is magnified through heart-to-heart interactions. Through compassionate suffering we can affirm that no suffering is lost, but rather all yields to a universal benefit.

8. Collaborative Resonance extends to all people and not just global leaders; however, these latter have a duty to work together to make a better world. This is a world facing threats due to our human malpractice that have resulted from greed and ignorance. In the opposite venue, the human family is rising to meet this crisis and is mindful of a new resonance never before experienced. Individual and local communities contribute, but so do all human groupings at regional, national and international levels. Teams accomplish more than individual 'Robin Hoods;' they grow through collaboration and are needed to reduce climate change and to establish a renewable energy economy. The air is electric with profound social, political and economic changes in the making, and this calls for an urgently needed collaborative form of resonance -- the goal of this project.

Chapter 1. Physical Resonance and Mystery

Common sense attributes to nature and sane human persons...the ability to choose freely between alternative possibilities of acting. Karl Popper

If resonance is postulated to be everywhere, then logically it may be the best place to start with the physical universe, both the invisibly small realms of elementary particles (the **microcosmos**) and the infinitely starry stretches of the universe (the **macrocosmos**). While taking on the physical world's resonance may appear best, still it may be difficult for readers who find many of the aspects of the physical realms somewhat mysterious. They may prefer beginning with the resonances of domestic life, but that too has difficulties since so much of ordinary communication does not resonate well between parties. Likewise each area of resonance means meandering into higher intellectual realms where critics say this treatment is too cursory -- and yet they are aware that much is mysterious here as well.

As Socrates says, "Wisdom is knowing that we don't know," and there is much still unknown in the vast and minute physical realms. In the area of physical resonance let's apply Zoob's Law: "People tend to oppose that which they don't understand, the degree of their opposition being directly proportionate to their ignorance." It's like Murphy's Law (whatever can go

wrong will go wrong). The world still has much to learn and yet it may be a process of piecing things together. For some this piecing together of areas not yet known and seeking some sort of coherence is a real puzzle, which life is too short to solve. For the adventuresome this is really a stimulus, especially if in knowing our practical aspects of life might be improved. So is the puzzle of ubiquitous resonance. The goal here is to expose that ubiquity in hope that greater clarity will come in time. Furthermore, by such action an improvement in global resonance with controlling climate change may result. This is certainly more than knowledge for its own sake.

In delving into practical applications limits arise as to time to accomplish a task, the neighboring physical resources at hand and the assistance from other like-minded activists -- time, space and people. At the start one is acutely aware of the need to overcome these apparent handicaps: our lives are short and getting shorter with age; our environmental resources are difficult to secure and becoming ever more threatened; and our ability to secure needed assistance by others depend on convincing them that this is a noble cause worth their attention. In treating resonance the activist seeks to economize on time needed to grasp the subject, the ability to muster resources to complete the task, and the ability to retain interest among agents of change. In all cases the need is to resonate within ourselves with time dependent elements, resonate with the environmental resources needed to complete the task, and resonate with people who are willing to participate in the task at hand.

a) Fleeting Time

Time passes fast, and especially that is true of us who are nearing the end of average mortal lifespans. Looking back, much of it, even entire decades, seem to pass with little recognition of what was achieved. Only in returning to an itemized "day book" does one discover the blurred busyness of a few decades ago. In some ways, our earliest decades are the most vivid, even to the point of recalling the feeling of the iron on particular gate latches. Yet far more recent events seem distant. Time plays games with us.

Is 'What is time?' the perennial question? Is our future determined by what has occurred in the past, or is there a possibility of changes greater than what classic mechanics would have predicted? A battle in natural science and philosophy has raged between those holding for a deterministic science (Newton's physics) and those upholding an unpredictable element in nature. All seek an intelligibility of nature, as A. N. Whitehead indicates when he posits: *The attempt to frame a coherent, logical necessary system of general ideas in terms of which every element of our experience can be interpreted.*¹ This subject of

time applies to many of us with different levels of intellectual talent and faith experience. Part of that experience for us elders is the urgent need to work with others. Practice, not theory, drives us forward even while mobility and amount of energy diminishes. Hopefully without too much distraction let's look at our reflections on time.

At this most elemental level of concern I feel a kindred spirit with Nobel Prize-winning chemist and thermodynamicist Ilya Prigogine (1917-2003). Incidentally, he overlapped during my stay at the University of Texas at Austin while working as a post-doctorate fellow with Michael Dewar in the chemistry department. Prigogine really extends the principles of his thermodynamics to everything from tornados to thinking beings -- and that touches a generalist's heart deeply. He holds that modern physics needs a new formulation, and that evolutionary aspects of nature has to be compatible with a full-fledged physical theory.² He proposes that the reasons for indeterminism (not fully predictable by past knowledge) and temporary asymmetry (time is not reversible) can be found in dynamics. For him the issue of the creativeness of life in no way contradicts the laws of physics.

Many modern physicists have suggested that the arrow of time obeys the second Law of Thermodynamics as proposed by R.J. Clausius in 1865. But is that true of irreversible processes such as radioactive decay, viscosity, and living organisms? This implies a pessimistic perception of increasing disorder to which Prigogine vehemently objects; he insists that the world is not a closed system as happens in thermodynamic calculations, but an open one and the unidirectional character is due to the resonance within the interacting particles themselves.

Resonance as considered here is defined by Prigogine as *The constructive interference that appears when two frequencies in a system are rationally related.*³ These natural entities of any size interact and help designate future paths to be taken; herein lives the ground for irreversibility in nature, the arrow of time that is the source of order.⁴

Prigogine is intrigued by the concepts of the great 19th century French mathematician/physicist Jules-Henri Poincaré; he says that Poincaré's resonances play a fundamental role in physics.⁵ As will be mentioned in Chapter 6 on Music, in physical resonance a spring can be deviated from an equilibrium position; it vibrates with a characteristic frequency with that of the applied force when equal to or larger by whole number integers. All find harmonies; resonance couples sounds. In systems with two frequencies, resonance as frequency is a rational number. Poincaré points out that the ratio is a rational number with "dangerous denominators." *Whenever there are*

*resonances these terms diverge.*⁶

Thus, determinism is shaken at its core; it is difficult to identify a problem in classical (Newtonian) or quantum physics where resonances do not play a significant part. Prigogine distinguishes individual level (trajectories) from statistical level (called *ensembles* as described in probability distribution). Resonances are not local events; they do not occur at a given point or instant; they lead to *diffusive* motion with various probable routes. This prohibits solutions of the classical equations of motion and moves matters to the field of probabilities.

The lack of predictability means that several paths may be taken at the sub-atomic level and herein one may say rests the first spark of freedom in this universe -- a new starting point of dynamics. A compatibility answer meets the more complex world of biological evolution, an open system, a world not of deterministic certitude but of possibilities. The question of scientific certainty still divides scientists: some think it is a goal of their theories, but some like Carlo Rovelli hold that science is not about certainty. Many of us would agree with such empirical scientists; however, they should not extend their field to include theological realms, though one will never be certain of our paths to deeper understanding. Our personal futures involve a path of indeterminacy, a sense of mystery of which time matters.

A fall of mechanistic determinism in the 20th century unveils the insight: from the past one cannot plot the future. The world is not a perpetual clock. If certainty means deterministic plotting, then that age is gone. Our past does not lay down the future concretely and act it out slavishly. By predictability, I can describe what I think the future might be, not what it will be. Degrees of freedom come into play. I create my future, and scientific theory seeks meaning in the changing world in which a plethora of egos exist. From the Werner Heisenberg *Uncertainty Principle* one discovers an inability to determine position and velocity of an object both exactly and simultaneously. And the very science itself has similar characteristics in its journey through time. The twentieth century showed limits to classical and quantum mechanics when dealing with microscopic atoms or elementary particles, and also with the vast astrophysical universe as well.

Ilya Prigogine joins many of us who share being intrigued all our lives by the concept of time. One comes to realize that time has common sense and scientific components. As young children birthdays seem so distant but as elders they pass only too fast. Time marches on and this continuous flow seems to speed with aging; it just won't halt. Likewise, time is irreversible and contains a future with a multitude of unpredictable possibilities related to

environment, age, human experience and even mental health. With age our concepts of time evolves when so much mortal life is behind and our vision blurs as our dreams magnify. With an economy of time our world can be saved. Let's look at some concepts of time.

The ever-moving **present moment** is at hand and then passes on and fades quickly into history. The current moment is the convergence of a partly remembered **past** with all its imperfections, and an anticipated **future** with all its hopes, dreams and possibilities. To slight either past as some prefer to forget or consider outmoded, or a future that they would like to manage totally on their own, is to disrespect the sacred present moment with its raw reality. Disrespect warps the straight arrow of time and causes disturbance in goals and loss of opportunities for success.

Respect for the past comes through a sense of and respect for history, a knowledge and love of culture, and an acceptance of the sacrifices of our ancestors. Honoring the past includes a "Down to Earth Spirituality"⁷ that accepts an honest look at life's pathways, a sense of begging forgiveness for what went wrong individually or socially, and a resolution to learn from past experiences. Gratitude for gifts, including the openness to see the past as lubricant, turns our hearts resolutely to a future horizon. Those who reject or forget the past are said to be doomed to repeat it, but even that has a heavy degree of probability involved.

Hope for the future includes an enthusiasm for what is to come and a confidence that the best can be achieved through trust in a Higher Power. However, the future is not set in stone; it is still awaiting creation. The believer in the future knows that changes in intention occur and new paths are taken. All of us help create our future for better or worse. Thus the space ahead is open to possibility and that holds from the smallest sub-particle to the most diligent human activists. Wheels do not have to be reinvented; a firmly believing community creates its future.

Awareness of the present includes alertness to life's current conditions and an ongoing enthusiasm to resolutely hasten the future. Curtains close on aging and fading memory; veils inherently cover a future that does not yet exist. Yes, our human dynamics are uncertain and yet include the power to reach a goal. Aging or maturing includes living comfortably with mystery. Each present moment must be seen as a new beginning and a happy ending within a passing transformational stage. Those who close out their future fail to live the present to the full.

b) Immense Space

I do not have TV and would never have thought television could ever move me. A few decades ago I happened to see a program on the beginnings of the universe -- when and what the title was has faded; all that remains is that an almighty hand is behind the Big Bang. This was a moment when intellectual scientific theory and religious emotion merged with a profound effect on me as viewer.

Big Bang was an event almost 14 billion years ago (some say 13.8 billions) that is now regarded by most of the current scientific community as being the dramatic start of the universe -- a moment of very high density and temperature.⁸ In 1927 George Lemaitre, a Belgian priest and physicist, proposed establishing the point of dramatic cosmic beginning, and over time it became known as the "Big Bang." Dating this has been augmented by Erwin Hubble's observations that nearly all of the galaxies show a red shift radiation when moving away from us; the ones farthest away are moving faster. Since the apparent brightness to us versus the actual brightness (standard for stars of different composition and stages of life) can be measured, the age of the universe is within the 14 billion year range.

In 1965 scientists announced that they detected (and heard) the "sound" as cosmic microwave background -- a "resonance" if truly an echo. For those seeking harmony, this was most fitting and yet, in fairness, is open to further discussion. In 2014, Hans-Jorg Fahr, a professor of astrophysics at the University of Bonn in Germany, postulated that the microwave radiation which bathes the sky is not the distant echo of the Big Bang -- but the discussion continues. Orrell associates the quest for harmony with modern physicists, including those working at the Large Hadron Collider in Switzerland/France who "have been risking 'madness and vexation' since 2008 to recreate, in a controlled way, the ultra-hot conditions that existed shortly after the Big Bang."⁹

Traditionally it has been thought that tiny temperature fluctuations in this microwave background indicate a clumpiness in the early universe. An observed universe constant temperature has suggested a uniformity resulting shortly after Big Bang. And to get from that smooth early state to more clumpiness today, some introduce the concept of "dark matter," a quite mysterious ingredient. Fahr says it uses one unknown to explain another: *This is sort of an entropy feature of the cosmos as it is.*¹⁰ Some postulate a ripple effect in space and time when two black holes collide. But what precisely is a black hole? Mystery increases in this physical space phenomenon as the following examples indicate.

String Theory invites us to return to the microcosmic level and speak

about an aspect of elementary physical resonance. The theory is that absolutely everything in the universe -- all entities making up matter and forces are comprised of tiny vibrating one dimensional fundamental "strings." Each of these elementary strings has its mass, charge and other properties determined by the vibrations of the strings. The theory has a variety of potential applications in elucidating black holes and that of providing a unified description of gravity and particle physics; lately string theory is related to quantum field theory but some question the value of continued research on string theory unification.

The resonant pattern associated with all objects involves frequencies. Just as a musical instrument has vibrating strings with a particular tone, so the body of the instrument has additional resonant features making this a higher valued device, so do all objects have specific frequencies including our Earth herself. Each resonant pattern is a multiple of the fundamental frequency.¹¹

Mother Earth's heartbeat is another example worth noting. "Schumann" are global electromagnetic resonances, caused by lightning discharges (about 50 per second) around the planet occurring in the space between the Earth's surface and the ionosphere. These electromagnetic waves are quite weak, varying with weather patterns and averaging about 10 Hz. Since June 2014 the steady resonance frequency of about 7.83 Hz. has been observed to increase to as much as 16.5 Hz. Since these resonances are naturally correlated to human brainwave activity, human beings can experience these increases in Schumann resonance or Sensory Motor frequency (SMR). Some would suggest that this is an awakening and could result in changes in the mood of individuals.¹² Is this phenomenon "being in tune" with mother Earth -- a body that resonates with different objects within and without?

Resonance at the physical level appears in various ways: it is involved in the first moments of the universe itself, in the composition of all entities, in their interactions, and in determining their differences. Undoubtedly, resonance exists at both the micro- and macro-level, as indicated already in both theoretical and empirical considerations. Had the explosive character of the Big Bang not occurred, the evolving and expanding universe would not have resulted. What about the marvelous gathering of cosmic fragments into stars and galaxies through the force of gravity? One body "resonates" with another and yet the resonance of expanding bodies is a deep mystery to us all. The universe space is utterly immense; it is measured in multiple light years, a unit defining the distance light will travel in a vacuum in one year (5,880,000,000,000 miles).

Multiples of this measurement baffle our minds when only a few hundred

years ago Earth was considered the center of the small universe (geocentric and then heliocentric models); stars were fixed and planets revolved around Earth, and the sun rose and set as did the wandering moon. Since then, with powerful telescopes, inhabitable planetary space shrinks to a blue-green speck in a vast ocean of what may be near void. Yet as in a paradox the mystery of our spatial presence deepens with years. This invites us to resonate with mystery itself as knowledge advances.

There's much each individual does not know or at best only a few can fathom. For instance, the general theory of relativity is a pleasing expression of math harmony and elegance; it beckons to a broader understanding. The British astronomer Arthur Eddington, who proved a distortion in space as predicted by Einstein's theory of General Relativity, was stumped by the suggestion at a public event that "he must be one of the three persons in the world who understand general relativity; he was silent for what some thought modesty and said, "On the contrary, I am trying to think who the third person is!"¹³

Mystery exists and grows even within the human community -- and that is accepted as part of our limited human condition. Still, even without understanding like a few others do, all of us are invited to resonate with those who know more about a physical aspect. Each takes as an elementary element of trust that forms of creativity are emerging; and these are worthwhile, and this requires a basic confidence in "the advance of science." The interrelationship of elements is not established even when all of those struggling to know admit a future promise that more can be achieved. By accepting mystery all are capable of becoming believers in the future. Maturation teaches us that mystery increases with greater knowledge of the physical world. The question arises as to whether the global community is willing to extend trust to working together for the common good.

c) Scientific Community

Amazing, even after all these centuries knowing that the sun does not revolve around an Earth-centered universe, our community that includes the scientific one still talks about beautiful "sunrises" and "sunsets." This is intriguing at a time when our American world of "miles" is challenged by purists desiring "kilometers," and after decades struggle to replace liquid measures of "quarts" with "liters." Few want to surrender former beloved ways and maybe should not have to, provided the alternatives are recognized and accepted.

Degrees of resonance. A discussion of physical resonance cannot stop

at cosmological and elementary particle considerations; humans concerned with these areas of knowledge are part of relatively small sub-communities of cosmologists, astronomers, physicists, space programmers and travelers and instrument design people. These number in thousands, even when including associates, secretaries and students. However these, like all committed community members, seek harmony, have a mutual frequency of interests exhibited through meetings and information exchanges, and resonate deeply with each other within a specialized scientific community. Human-to-human resonance is essential to advancement in a field of knowledge or any development project and admits of **degree** of involvement.

Emotion and resonance. Scientific teamwork requires deepening levels of resonance. The shouts that went up at the Houston *Mission Control Center* when Neil Armstrong set foot on the moon on July 20, 1969, or the accumulated grief felt when a rocket failed and exploded a few years later, were genuine feelings that show emotional resonance among team members. Researchers at major scientific research centers are close-knit, not only because they have professional employment, but because they are part of a collaborative vision that is intending to push forward the frontiers of science and technology. These team members, including associates and staff, seek to achieve a defined goal and highly anticipated success, and while intellectual to the core, their shared human emotions run deep. Team "frequencies" are real and merge in a harmony far greater than what a chance encounter of individual performances could produce.

Anticipated resonance. In working together ethical considerations arise that strike some quicker than others. The Second World War "Manhattan Project" that pressed forward to the atomic era was a joint physics, chemistry and engineering project that affected humanity in a very marked degree. Resonance certainly occurred among the co-workers as they struggled to develop and advance twentieth century war weaponry -- and yet ethical considerations in the Manhattan Project weighed heavily on some of them including its director, J. Robert Oppenheimer, who said "I am become death, the destroyer of worlds." His misgivings and ethical struggles are well documented¹⁴ and said in afterthought, "The people of this world must unite or they will perish." This brings us in reading his life to wonder whether there is such a thing as "anticipated resonance" that is an invited resonating by individuals with those who live after them but share similar concerns.

Promoted resonance. Public involvement certainly occurs at the physical resonance level. The public learns to cherish rocket-launchings and moon landings though it hesitates at the physical "advancements" of atomic and nuclear weaponry. In fact, public support is integral to tax payer-sponsored space and military programs. Space needs not be spacey, or spaced out; the great universe surrounds us as a mystery. Promoters capitalize on this fascination and speak of extended benefits:

communications, security, rocket weaponry development, space travel possibilities, environmental monitoring, knowledge of the cosmos, and on and on. Yes, it can be hard to rally the general public, but history shows it can be done -- and some of this could be labeled propaganda. Public support is crucial lest space R&D be stymied.

Distorted resonance. In 2016 on 7/7 (same as the Biblical Genesis numbered account of Noah entering the ark), the Christian conservative Creation Museum group launched their replica boat at their center in Northern Kentucky called "Ark Encounter." This is claimed to be the largest timber frame structure in the world (3.1 million board feet). The entire enterprise is to show literal Biblical history, something never intended by Scripture writers. The "fact" of a world created in six 24-hour-day intervals about 6,000 years ago is a recent "historical" concern and foreign to the traditional understanding of the Genesis account. Actually, authentic science, and compatible with a more balanced view of Scripture, shows a far more fine-tuned universe evolving over billions of years. The tragedy of the over 100 million dollar Ark Encounter" is that when young visitors from conservative congregations study science in college they will become confused about academic and earlier notions of historic fact.

Reflection: In these physical considerations one distinguishes at least three sets of resonances: the micro-level that indicates irreversibility and the distinct arrow of time, along with indeterminacy as to pathways taken by entities all of which have resonance components; the macro-level that involves the Big Bang and associated phenomena with possible additions related to gravity and space/time considerations along with associated theories and speculation; and the communal relations among researchers of this field of knowledge, along with interactions with the general public. All of these are mentioned passing to show the existence of resonance but not necessarily their interrelations to each other. That is a more difficult task that makes this a work-in-progress. Mystery emerges and grows both at the macro- and micro-levels and within the psyche of individuals committed to scientific research and promotion.

Public citizens find it difficult to resonate with the experts in such sophisticated fields as higher math, astrophysics, or space engineering, especially with fast moving advancement in the twenty-first century. Much seems mysterious to them both in content and in proper use of knowledge gained. Ethical responsibility raises questions that not only confronts experts and administrators such as J. Robert Oppenheimer, but also within a citizenry expected to support programs that are potentially dangerous if mishandled. Nuclear weaponry, enrichment and waste materials are of particular concern in the atomic age.

In the course of this project our understanding of resonance introduced here with respect to time, space and community will grow with each subsequent chapter. All are filled with mystery unsolved or unable to be predicted; this mystery does not diminish but grows with age and among all parties. We have introduced here emotion and resonance, and anticipated, promoted and distorted resonance as the first variations on this common theme -- and there are more to follow with each subsequent chapter.

Further questions for reflection: How does time enter into my life, and do I consider myself the master of my time? In what way am I determined by space, whether at the micro- or macro- levels? Does a citizen presence in funding, voting for and showing interest in the outcome of space programs affect the total resonance of our coming to know more about the universe?

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Chapter 2. Chemical Resonance and Responsibility

Inquisitive minds of any age delve in how the material world is structured. This spirit of wonder stretches back to ancient Greeks who developed atomic theories; it continued down through the ages with the alchemists' quest for gold to our own times with isolation of natural products and fabrication of plastics and synthetic fibers. The science of knowing and creating substances is connected with the art of doing, and includes designing and producing thousands of new compounds. Modern chemists have a touch of combined scientist/artist and are happy harbingers of an accelerating evolutionary process of our making.

Chemical resonance involves interaction among components within the

molecular structure, as well as reactivity between various chemical molecules under suitable conditions. The "resonance" structures that are used in chemical publications are educational models of a total dynamic imagery used to rationalize the affinity and reactivity of chemical molecules. It pertains to both internal resonance of sub-particles within a particular molecular structure and external resonance among molecules or portions of them to form new chemical substances.

Furthermore, within the chemical realms resonance involves chemists who go beyond study to practical applications (e.g., enhancing nutrition, fertilization of soil, synthetic materials, and medical remedies for humans, animals and plants. Still, a final set of resonances involve ordinary consumers and their manner of use of chemicals, with which they gain some benefit and their willingness to use these chemicals for medicinal, cosmetic or other purposes; without self-control such practices may lead to risky habits and addictions that can harm individuals and the environment as well.

a) Chemical Structures

Many of us never lost the awe of knowing how molecules interact with each other, as well as their own inherent structures. We admire the skill and ingenuity that early chemists utilized to bring us to the basic understanding of chemical reactivity. In youth, the history of chemistry proved fascinating with one's "chemistry set," and that fascination continues into adulthood.

Let's first affirm an internal chemical resonance within a **molecule**, wherein one or more atoms and electronic components resonate with others. A basic understanding of an **atom** (smallest particle of an element that can exist alone or in combination within molecules) and **electron** (mobile elementary particles consisting of a charge of negative electricity) is needed for basic chemical reactivity. Visualizing "resonance forms" composed of these particles aids scientists in understanding structure and reactivity of molecules; they can be depicted as multiple "Lewis" structures (see illustration below) that collectively describe a single molecule. These involve internal associations of electrons in proximity to relatively fixed atoms with certain determined bond strength, length and proximity, and represent relationships not determined by a single illustrated structure.

For those less familiar with the basics of chemistry the following notations for compounds may be puzzling. Most people have a common knowledge of chemical **elements**, and especially those of carbon (C), oxygen (O) and hydrogen (H) as well as iron (Fe), gold (Au), silver (Ag) and copper (Cu), among

ninety some other naturally occurring or synthetic (laboratory produced) elements. They also know that atoms bond together to form molecules, with stability or short-lived existence under specific laboratory conditions. Carbon is paramount to the "organic" world of living plants and "carbon resonance" will be discussed in Chapter Three.

Chemists are inclined to visualize a world with molecular structural existence; this can be expressed through actual measurement of bond distance, angularity and strength using instrumentation. Basic orbital rules apply to elements naturally arranged within the atomic chart, namely, first row hydrogen with 2 electrons when bonded and second row (shells) carbon (C) with 8 bonding electrons, and on and on. Bonding among atoms occurs. The single bond between two atoms involves two valence electrons shared by two atoms (a covalent bond). As a Lewis structure the "single" bond is denoted by C:C or C-C, with each dot a shared electron. The "double" bond C=C indicates more intense electronic binding within the molecule itself involving 4 shared electrons; these double bonds are shorter and stronger than single bonds.

Benzene is a **compound** (union of elements) found in distilling fossil fuels; its chemical composition is C_6H_6 . Solving the puzzle of the relative positions of carbon in benzene was a major breakthrough in organic chemistry (coming in a dream) indicating the "aromatic" nature of the benzene molecule; the arrangement of benzene's carbon atoms was like six snakes biting the tail of another and all in a ring. Resonance structures depicted here show how atoms and bonding relationships can be accounted in simple resonance examples.

Benzene

a) relative atomic positions

b) Common organic chemical notation

The oxygen we breathe exists as molecules in air as two atoms O_2 , in greenhouse gas carbon dioxide CO_2 , and as gaseous ozone O_3 , a compound that

is a pollutant in excessive amounts near Earth's surface and a protective shield in traces in the upper atmosphere.

Carbon Dioxide

Ozone

b) Magnetic Resonance Applications

My graduate chemical studies of over fifty years ago included the recent magnetic resonance technology that was applied to chemical compounds in order to determine their exact structures. Our graduate chemical department acquired this instrument during my sojourn, and it was highly regarded as a definitive last word in structural analysis at the time.

Nuclear Magnetic Resonance (NMR) is a highly precise research technique in spectroscopy that helps unravel the mystery of chemical structures whether isolated natural or synthetic products. This analytical method acts in a non-destructive manner, and exploits the magnetic properties of certain atomic nuclei in determining the physical and chemical properties of the atom or molecule. The phenomenon involves a nuclei in a magnetic field that absorbs and re-emits electromagnetic radiation. The peaks appearing on the recording paper are energy levels in a specific resonance frequency depending on the strength of the magnetic field (strong ones needed for NMR) and the magnetic properties of the specific **isotope** of focus.

Isotopes are two or more atoms of a chemical element with the same atomic number (same chemical properties), but different mass number and physical properties. The isotopes of particular interest for NMR analyses have fractional spins of $\frac{1}{2}$: ^1H , ^{13}C , ^{19}F (fluorine) and ^{31}P (phosphorus) of which the first is most commonly used for NMR analysis; also ^{13}C -1/2 (6 protons and 7 neutrons) is widely used even though consisting of only 1.1% of naturally occurring carbon (the rest is ^{12}C); however, using non-enriched ^{13}C takes longer operational time.

The NMR imagining techniques involve the resonance frequency of the chemical substance in question; changes are directly proportional to the

strength of the applied magnetic field. When the substance is placed in a non-uniform magnetic field, NMR works by aligning magnetic nuclear spin in an applied constant magnetic field and then a disturbance of the alignment of the nuclear spins by employing an electromagnetic (often radio frequency) pulse. The resulting perturbed frequency is dependent upon the static magnetic field and the observed nuclei. Resulting response to the magnetization of the nuclear spins is what is recorded both in NMR for chemical identification and medical applications.

Magnetic Resonance Imaging is the medical application of what has just been briefly described. It is used not to image the physiological and anatomical human body (or other animal bodies if applied). The technique first aligns the spins of each atom of the human body (hydrogen is the element of choice). The radio frequency specific to hydrogen is applied to the portion of the body being analyzed. A field gradient is produced by the MRI device that changes the main magnetic field at a specific level and cross-sectional pictures of body organs and structures are obtained on the screen.

The obvious advantage of MRI is a non-invasive unfolding of a view of the body not obtained in such detail by other modern techniques. The information obtained is different from that using x-rays, ultrasound or computed tomography. MRI does not employ radioactive materials, with the associated dangers in handling and resulting discomforts. It is too good to be true, except MRI equipment is expensive (about a million dollars per instrument along with installment costs). A test could cost \$3,500 for equipment, along with an additional tenth for professional interpretation. Some professional medical associations and individual physicians consider that MRI tests are too frequent in such problematic areas as lower back pain.

c) Individual Citizens and Chemicals

My current physician suggests taking a tiny aspirin as is the practice of older males. In no way do I want to engage in this precaution, because I fear any more chemicals than absolutely necessary, and aspirin fits this category. Being a chemist by training I respect chemicals and differ from currently accepted public attitudes. Besides, aspirins irritate my digestive system.

Chemistry had a long and rocky start for centuries and the history of alchemy need not be retold here; much was not science in the modern sense. Attention to precise measuring detail by Antoine Lavoisier in the late eighteen century resulted in his being entitled "father of chemistry" -- and his offspring have never forgotten his basic emphasis on detail and discoveries of basic

elements. Extracting and recording this information became a hallmark of successful chemists over the two centuries since Lavoisier's untimely death on the guillotine during the French Revolution.

Chemists' resonance. This field of knowledge continues to fascinate many people, certainly more than a few who are captivated by a desire for scientific progress: researchers, teachers, medical personnel, etc. The synthesizing of chemicals in the laboratory came with people who uncovered the phenomena of the breathing process, fermentation, and combustion. Chemistry coming through acute measurement and in unveiling practical aspects of life has meant that chemistry involves applications to ordinary life. The chemical world beckons the scientist/artist to take an active role in making substances with advantages such as better quality available substitutes for natural products. Chemists resonate with natural processes and the connection with artificial ones as well.

Chemists soon learn that substances in themselves are powerful and mesmerizing, but using these properly is a learned experience; they treat the materials on which they work with respect and care -- or otherwise they would be physically harmed. As chemistry and the biochemical allied sciences emerged, the good -- and harmful -- effects of unforgiving chemicals appeared in greater frequency. However, enthusiasm in research discovery often led to minimizing the safety and environmental effects of the chemical in question. Recall the effects on the health of Pierre and Marie Curie in the sub-branch of radioactive element research that they performed (both their lives were shortened by use of these materials).

Benefits and possible risks -- a scientist's constant caution gained through research experience is not often communicated to the general public using commercial chemical products. Besides the resonance within and among materials and between scientists and their specialized chemicals, there exist moral implications of the production, use and ultimate disposal of chemical products. Natural poisons were known in ancient times where users obtained firsthand experience; later synthetic chemicals bear a need for caution in handling new and mass produced substances. Over time chemical applications led to workers ill effects as well as environmental pollution and improper disposal of chemical wastes. Chemists employed by government and industry do not take a loyalty oath to keep silent when harm comes to workers, consumers, or the environment. However, many develop a practical loyalty for the sake of job and reputation, and this often causes a hesitancy to look for all harmful effects of a new chemical product.

Public interest resonance. Enough pollution and disposal problems

arise that this becomes the foundation for an awareness that the gullible public could be harmed without proper alerts. Trust of commercial firms goes back to Big Tobacco, Big Oil and Big Drugs. It is assumed that, if commercialized, a chemical should be tested for safety -- and that has not always been the case. Ideally chemists are partners to that general public and what is good for oneself and associates holds equally true for the near and distant neighbor. The love of working with chemicals is tempered by a love of the welfare of neighbor along with a knowledge that many people do not know how to handle chemicals safely. Nor are general directions fully described lest cautiousness become a red flag against using the chemical that chemists desire to promote. Thus some chemists do not want to join forces with public interest advocates highly influenced by a sense of social justice.

Whistleblowers resonance. Whistleblowers call attention to current mistakes that need correction in production, handling and safety of chemicals, especially pesticides and radioactive materials. Herein lays the recognition that a goal can be better reached through revealing misdeeds within the organization and, if this is not remedied, by going to the public or to a governmental regulatory agency. One whistleblowing issue which is of current need in Appalachia today involves lack of recognition of radiation damage to individual guards and workers at the *Portsmouth Gaseous Diffusion Plant* at Piketon, Ohio; similar concerns are arising at the related Paducah, Kentucky facility and the Hanford plant in Washington state. Revealing the harmful effects of certain practices dealing with radioactive and other dangerous substances being processed can lead to being ignored or ostracized by regulatory agencies allied with industry or by a public that does not wish to be involved in complex issues.¹

Environmental resonance. Marine biologist Rachel Carson's book *Silent Spring* (1962) was credited with starting the active environmental movement; she was concerned that a chemical pesticide (DDT) was affecting egg shells of eagles and survival rates of offspring. Concern over the years has extended when new miracle chemicals are invented and dispensed with impunity -- and producers are less concerned by extensive use of the product. Greater attention to risks as well as benefits of miracle pesticides emerged during and following World War Two. A pesticide or herbicide can be quite powerful, but can have extended consequences where not intended. Are powerful chemicals used for pesticides and herbicides affecting the natural cycles of neutral plant and animal life such as the current die-back of honey bees?

The DuPont advertising slogan "Better things for better living through chemistry," (from 1935 and changed to the first five words in 1982 because of DuPont expanding into the biological science field) showed a certain glamour and naive mission on the part of chemical producers and their loyal workers to

fighting pests and diseases. Yes, chemicals can be both beneficial and harmful. Dangers are more than private practice and risks (e.g., smokers by themselves) and may include effects on others (e.g., side effects of smoking to family and co-workers). Quite often scientists are optimistic about the product produced and so ignore a greater realism that includes non-targeted environmental components; thus the appearance of air, water and land pollution.

Global environmental resonance. Various synthesized chemicals have proved beneficial and with time have proved to have widespread environmental effects. Among the many twentieth century chemical marvels were the CFCs (chlorofluorocarbons) that found a ready market as refrigerants, aerosol propellants and other consumer applications. While plentiful, low in cost, and performing the specific task intended quite well, scientists discovered side effects of emitted products drifting to the upper atmosphere and destroying the protective ozone layer; this layer shields man and beast from the harmful ultraviolet rays of the sun that can cause skin cancer. The protective ozone layers thinned especially at the South Pole alarming the global environmental and medical community.

In 1987, concerned governmental agents assembled at the international level and drew up the *Montreal Protocol on Substances that Deplete the Ozone Layer*; this convention called for curbing the consumer use of harmful CFCs. As a result of this first significant international treaty signed by virtually all nations, the ozone hole in Antarctica is slowly receding and by 2050 the ozone layer is expected to return to normal. The discovery, alarm and remedy has been a UN global success story -- and present a hope for global treatment of current worrisome climate change problems.

Commercial chemical resonance. Chemical and drugmakers want to popularize products and so commercial advertisements and promotions are a major effort to entice use by agencies and individual consumers. Through advertisements the current drug industry has changed the basic practices of people as they move from home remedies to synthesized commercial drugs. There has been an effort to teach an acquired resonance of trust in the commercial producer to satisfy a need to reduce pain or heal some illness. The drug companies, which assist in the healing process, are certainly able to benefit the general population, but if care is not taken they can do harm. Habits and addictions can be initiated and encouraged as though all depends on the free wishes of the consumer and with little relevance as to deliberate efforts to create markets and consumer "needs."

Loss of respect for chemicals by the general population is becoming evident; popularity of certain chemical substances reflects the power and

success of profit-motivated pharmaceutical and chemical industry to teach people to use new substances. Overdosing has become a major American problem with regards to both illegal and prescribed drugs. Today in our country overdosing of generally legal chemicals kills more people than auto accidents in this country. Chemical overdosing is an epidemic and was called a fifty billion dollar excess in 2004² and far more today. With current overdose levels one may ask whether the government has lost control of drug prescriptions. Do doctors bend to the wishes of patients seeking more and more chemical medicines? Is part of the human disasters resulting from mixing legal and illegal drugs, or combinations with alcohol? No one really knows all the effects of such mixtures in the human body. How does one question subjective complaints of pain, even among the elderly -- some of whom pass addictive pain killers to nearby addicts?

Consumer resonance. Today, consumers are mesmerized by the advertisements calling for technical miracles through the use of this or that chemical substance for household or medical reasons. In our youth, parents would plead with doctors not to recommend a new costly drug beyond natural remedies or a little toddy. Today, after billions of pharmaceutical dollars expended in advertizing, the familiar plea is for the "purple pill" or another expensive commercial drug that has caught the TV viewer's fancy. Respect has broken down. The sense of moderation in using natural products has given way to the allurements that if something is good, more of it is better -- and if expensive it must be effective. An occasional cup of sassafras tea has been a traditional natural tonic; continuous habit of using this product could and does cause cirrhosis of the liver.

This form of consumer resonance is acquired from the commercial resonance previously mentioned, and may not be ultimately beneficial due to that lack of consumer moderation and will power. In fact, this tendency to substance abuse challenges a resonance's definition. Chemicals are like our relations with wildlife; they are enticing but must always be kept at a distance and handled with care and common sense. In dealing with wildlife the novice learns quite soon not to threaten wild inhabitants, but rather give them their space. Caution extends quite early in life to avoid poison ivy and other toxic plants or not to play with bear cubs in the wild with their mothers nearby. Risks arise when free agents become disrespectful, a condition extending to the synthetic as well as natural world (oven cleaners, aerosol products, and a host of medical, sanitary and cosmetic products). Advocates for simple living techniques tend to remain attached to traditional natural products when possible.

A hidden assumption by the lulled public is that companies know best with

their highly touted products; some consumers naively think large companies with familiar trademarks mean safe and effective products. Few care to read voluminous fine print or inquire independently about dangers or possible side effects of using materials. Consumers can be lulled into a social addictive behavior and regard it as part of the exercise of their freedom in consumer choice. Though product loyalty they may resonate with certain products that can start as proper pain killers and end in death by overdose. Here acquired resonance takes a bad turn and complacent consumers strengthen it. Saying "No" does not come easily from pampered infants to decision-making affluent adults.

Personal responsibility is never an easy subject in product choices; new ones promise convenience and medical benefits for this is a pejorative form of **consumerism** which has two definitions.³ Overdosing is a drastic result of over-consumption; lack of moderation affects many even those who act as responsible consumer and distinguish good foods and harmful ones. Paradoxically strong religious and cultural practices teach self-control, fasting and abstinence, but a pervasive materialistic consumer culture tied in with economic consumption has the opposite effect. Those who wish to restrict consumers in any way are looked down upon as non-liberal; those who teach self-control are often regarded as old-fashioned. Here in the world of plentiful chemicals the problem of self-, local, regional, national, and even global controls arises.

Summary Reflection. Like the physical resonance of the previous chapter with its sense of mystery, here in chemical resonance mystery is certainly present as is utility of chemicals. Personal responsibility emerges once human beings enter the world of chemicals from study of chemical reactivity to applications in ordinary life. Use of chemicals by ordinary citizens can have good effects but mis- or overuse can bring about harm to the user or the inhabitants of the environment, local and in some cases distant. Due to possible harm, chemicals must be treated with respect and moderation in use. Social responsibility and human self-control enters into realms of chemical resonance, which is often counter to individual inclinations. Chemical resonance is subdivided into various types:

- * **Chemical Internal Resonance** within chemical substances is expressed by "resonance structures" (basic chemical topology, dynamics and three-dimensional structure of molecules).

- * **Chemical External Resonance** is reactivity among chemicals under suitable conditions which include medical effects for patients and scientific research.

- * **Chemist/Chemical Resonance** is the relationship between the

producer and natural or synthesized substance. This is more often experienced through teamwork and includes natural products discovery, chemical theory and research, production of pharmaceuticals, and teaching and promoting chemical subjects.

* **Public Interest resonance** involves those taking their social responsibility seriously. This includes interaction among knowledgeable people and regulatory agencies and general public as to proper controls over the production, transport, use and disposal of these potentially dangerous chemical substances.

* **Whistleblowing resonance** falls on the "minutemen" of this age and includes revelation when needed for safety and environmental concerns and extends far beyond chemical levels.

* **Environmental Chemical Resonance** occurs when individuals manifest a concern for plants and animals and exercise a healthy skepticism about new chemical applications and possible harm to subjects under their purview. The process is becoming globalized.

* **Commercial Chemical Resonance** is between producers and the general public to which the chemical is produced, advertised, and distributed along with associated responsibilities as to cautions and alerts when harmful situations could arise. This involves the process of educating the public to an acquired product loyalty.

* **Consumer Resonance** is the interaction between the public and the new substance that they are now able to handle as individuals within their own lives. Overuse and careless handling of powerful substances can lead to abuse through mis- and overuse and a certain familiarity that breeds contempt.

References Chapter 2

1. Charles Lawson, "How to be a Long-Term Whistleblower," Earthhealing YouTube, 2016.

2. John Abramson, *Overdo\$ed America: The Broken Promise of American Medicine*, (HarperCollins, New York, 2004).

3. **Consumerism** can be regarded as proper choices, pricing, and quality of a product by responsible activists, or it could mean a unregulated and uncontrolled use of products that result in waste and damage to local and global environment by the privileged few. For details on this distinction see Al Fritsch, *SJ Healing Earth*, (Brassica Books, 2016), pp. 38-43.

Chapter 3. Biological and Acoustical Resonance

*There are two ways to live your life.
One is as though nothing is a miracle.
The other is as though everything is a miracle.*
Albert Einstein

Life (vitality) is truly a wonderful miracle as flourishing on our Earth. Yes, the more one delves into the uniqueness of life, the more it becomes apparent how unique were the conditions on which life evolved and continues to thrive on this planet. The marvel will not be lessened even if some day life is discovered elsewhere in this universe, though similar unique conditions will come as a surprise. Just as dark matter is still such a mystery to physical scientists, so the origins of life and its fragile existence in this universe remains another mystery. In fact, biological resonance equals the mystery of the Big Bang and evolving of the universe itself in its chemical structure. Life is mystery and life is fragile; we accept this vital mystery in awe and with a responsible attitude to respect and protect it in all its forms from wanton destruction by a greedy and thoughtless world. Preserving awe and fostering protective care take **balance**, just as does life itself in all its forms.

This mystery grows when we consider the feelings and awareness of other sensate beings and marvel at their presence. Some are able to break through the great divide of species division and communicate to us. Sympathetic observation tells us that pets and other animals have feelings of pain and even personality; hawks and owls have superior eyesight; hound dogs have a keen sense of smell; and deer are choosy in tastes and reject hot pepper sprayed on their favorite shrub and vegetable leaves. All animals are not endowed with equal sensations; some lack vision of colored objects; others eat only certain foods. Green thumb gardeners testify that plants under tender care respond to them. Is this a form of subtle resonance as well?

Life is a self-organizing phenomenon that is found at present only on our planet Earth. The conditions have to be right for life to start, endure and flourish: right distance from the solar energy source with limited temperature gradient; sufficient amount of light over a time period; ample supply of oxygen in a non-combustible atmosphere; presence of carbon under right conditions, and ready supply of water and nutrients. The planet Earth is precisely endowed with these essential components; on the whole it is not too hot (as is Mercury), nor too cold (as is the dwarf planet Pluto). Vitality requires an ideal environment, but will human beings who can do major misdeeds protect it properly?

The conditions for life in an amazing way must be fine-tuned in a long process of evolution from Big Bang through Earth formation and down to our

time. That fine-tuning occurs because life in its fragility can only thrive under precise conditions as just indicated. A delicate eco-balance prevails, and Francis Collins, former head of the Human Genome Project and director of the National Institutes of Health, speaks of living matter the "language of God."¹

a) Carbon and Bioresonance

Many of us have an affinity for species of creatures that are called "spirit creatures." I have always felt an affinity with bovines whether cows, calves or even bulls -- and that includes bison as well. Once when jogging on a rural road in northern California I came to a herd of bison with a sturdy fence between us. I approached one who was near and it moved its head up and down, and I had heard that nothing could stop such powerful animals if they are provoked enough. So I gently moved on.

Life on Earth in its earliest and simplest forms as found in ancient rocks is estimated to have started almost 4 billion years ago. Scientists are far surer about the starting date than how the origin occurred, and in fact regard this as outside of their scope of biological evolution (a theory of changes, not origins).

What is "carbon resonance"? Karl Giberson and Francis Collins speak about how fine-tuned this universe was so that the life that is present could come to be. They marvel at just how small differences from the Big Bang through billions of years of evolution and through the birth of planet Earth would never have resulted in an environment of life. For them, this fine-tuning is a pointer to a Higher Power outside of the system.²

Much depends on the early fusion reactions of older stars and the formation of the element carbon that is so needed in living materials. The formation occurs through the *triple-alpha process* by which three helium-4 (alpha particles) are transformed into carbon; part of the process involves an intermediate reaction product of unstable Beryllium-8 that fuses a little faster with a third helium atom that it decays back to two helium atoms. Thus carbon-12 is born in such very delicate circumstances. Astronomer Fred Hoyle in the 1950s coined the phrase "carbon resonance" for this phenomenon and observed that *a commonsense interpretation suggests that a super-intellect has monkeyed with physics as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature.*³ Hoyle's amazement only emphasizes how a universe of 14 billion years had to be so fine-tuned with properties that enabled life to occur on this planet.

Every organic chemist knows that carbon is unusual in that it is adaptable

to the formation of longer chains of similar atoms; these form into the blueprinting molecules known by replicating into such molecules as DNA, the building blocks of life. Without going into the biochemical process of proteins, genes and cells, one can rest with the words of Alister McGrath who says that *the unique chemistry of carbon is the ultimate foundation of the capacity of nature to tune itself.*⁴ Thus, one can conclude after reviewing the biochemical processes that without the fine-tuning there would never had been a living being.

What is bioresonance? Human beings have an internal awareness of being alive. As far as is known, only humans express themselves about their vitality -- though the awareness exists in degrees among many other species, the amount of which is somewhat mysterious to us. How much a flea knows it is alive baffles us. Certainly various animals imitate human powers to some degree, but only to "some." *Animals think, therefore..*"⁵ Vivid examples are elephants caring for each other even though not blood relatives; dolphins imitate human behavior in striking ways. Many animals exceed the capabilities of humans who feel, see, hear, taste and smell within certain ranges. Bioresonance is a complex subject, but most creatures desire to continue being alive and continue the species.

Internal Bioresonance is the innate desire to live. Life and impending death come together as part of human awareness, but most prefer to keep the mortal closure at a distance. It does not take long before a youngster becomes aware that life is not permanent, but rather mortality occurs, even at rare times to youthful friends. If life is seen as ultimately terminal, it is likewise discovered to be always vulnerable, and death comes whether naturally after aging and sickness or through unexpected accidents. Safeguarding conditions to continue life becomes a vital issue and humans grow in care for self: watch out for traffic; be cautious when riding the bike; beware of strangers. Gradually life takes on the character of safeguarding our precious vitality and internal judgment, and practical actions combine to create and preserve a harmony, a manner of caring for self and love ones.

External bioresonance is the elementary working of vital entities to self-enhance and preserve a specific species for life to continue. This is the power to draw together, to associate, assist and to reproduce life; it includes family life, clustering of species such as flocking birds or the mutual workings of a beehive or anthill. Each partner enhances the group, even though instinctive efforts are mysteries in themselves. Very rarely do some isolated animals (e.g., some older male lions) lack the cooperative spirit that works to the benefit of the species. Thus interaction of generation, youthful care, and continuation of livelihood involves the resonating of beings together.

External Bioresonance includes moral conduct or a sense of right and wrong behavior that enhances our life and that of those around us. Moralists speak of a moral "law" within each person or a conscience that tells us to act properly with respect to others. No one acts perfectly, but most are aware when doing better or worse, and that this is part of tuning our lives in accord with others and the Common Good. Being free agents means that this can be done for the benefit of all, not in selfishness and at the expense of the quality of life of others. Misdeeds have been committed from the time of Cain and Abel down to the present, there are always those who attack, hurt and kill one another. In such cases an imbalance occurs and equilibrium in relationships is ruptured; external resonance is frayed or broken.

Killing and harm to other humans is contrary to the moral law. Unnecessary killing and harm also extends to relations with other creatures with whom the human family belongs. However, human nourishment demands selective sacrifice of plants and animals without undo suffering and sacrifice. Higher species feed on lower ones, otherwise life would not continue in its ordinary natural process. The moral law directs us to refrain from doing violence to other humans and even to animals in obtaining essential needs.

The right to life comes quickly to mind when speaking of our external resonance, for if life is a precious mystery then all of us need to protect it in every way possible. Certainly the justice involved in human relationships becomes more complex when someone defends self or others by use of violent means. Is such action justified sometimes? Most people react quickly to threats, some in improper ways that are the subject of police in certain mixed racial situations and leads to "Black Lives Matter." Really, all lives matter with equal degrees of concern among advocates of external bioresonance.

However, ramifications of moral law quickly becomes a highly controversial matter, where life is permitted and extended by self or others or is taken as a penalty. The last is easier to oppose in our society that still permits the "death penalty;" such is a throwback to former times when incarceration was more insecure. No life should be deliberately taken in such fashion, even though over half the American states still allow them.

The controversies become more intense and divided with issues such as abortion and euthanasia. All life is precious and should be guarded, but the ones who bear immediate responsibility do differ. To shorten a long story, which all of this book unfortunately does on every issue, every effort to preserve life from conception to death should contain a deep sense of the mystery of life. In the midst of this controversy one is aware that "right to life" covers many issues and one such is denial of climate change -- in this case the viability of the

planet herself.

Quality of life involves security in obtaining sufficient quantities of essential materials for food, water, lodging and fuel needs. When some of these are lacking, life quality deteriorates rapidly. A just social, economic, and political system implies that all have that quality needed for a full life -- and that system serves to respect and preserve habitats for other creatures on Earth making up our total environment. But the job cannot be done alone; human cooperation is needed to control and preserve this quality of life -- and for that reason governments are created and function, though not always perfectly.

Bioresonance evolves when conditions change and individuals are challenged to subsist on new food, share limited water resources, adjust to climate change or compensate for lack of mobility. Evolutionary forces bring on livelihood changes for the betterment of the species. When one species cannot adapt new food sources at the loss of a restricted traditional one, the very life of the group is threatened -- and some have become extinct. Today, threat of climate change demands expanding our sense of species welfare, and thus the need for curbing greenhouse gases ASAP.

Environmental Resonance results from a socially conscious bioresonance. The vitality of the planet and its component parts depends on care and concern by those who take environmental action (stopping waste and pollution in all forms and taking on green conservation measures). A wholesome environment enhances our quality of life, whereas the threat and extinction of our surrounding plants and animals damage the quality of that life. Birds and wildlife species in this complex ecosystem called Earth add to life's quality, though a deeper reason exists, namely the existence of these species for their own sake. This existence then is part of the Common Good showing that it extends beyond the human realms. In fact, humans have a duty to look after the other species in our midst as part of preserving a healthy environment. Extinction of forms of life occurred before the advent of human beings (dinosaurs 65 million years), but human thoughtlessness must not be cause for what some regard as a new age of mass extinction -- mainly due to human misdeeds.

Environmental Resonance evolves. Earth throbs with life, but this condition cannot be taken for granted. Humans have the power to kill and that includes the vitality of Earth herself. Resonance at the biological level includes critical life choices where others (human and non-human) are involved. Other ages were unaware of this power to build or tear down, a capacity due to a global technology and use of materials at unprecedented proportions. Consumption of fossil fuels and other resources lead to emissions which damage the planet

and its life forms. The response involving human free choice is just as unprecedented; it stems from a deep reaction to those who are hurt. Environmental action becomes a form of resonance to Earth and its creatures; it includes profound respect for those who are harmed and a challenge to those who perpetuate the misdeeds. This social response goes beyond the domain of private concerns and enters the field of public interest, as mentioned in the last chapter in a more generalized manner than previously discussed. Safety and welfare is now globalized.

Some regard the freedom of choices as paramount to quality of life -- and to a great degree it is. That is provided the choice does not infringe on the rights of others to life, liberty and the pursuit of happiness. Am I free to smoke if others find it objectionable and infringing on their freedom? Does a woman have a right to terminate the fetus' life as part of her arena of choice? The first has been somewhat settled by the proving of hazards coming from ambient smoke; the second is a raging issue with some speaking for the rights of the unborn fetus and others of the rights of women to make their own decisions. Resonating with those expanding choices and still making proper ones is necessary.

b) Acoustical Resonance and Eco-Balance

*Stillness is what creates love,
Movement is what creates life,
To be still, yet still moving --
That is everything!* Do Hyun Choe, Japanese sage

I am defined as deaf and struggle to hear, though refusing the worry of batteries and expense of a hearing aid. My long-standing problem with bothersome tinnitus is due to operating overly loud mechanical corn crushers while preparing feed for livestock when a youngster on the farm. Frankly, I treasure moments of silence, but this is hard when interacting in a gathering demanding exchange.

All humans like moments of silence, provided it is not deafness; they also like the comfort of loved ones and the sounds of soothing music. All of us marvel at Helen Keller who was both deaf and blind, and was still able to overcome total hearing and sight deficiencies through interplay of feelings of lip movement and musical and other vibrations. Awareness of internal resonances related to the various senses such as sights, sounds, vibrations, tastes, and smells are highly subjective. However, much can be said in an empirical fashion about vibrations and hearing frequencies that can be scientifically measured and properly utilized for the betterment of the Common Good.

Acoustic resonance is a phenomenon consisting of a given system amplifying a sound whose frequency matches one of its own natural frequencies of vibration (refer to String Theory in Chapter 1). This acoustic resonance can occur within or outside of the range of human hearing, for most of us are aware of a dog's acute hearing or disturbance by the sound of thunder. Acoustic Resonance involves our perception of sound in its many forms of intensity and quality -- and how different people react to these sounds. Today, the manner in which sound or its absence or interaction with silence affects hearers is a major concern in the age of mechanical noise amplification. With this expanding significance one can contrast sounds and silence and extend this to everyday life.

Arenas of sound and silence do not co-exist at regular and expected intervals to the satisfaction of all. Often sound-makers recreate and enjoy certain expressions at times when others prefer silence. This brings those choosing quieter surroundings to regard "noise makers" as aggressive, self-centered, attention-seeking and exploiters of silent space; they regard the unwelcome sounds as violating a type of Commons through **noise pollution**. Actually in defense of noise makers one finds that they are often unaware of how much others are disturbed by their enjoyment of social exchange, the high volume is not always recognized, and the availability of space for such practices is limited.

Urbanites are accustomed to a congested world of sound, for cities never sleep; in fact, many who are immersed in urban life are sometimes frightened and even terrified by silence. For some, especially youth, going to sleep using "white noise" machines is a modern practice. When directing our Nature Center it was apparent that volunteers from cities were often frightened by degrees of silence and the softer unfamiliar sounds of nature. Do people learn to resonate with sounds in everyday life? Is there a vital balance in rest and action, an ideal of some form of harmony that is not totally ceaseless noise nor total deadening silence, a goal to appreciate time for sound, time for silence, and time for a mixture of both?. Among many Native American nations people speak, and then remain silent for long periods of time, for just being present to one another in silence is a form of participation.

Compromise helps establish environmental balance and harmony. Yes, some like modern music, and challenge others to appreciate or at least to tolerate it at certain periods. Those who have other musical tastes may retreat to a relative quiet zone and listen with earphones. The difference is that the first group may want to be social and hear the music with others present, whereas the second group prefers to be alone and to concentrate on the music

itself. The first group sees health and wellbeing in social togetherness with like-minded music lovers. Even the second group may extend their enjoyment to occasional gatherings at concerts to their liking. The difference may be in accessibility to times and places and costs associated with such events.

Elements of compromise call for regulated sound control at certain times and places. Should excesses be tolerated? Total silence challenges the spirit. Likewise, medical experts agree that excessive sounds harm the ear drums and lead to emotional problems that will affect victims for the rest of their lives. Just like smoking or drug abuse, excessive noise is harmful, not only to the primary hearers, but to those who must endure second-hand noise. Literature is replete with examples of people being harmed and personal experiences with loud noises causing temporary deafness. The degree of discomfort from such conditions depends on the severity and duration of noise assault. Many take hearing for granted, but when partly or totally lost it is a precious gift that is then appreciated. Those addicted to noise are hesitant to consider compromise and to curb their social sound-filled periods.

The challenge is to create times for sound and times for silence. Measured words are important, but so are thoughtful pauses in conversation. In an opposite vane are those who nervously chatter on and on because they find silence often difficult. In this modern age of electronic device users, the compulsion to have some form of busyness through sound generation is something that strains nerves. To such communicators, being alone in silence is oppressive. Many are impelled to keep busy talking with or without hearers while thinking that silence is unhealthy. Some addicted to electronic devices find when these are absent a feeling of phantom vibrations and sounds.

Is "noise" subjective? The classical music lover may flee from the hard rock band; the hard rock lover may flee from an argumentative household with its abusive language and loud voices. Each is tempted to flee at times because certain sounds create discomfort. With modern traffic noises and sirens, leaf blowers and jack hammers, motorcycles and jet skis, airplanes overhead, and blaring radios and televisions, few of us are able to flee too far, for the air waves are filled with sounds from mechanical and amplified sources. Modern noise-making technology expects long-suffering endurance, for busyness is the price of modern life. Upon recognizing these in work environments, advocates seek noise reduction by setting and enforcing noise pollution standards.

Measuring sound is possible today as to loudness that is expressed in *decibels* (dB). When an adjustment or weighing is made for high and low-pitched sounds according to ordinary hearing, the adjustments are called

"A" weighted levels (dBA). These sounds are measured in logarithmic units called "decibels," which go from zero where humans start to hear to over 140 where noise causes pain (certain rock and roll concerts). Permanent hearing loss can occur when continuous exposure occurs over a long period at approximately 85 dBA. Health advocates help establish limits for time periods, and ear protective devices are required for airport workers and other noisy occupations.

Besides continuous work place noises, consider secondary effects of unwanted sound pollution, effects like those in proximity to smokers; it is an environmental problem. Some brave souls will say that they can endure urban sounds and even take pride in not being startled and frightened like others unfamiliar with a particular sound (e.g., the crash of a garbage truck dumpster). But the impact of incessant noise is to fray nerves, increase the stress on hearts, and impair learning abilities. Studies show that students of similar age groups do better in quieter surroundings. Noise reduces our attention span; it leads to family disturbances and social unrest; it affects the quality of life. Wildlife experts tell us that wildlife cannot hear their prey or their attackers, their natural routines disrupted.

Silent space is difficult to establish in a busy household or a social media cluttered world. Some simply seek to replace unpleasant noises with chatter or music, or other comfortable sounds for welcome relief. Some, especially those who are immersed in continual background noise, find silent pauses uncomfortable, for to be alone is to die. However, in the end more and more people are discovering the value of rest and silence at times if not permanent. They turn to meditation, silent reflection, retreats, hikes in the wilderness, or religious chant. Many drop from exhaustion and do not regard extra sleep as a waste; they may come to realize that lack of sleep is regarded as causing Alzheimer's disease and other ailments.

Sensitivity to a rhythm of silence and sound means that excess of either is not welcome; there needs to be times and places for both. Sensitivity to noise may be due to delicate auditory senses affected by discordant sounds, lack of rest and sleep, pressure to produce results, inability to concentrate or work or study, and other things. Sensitivity to silence may be due to fear of silence and or darkness or an uneasiness to deal with personal problems. Many look to find balance in internal resonance that can only be fully established by controlled external resonance; a harmony with both is necessary for a higher quality of life.

Activists seeking harmony of silence/sound can show the intensity of noise levels by the use of a standard noise meter; through observation by those with good hearing one can pinpoint the source of noise. At this point, the

sensitive person may withdraw and hide or run, or remain silent through lack of boldness. On the other hand, the activist can address causes and use creativity to expand the areas and times of silence in one's domestic life and that of the neighborhood. Some examples of creating individual and communal silent space include:

- * Turn down the volume for ourselves and other residents.
- * Use head phones out of respect for others.
- * Get rid of snow blowers and leaf blowers and use physical exercise instead;
- * Do the same for noisy hair dryers and the like.
- * Mow grass with a muscle-powered mower or turn lawn into wildscape and avoid mowing.
- * Limit phone use and be sensitive to people in proximity.
- * Reduce volume of doorbells, home phones, timers for the microwave, safety and fire alarms, clock alarms, and the radio.
- * Help establish silent zones for hospitals, senior citizen places, libraries and schools.
- * Insist on curfews on lawn cutting and outdoor party times.
- * Support community efforts at noise regulation such as limits to motorcycles and ATVs and use of motor boats and jet skis.
- * Allot silence space within the home (where large enough).
- * Fix a quiet room with its own acoustical materials for those who wish to listen to something while others prefer to remain in silence. Even egg cartons tastefully dyed and arranged can be low-cost materials for quieting the special room or nook.
- * Take rest breaks during the work day to gain strength and energy to keep on top of the assignments at hand.
- * Sleep space and time is sacred time to remain undisturbed.
- * Honor the Sabbath; truly do something restful.
- * Create some sacred space in your life, a place where with minimal noise the different senses can harmonize with the sights, sounds, smells, tastes and feelings of nature. Even in densely populated areas, often space requires companionship for protection.
- * Make time for an annual retreat to reconsider the course of life and these should occur in a quiet setting.
- * Take a vacation that is relaxing and includes quiet time.
- * Consider exterior sound barriers made of vegetative matter such as bushes or of wood or other construction materials.

Sound/silence rhythm is expressed by saying there is a time for everything under heaven, "a time to speak and a time to be silent." There are times when one must speak, for otherwise the silence is a tacit assent to

something that is wrong, as when citizens shirk their responsibility. At other times one must remain deliberately silent so as to listen and gain knowledge in a given situation. Also at times remaining silent encourages others to speak on our behalf. This will be discussed again in Chapter 4.

Certainly, establishing an essential **internal Silent/Sound Resonance** is achieved through planning and deliberate execution -- providing sacred space and protection from unwanted noises is possible. Such may not be the case at some domestic settings or institutions in which one is lodged (e.g., prisons) or engaged in employment (airports). External Silent/Sound Resonance involves working with other to establish the balance desired. Many need time to "let off steam" in playgrounds and social centers, and all need time to rest. Compromising helps establish the heartbeat of a healthy neighborhood. All need balance and yet some must be brought to this, for improving our quality of life; establishing balance is a form of environmental resonance.

c) Measurement and Control of Pollution

Anyone who camps in Montana's "Big Sky Country" is amazed at the expanse of the sky. In such places the lack of electric lights gives campers the privilege to observe the heavens. For us Northern Hemisphere folks, I found in my only visit in 1990 that the shores of Lake Titicaca on the Peru/Bolivia border provide a view of land free from "light pollution" and a taste of darkness.

Besides acoustical considerations there are visual, light, odor, and vibrational harmful threats and effects on human health and welfare. Here, resonating with our neighbor can be reduced or even destroyed and our quality of life lessened. There was no resonance between slaveholders and abolitionists, climate change fighter and deniers, and those concerned about the environment and those who damage it. For a growing number, environmental pollution in sensitive areas (visual, light, odor, sound, vibrational) must be recognized and corrective action undertaken. An **Environmental Resonance** of awareness and activity must be joined at all levels.

Visual pollution is often blatant in congested areas -- and so is visual harmony of a once beautiful but now marred sight. No specific mechanical measurement exists for what constitutes a beautiful or ugly site, though forms of harmony in art have been expressed with some objectivity (see Chapter 5). Landscaping and artistic architecture enhance natural balance of land and water (ponds, creeks, lakes, rivers and even domestic fountains); these human efforts add harmony to otherwise drab surroundings, all to the satisfaction of beauty-seekers seeking harmony. Junk is a misplaced resource that is good

luck to some and a disorderly irritant to others. Visual pollution disturbs some who seek harmony in the arrangement of things. When a community viewscapes is cluttered with signs and commercial ads then disturbs residents and drives away tourists and economic developers.

Visual corrective measures involve the challenge of how to return proper "viewscapes": place combined commercial signs at specific sites, remove unauthorized graffiti, reduce or regulate size and number of signs, specify length of time span for certain notices, plant trees in denuded areas, encourage floral plots on road right-of-ways, place a heavy fine on littering and encourage proper enforcement, remove junk and litter on a regular basis, and promote beautifying measures through campaigns and publicity. Enhanced environmental resonance is a public interest goal, but some clutter (at construction sites) may be tolerated. Tolerance permits beauty in the mind of the beholder. Zoning regulations work in some areas where disorder has been routine, but some regulations may become repressive and not allow for innovation such as wildscape in contrast to manicured lawns. In compromising, disorderliness and depressed property values must be addressed.

Light pollution is a major global problem, as one evidently observes when flying over congested areas. An international team of researchers tell us that 83% of the world's population lives under a haze of artificial light.⁶ The ancient vision of the incredibly beautiful Milky Way and associated resonance is now denied to 80% of Americans and 60% of Europeans -- a cultural threat. Other countries with over half the people living under bright lights include Kuwait (98%), Qatar (97%), South Korea (66%), Israel (61%), and Argentina (58%). Urbanites lack true darkness.

Light meters can measure light pollution impact on quality of life due to over-saturation, concerning public health issues, wildlife, and wasteful energy spending. For instance, just hatched turtles are disoriented and wander inland rather than into the ocean. For crime reduction, trends are for increased street lighting, especially on campuses, though lighting types vary in amount of electricity. These modern fixtures come with a price tag. Even a modern generation of energy efficient light emitting diodes (LED's) for street and domestic lighting, while highly efficient, has a relatively high portion of blue light, which can disrupt people's circadian rhythms; LEDs can yield a glare that can affect safe driving and even walking at night.⁷

Illumination control is possible but needs to be another form of compromise; the extra night light is highly regarded as a safety factor for some and a disturbance for others. Tucson, Arizona with its nearby telescopes and observatories seeks to take corrective measures with light pollution. Are periodic blackouts such as in time of war a ready answer, when all know they are quite effective? Reflection shields can direct light rays downward. Further efforts include treasuring and protecting outside dark space; the "International Dark Sky Places Conservation Program" involves sanctuaries where darkness is preserved. Again, this includes limiting use of "blue" light that can affect rhythms in wildlife as well as human vision. Time and space for greater degrees

of darkness are areas of environmental compromise.

Odor pollution is quite evident to those who are overwhelmed by hog farms, paper mills, or the smell of garbage. For most human beings certain smells are revolting or discomfoting, though maybe not so for vultures or pigs. As far as human health, the unpleasant odors are often a cause of mental anguish more than physical harm -- though some aromas signal toxic substances. Often economic productivity calls for tolerance to the operating paper mill; compromise as in other sensitive areas is needed for improved quality of life, especially for those residents who suffer downwind. In some cases corrective measures can be take, whereas in others isolation or masking smell may be the most workable solution. The sense of smell can acclimate to many odors, but loss of tourism and depression of property is less tolerated.

Odor control can be achieved in several different ways. Getting rid of the odor source is a common sense approach, but cannot always be achieved. Air "fresheners" are often misnomers, for all they do is mask the odor with perfume or anesthetize the nose that can be easily fooled or becomes less sensitive with time. Often proper chemical treatment can neutralize the sources of the odor, along with dispersal of smelly hogs over greater space. Timely garbage pickup and recycling methods reduce odor substantially without resorting to anesthetizing sensing organs. Note that tobacco or marijuana smokers reside in close proximity to residents who are irritated by odor and presence of fumes; removing the source then becomes a localized domestic matter; this extends to those heavily-scented-cheese eaters. Where odor betrays the presence of toxic materials, human health and safety of both polluter and neighbor could be at stake. Rights are not always respected for those with breathing problems. Compromise, as in sound/silence space, extends to inconvenience and is not tolerated when odors reveal harmful environmental dangers.

Vibrational pollution includes blasting of construction sites and roadways as well as surface mining operations, the rumble of trains and congested traffic, off-road vehicles and NASCAR racing, military struggles, boom boxes, landslides, and human-induced earthquakes where fracked waste water has been introduced into sub-surface rock layers. Even the instant roar of spectators at certain athletic events has been known to cause minor earthquakes. Numerous instances of disrupted communities and flying debris damaging buildings and harming individuals occur where explosive operations are frequent or earthquakes occur. Needless to say, natural calamities continue to occur with moving ground and tidal waves in sensitive zones with minor events as daily occurrence. Buildings to withstand these severe earthquakes are lacking in poorer communities, with resulting injury and loss of human life.

Vibrational and acoustical effects can be measured and are, through science and professional organizations such as the *Acoustical Society of America*; these organizations produce peer-reviewed papers on the advances of the science of acoustics. Architects are keenly aware of the size and shape of buildings and how sound carries better when one goes from one hall or building to another. The fabrics and materials for walls, floors and ceilings make great differences. In an age before magnification, the volume of speakers at gatherings was important, and those with

more powerful voices became leaders. Amphitheatres were engineered with exceedingly good acoustics in the Greek and Roman world, and thus theater and civic debate could allow audiences to hear proceedings.

Architecture impacts vibration and sound immensely. One study of measurements of resonance in six diverse ancient structures revealed each sustained a strong resonance at a frequency between 95 and 120 Hz, despite major difference in chamber shapes and sizes (well within the adult male voice range). To the researchers this meant some sort of human chanting, enhanced by the cavity resonance, were invoked for ritual purposes.⁸

In the 20th century 1.3 million people died from earthquakes and tsunamis, including the Tangshan in China killing almost a quarter of a million people. Much could be done to lower death rates by selection of building materials, design, construction and reinforcement. Many humble homes crumble from vibrational effects. Building engineers say that well constructed taller structures are actually safer than counter-intuitive lower ones. Tall buildings can resonate with the frequencies of the ground movement itself and move slightly with no major damage. Elevated structure designers and engineers stay alert to earthquake possibilities.

Establishing balance in our lives is a goal worth committing ourselves. Life itself is the product of fine-tuned balances in nature without which it could not have evolved and survived. Those who understand the basis of life are more willing to address the various imbalances that arise through human conduct and misconduct. Just as life is a fine-tuned phenomenon, so is the enhancement of the quality of life -- a concern of all sensitive people.

A summary of bioresonances includes:

* **Basic Bioresonance** is awareness of being alive (**Internal**) and in living and relating with others (an **External** component).

* **Environmental Resonance** covers relativeness in a particular place with associated sights, sounds, smells, tastes and feelings. Awareness of pollution is a common issue worthy of addressing.

* **Environmental Community Resonance** is the effort to work with others who seek to restore harmony in time and place and who strive to maximize life choices in our world.

* **Sound/Silence Resonance** involves balancing both activity and rest in our internal life and communities and involves compromises. The same can be said of sight, light, and odor pollution.

Note: "Bioresonance therapy" promoted as a cultic treatment (Scientology) is considered pseudo-science by researchers.

References Chapter 3

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Chapter 4. Communicative Resonance and Equality

Communication takes on a variety of forms, all involving resonating with another or within and/or among groups. Some is part of everyday life; some is part of the process of transferring knowledge and skill through education; and some is building up communities for mutual betterment. Meaningful communication is obvious to all of us; the opposite is likewise: when one is communicating improperly by lying or deceit, or refusing to be involved in learning, or frustrating a community process through terrorism or continued exploitation.

a) Modern Communication

Several of us farm youth planned an ambush of a massive flight of crows heading back from feasting on Kentucky corn to their nightly roost north of the Ohio River. Three of us were lying at the brow of a hill in the direct traditional evening path of these crows; a lead sentinel crow saw us with our guns long before anyone could get a good shot. This bird somersaulted in mid air and the entire stream of crows made a detour of a half mile around us and then continued as the crow flies. It was bird mastery.

Sensual beings communicate with each other. Who of us comes close to knowing all the secrets of a wide variety of fauna? With time and acute observational skills a few naturalists have come to some understanding of how elephants or flocking birds connect and interact with each other, or with other species. Often the signals they make are communicating practices, and these can be surprisingly sophisticated. Whale pods have creative signals like new popular tunes that start at one part of the world and spread in relatively short periods to other parts of the vast oceans, as through a "whale hit parade."

Animals communicate with each other, whether the woodpeckers' sounding their spring mating calls, or the dance of honey bees indicating a new source of nectar, or the screech of an owl telling who is boss of the night. It is a fascinating to explore animal communication on birds, land mammals, or maritime life for animal lovers and observers. By listening to the singing crickets or croaking frogs we learn something. In youth, I detected that crow calls were different. Yes, animals resonate with each other through actual communication.

Most likely some animals can communicate across species -- and humans can as well. People converse and even talk to their pets and beasts of burden (gee! haw! or whoa!). Pandas returned to China have difficulty changing from English calls to Chinese. We hear about horse whisperers; we know that pets can have an ability to know their human cohorts (let's not say "masters") in non-verbal ways whether by specific sounds or looks or other bodily expressions. They know when humans are dissatisfied or happy or in danger; they react accordingly with an appropriate communication. The famous "Elephant Bill" (James Howard Williams) spoke often about the communication of that majestic species: *They flapped their ears, some silently, some producing a sound like hands clapping. Even the air itself throbbed with their presence. It wasn't a fanciful notion, but a physical fact, as their low vocal tones were felt as a vibration in his chest. Their chatter -- everything from incongruous little shrieks to low rumbles, like a lion's growl -- seemed full of meaning.*¹ There was a special relation with one elephant (Bandoola): *Williams reached out to pat Bandoola's trunk and felt a very odd sensation - a meeting of souls. He was certain that a current of mutual recognition had passed between him and this elephant.* Sometime later he would write: "It was not merely that chance or fortune brought me together with him."² Williams would consider it destiny and that he had "A feeling of understanding him as a fellow creature closer than many human beings." *From the one who first trained Bandoola (Po Toke), Williams learned about a method of schooling that resonated deeply with him.* He regarded that strategy as revolutionary and it was built as much on love as logic.³

Our human to human acts of communicating include signals in everyday life: alarms, hunger, or attention gathering cries, shouts or whimpers. This is dynamic resonance of two or more, with the source giving a sound utterance; the receiving party hears and responds through some sort of reciprocal action. Human social communication expands the simplest forms of fauna communication (proximity, friendly relations, security, essential sources of food or drink, alarm, sexual desire, and simple social companionship). This becomes more complex with evolving human relationships.

Modern technical forms of human communication show great sophistication that only a few centuries ago would have never been imagined. The printing press, telegraph, transoceanic cable, telephone, radio, television and Internet are all progressively broadening levels of rapid communication containing immense amounts of social content and information. These rapid means of communication have expanded neighborhoods from local dwellings through shout, yodel, or phone call to an expanding range that is regional, national, continental and planetary in nature. In our times, "neighborhood" has become the entire Earth; and some daring souls even seek intelligence in the celestial realms.

Focused Communicative Resonance demands meaningful receptivity, for the message sent must be meaningfully received. Thus, a global human language is promising, and communication is narrowing to fewer usable world languages (the official United Nations ones: Arabic, Chinese, English, French, Spanish and Russian), along with some of economic importance (German, Italian, Japanese and Portuguese and others). However, in the process of globalizing communications, the minor languages spoken by certain regions and small nations have taken a secondary role and, by United Nations' estimates, half of the world's nearly 7,000 languages will be lost by the end of this century. It is reported that some young people even in Arab lands prefer to speak English.

The rapid evolving of primary languages occurs at the same time that smaller ones are threatened with extinction. The isolation that created languages of the past is over, but who knows whether a repeat among major languages of the loss of the equivalent of the Roman Empire's Latin network; however, it would take relative isolation. Perhaps cryptic *Twitter* or something else waiting to be developed could spawn abbreviated languages; emotional communication could return us to ideograms or symbolic language. Languages are both threatened and evolving.

Current social media exchange is not only rapid in time from donor to receiver, but it is relatively low-priced, especially when over half of the world's people are now equipped with cell phones and other electronic communicative devices -- and the total percentage of users keeps rising. Current weather reports, marketing information, movement of people, and local and global news allow a level of information unheard of a century ago. When properly reported, people with social media devices are alerted in seconds to impending dangers from extreme weather and terrorist attacks. The world for better or worse is interconnected.

In Washington DC from 1970-77 I resided much of that time a half block away from the Library of Congress, the largest repository of information in the

world -- and I visited this massive place on occasion for research projects. Today, far from such a treasure, while residing in Appalachia and blessed with broad band Internet connections, I have much better access to basic and primary information than when living next to the Library of Congress. More available information enhances intellectual life.

Evolving social communication covers a vast variety of fields: medicine, finance, migration, sport events, drug trafficking, and cultural and religious celebrations. People of all ages and walks of life want to know what is happening -- and rapid communication can deliver human benefit or mischief. Businesses and individuals who capitalize on search-engine access help sustain and inadvertently promote *Google* and *Facebook* -- enterprises garnering billions of dollars, all while neglecting the fact that communications' maintenance and access are supported by general governmental funds and the taxpaying public. Vast communication networks need to be more centralized, but that should be all the more reason for such to be accountable to the public -- something that pure market forces cannot achieve even when profit driven.

As social beings, people like to interchange information and to be aware of the latest happenings. Communication breaks the curse of isolation, a notably rural problem, but urban immobile or restricted individuals (prisoners, shut-ins, etc.) suffer as well. Conversation allows growth in mutual understanding and trust. By removal of barriers to information, the isolated can be united with potential partners in an I-thou relationship -- a special form of resonance where all parties benefit more closely.

To contrast the differences in communication, consider an actual letter sent by the Spanish King Philip II (king 1556-98) to his military commander in Latin America (Philip reigned over a greater portion of the world at that time than any other ruler). Philip was also regarded as a great micro-manager. Just before the sea convoy to America was to leave port Philip was writing an important set of directions and spilt some ink on the paper. There in the late hours of the night Philip personally quickly used sand to cover the spot and appended additional words in and around this vital bit of communication that would then take several weeks before it reached its destination. Such was communication less than five hundred years ago.

Perils coexist with promises. We can be overwhelmed by the progress of social communication, but is it all roses. Granted, the curse of isolation is broken for many, especially among distant loved ones; a global neighborhood shrinks to our doorstep; people are able to greet, inform, encourage and support others each day at very low costs. Still there's nothing

perfect in this world and even modern communications and internet access and ubiquity involves perils that must be recognized..

Social media can be habit-forming. The temptation exists to waste time communicating through available and relatively low-cost electronic devices. Road dangers increase with distracted drivers wanting to text at the wheel (American pedestrian deaths rose by 10% in most recent years). Likewise proliferation of pornography on the Internet, stealing of intellectual property, and failure to follow legal copyright procedures occur with greater frequency; maybe we need a fresh look at copyrights. Jamming networks with worthless materials causes information overload and misinformation. Deliberate damage to websites by saboteurs and those seeking ransom money sprouts up daily. The "word of mouth" rumor-mongering monger sometimes described as "Social Resonance" is a new phenomenon. Spam in all its distracting forms along with unsubstantiated hoax or scare-mongering focus on gullible individuals, especially elderly who lack Internet electronic proficiency. Finally, those engaged in excessive social contacts need wholesome rest time.

Dissonance as an original human weakness is deliberate disruption of harmony that can occur by increased volume or speed of delivery. Communicative Resonance can be challenged in many ways some unintentional and others highly intended. For instance abrupt human-generated noises disrupt an opposing sports team or even an army in battle. Consider when Confederate General Stonewall Jackson encouraged his troops to "yell like furies." And thus, in that charge at the Battle of Manassas (Bull Run), was born the "Rebel yell." A Civil War veteran said "The peculiar corkscrew sensation that it sends down your backbone under these circumstances can never be told. You have to feel it, and if you say you did not feel it, and heard the yell, you have *never* been there."⁴

Controls. Communications is a new public highway that can attract hosts of travelers of all economic classes. Highways need road signs and regulations for users and police to prevent mishaps. A class of communications highway-scammers is bent on exploitation and thievery; these can create conditions that scare and intimidate targeted groups or individuals. Controls imposed on private wrongdoers are the first consideration; however, controls often include hostile governments who threaten their own citizens through authoritarian practices. The challenge soon emerges as to whether self-monitoring and agency controls are sufficient, especially when market forces and profits are concerned. Is it proper to denounce regulating agencies seeking balanced controls as public policy?

Professional Secrecy. Participating in Communicative Resonance has

its natural limits. Privacy is always a matter of concern when social life depends on keeping certain information restricted. However, one wonders why such secret messages are sent on the public highway of Internet, for traces can remain for future mischief. Emails ought to be "protected" or the communication made in a more guarded fashion (person-to-person or through sealed postal service). Professional secrecy is often in need of greater caution especially with centralization and access of financial and medical records through the Internet.

Trade secrecy has been an added problem within the commercial world even before the Internet. Some trade information needs to be known by regulators and those dealing with health and medical concerns. When a potential toxic substance needs to be identified as to given amounts and degree of toxicity, then the public and especially workers have a right to know. This exceeds the so-called right to private property when companies could retain information -- though this is required to be revealed. In many of the pharmaceutical arenas (though not all) this revelation is standard administrative practice.

Limits to controls. In a simpler age before communication and records were so public, a person with a personal blemish could be overlooked or forgotten through movement to a new location or change of name. That is more difficult today when so many records are easily stored and retrieved. Governmental agents use the tools at hand and still are uneasy from a destabilizing power of the media, criminal and terroristic gangs and the inherent vulnerability of a more computerized age. The more sophisticated the interconnected, the greater the possibility of intended threats by groups that sense power in damaging the fragile system.

Vulnerable communications. A weakness in the status quo is that grievances such as injustice and inequality can be challenged more successfully by those perceived to be harmed. The system demands the harmony and trust of all. Resonance of a more globalized system demands globalized trust, whereas the spoilers want no part in being trustworthy; these terrorists or promoters of questionable medicines or unsafe products prefer an unregulated atmosphere. Passwords and private information can be compromised; scams are frequent; past records are accessible, embarrassing emails can surface and defeat candidates and jobseekers, transmission equipment can go out of style and design and become inaccessible, and compulsive constant connectedness can become habit-forming and regrettable. Internal (private care and prudence) and external controls are necessary.

Quality Communicative Resonance. Limiting use of communication

means and varying the means for different functions can safeguard modern means of communication; care is needed. Words whether written or spoken have immense power whether essays, homilies, lectures, dedications, or formal greetings. These include processing information and discerning and reflecting on ways to resonate with others in a guarded fashion:

* Discernment can involve purely mental exercises, or can be put on paper (work sheets, diaries, day books, planners, etc.) for recording and future referral. Discernment involves weighing ideas, whether internally (with divine assistance) or in conversation with trusted confidants. Reasons for acting or not acting, or acting this way or that constitute basic elements for wise discernment. Planning, whether through mental processes alone or through recording on paper or digitally, takes quality time.

* Meditation is an added form of internal Communicative Resonance. A variety of culturally conditioned forms of meditation exist of which participants find worthwhile. Mental and formal prayer in praise, confession, supplication or thanksgiving will be considered in a more spiritual treatment. In some cases this goes beyond formal words to be presence to Another. Varieties of meditation are highly popular in our super active world. In prayer one may mentally see, hear and feel sacred events; it can involve discursive exercises or meditative forms of Scriptural reading, or the repetition of formal prayers.

* Non-verbal communication comes in infinite variety from facial expression and degree of attention to manner of posture and crossing of legs. Some can tell at first glance whether the person wants to communicate or not. All in all, resonance can be enhanced or retarded so easily without say a word.

b) Education as Communication

I watched a robin at the tree next to my window. A nestling was stretching itself to get the worm in the mouth of the parent bird, which stepped back at each additional stretch, moving the fledgling outside of the nest to the branch and then the flutter as the parent jumped to another branch with the youngster taking unsteady steps to follow. The exercise went on for a period of time. Amazingly, there was resonance involved as the learner opened itself to new experiences in order to earn its "wings."

Educational communication involves the passing on through communication of word or forms of experience and information to others; there are many ways of teaching and learning of which resonance is an important component. Such enterprises are now broadening within a global level, for the value of education is universally recognized as needed in this world of increasing sophistication. The intensity and duration of education varies with the talents

and mental stability of individuals, some challenged by K through 12 and some who seek but lack technical specialties rather than traditional academic routines. In today's complex world a sizeable number of youth are expecting and expected to attend college and receive advanced degrees.

Resonance is certainly involved in the passing of knowledge or skills from teacher to learner. A world of the neglected and unlettered hungers for literacy and for practical skills. The hope is to broaden access to education, through greater resource commitment in public and private spheres. It takes time and resources to learn to read and write; it takes much more to be a medical expert or professional engineer. However, the current educational enterprise is cumbersome and costly and somewhat closed to the global multitudes, for over a billion youth are extremely limited as to educational opportunities -- and hundreds of millions remain today without any formal learning process. All have a right to some education and a global resonance rises to share such intellectual pursuits with all the people not just the privileged.

Improvements. In the mid-fifteenth century, the printing press was a step to new educational possibilities through greater access to books and information; frankly, there was less need of students transcribing the teacher's notes. Today, the role of classrooms, study halls, libraries and student dorms may be outmoded through new educational opportunities: *Skype*, teleconferencing, information access, and global networking. Why the expensive physical facilities (and administrators) and the many duplicated libraries when basic educational materials are available on-line? Certainly face-to-face exchanges are of value, but at times they approach being a luxury.

Accessibility. Education is potentially accessible to far more people, if class time, credit hours and degrees are freed of monetary expenses. Socrates and Plato believed in tuition free classrooms as did the Jesuits for several hundred years. The vast educational enterprise with tenured positions and cushy administrative jobs resists the handwriting on the wall. With ballooning indebtedness on the part of hundreds of thousands of students, education is coming to a crossroads and challenges policy-makers to change -- and high prices will undoubtedly bring on change. True, in theory many can go on-line and listen to a lecture by an expert -- who is already compensated, is retired, or who has independent means of support. However, such opportunities do not mean the listener will be guaranteed becoming engaged with the lecturer. While ease of access is globalizing the educational experience, it does not ensure a listener the discipline to learn -- but with limited degrees of resonance?

Challenges. The power of high-powered schools and degrees still holds sway today. Costly frills like football games, frat houses and pom-poms are not

education but add barriers to the total enterprise. College indebtedness in the U.S. is at 1.3 trillion dollars (2016); and private corporations and CEOs make millions.⁵ Formal education both public and private is a key ingredient to the current economic system. Certainly, one affirms that socializing is part of youth education. However, others see value in non-specific academic circumstances. Unlike the Sophists and even Plato's academic milieu, Socrates disliked that more formal approach; he preferred immersing one's self in the life of the city; this involved living contacts between human beings.⁶ In some ways this is another form of socializing with very practical overtones, but less expensive than academic settings.

Luxury? Education ought to be practical and enjoyable. Perhaps the process could be less burdensome without costly tuition and constant testing. Many of us elders remember nail-biting days of exams, essays due on time, and recitation in classes when unsure of subject matter. Actually, education has tensions and also pleasant moments. Self educational opportunities may offer some but not all these socializing occasions. What is missing is the resonance of teacher and student, the importance of which is far more profound in younger years but may diminish with higher educational levels. Often in higher education, resonance of teacher and student is lacking and often has a delayed effect, a period after face-to-face meetings when past insights become clearer to the learner; this arouses delayed gratitude, and is frequently missing when the teacher is observed at a distance in a vast lecture hall or over Internet. Good teaching is fed on active appreciation and this motivates the teacher all the more.

Self-education. Learning on one's own becomes a challenge both in opportunities and in the temperament of students. General public education is the hurdle of local, state and national public policy, since so much financial resource is put into schools facilities, teacher training, educational materials, buses for transportation, and athletics and other extracurricular programs. Of course, some attention is justified in the long process of bringing youth to mature citizenship. Other aspects, such as big league sports encouragement are sources of high finance. Resources are certainly needed by the self-taught, but the less costly Internet beckons as lower cost educational alternative. A public policy that encourages self-education is lacking for numerous reasons, one of which is a vested educational enterprise.

Educational counseling needs to be available for self-learners. A minority may be confident when undertaking educational ventures on their own; many lack such confidence and as termed "professional students" some pathetically seem in constant search for courses, degrees and specific directors. They search for teachers to satisfy needs, and fail to detect self-interest by

academics and administrators who feed on this insufficiency malady. Needed is another form of resonance, that of a neutral counselor who encourages those who seek skills to strike out on one's own. Though many of the learned may object, the weak are preyed upon by the formal educational racket. On the other hand, the entrepreneurial spirit drives others to hopefully find their way, but it must become one striving to share an experience.

Team learning. Educational forms of communication involve sharing the learning process, not as in a competitive atmosphere of one surpassing another, but in mutual fulfillment. There are wonderful tales of students in poor regions who return after classroom experience and share learning with those unable to attend. A cooperative spirit brings out the best in many who rise together and include both the more forward and those quite bashful or slower learners. Supervisory personnel can detect those needing encouragement within the team and can promote continuing education on the part of all.

Educational Resonance. The desire to transmit a legacy of experience is human; the happenstance of finding willing learners is less remote when told about the eagerness of poor youth and families especially in developing countries who takes great pains to be educated. The joy of the "Eureka" moment can be shared by all who are naturally curious and are alert to discovery. That moment becomes an **internal** resonance; the sharing is an **external** one. A motivated child of any age shows excitement when learning something new and an added excitement when relating the learned material with companions and among family members and loved one. In addition, an accessible and teaching social media has the potential of expanding Education Resonance at this time -- and this goes beyond the elitism of the privileged few. The challenge is to enhance education for the masses without damaging the content.

c) Community Organizing and Enhancement

It may be called an herb garden club, but what I note in this monthly meeting of good gardeners, cooks and simple lifestyle folks is a willingness to engage and share local practices. I like to call it "community organizing lite," for the problems flow from an enhanced community of like-minded people who see a need to address the ordinary issues that confront the entire gathering.

Pods, flocks, herds, schools, termites and anthills all have a communal character, an elementary socializing of their own as part of an interdependent endeavor; this gives a more orderly and suitable habitat for the benefit of all within a local community. All have roles to play in enhancing membership if we

could penetrate the complexities of barriers that separate us. Entire books are written on how to organize. Throughout the rest of this book our attention will return to cooperative activities which improve human communities, for much ought to be said.

However, our misplaced human freedom can overshadow struggling communities with examples of greed and other misdeed. Fractured or exploited communities can be changed for the better; this was the firm faith of Saul Alinsky⁷ (the founder of modern American community organizing) and his many associates and disciples with their own leadership skills. Political action for them involved raising the democratic spirit within the dispirited usually focusing on local issues to which a possible victory is within their united efforts: school boards activated, zoning reorganized, police protection fine-tuned, and on and on. President Obama was a community-organizing disciple who carried acquired skills to fashioning specific presidential campaigns and becoming quite successful by winning the office.

Seeking equality. Community development depends on the depth of faith in a collective future. Believers who are willing to cross denominational and faith-based lines can still aspire to a better quality of life for an entire community. When trust builds up through working together at smaller scale projects, then taking on progressively bigger ones is possible -- a community organizing effect which is a form of communal resonance. Much depends on the relative equality perceived within the group; where great differences exist and are allowed to continue, the community trust is limited -- and friction can develop more easily. At least the promise of greater equality must be present and operative, so that greater harmony can be nurtured within an emerging community. Recall that a long history of European colonialism was highly legitimized by encouraging practices of class differences between exploited and exploiters.

Common resonance aspirations. Improving social communication, education, and organizing have a common goal of greater outreach so that more can be interconnected. Expanding equality and expression are common themes. Power emerging when isolation is removed, when greater numbers receive educational skills, and when powerless communities are empowered are the goals of those seeking harmony through justice. Justice is recognized in free access to the Internet, in poor children learning to read and write, and in oppressed communities being set free by agents of change or through their own efforts. Both internal modifications and external help are needed. The challenge is to improve resonance in the face of privilege, profit, scam and exploiter. Improving resonance becomes a struggle. Inequality hurts us all; fuller equality enhances resonance at all levels.

References Chapter 4

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Chapter 5. Artistic Resonance as Expression

Art is a form of communication that involves expressing the accomplished skills of some to a wider world. Communicating and organizing resonance stresses co-equal partners seeking mutual benefits for all parties, still here is a form of resonance acknowledges in which the skilled originator(s) initiates a process that is then expressed or presented to a larger body as a product worthy of appreciation. Thus the basic resources of materials and inspiration enter into a primary moment and the acceptance of the product in a subsequent moment. Thus expressing art is directed to an enduring Commons that is part of the evolving culture of a community in which the artist lives.

Artistic Resonance involves different levels: the *interior* resonance or creativity of the artist seeking to produce an artifact and expressing personal experiences to others; the *exterior* resonance of both artist and materials, conditions and experiences from which the artifact is created; and certainly the *social* resonance with a recipient audience or critical society, whether current or in the future. An artist is at the mercy of the public and, though inspired, still may not have reached a level of popularity to claim public artistic success at the time of production. How about the art of a cave man who died without recognition but was expressing for a future generation? Are both inspiration and recognition essential components of art?

a) Artistic Creativity

From earliest youth my effort was to say something to the world -- the private seeking to become public. I engaged in youthful storytelling to siblings or anyone who would listen, but always aware that "telling stories" in my culture meant telling partial truths. To tell stories could become something to confess as a fault. I've never said I am a story-teller or a "writer" for that matter, though the Special Collections people at Berea College library accepted all my writings and talks. Let others decide.

Art resonates in various ways. Most, but not all, inspired artists prefer a public display of their work and run the risk of rejection by peers and critics in their lifetime or beyond. Most artists desire to be accepted; however, history is replete with examples of art acceptance in one's lifetime and then a later rejection, as being out of fashion. On the other hand, some artists do not want to resonate with the *hoi poloi* or with certain critics who they regard as incapable of proper judgment of their artifacts. They prefer direct contact with patrons who appreciate their work and whose encouragement can bring it to full fruition. However, artists act in different ways. Some reject current critics and, in fact, disregard the comments of the current generation; rather than listen to criticism they set about producing art for posterity in their own way with hopes for more favorable future appreciation.

Art in all its many varied forms shows forth experiences truly human in creativity. A strong **interior artistic dynamic** manifests resonance within the person. However, it does not remain there in most circumstances. The normal impulse is the happy communication of the work so that others can judge and appreciate its quality. However, examples exist of a disjointed artist deliberately destroying the artifact, maybe due to depression, or longer-term mental illness, or perhaps refusal to consider the product worthy of presentation to the world. Ordinarily, the art work is a self-communication to the world, a revelation worthy of outward expression. The particular artifact expresses a harmonizing of hands, head and heart -- and the product is alive. Michelangelo, filled with the grandeur of his efforts, tapped his finished statue of **David** and said, "Speak!"

Inspiration of the artist is worthy of being celebrated. In one sense this is made known to others in the artistic expression; in another, it is an internal appreciation that elevates the artist own self worth. However, when art depends on self-criticism alone, people can be too hard (or too easy) on themselves. Certainly others often fail to fathom the process of the spirit in the

creator's head, hands and heart. A "triune" working within the person including a spark that does not come from outside -- or does it involve the Spirit as origin of inspiration?

Inspiration is considered as springing up within and yet there is a vital connection with the real world all around. Inspiring raw material triggers the individual to conceive of a "new" creation. Inspiration enlivens us because it is personal and yet with a social dynamic that drives it forward.

The famous painter, Hans Holbein the younger, was commissioned by Sir Thomas More to execute what is referred to as the first great work of secular portraiture in Northern Europe. This record of the More family history reflects More's own profound sense of tradition, *but it is also a study of intimate relations, touched by spiritual awareness and enlightened by knowledge.*¹

Even before the idea of a work of art comes to be, there was an interior resonance, a vibration within that craved exposure. I can testify to that; inspiration leads to this project attempting to give birth to something new. However, as in the birth of a child, it takes more than one to bring this about, so the hypothetical audience of an art work must also be present in the "mind's eye" so that gestation can be initiated. Thus, an interior resonance that involves all parts of the body must have a counterpart that in some way fertilizes the effort. The mental process of conceiving an idea leads to an artifact with enthusiasm or "the God within" -- human and divine.

Does interior resonance involve harmony? Believers radiate godliness by manifesting experiences in their individual lives and in harmonious interaction of body parts. All bodily organs work together for total health and well-being: the **hands** fashion clay, the head ponders specific design, and the heart quickens the process through inspiration. The **head** plans the use of hands, expresses the satisfaction of seeing the spiritual artifact emerge or service rendered, and faces that smile with joy. The **heart**, that traditional seat of emotions, gives inspiration to head and hands, and triggers revealing and sharing the artifact for practical use and human benefit.

Bodily organs work together, are not jealous, nor seek special recognition. A total art work involves giving, reflecting and accepting -- hands which give and receive, heads that reflect and nod in agreement, and hearts that go out to an accepting and offering service to others who are a cultured community. Harmony then becomes giving and receiving, a self-communication in which interiority grows and flourishes as it is prepared for proper externalization; this in turn catalyzes further inspiration.

Art production involves organizing and planning and is worthy of everyone -- though many do not readily respond. Artists become renowned creators of artifacts through their talents, efforts, and planning; organizers help create communities; gardeners create cultivated space in growing produce; homemakers transform households into homes; nature lovers create their own sacred space; and carvers and crafters have shops and nooks where their prized works are produced. Love of harmony begets its own expressed fruit of labor, and at least the interior wellbeing of the artist benefits with a deeper spiritual growth involved. A dynamic effect results with loving artistic deed of production or promotion giving rise to expanded external appreciation though it may be delayed.

Though greatly self-gratifying, most art is made with others in mind: admiring loved ones, patrons, audience, sightseers, critics, etc. The desired result of an artifact is response to some degree of intended comfort, or positive or negative critical expression that opens future improvement to the artist. To the degree that this is achieved, it can become recognized art for a period, if not enduring art for another generation. Most artists desire public acknowledgment as a resonating dynamic that keeps them energized. However the artist may sometimes want limited exposure of his or her work so that it conveys selectively to those who appreciate the intensity and richness of the artist's experience. Audience or viewer size and type vary with the artist's works over time; immediate increased size means more income and job security and more acclaim.

The ancient Greeks regarded some forms of art as worthy of their skilled slaves' endeavors. For long periods of time, such works of art were the task of servants, slaves and serfs and beneath the radar of intellectually-trained but less artistic academics. Artists and craftpersons were of low esteem and signing their products was out of the question; it was the treasure of the artist's master or, in the case of cathedrals and other masterpieces, that of the affirming and participating public. Art products appreciated through age, but the actual individual creator of art held a secondary position in society.

With time and emphasis on individuals and their unique skills, the particular artist became more important and often the name of the skilled producer gave greater value to the work itself. For Christians the calluses of Jesus the Carpenter and Paul the tent maker added nobility to the worker, and with growing respect for individuals the designation grew in a slow methodical way. Perhaps three monks completed *Book of Kells*, the Western masterpiece of calligraphy from 800, though their names are only known to God.

b) External Resonance

*You don't work **on** the wood; you work **with** the wood.*

Steve Farmer, Woodworker, Berea, KY

Only a few blocks away lives a real artist by my estimation, Tim Hall. He can take a block of wood and from it emerges a beautiful flower or bird which he further embellishes with detail and special creative touches. In videotaping him for our YouTube series,² it becomes most evident that he enjoys his work immensely and that he has a relationship not only with the finished product, but with the raw material. Interestingly enough, on the signature of each of his work is an acknowledgement that God is at work here as well -- a sense of gratitude and community between artist, God and the material itself.

Substances used to make the artifact are selected with care by good artists. Often these materials are limited by availability or cost, and yet their selectivity betrays the attention by the artist who appreciates quality starting materials. In every way, the artist resonates with such materials once selected. Most artists know what these resources are, for that gives uniqueness to their works. Perhaps an added talent is when artists make good use of flawed materials, and this becomes a mark of their talented skills. Likewise, all forms of art may have to pay special attention to conditions in which the art is produced so that it will endure.

Buildings can be works of art and stand out from surrounding human-made objects; they can be noticeable as inspired by builders and inspiring to residents and visitors alike. However, much of this is not just the different design but a combination of use of materials, awareness of climate and weather, knowledge of soils and rock formations, appreciation of the immediate landscape, and willingness to work with native flora. Careful attention to such details adds to the success of a house as a work of art.

Good architecture of an enduring public artifact includes materials and existing conditions of the product. You don't build a house on sand. Can anyone of the millions who watched the short movie (my first some 75 years ago) of the swaying and collapse of the Washington state *Tacoma Narrows Bridge* in 1940, four months after completion, not be impressed? At the time, this expensive span across Puget Sound was the third longest suspension bridge in the world. Shortly after being built it was struck by a 40-mile-per-hour gale, swayed violently and then collapsed in a matter of minutes. The elementary forced resonance of the bridge met a wind providing an external periodic frequency and the bridge came down, though the actual cause was called

aeroelastic flutter (interaction between the inertial, elastic and aerodynamic forces that occur when an elastic body is exposed to a fluid flow). All later such extension bridges considered external resonances and that included the wind.

Resonating architecture involves the interaction of the architect with the materials selected, as well as the site and the forces of nature (wind, floods, earthquakes, etc.) that can affect its durability. David McCullough noted in an interview on NPR that architects build for light; this he said is when observing an architectural work at sunset or at other times of light play. Here light and work interplay in a general sense of resonance including the work's designer. When the finished product has a more permanent purpose, then added support, choice of materials and protection from the elements are necessary. The architecture may have a primary practical purpose, but also is built to be a beautiful and pleasing portion of a community of structures; the surrounding landscape contributes its presence and shares its purpose for existing.

Gardening is a work of both art and horticultural science. Well designed and tended gardens can be works of art that the gardener and others can admire. Certainly the gardener's spiritual and psychological wellbeing can be enhanced by proper siting, selection, variety, choice, tillage, and other factors considered in becoming a "green thumb." Such people have a special relationship with the land itself and with the crops grown on that land; they resonate with land and produce, and as caretakers of pets or livestock have resonance with their sensate animals.

Gardening is also a science with special attention given to weather conditions, water needs, fertilizing and protection from weeds; space demands of growing species and proper rotation; and precise times for sowing (some consider moon phases) and harvesting. Consideration of amount of direct sunlight during a plant's maturation is important as well as extending both ends of the growing season. Additional care is given to protection from wildlife, as well as trimming of fruit tree and vines during the growing season. An added resonance is with the soil itself and its care, as well as with the community of fellow gardeners and consumers and those who admire the beauty of fruitful landscape.

Dramatic performance or dancing involve artistic teamwork and go beyond the production of an exceptional architect or gardener -- who may also have had contributing associates. In reality, many art forms (theater, choral singing, concerts, etc.) involve essential teamwork inherent to the artistic production. What is said of single individuals also applies to artistic resonating participants. The greater the resonance, the better the performance.

c) Social Artistic Resonance

While going to museums can be tiring, I never forget my doctorate days in New York City when I spent frequent Sunday afternoons with others in our student community going to art museums -- of which there are many in the city. I even saw the "Mona Lisa" on exhibit from within a slow moving line. However, unhurried viewing of art works was more delightful, and doing so with other art enthusiasts added resonance to the occasion.

The human impulse is to expose deep personal feelings in some outward sensual manner, whether visual (sculpture, woodcarving, photography or architecture), audio (music, literature and poetry), motion (dance, dramatics, video work and certain sports), or smell and taste (culinary arts or gourmet food production). These products of human inspiration enhance the quality of people's lives and are underpinnings of our civilization. When art of past centuries is deliberately destroyed by terrorists such as ISIS, the attack is not on a single work, but the entire civilized artistic enterprise currently existing -- the **Artistic Commons**. The legacy of civilization that outlasts the artist is damaged in an act of profound meanness by those who only wish to inflict violence on those they hate or wish to conquer and control.

Resonance exists among art lovers. The ideal union of artist and fellow human beings has a resonating effect beyond the motivation of the artist and relations with current art enthusiasts for the producer. It involves a start of a legacy that goes beyond the participants' lifetimes. The total work involves giving, reflecting and accepting that first enhances artists and their works and then reaches to broader levels of an art appreciating community with its enduring characteristic -- a legacy worth passing to future generations. Public recognition is based on creation of enhanced beauty whether in design, visual art, dance, theater, poetry, architecture, and scientific and engineering feats. An enduring legacy goes beyond classic forms of art and includes clothing fashion, hairstyling, community organization, home interior decoration, yard care, culinary delights, and gardening. Something beautiful is communicated and appreciated.

The successful fiction writer David Farland³ speaks of the power of resonance in writing with insights that are beneficial to the writer of novels. Keeping the audiences in mind was the gist of his instructions. The resonance of writer and reader is very real and worthy of deep reflection. Even though I never read novels or accepted Easter bunnies or North Pole-dwelling Santa Clauses and prefer biography or history, I profited from Farland's book.

Actually, I know little about his example of J.R.R. Tolkien's *Lord of the Rings* (Is this a waste of genius, inventing languages for his characters?). Frankly, capturing an audience is a necessity for those of us ordained to proclaim Good News. Note that my critics seek that I affirm that classics involving fictional characters have moral timeless messages. I concede!

Artistic Commons is part of a culture, a long-standing community of experiences predating the particular art production. A particular art is an inheritance tapping a historic culture, as well as existing materials that are creatively selected for the artifact or performance. Art is more than an individual's preserve; it is a human family undertaking, and thus resonance includes a cultural space in which the artist is able to flourish. Thus, his or her work is not the product of pure isolation, though often artists need silent time and space to completely design and execute a work; it is the product of an ongoing and enriching Commons of which artists share and contribute. It involves the acknowledgement that unique skills enhance cultural advancement. The growing Commons welcomes uniqueness.

The harmony of good existing art leads to further harmony within a community and bears a feedback mechanism at work. A healthy society is one where art flourishes and audiences support directors, producers and productions. A healthy culture is an atmosphere of artistic appreciation exists that encourages art and encourages special celebrations, i.e., festivals, fairs, anniversary celebrations. As mentioned under creativity, the hypothetical artifact is like the twinkle in a parent's eye, for art has child-rearing similarities. The act cannot be done alone, and so partnership is a key component that enhances inspiration on the part of all parties, the artists and the community.

Inspiration can be made contagious. The creative act of art production has an added spiritual dimension that touches others than the artists themselves. Powerful inspiration is successfully transmitted to others whether a partner, local admirers, or a future generation. Degrees of "success" can sometimes be quite misleading, for current or future popularity is not the only criterion for judgment, but it can be a reinforcing element for budding artists. However, instant popularity can have inherent weaknesses, for some artists become wealthy and others starve. Think about the entire history that gives million-dollar value to an artwork that is then declared counterfeit? Art is more than mere economic investment based on a product's supposed originator or the public's hype. Great art has recognized value but all forms of primitive art has some though more limited value.

Basic materials beckon the artist as Michelangelo says, "Every block of stone has a statue inside it and it is the task of the sculptor to discover it." To

some degree a future rests in a raw material world that encourages artists to express themselves in a creative fashion. Can one speak of teleology, a future glory of what is to be produced? If artists have ideas but no will to execute them, then daydreams fleet and the Commons is impoverished.

Unfortunately, as mentioned some may destroy their own art, perhaps believing that it is not worthy of public view or future posterity. Such is life! Nevertheless, the greater multitude of artists want to be part of an artistic legacy; they will take steps to see that their works are preserved. Art work can have investment value in itself that can age and mellow with time. Artifacts do not stand alone; they are part of a community of human keepsakes with current recognition, or that stand to be appreciated long after the artist has passed on.

Reality can be harsh and this includes the art world. Discord confronts the artist in many ways, some conditions retarding a work, damaging a product, or even yielding a miserable or demanding personal life. Competition influences artists in a variety of ways not all detrimental. For instance, the famous Leonardo da Vinci fresh from painting the *Mona Lisa* was commissioned to paint the Battle of Anghiari on the wall of the Florence Council Hall. A much younger Michelangelo was commissioned to paint the Battle of Cascina on the same wall; his statue of David was installed outside the Palazzo Vecchio. These two great artists were in direct competition, and with severe competition came paranoia and deep dislike on the part of both.⁴

Even amid all the shared experiences of artist and recipients, discord and division abound and take the forms of erratic conditions beyond immediate control -- discord within and among families, selfishness and failure to pay for services, and addictions that result in discouragement and even despair by the artists. Simply reading the lives of artists can be eye-opening. Art is never produced under perfectly ideal conditions; all too often it reflects the human condition.

Summary: Resonance within art includes a celebration of the skills of a creative person. The focus here is on skills over and above those of ordinary folks and yet involves the ordinary celebrants as well. Resonance in art is within the person of the creator of the art who uses a combination of head, heart and hands; this involves extending inspiration to the materials that are resource to the art. The sympathetic supporters of art enhance the artistic Commons through their mutual appreciation. This becomes a feedback for inspiring people to produce their own artistic products.

References Chapter 5

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Chapter 6. Musical Resonance as Togetherness

*From harmony, from heavenly harmony,
This universal frame began:
When nature underneath a heap
Of jarring atoms lay,
And could not heave her head.
The tuneful voice we heard from high:
Arise ye more than dead.*

John Dryden, "A Song for St. Cecilia's Day"

Music reveals the soul. Some speak about the experiences, tones and emotions and even visualize certain colors and hues when hearing musical sounds. Moods are created in the mind's ear and eye and take many forms: relaxation and comfort, energetic dance and action, patriotic fervor, religious fervor, togetherness and isolated pleasure. Most would agree that good music transcends space and time and raises the spirit. It arises within the most primitive and sophisticated societies and pertains to the essence of human desire to express oneself. As participating audience, all of us marvel at the ability of music to create and enhance different levels of enjoyment. As a young dairy assistant, I recall how contented was the sound of soft music to the bovine species. Likewise, they tell us that whales enjoy making music to some degree. Birds, and especially the mockingbird, have that basic music appreciation stamped in genes; animals can harmonize.

a) Music Creation and Enhancement

Of all the variety of resonances introduced in this book, none individually or collectively are a greater challenge than music. Certainly the art of music involves a degree of talent that varies tremendously, but there is the subtle addition of a variety of resonances of which participants may enter fully or in part. My own experience of intending to chant as religious celebration is one where our late organist, Carol Yunker, encouraged me, because "You can hold a tune;" I have refrained from getting a second opinion on that. Amid it all, my favorite NPR classical program "Music through the Night" allows me to respect music in its many forms.

Musical resonance is both a physical reality and a form of communication among music makers and participants/listeners. There is something divine in the marriage of creativity with a real world of sound and music-making. This includes the vibrational motion at natural frequencies when the music maker excites an instrument by plucking and stroking the strings, striking or drumming the percussion instrument, or blowing or breathing into the wind piece, all to bring forth living music out of the heart. Each frequency is associated with one of the natural standing waves of the instrument and is often referred to as the harmonics of that object -- truly a complex field with musical folks coaxing physical devices to elicit desired sounds.

Music is essentially celebratory in nature and so includes a host of resonating experiences that include:

- * Internal resonance of the musical composer or performer that includes acquired experience with a particular world of music;
- * Kindred relationship of performer with instruments and materials in the

instruments;

- * Physical resonance created by the vibrational sound that is apart from those making or receiving the sound;

- * Interrelationship of performers and conductor in a band or symphony or choral gathering all seeking a mutual goal; and

- * An audience who emotionally resonate with performers and especially with the composer if present.

Internal resonance of the musical creator includes the workings of the mind's ear wired closely to the musician's mind and heart as well as hands, fingers and breathing apparatus. Making music has divine and human characteristics. One ponders how Beethoven must have felt when he started losing his physical hearing; it's reported that at one point he contemplated suicide. But his mind's ear was such that he could hear within his own being and faithfully transcribe his internal resonance to paper. Yes, the immense power of music can truly overcome handicaps. Those who are talented hear a melody before writing a single note.

Internal resonance of the performer parallels that of the composer. A person who faithfully reproduces the work as originally intended enters a mindset of the composer and in some cases can even exceed expectations. Furthermore, though perhaps anathema to the Medieval classical musician, an improviser of jazz moves in an environment where new music is forthcoming, depending on the mood of the performer and the encouragement of an audience.

Interior/exterior resonance expands the notion of the echo beyond the persons making music to the non-human substances involved. Instruments and the materials in which these are made resonate. A good performer is wed to his or her favorite instrument; some of these are objectively recognized for good tone and quality. Creativity involves the mind's ear but the instrument plays a role as well. Mozart spent more time on his favorite instruments (piano and clarinet), but did well on those that weren't. What becomes evident in those making good music is the premium choice of violin or set of drums. Appalachian music is highly prized, and one local member of our local herb club (John Crowe) makes his own dulcimers from Kentucky coffee tree wood -- and the tan-colored, fine-grained wood makes a unique sounding instrument. He knows his materials and they respond.

Physical resonance of the music is extending the concept still farther. The sound itself stands out as a haunting reality and seems to linger. Is this truly apart from the living musical community of performer and audience? One can consider here the transmitting media that brings former or actual

performances to distant places for a receptive audience, or for records that can be stored while the material record's condition lasts. It is music awaiting future enjoyment and basking in the possibilities of being included into a **Musical Commons**.

Interrelationship among performers and conductor/leader is essential for creating a good musical experience. In this part of America an atmosphere of music making draws Appalachian musicians, including my musically-talented neighbor David Maggert, to perform together in a "jamming session." These friends improvise to some degree, but are confident that what they add increases the quality of the totality -- and that is what musical resonance always invites. Music-making ensembles resonate and at times at very high levels of intensity. Togetherness intensifies when a classical orchestra or a school band or a backyard gig plays well and knows it. It is impressive when one hears Jazz musicians reach such a level of trust in working together, that solo improvisations of one or other is welcomed by the rest. Music-making is collaborative. Such togetherness finds expression in homecomings, caroling, festive performances, and camp fire sing-alongs.

Composer/musician and audience resonance is closely related to experiences of those playing the music. This is because music has a way of involving those within hearing distance and can draw them into becoming equivalent music-makers through participation. Thus the resonance is not perhaps as intense but can approximate the same effects as when actually playing an instrument. Hearers morph into participants when entering into the complete musical experience. All parties gain from being enthralled. Musicians testify that compositions take on new life when performances are made before a face-to-face listening and appreciating audience. Recording sessions sometimes include at least a few who attend as audience for these add life to the practice. Even a lullaby sung to a sleepy infant brings a special resonance with the rocking mother. Performers are enhanced by responsiveness that become contagious and inspiration intensifies with interpersonal harmony.

Perhaps music is meant to captivate a broader audience who gain familiarity with specific melodies. David Farland¹ writes about how the power of musical refrain draws power from repetition, captivating the anticipating listener. He cites Beethoven's Fifth Symphony as a masterpiece of resonance known to many for its 'da, da, da, dum; da, da, da, dum.' The famous musician starts with a simple repeating theme, building up with variation after variation, and then after a period of what seems to be something new returns with force to a familiar theme -- and listeners respond. Rather than becoming boring, good music when repeated intensifies the sense of past enjoyable experiences.

b) Musical Harmony

Six decades ago in student days I would go monthly as a German Club member of Xavier University to the Kolping House (a Catholic-sponsored boarding house for German male immigrants) in the "Over the Rhine" district of downtown Cincinnati. There our taste of harmony and drinking songs blended, and those words and tunes have remained with me ever since. Our group acquired two types of harmony: the singing of the songs and the companionship of the club members; both gave rise to happy memories.

Harmony exudes from an experience of good art, but is most highly exemplified in music, since observers become participants. To see a good piece of architecture pleases the mind and brings on a degree of induced harmonizing with the surroundings. However, to attend to music allows hearer to enter and own the performance to some degree, and the harmony has greater intensity. In music, harmony is the calling card to all within hearing distance and much depends on how well it is accepted.

In its basic meaning, **harmony** (derived from *harmos*, the Greek word for fitting) expresses an orderly or appropriate agreement of feelings, actions, interests or ideas. In music-making the potentially productive situation includes the simultaneous sounding of two or more tones made in modulation of chords. While harmonics can apply to mathematics and to physical motion, still it is in music where its beauty is exemplified and appreciated by a culturally inclined public. Here it added a sense of beauty that encourage participants to share and resonate with others.

To some degree even the instruments participate if in the hands of the right performers. In the wooden musical instrument, harmony emerges by utilizing texture, color and grain, a harmonizing of simple created raw materials so that the potential of the instrument inspires the musician to put more of his or her soul into the production for a receptive audience. Concordant notes, measured rests, and a sense of modulation of chords all create an atmosphere that is most pleasing to the ear of a music community. Harmony is contagious and resonates.

Disharmony exists in our troubled world. Even amid all the harmonizing that one attempts to create and share, disharmony abounds and takes the form of erratic conditions that penetrate ordinary life: congestion and noise, personal and group conflicts and discord, selfishness and failure to share essential goods and services, and addictions of all sorts that result in

discouragement and despair. Hands are idled or misused; heads are filled with false glory or greedy plots; hearts are insensitive to others' needs. Body parts function, but do not always work. Disharmony cannot but help to depress the struggling commons -- but the sounds of music are never fully drowned out.

Musical harmony arrives in gentle ways to counter the world's and individual's disharmony. The experiences where all participate in some manner in playing or hearing music allows for a community to combat disharmony without even confronting the total impact of the struggle. Global or regional depression creeps in on a congested world and those affected crave harmony. In fact, good music at precisely the right time becomes a means of coping with the pressures of life. The harmony of music counters the disharmony that threatens us. Music is the troubled world's interlude, the healing grace so often sought after even when unexpressed. Music has the power to bring hope.

This hope connects past experiences with current need. The silent written notes of past compositions invite a replication of melody and rhythm. Even so, the new experience is unique. True music lovers may insist that some performers can take the same musical score and create an experience that fits solely with the mood of the times and place. Certainly, classical Bach scores can be reproduced much like the composer intended, and there is both art and science to this replication, something faithfully repeated but with its own flare and mood. Emotions obtained at a first performance cannot be duplicated, but the call for new and intense experiences can be triggered through the same musical score. In this way, music becomes a healing balm for a world in need giving both a sense of continuity with the past and unique appreciation of this moment.

The harmony being created is a connection with the past and a balance of art and science. Dr. A. True Ott tells us of some of the basic aspects where music and science meet. He says the ancient Greek genius Pythagoras of Samos, who lived a half millennia before Christ, discovered the mathematics of "musical sound" and realized where a portion of a string creates an interval that is called a "fifth" and is a note between what one knows as *do* (middle "C") and *sol* ("G"). A musical fourth is simply the difference between *do* and *fa*; the string vibrates, the hertz will double.²

Apparently Johannes Kepler (1571-1630), a noted astronomer and mathematician,³ connected the basic laws of mathematics as applied to music to the structure of the solar system and was able to measure the orbital paths of planets as well as time and space without access to modern instrumentation. He wrote: *I feel carried away and possessed by an unutterable rapture over the divine spectacle of heavenly harmony. I write a book for the present time, or*

for posterity. It is all the same to me. It may wait a hundred years for its readers, as God has also waited six thousand years for an onlooker.

Music at the right time and place helps form community, a fact long recognized by civic, religious, political and economic organizations. To some degree this requires professional input by those seeking a source of livelihood, though musicians do not always find this smooth sailing. Even in the days of great patrons of music the struggle for survival was intense, except for those privileged to be sponsored by a wealthy patron. It is baffling that Mozart, one of the greatest musicians and highly appreciated, died penniless and then buried in an unmarked Vienna grave. Fame is fleeting and some musicians can be quickly overlooked or forgotten, even while their music is still appreciated by specialists or close friends. There are perhaps more musicians than painters -- and many perform out of love.

Unfortunately among the many who share a love for music, only a few can make a livelihood by musical performances. People of all ages and stations enjoy good music, though tastes are highly determined by cultural backgrounds and a willingness to support musical performers. Quite often the pressure to make a living demands that the musician composes or performs outside regular work hours for a mug of beer, or a passing smile or handclap. If lucky, original music is recorded and the composition published. Modern social media allow original works of music to be copied with no recompense for the originator or performer. Recall the begging condition of street performers (buskers) who have a bucket for tips and play in subway stations or where crowds gather -- the budding harmonizers in a society ever so slow to reward its musical artists. Yet public musical performance adds to the total environment and is an effective medicine against disharmony.

c) Music Universality

I once went to a mountain festival and did not particularly like the music being played. However, it became evident that others all around me did like it, and they danced to the rhythms and beat. With time their enjoyment rubbed in and, without wanting to admit it, the music certainly sounded better. Our tastes can change as certainly they do in life, and with time our tolerance for different kinds of music grows to the betterment and growing togetherness of everyone. Music can invite us to acceptance.

Can music be universally appreciated? Music is the celebration of people with different tastes. Some music can enliven individuals encouraging them to uplift their spirits and bringing them shared experiences of enjoyment.

Music can be a community glue and even has the potential to bind intergenerational groups on a single occasion. Festivals often include several musical sub-events occurring simultaneously all adding to the general atmosphere that cannot but help cultivate tolerance. The potential exists for a new harmony of uniting with those who find it easier to open themselves to new sounds. One can be reminded that very young children enjoy ditties and rhymes that older folks only find fulfilling in observing the youthful joy.

Music opens the door to offer a two-fold participative resonance: the actual participation in the creation of the sound among performers and audience; and observing the harmonizing effects that music is having on others present. Really the first is more evident when this recalls past musical experiences; the second is something that occurs more with aging when hearing fades and a joy in seeing joy becomes an expanded musical experience; in such cases music is universalizing when intergenerational.

Musical styles are like languages, where certain physical, physiological, and neurological conditions create diversity of tongues over long periods of time. Music, however, hastens events and shortens the time to learning to share enjoyment. There is no perfect music but that may not be accepted by those committed to a particular style. Here music of different forms can be itself a means to break the barriers that traditionalists seem to construct.

Sometimes two notes played simultaneously but with slightly different frequencies, produce sounds that the classical musical mind may consider out of tune, whereas in another part of the world people may regard this roughness as attractive. Who is to say amid cultural differences what sounds "best?" Amplitude fluctuations mean that the combinations of two or more vibrations may enhance (constructive interference) or make smaller (destructive interference) and can be placed in overlapping categories; thus, a beating sound is produced. Musicians of different cultures exploit the beating and roughness sensations making this amplitude fluctuation a pronounced specific tool in the musical sound propagation. This *dissonance* enters into composition and performance of various musical types. Tolerance for some is strained under these circumstances, but those who champion music for enjoyment finds harmony in togetherness as much as sounds.

Musical performance helps make community and does so better than many other art forms. A choir rehearsing is making community; cotton pickers joining in a spiritual find life less burdensome; sailors rowing a ship in unison or soldiers marching in called step formation become a temporary community effecting desired results through musical voices. Groups from scout campfires to school bands, from monks chanting to congregational hymns, and from

athletic boosters to political parties with "fight songs" have community-making in mind -- and they can succeed. When listening to a good symphony performance one is amazed at the camaraderie of conductor with the assembled musicians and that among the performers themselves. All work to make sub-or temporary communities that add up to bonding larger ones. A performance by a talented pianist with profound internal resonance produces equally dramatic effects on a music-loving audience; thus the call for one or several encores. Musical experiences are inviting.

Fosco Maraini wrote a fascinating account of photographing Tibetan temples and the power and glory of Oriental art and then in concluding his travels he says ... *when I listen to Palestrina or Bach, there is added... knowledge that no other civilization has ever reached such heights or bestowed such a gift for all future generations ...*⁴ Yes, European classical music is great, but really the greatest? Subjectivity enters into musical tastes, but is some music truly, as a cultural phenomenon better than others? Certainly, some music is poor and there are degrees of music perfection, but how far does this ranking go?

Accepting the wealth of music variation is part of the phenomenon of globalization. When Amjad Sabri, Pakistan's favorite quwwali singer, was killed in 2016 for his open support of Sufism, an obituary writer said he and his musical family's greatest legacy was *the unshakable primacy of music, peace and love*. Amjad sang with a plea to be noticed at the court of heaven. *As he and his relations sang, the audience would start to sway, clap, sing along, dance and lose themselves in the ecstasy of God.*⁵ Musical resonance burns brightly in this world; a challenge for us is to discover and celebrate with those familiar with their cultural musical riches.

Musical Commons transcend both space and time. Since a legacy is associated with art as Commons, **a fortiori** this applies to enjoyable musical art as well. Perhaps here more than other arts, the participation of the audience is more than passive observer; at least they clap, pat their feet, sway to the rhythm, shout an "amen," rise and dance, or join in the singing; they add to the multi-phased resonances that only music can arouse. Within the act of enjoyment is contained a hope that what is being enjoyed in music will continue into the future for descendants who carry on enjoying festivities after our passing. This hope is a way of bequeathing a unique musical treasure and its residual joy to future generations -- and that enhances this Commons.

Musical legacy involves teleology, a sense of continuity that is more felt by the whole being than many other art forms. Music involves the many senses: hearing the sound, feeling the vibrations, seeing the joy in performers

and others, and tasting the communal enjoyment itself (granted, dancing follows the same sensual expressions and is often accompanied by music). Musical resonance reaches a new dimension where the divine and human kiss and create participating experience of those in communion with each other -- a form of global celebration that conveys a memorial experience. Increasing numbers of committed cultists and secularists may face the challenge to accept a more universal harmonizing that includes religious music from different worshipping communities, e.g., Christmas carols, Buddhist or Eastern Orthodox chants, or Moslem calls to prayer.

Summary: Enjoying another's music expands our horizon; music truly opens itself for inclusiveness. Music that is not meant to be seductive becomes a global invitation for inclusivity is music's spell. It includes simultaneous internal and external resonances as well as a basic harmony that brings all participants together. This movement at a local level is capable of producing a ripple effect drawing all peoples more closely together -- an act testifying to the inherent power of music to be **celebratory**.

References Chapter 6

1. Farland, p. 3.
2. A. True Ott. *Harmonic Resonance of Music*.
3. Johannes Kepler. *The Harmony of the World*.
4. Fosco Maraini, *Secret Tibet*, Trans. by Eric Mosbacher, (New York: Grove Press, Evergreen Edition, 1960) p. 274.
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Chapter 7. Psychological and Compassionate Resonance

*Our life lasts for seventy years,
eighty with strong health.
Teach us to count how few days we have
and so gain wisdom of heart. (Psalm 90: 10a,12)*

Psychological and Compassionate Resonance deal with the condition of the human person in relation to wellbeing of self and others. Internal and external resonance components are involved, but these are subject to being misinterpreted or unrecognized. Internal harmony is certainly a worthwhile goal; good social relations are meant for the Common Good, the importance of which was noted in Chapter 3. Furthermore, our modern culture contains disharmony and drug addiction; the need exists to re-establish a social harmony, of which each of us has a contributing role.

The preceding chapters have been cumulative: the physical sense of mystery, need for chemical responsibility, biological controls for eco-balance, equality in communications, appreciation of artistic expression, and cultivation of musical talents leading to togetherness are all leading to a better quality of life. Here we focus on our special efforts to work together to enhance the Common Good and how this leads to struggles that seem to run counter to goals of individual comfort and higher life quality.

My effort here is not based on documentation of experts; rather it involves decades of pastoral work (church, prison, hospital and environmental activism) with its own type of expertise. My conclusion is that enhancing our total health and wellbeing extends beyond being fastidious; it is a necessary component of an ever-expanding social system that has global collaboration as an ultimate goal. In truth, many of our limitations are outside our immediate control (health, financial situations, political environment, household limitations), but they may be challenges to overcome and signals for more intense efforts needed to purify our resonance relations.

a) Psychological Resonance

When I quit jogging after 43 years I began to have a weight problem that still disturbs me. This raises the issue of having peace of mind and soul -- and allowing our imperfections to stand out for our growth and for others to observe personal struggle. In a broader sense this may be a sharing of the movement of a world with problems, some recognized and some not. A form of resonance is involved that emerges over time for personal consideration.

My pastoral experience is that many people endure stressed conditions, which they feel helpless to change. If allowed to fester, such conditions only compound the stress load and a feedback mechanism develops in which personal troubles become a major part. For these folks under strain a peace of soul is threatened -- if it is even recognized in the first place. However, some people can handle serious situations (job loss, ill health, etc.) with a certain equanimity and even lightheartedness. Why the differences and can we find points where a more wholesome view can extend to all parties?

Peace of soul is for me a goal and something I strive to work towards even though this is a work-in-progress. I am sure of the road and the goal but realize that detours can occur. Life is a gift and the elements of stewardship include seeing it as a treasure that can be damaged by caving in to allurements of various types. Peacemaking is a struggle and can welcome assistance from others. Just doing my best becomes a consoling moment that energizes and keeps me going. With help and the knowledge that time is short and limited, then the efforts take special focus. For a good steward, mortal life is both gift and limited in time, but it takes a lifetime to fully appreciate.

Interior resonance that is comforting is the quest for "peace of soul." All are aware that each has an approach to life in which interior health components (mental, physical, and psychological) are at work. For some, the interior is better ordered and expresses itself in good social relations with others. One observer commented to me that certain sick people, even when critical ill seem to be at peace with themselves. Their contentment occurs even in the midst of pain through smiles, optimistic outlooks, kind words, enduring patience, enthusiasm, a spirit of sharing and wishing others well, or a twinkle in the eye. Their internal peace creates an atmosphere that is far longer lasting than a vacation or sabbatical period, or even a permanent retirement. Those at peace present a teaching opportunity that makes us comment, "They teach through dying well."

I wonder. Do all have interior resonance? Perhaps some do but do not recognize it; others allow their lives to be torn by some form of allurements that distracts them from serious matters. Those who no longer resonate in a social way may enter the dark cloud of despair and allow their interiority to erode, for interaction with others is part of being sociable: with partners, friends, children and grandkids, care givers, counselors, psychologists, psychiatrists, medical experts, spiritual directors or kindly neighbors who dare to enter one's life. Interior balance does not seem possible without these other people in our lives. No normal people are islands unto themselves.

Interior and exterior resonance are distinct but closely related.

Within myself is a private domain, an immanence apart from that more public social dimension. Certainly, some have apparent peace of soul amid harsh circumstances such as prison or slum or hospital, but are they spiritual marines or people in relationship with others near or far? Believers speak of God's presence as making life worth living notwithstanding harsh external conditions. For those caught in an unwillingness to continue life, an option emerges called euthanasia, which in this age includes others who are willing to honor someone's request for termination of life. The pastoral dilemma is how do we speak to such people who indicate no operative interior resonance at work?

External resonance seeks to couple with interior struggles, and sometimes dismisses the discussions with believers as forms of "spiritual selfishness." Even the noble efforts from palliative care givers can only go so far with a sense of hope. Something positive can be affirmed for the courage presented by the sufferer. A further response is that the long struggle for life on this planet in which each of us participates is a precious gift that needs to be sustained through the nobility of those who suffer and live for others as models. However, secular arguments seem inherently weak and unconvincing.

The natural instinct is to desire a normal and productive life -- and many find the prospects narrow with adversity. Our internal domain involves our conscience, which looks to that wellbeing of self and knows also we want justice for all others in the quest for a proper life. At times we are called to help those who find such a quest very difficult due to injustices they must endure. Some have a mental concern but still do little actively; they say, "Leave the affluent in their comfort and good luck for those not so privileged." Really, is this enough? How much can we enter into the plights of others and still keep our interior balance? Is seeming tranquility true peace?

Are peacemakers tranquility disturbers? To allow the affluent to continue in their ways is a form of injustice that can weigh on concerned activists. From local experience we know that our own selfishness and greed are not satisfying and even contaminating. Does it disturb us that billionaires are allowed to bask in their status while a billion unfortunate in this world lack food security? Isn't uncontested privilege in a world of want a form of subtle global violence, of which we participate through inaction? To permit those conditions unchallenged denigrates the concept of peace of soul and inherently become troubling. Lasting peace for individuals and a world community is not possible if we seek to avoid the struggle for justice. Must we disturb the tranquility?

Global injustice is a fact -- but addressing it awaits our action, for our individual and collective peace of soul is at stake. Peace is not a commercial

commodity; cries of the poor go unanswered; terrorism expresses itself in many forms. A restlessness comes over those of us who think we have peace of soul. A comfort while others suffer is hardly "peace" by any description. Restlessness drowned out by creature comforts is all part of the grand act of pretending, the fool's gold of the affluent -- and others as well. Yes, some find solace in social communication chatter; some trust that professionals can relieve this inherent restlessness. Others turn to allurements (alcohol, drugs, etc.), but these have problems that soon become evident.

Accepting restlessness appears to me to be psychologically healthy. This is the price of bringing peace to a dysfunctional world. Our interior wellbeing is both for self and others; any restriction due to the lack of justice is detrimental to a world in need. To go out to help others means accepting restlessness as something good; perhaps it is energy for our ongoing peacemaking endeavors. Perhaps restlessness is movement to a more complete and eternal journey (described by St. Augustine). Travelers may be comforted in knowing they are on the right road and yet restless to reach the goal up ahead.

Meaningful interior resonance is a concern for social justice, a cooperative endeavor, a balancing act, and a tolerance of restlessness leading to greater social benefits. When the wall of public/private life is rigid, an external hand cannot penetrate this cocoon of false interiority. However, people are not spiritual marines, "hard guys" who think they can exist on will power alone and without help of others. No one can adequately operate alone, not even hermits (who find God's presence within their solitary lives). People can remain separated from others for brief periods, but some form of assistance is needed to sustain one's psychological balance. Acceptance is related to shared or social restlessness -- and this is a longer range peacemaking activity. When we are doing the best we can for self AND others, then a satisfying interior resonance results.

Interior life takes effort. It is a road, and roads can have detours. For believers, a road map to interior peace of soul includes accepting fellow travelers who also see to regain self-control for the success of the trip. Mastery of self needs to be achieved while mindful of the struggles of others. Ex-addicts realize the damage that their lack of control has inflicted on self and on the social order. Responding demands mutual support of others with their own rocky journey and thus joining in such efforts as the *Alcoholics Anonymous* "Twelve Step Program." Together these ex-addicts seek to grow in mutual trust..

The joint efforts of reaching a balanced interiority/ exteriority includes all who see that the temples of commercial life are crowded with those who have

forgotten that moneychangers have taken control and pushed out space that is meant for "all the people." To cleanse the temple is a way of preserving interior peace through cooperative endeavors that take on public expression and still an awareness of self-control. Anger at injustice can be paralyzing. Direct action may include making a whip and driving out those causing injustice and members of the status quo.

External resonance at this level embraces all who struggle in an active way to make the world just. Resonance springs up between all who work for justice and includes those unjustly treated. Fulfillment of interiority brings its own true peace -- doing the best of what must be done, even when not perfectly successful. Rendering needed-service ensures a growing community between those who address injustice and those who suffer from injustice -- which in itself ultimately involves all of us. Now to our compassion.

b) Compassionate Resonance

Some beggars come in need of food. I unlock the food storage building and give them non-perishables that for a moment gives me a sense of power, until I recall that this person deserves food in justice, not charity. I keep keys to the store of goods but the stored goods belong to the hungry in Appalachia. I ask the hungry person for prayers and find it disconcerting that many have never before been asked to do something for a handout. When they show surprise, I assure them the prayers of the hungry are powerful and help advance my spiritual growth and a desire for justice.

Artists create harmonious artifacts, organizers start programs, administrators run functioning institutions, gardeners produce crops, homemakers transform households into homes, healers work for the victims' wellbeing, and hospice workers fashion an atmosphere of support for those making the final journey. Social service extends harmony and yet it takes effort to make the process work successfully. If establishing interior peace involves an outreach component, does it have an incoming one as well? Is the ever-shrinking neighborhood of troubled humanity calling for more than sympathy; must we not act? An African infant who is denied a fifty cent inoculation shot through faulty governmental health structures is crying out for justice and many are drawn to respond.

Pope Paul VI said "If we want peace work for Justice." That applies both at the individual and the global levels. A hungry child is disturbing to see whether face to face or in a photo or video. That cry of anguish cannot go unnoticed. A billion poor people lack essentials for a good quality of life. Don't

these deserve essentials from the abundant Global Commons as much as I do? People with an ounce of altruism may notice the local hungry and seek in some degree to resonate with the hungry, naked, homeless, isolated and ill. First, it is a matter of basic human kinship. Further, for many of us it is an interior awareness that one's salvation rests on seeing the hungry and realizing that my interior balance demands that I address their needs.

Elemental compassion means seeing and vibrating with those who suffer near us -- and thanks to social media, also with those at a physical distance. The clear accusation *You did not see me when I was hungry* in Matthew's Gospel (Matthew 25) haunts believers. Jesus' self identification becomes that of the concerned. Here emerges a description of hell, for uneasiness comes over the affluent and raises the specter of unrelenting pain if needs are not addressed. The imperative in being human is for all to engage in co-suffering to some degree. The challenge is to change suffering from being a problem to an opportunity to gain salvation when seen in its full social and spiritual dimension, and to extend salvation to those suffering from lack of basics of life. If the most elementary needs are not met, the one with plenty becomes an aggressor and a terrorist in a very real way. The hungry person, if continuing in hunger, breaks the tranquility of soul of those hearing. Proper external Resonance beseeches basic human response.

Are there deeper degrees of compassion? One soon discovers that more can be done for suffering individuals than an expression of sympathy and a limited measure of charity. A deeper response is to visit victims and actually meet face-to-face, giving caring assistance because they are part of the suffering human family. People in need must be helped as human beings. The act of resonating means that the sufferer meets the caregiver as a person who perceives a need at close quarters; a neighborly relationship is established and distance narrows to proximity. Giving comfort and assisting another as a Good Samaritan fulfills the need for neighborliness that now includes a globe in close connection.

A step beyond merely giving sympathy for another because they are suffering is a matter of resonating in heart. The deeper desire to relieve the suffering of another is to share with the sufferer and to identify with them. This is evident when meeting very caring persons -- and they can speak also through gesture and body language. A caring attitude is expressive, a sense of eye contact, cheerful disposition, warmth in words. Quite often each of us takes mental notes from successful nurses and hospice providers (even their care for the terminally ill who have little chance of improvement). Sufferers desire resonating companionship.

The deepest compassion goes beyond distant awareness or even proximate caregiving; this occurs when the suffering of one becomes the suffering of another -- two hearts become one. A partner who is so close to another suffering pain will express it in facial gesture and tense muscles. Here a co-suffering binds the "better and worse" of the marriage vow, when two live as one. This solidarity extends to those who take on a cause and allow the vulnerability of the one to be shared by the other. At this deepest level it is an awakening by the compassionate that suffering received graciously refines the sufferer. The compassionate one truly understands life and sees the hidden value of another so often hidden from plain view. To suffer freely is to be more open to life itself and to share life with another makes the compassionate a better person.

Ecological compassion extends what is said about our human neighbors to that of a troubled Earth as well. *This is why the country is in mourning and all who live in it pine away.* (Hosea 4:3). With the growing sense of climate change and its effects, some may come first to eco-concerns before the experience of human suffering, especially if becoming aware of pollution in its many forms. Whether Earth's plants and animals to humans, or humans to all of Earth's creatures, the two are really the same compassion.

Environmentalists note that damage has been done through land, air and water pollution and that the impacts have led to damaged ecosystems and multiple threatened and endangered flora and fauna. For the concerned, something catastrophic is occurring before our eyes, and yet no one likes being called a false alarmist. What if the disaster of excesses of two degrees celsius above current global temperature does occur through the power of climate deniers? One can see, as well as smell and taste, the air around us that is dangerous to breathe and the water unfit to drink or bathe in. The pain of "country" in the quote above is more than a poetic expression; it indicates a reality expressed openly by world leaders in talks and writings.¹

Earthhealing is a deepening resonance. Our ancestors in previous centuries did not know how we could harm our world -- though they were aware of erosion and local forms of pollution. A deepening level of solidarity can be achieved with Earth herself, when in feeling the planet's hurt we become aware of the effects of human exploitation and greed. A wounded Earth needs to be healed; this resonating among caregivers to a harmed landscape or creature is a form of compassionate caregiving; this extends beyond a human community of the concerned and includes the suffering of the victims themselves. We can resonate with the sufferers including the plants and animals, which were the product of millions of years of evolution. Animal lovers reach out, as do veterinarians, to suffering fauna; gardeners and tree surgeons touch the tender

and damaged flora.

Healing is called for and this takes a community of healers to halt climate change and repair the damage of pollution in all its forms. Earthhealers feel planetary vibrations with a realization of individual and collective misdeeds in the past and even continuing today; these cry out for corrective measures and the act of yearning is a form of eco-resonance. Healing of Earth means taking social responsibility for what is obviously wrong in a polluted world and to do something about it on the individual and community level. This ranges from simplifying lifestyles to taking part in marches and demonstrations. All this adds up to a eco-resonance that is emerging rapidly when power is enhanced by climate change deniers. Damaged Earth resonates with compassionate people. For those attempting to enlist others to environmental concerns, the Earth speaks in its anguish.

My aunt, a good gardener, asked me once if it were wrong to speak to plants; I said that may be the mark of a true "green thumb" person. Relations with animals are quite well known, and many households include conversations between animal "pets" and their loved ones. What about the tree huggers or the ones who speak to the mountains? Surely the land listens and hears nature-loving caretakers. Speak to what suffers and do so with a heart with the vibrations bringing on a response.

Eco-solidarity calls to the compassionate; global problems demand bearing global duties and responsibilities, but those in eco-solidarity must start with the piece of Earth closest to them -- their local vicinity. This solidarity includes a joy resting in the confidence that restoration is being initiated before our eyes. The caregiver who desires response to a wounded Earth resonates with a living planet that means gardening and beautifying our landscape, volunteering to help local projects, and working for needed reforms in the neighborhood. Eco-compassion contains energetics somewhat similar to that of the suffering human being and a compassionate caregiver. Such joy is contagious and is contained in the mentioned feedback mechanism that motivates others to become caregivers and seek eco-justice for our vulnerable Earth.

Compassion

*Our mountains move -- yes sliding, tumbling
as fragile cover is skimmed away,
exposing jet-black coal, the fuel
that turns the urban night to day.
The soil and saplings slip downslope,
and they can't climb back up again;*

*down, down to rivers and streambeds
to smother fish and wildlife den...
Will hills take in our compassion
and forgive all offenders' sin?
Will we cease to make the hills fall,
and start to build them back again?²*

c) Suffering through the Ages is Meaningful

In my pastoral ministries a number of years back, I became acquainted with a widow with numerous children, most of whom had moved away and yet she had one living nearby; he took special care in seeing that she moved to a more manageable residence. The others did nothing in this situation. However her sense of gratitude in general for having some special care was quite inspiring, even though only one in the family had done so.

Sacrifices are meant to show respect and value, whether to the one to whom the practice is directed or in the worth of the deed itself. Sometimes these require great effort and sweat and could involve suffering and even death itself, the ultimate sacrifice. How many relatives have died caring for a loved one with no noticeable recognition? How many warriors are supposed to have died in vain, but did they really? The world is filled with examples of past, present and even expected future sacrifices, many undertaken with a mixture of pain and joy.

An echo resounds that extends the sacrifices of individuals and communities in such ways that a greater solidarity is achieved. The invitation is for all to recognize sacrifices made by others and to appreciate them as having worth. Joseph Campbell says all must *participate joyfully in the sorrows of the world*. That joy must be extended to all efforts, including sufferings bent on making the Commons a better place. The tragedy is not that there is suffering, but that it is not recognized as a sacrifice that makes this world holy -- and can be undertaken with a joyful heart. Once respect for the effort of others is recognized as something sacred, then the general resonance of empathy that is so hard to define takes hold. In former times how could people attend a criminal's hanging, or participate in beating a prisoner running a gauntlet, or laugh at the physically disabled? Are we so brutal?

Suffering is too precious to ever be lost. It is part of the human process and an ongoing resonance that transcends the ages. Certainly, pain should be lessened when possible though advances in palliative care and advanced cancer treatments. Granted, all people need some degree of food and health security.

Assuredly, a hospitable people will welcome refugees. Suffering can be mitigated and sufferers comforted. What about the forgotten, those who lived miserable lives and died without a loving companion? Often formal talks after heroic battles or struggles for justice (e.g., unsafe mine disasters) mention that military or worker deaths were not in vain even when it seemed otherwise, when great numbers died in battles or in unsafe working conditions.

The assurance is heard that a victory was won through suffering, and conditions leading to their suffering will not now be repeated through acquired experience and better regulations or peacemaking ventures. But is there not still more than incremental advances in peacemaking or safety protection? Past suffering cried out for justice. Unity is formed in compassion that reaches back in time and brings it forward as of communal worth for future transformation. Yes, memories fade but the suffering is binding through ongoing compassionate caring. It takes faith, and here challenge is for religionists and secularists to seek cooperative agreement. Suffering is never lost; it is part of the law of conservation of energy -- of spiritual energy.

The present -- Deepening compassion accepted today helps establish a dynamic equilibrium that brings past events to the present altar of sacrifice; this presence opens to a more directed future through the direct experience of a value-laden past. For many unbelievers, suffering is needless and in their view worthless, with suicide as an option and opening questions about still more effective pain control. All in all, awareness of spiritual benefits to offering suffering for the benefit of others gives meaning to the present. Our challenge today is to see past suffering as resonance that extends into the future and is expressed in our present actions.

The past -- The past contains the burden of suffering, endured but not forgotten; rather, it becomes a treasure, a dynamo leading to an evolving future for those with eyes of faith. Individually, those not burdened by their own imperfect past, but rather professing a freedom that comes with forgiveness, can enter into solidarity with those who suffered and are suffering right now. One reads of the Black Death, when Europe lost one-third to one-half of its entire total population in a three-year period.³ Again one recalls the massive holocaust of the Second World War. In vain? History is a repository of frightful events not to be forgotten; rather history challenges us to remember; it energizes us to move to action in anticipation of better things. Voltaire says that while history never repeats itself man always does. We can learn from the past and not be condemned to repeat it.

The future -- A dynamic equilibrium is at work, where past deeds understood as meaningful energize us to direct and focus on choices for our

future. Thus, the future draws meaning from past suffering through the medium of the compassionate, who see value in the solidarity of sufferers of every age and the growth in their inner life. Through suffering the world evolves into a more loving place. The compassionate believe in the future and confront suffering, not deny, run from, or find it valueless. Our becoming better is part of a grand resonance.

Suffering takes on new meaning. With today's emphasis on health care, existing palliative practices come under greater scrutiny, and this is driven by improved health care, intensity if not length of hospital stays, number and workloads on care workers within institutions (especially for-profit senior citizen ones), and oversight of those dispensing this care. Truly this is a growth industry with a promising future.⁴ Many populations are aging and call for care that extends beyond the capacities of urban family care. On top of this the need for health care accessibility to all people is becoming a priority, for all people have a right to health security. The challenge is to go from local or even national needs to global ones -- and that is a tall order. Though terrorism has included some major forms of atrocity by ISIS and others, still the trajectory is for greater compassion and an extended resonance that includes all the suffering of this world.

Summary: We struggle in observing how some come to peace of soul and others do not. Avoiding injustice strikes people in different ways, for as social beings all need a shared peace. In working together we learn that the process to make peace interiorly and externally is ongoing and involves mutual cooperation. Our attention turns to the ones who are less able to help themselves and thus discover the option of basic awareness, giving in charity, or actually entering into the world as co-sufferers. This sense of eco-compassion extends to all the creatures of this troubled planet. Furthermore, this process of co-suffering extends to a resonance that has a past history and anticipations of future offspring, all giving the present moment its reality. Co-suffering becomes a globalizing phenomenon.

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Chapter 8. Resonance in Collaboration

Our course of reflection on various stages of resonance takes us through the complexities at each level, with none of our surveys totally satisfying; each is a study in itself. However, a cumulative understanding starts to emerge. In Chapter 1, we discover a sense of awe and wonder in a physical world with particles capable of moving in an undetermined manner forward in an arrow of time. In Chapter 2, the human ability to chemically change matter for better or worse opens the need for responsible action. However, in our lives human excess and mistakes in use of resources demand controls to preserve vitality to our fragile Earth. In Chapter 4, our collective efforts demand excelling in communication, education and community organizing. In Chapter 5, we look more closely at artistic expression where creativity is enhanced in a community recognizing the Cultural Commons in which artists contribute. Music, as discussed in Chapter 6, is the communal resonance expressed through participative action by all present. In Chapter 7, the challenges of suffering as worthy of community concern are addressed through compassionate caregiving.

This emergence of collaboration at ever deeper levels of resonance brings us to where joint action is essential for preserving the quality and vitality of the global human community. To do this requires elements from all previous stages of emergence. Now we turn to clusters from families and clans to the global scale, for all active citizens resonate at different levels of involvement: family, local, parish, fraternal, professional, regional, and national, but does it stop here? Collaboration is open to all the global family when able to communicate freely and when common goals become prominent.

Storm clouds hover. Prior to this past century, problems facing the Earth were not so evident. Nuclear warfare surfaced in 1945 and threats of mutual destruction have been contained to date -- without guarantees. Another threat to our civilization from dramatic climate change due to human excess now emerges in this twenty-first century and here is something bigger than mere national policies of curbing weapons. This involves the good will and activities of all citizens, but most especially those in the use of more resources -- the privileged ones of this planet. The double challenge here involves both

curbing human lifestyles and controlling larger corporations that can retain harmful practices through the economic power they possess. Curbing takes lifestyle changes; controlling global corporations takes a new world order.

Global Resonance is needed. The pattern needed is similar to what already exists at various levels that make a civilization and its fine points of collaborative teamwork: local sports teams, community festivals, religious gatherings, hospital emergency wards, city planning programs, national political caucuses, fire-fighting ventures, corporate funding investments, and international scientific research efforts. Even cross nation policing teams are working today in Nigeria and other parts of Africa. Just listing possibilities would be encyclopedic, but it does prove that society already functions with degrees of teamwork with some degrees of success. It is ISIS' failure to disrupt our civilization that takes us back again and again to what is fundamental to human normal existence -- working together for the Common Good.

a) Types of Collaborative Efforts

On the Kentucky farm where I was born and raised, all our family members were expected to pitch in and help with the crops: planting, hoeing, harvesting, milking cows and a multitude of other tasks. The only way the place could stay afloat was for adult and youth to be collaborative at the family level. Can this occur at a global level among all of us siblings in the human family?

Examples of teamwork contain areas of imperfections, but many are successful through corrective processes and practical compromises. Benefits come even amid friction and internal battles. The grander global resonance anticipated will not be perfect sailing and yet it must come ASAP. The terrorism is both from militants and from the horror of living in a world of food, lodging, job, and health insecurity experienced today by millions of people, many of whom see no way out. However, deep down among most insecure individuals rests a will to change for the better. Those of us with hope in the future see a need to work together and encourage others to join ranks -- for the work of all is needed to develop a Global Resonance that addresses climate change and existing threats to our civilization.

Working together takes a trust in ultimate success using our various skills and talents for the greater good. Unfortunately, mutual teamwork is not always a highly celebrated trait in our "advanced" Western society -- and examples are actually found more telling in primitive societies. Mutual undertakings are not a modern story, only the broadening of it to a global level. The current business world of economic cut-throat competition is not the productive atmosphere that

is sought, but rather is an individualistic pressure of a privileged few to gain more for selfish wealth and control. An emerging progressive thought is that a decadent capitalism holds us back.¹

However, with these thoughts goes the current deeper nationalistic trend through Brexit and the rise of the far right to move away from globalized cooperative efforts. In fact, the mix of billionaires gaining much of the fruits of widespread economic arrangements and a lower class sinking further behind makes the challenges all the more difficult.

Some doubt whether a broader collaborative pattern can thrive in this troubled world. Still, we do turn to lower levels of governance and find the building blocks that could be utilized at the global level that needs both space to prosper and time to take hold. Even at the international level we find examples in history going back to leagues and alliances that had some periods of limited success. After the Napoleonic wars an effort was made among European powers and again after the First World War the League of Nations includes a broader range --but without U.S. support. After the Second World War the United Nations (UN) emerged through a heavy commitment by its founders and the great majority of the world's nations. The League was flaunted by Hitler and other autocrats in the 1930s and it died with a whimper. From the aftermath of war emerged the UN dream and reality, which still functions with some limited success. However, this body lacks enforcement provisions and could be threatened by current nationalistic interests.

Individuals and Partners. Robinhoods or individuals working with a social agenda outside the system may have some influence, but still not be "collaborative." Two or more change agents partnering and working together show a clearer trend, and examples abound of this being effective for Earth-changing actions starting at the grassroots: labor organizing, halting waste dumps, improving public schools, etc.. Local successes can stimulate others to follow, but they can trigger those who are not secure at higher levels of power to exert repressive measures to preserve the status quo; those calling for radical change such as Chinese social justice advocates are feared, for changes could occur. Margaret Mead says, "Never doubt that a small group of thoughtful committed citizens can change the world; indeed it is the only thing that ever has."

Local group interior collaboration. A multitude of civic, athletic, religious and educational groups exist to prove the success of lower level cooperative endeavors. We are tempted to divert discussion to a multitude of these, but few readers are unaware of success stories that are first hand. In fact, our civilization is based on the social welfare of these multitudes that are the

foundation stones of society. Guidebooks fail to tell the exact basis for all these successes, since the paths contain degrees of acquired leadership skills, participation, and governance stemming from gatherings of cultural differences. These groups rise and fall like the tide, but in their moments of glory can trigger profound change through ripple effects going out to likeminded groups. Certainly, internal collaborative processes exist at all levels of society beyond the familial and local community level: regional, national, and international (even UN agencies and among religious, economic and social agencies and organizations). Members of these agencies resonate together and their stories are worth telling.

External Collaborative Resonance is enhanced when units that are collaborating on a given level accept some sort of federated relationship with others. While all share the same goal, they may have originated as independent clusters (e.g. labor units or state teacher associations) working for broader goals that demand coalescing with other groups to wield influence for broader goals. They may include state groups banded together for common purpose, such as abolishment of the death penalty. I belong to the Knights of Columbus (a Catholic men's fraternal organization with over a million members) that has been highly successful nationally in the U.S. and is now moving to the Philippines, Mexico, Canada and Poland. Broader association encourages growing influence, but demands resonance beyond local units. However, the uniting across national boundaries now is becoming a catalyst which could potentially accept social justice issues at a transnational level.

At critical times, groups with similar agendas coalesce to mutually work for the success of their shared issues (e.g., climate change awareness groups across national boundaries). For a variety of reasons, they exist independent of other groups in finances and governance. Again, numerous examples of success can be found, from political campaigns to the civil rights movement. Success depends on overcoming competing agendas within the cooperating groups and their willingness to lay aside differences in order to achieve a common goal. Certainly, failure of power groups on this level can weaken efforts for more international participation (U.S. non-participation in Law of the Seas and World Criminal Court).

External multilevel resonance is essentially a potential growth arena; this refers to diverse groups at various levels working for similar goals. Not only must people work within horizontal levels of similar size, but also among vertical multilevel varying-sized groups; potentially they can attack climate change and preserve our civilization from massive disruption from terrorist groups. The temptation is for agencies at higher levels to seek to lord over those of lower ones; the higher may neglect to understand the internal politics of local and

regional groupings and regard themselves as more effective and thus more ready to work exclusively among national and international organizations. It is paramount that lower level environmental pressure groups be constantly at work prodding national and other governmental agencies to join forces as co-equals.

b) Resonance in Ecological Collaboration

Our own Appalachian public interest collaborative venture was the "Environmental Resource Assessment Service." This flowered for two decades as a means for earning income to support our organization, Appalachia -- Science in the Public Interest, and consisted in performing work for 200 non-profit organizations in 33 states, the District of Columbia and two provinces of Canada. The program involved visiting non-profit (often religious) property holders, assessing sources at hand needed to "green" their property and help make a one-decade suggested schedule of changes for the group to become a neighborhood ecological model. Over time it became evident to our team that organizational success depended on active team leaders, along with a group of working individuals within the client groups willing to bring the plans proposed to successful fruition. A single individual cannot do what a collaborating team can accomplish.

Can climate change goals be achieved by people operating at a local level alone? From the start of the environmental movement after the First Earth Day in 1970, it became evident that regional and national operations were necessary -- and international ones would have a major role to play. Furthermore, by the First UN Conference on the Environment at Stockholm in 1972, it was also evident that international cooperation was needed when air and water pollution transcended national boundaries and demanded broader controls -- though how to achieve these controls was always problematic without surrender of enforcement mechanisms by various national governments. Foresighted environmentalists realized that various organizations working towards similar ends were needed at the local, regional, national and international levels. A symbiosis of interaction was a far healthier process than people considering a single level as the path to ecological health.

The problem transcends the local community and is global; air and water pollution knows no national boundaries -- though land-related types of pollution could be more localized concerns. The problems become greater when considering that the early pollution problems originated in more affluent regions of the world with their widespread use of autos and other consumer products.

The wealthier nations have generated more pollution through large amounts of consumption by a minority of the world's people. Early efforts at merely dividing environmental damage by the people of the world and blaming the more numerous populations as though all, including low-consuming peons, were to blame proved fallacious. The only redeeming effect was that someday the large populations would want their share of expended resources. Mere population control at a national level is easier said than controlling individual consumption patterns by the wealthy elite.

Too often overlooked were the early industrial nations and clever individuals within them who were free to amass wealth and political power. Even today these drive gas-guzzling cars, fly to exotic vacation spots, discover tax havens, air condition large homes, and are the hidden air and water polluters through excess use of resources. To meet their "needs," fossil-fueled powerplants spew gases at sites inhabited by the lower income and bury the accumulated wastes near humble dwellings. Hypocrisy is unveiled at international meetings when less developed nation's spokespersons called on the primary polluting nations to foot a higher portion of clean-up operations. Granted, all developing land aspire for the comforts of the wealthier ones.

The complex problem emerges. The world is awakening to the massive disruption caused by use of fossil fuels as a major source of energy in the industrial revolution. Climate change is a reality shown by choking air pollution in Beijing, to melting glaciers and rising sea levels that threaten the existence of entire Pacific Island nations; the change includes loss of ice sheets at both poles, damaged coral reefs, and growing frequency of extreme weather conditions. Who must take responsibility?

One's personal expenditure of energy from fossil fuel uses does not seem to make a major difference. On second thought, cumulative effects of hundreds of millions like me do. The emerging effects of climate change frighten us, but many would shift remedies to a future generation, rather than change comfortable personal habits. Attitudes among many "haves" are to ignore or shift blame to "have-nots," and this generates antagonism within the developing world. Wasteful habits in emerging consumer groups are easy to learn but hard to break, especially if expected to be achieved through voluntary action.

Citizen joint response is critical. Climate change deniers are still with us, no matter how much the hard evidence at hand. Deniers seek to show two sides to an already settled problem, and to continue the status quo as long as possible. Issues and "experts" in the denial of health effects from smoking cigarettes in the last century resulted in several additional profitable decades without controls and regulations -- and some of the same status quo participants

reappear among fossil fuel deniers.² Big Energy seeks to preserve its fossil fuel markets at all costs, even at the risk of health of the planet and people.

Activism is reappearing. Citizen groups work with greater handicaps than economically entrenched groups. Massive environmental marches occurred in New York City and elsewhere in the autumn of 2014 and another during the Trump Administration in late April 2017. These take considerable coordination and resonating among environmental groups, led by *350.org*; they include the efforts of hundreds of local groups. International collaboration efforts would have been more expressive in late 2015 in Paris at the Climate Change Conference, had not the French government curtailed demonstrations due to heightened terrorist concerns.

International cooperation exists among environmental groups through Internet communications, but is always a challenge due to attention fatigue. Some argue that occasional mass marches and confrontations are imperative because voluntary actions at lower levels are too limited in impact. They assert that within a decade global climate warming increases could reach a catastrophic 1.5 or 2 degrees Celsius; at higher increases over traditional levels a cascade of effects would lead to dramatic ocean rises and more extreme weather conditions. No doubt, wind and solar energy sources are developing rapidly and account for a major share of new electricity generating sources; however, is curbing of fossil fuel emissions proceeding fast enough?

Solid evidence calls for change now. The facts are supported by over 99% of climate scientists and 196 nation leaders in Paris in December, 2015, as well as Pope Francis and other world religious and social leaders. Continued heavy use of fossil fuel is not "justified" until renewables are ready in decades. In fact, renewable energy is reducing to competitive costs compared to fossil fuels; they are proven effective and now account for a major portion of electricity generating sources coming on line -- and this will usher in a new economy, provided curbs occur on existing fossil fuel generating sources including natural gas. Nevertheless, these two movements toward renewables and away from traditional fossil fuel and nuclear sources must work in tandem.

National policies are imperative to break Big Energy's death grip on national energy policy, but the question is do we have the luxury of time for gradualism in transfer? Current 400 ppm greenhouse gas carbon dioxide levels in the planetary atmosphere are highest in recorded history and are moving toward a 450 ppm critical point with catastrophic consequences. Many greens regard the most recent *International Panel On Climate Change* (IPCC) report to be too conservative. Climate change deniers in the White House could spell disaster ahead.

Genuine economy transition difficulties exist. Harmony is important, but the movement from fossil to renewable energy is fraught with challenges: denier national policy; lower prices of fossil fuels due to tax and other incentives and advantages over renewables; vast economic Big Oil resources trying to perpetuate a lost debate; reluctance on the part of the general public to change ingrained habits and to move to renewables (though this is softening rapidly); the so-called need for the energy economy to have a mix of all energy sources; failure to obtain a carbon tax in an age of "no new taxes;" and the slow rate of harm within the immediate life times of older and more highly voting populations. However, progressive state policies must lead the way.

Effective responses are possible, even amid current official denial climate. The call to keep fossil fuels in the ground can result in stranded fuel resources, the inability to capitalize on what could be exploited in the future if demand for those resources is cut off. The wisdom of investors shying away from such resources could bring down the price of reserved fossil fuels and lead the investors to renewable sources of income. Economic wisdom from a purely capitalistic standpoint is starting to swing in favor of renewables, and every effort to support the fossil fuel divestiture movement could become a rallying point. Renewable energy is the wave of the future and those with a keen business sense are starting to take notice. A groundswell could result ultimately in abandonment of fossil fuels that could move from a trickle to a stampede; that could promise to be win-win for people and Earth.

Global collaboration will grow. The climate change problem is global; so must be the solution. Note that this collaboration is going far beyond environmental concerns, as pointed out by futurist Jeremy Rifkin.³ A global community has worked, is working, and has promise of continuing even amid factions and differences. Nations are hesitant to give up power, but it is astounding how much the current 27 members of the European Union have conceded to a central governing body in Brussels -- though exits to such a union are possible; however, "Brexit" has pointed the way to a possible loss of the EU dream. Though much farther behind, the African Union as a federated body on the developing continent is working to some degree by making economic- and safety-related strides. Granted, nations are jealous of their own national policies and independence and none, perhaps, more so than the U.S. Our country has never joined the Law of the Seas at the global level that would take joint action to protect the resources of the three quarters of Earth's oceanic surface. The challenge exists to surrender some independence in the emerging new world order.

c) Preserving and Enhancing Civilization

Hearing, I forget. Seeing, I remember. Doing, I understand.
Old Proverb

In 1972, my only visit to Rome involved spending a day accompanying my former teacher and friend, Ed Miller, who was doing summer work in his classical studies specialty in the Eternal City. The two of us spent a memorable day walking and photographing the often overlooked sites and ruins along the Appian Way, and also a period within the Colosseum enclosure through Ed's ability to talk the guards into letting us pass. I turned over a medium piece of scattered construction materials; on the side facing the weather it was like a half melted ice sculpture; on the covered side it was finely chiseled. Civilization melts away through air pollution.

Preserving civilization looks to the good of the past and find it worth our efforts; welcoming a renewable energy economy looks to the future and respects the arrow of time. Both are part of a sense of present time that reveres the past and welcomes the future. Dismissing either leads to a distorted world where one is condemned to relive past mistakes or despairs of a better future. Nevertheless, the problem of preserving civilization is more complex than creating a renewable energy economy, which is certainly difficult enough.

ISIS and radical Islamic groups see their own way of life threatened and, in thrashing out to defend it, are willing to violently confront all others they define as "decadent," even to the point of erasing monuments of human civilization. Thus, within this decade the world has been shocked to see deliberate efforts to destroy past millennia-old structures such as at Palmyra in eastern Syria, which dates back to the Neolithic period and is a World Heritage Site. Heroic efforts by preservationists have tried to save these ancient treasures against this deliberate destruction and terror attacks on monuments as well as non-conforming people.

Looters strip mine our past.⁴ A shocking expose' in *National Geographic* June 2016 tells of global trade in stolen artifacts from Iraq to Egypt and from Bolivia to China. Satellite imagery is now used to monitor artifact thievery in Egypt, where one-quarter of the 1,100 archeological areas have been substantially damaged and one could expect the rest to be at the current rate by 2040. Some are convinced that lucrative trade in antiquities helps fund ISIS and other terrorist groups. Cracking down on that trade will be effective when focus shifts to excluding private collectors who are partaking in criminal

activities. A few such traders and merchants are caught but, if held for prosecution, are given light sentences. In Syria today, ISIS takes a cut from the looters, enough to help fund their operations. But the field is not clearly cut between good and bad guys, for it appears other Syrian warring parties get looter payoffs as well. The tragedy appears extreme when ISIS militants do not hesitate in blowing up structures that are some of the most highly prized antiquities. Unfortunately, in sensitive areas, poor natives assist in digging up buried treasures.

How is cultural resonance improved? A number of actions can be taken to help preserve our Cultural Commons. Increasing security is one obvious procedure, but may be difficult in financially-challenged regions. Another is to improve public education, especially in the localities where the artifacts are located so that people respect the treasures that they have present, whether these be wildlife habitats or cultural heritage sites. Another and highly effective method is to spray objects with "Smart Water," a traceable liquid solution that can prove theft by leaving a unique identifier, which is invisible except under UV lighting.⁵ These chemical "fingerprints" do not damage the artifact and last for long periods of time.

Preserving cultural artifacts is well worth attention from the donors who in America gave 350 billion dollars to various causes. Very little is given to safeguarding past human efforts even in comparison with wildlife preservation, which is also in crisis mode; actually both forms of preservation are ecological endeavors. Citizen activism must include articulation of dangers, greater encouragement at the national levels in controls on trade of goods (including total ban in sale of wildlife parts), and improved regard for global cultural expression. Neglect will deplete the Cultural/Ecological Commons.

Forbid private collections of antiquities. It may sound harsh, but one way to preserve retention of our common antiquities is to outlaw private collections; this checks the use of vast hidden funds to buy these valuable components of the Cultural Commons. How can someone take with impunity something that belongs to all of us? Such tolerance -- or intolerance -- must be addressed forthrightly. If there were no private collections, and all now held by individuals be surrendered to public museums or storage, the greater part of the "market" would disappear and more easy controls would be possible.

Cultural vibrations are felt. Changes are in the air; reporters and travelers tell of similar feelings among people from all inhabited continents and especially among those connected through the Internet. The desire for common security is felt by those enduring civil war and strife, among those suffering economic depression, among youth indebted by unpaid educational

bills and without satisfactory employment, among the ill and disabled, among those suffering from family and community substance abuse, and among social and religious leaders. A **Global Resonance** is a faint rumbling vibration that is nonetheless real -- and it embraces more than culture. Moslems on the defensive due to ISIS extremism testify more openly against those who want to punish an entire religious tradition for the few terrorists coming from their ranks. Migrants want to settle and gain meaningful employment; refugees would like to return to a peaceful homeland; the religious would like freedom to worship according to their choice. Perspectives broaden and more accept the dynamics of global collaboration.

Authentic collaboration in cultural matters has the potential of expanding and becoming a *ripple effect* to other similar groupings that appreciate festive events, culinary arts and musical performances. Economic sharing is always a greater challenge, especially if deep-seated privileges and wealth status are challenged. For instance, good local resource preservation measures often receive notice at higher levels of governance due to sound economics and maintenance. A group that wishes to preserve traditional culinary arts celebrates tastes from the past, and those from other cultures take note and even venture to enjoy the good quality of other menus at ethnic restaurants. They, in turn, take a certain ownership of these now liked alternative traditions.

A new economy is rising. Today, tens of trillions of dollars (exact amounts unknown but suspected through the recent revelation of the Panama Papers) is hidden in tax havens and eludes the responsibility of paying a fair amount to improve working conditions. The culture that allows people with accumulated wealth to continue to possess or to purchase and store privately the antiquity Commons is outmoded. Some, such as economist Naomi Klein⁶ and others call for change in order to save our threatened Earth -- and one can easily add preserving past antiques and relics. Political activism demands systemic changes to institute a future renewable energy economy and a past civilization, and both our past and future are worth promoting.

Signs of global collaboration are starting to emerge and some are appearing. As mentioned in Chapter 2, the "Montreal Protocol on Substances that Deplete the Ozone Layer," the first universally ratified treaty in United Nations history -- and the depleted ozone layer is returning to normal through global collaborative efforts and this is expected be completed in 2050.

Furthermore, protected oceans especially in 2016 have now expanded to the size of Europe. Humpback whales have been taken from the endangered list -- though others are being added. Life expectancy since 1960 continues to climb from 52 years to 71 in 2014. The Amazon deforestation is being brought

far lower. Though quality may need improving in many systems, still the primary education rate has risen from 79% in the end of the last century to 89% today. The number of solar panels purchased increases by 20,000 per hour. Billions have Internet connection; women in elected office rise; global incomes have doubled; even battle deaths have dropped. And on for areas of optimism overlooked.⁷

The urgency for collaboration stimulates all people of good will to work more closely together at this point in history. The Common Good demands that a self-centered profiteering economic system with growing inequality is detrimental to the task at hand, for it perpetuates an economic terrorism that extends to a military one as well. Can a Global Resonance thrive if an existing inequality is permitted without a worldwide system of enforcement?

Is it time for world federation? The two great conjoined problems (climate change and preserving civilization) raised in this book cannot be solved by piecemeal military action to curb individual terrorists, or by a voluntary approach to curbing climate change. Nationalists avoid the mention of "federalism," and yet uncontrolled globalization has given rise to free flow of money, international commerce, rapid intercontinental travel and migration, and a host of financial operations demanding far more than national control measures are able to handle. The world has global problems and needs global controls. The ongoing injustice that allows billionaires to pretend to coexist peacefully with those lacking necessities of life is blatantly upsetting and causes terrorism. For federalism to work, all ought to cooperate.

Summary: Global Resonance already exists to some degree, but has a long way to go for all to participate. The climate change controversy is scientific fact and needs immediate efforts at solution by directly confronting profit-making deniers, not by prolonged debate. A new economy is emerging, but it ought to come sooner. The baffling problem of combating terrorists who attack heritage sites and steal artifacts is being addressed, but not yet thoroughly by closing off a private collector's market. Part of the longer range answer is to remove the inequalities that cause food, lodging, educational and health insecurities in all parts of the world. A more effective Global Resonance awaits a federated effort with universal enforcement powers. Work is in progress.

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Summary PART ONE

All creation on micro and macro levels resonates both internally and externally. Upon reflection one finds that more complex levels include and enhance the resonance of prior ones. This echo appears to deepen as we focus on the physical mystery of creation, responsible actions of human beings utilizing environmental resources, giving vitality to advances made, communicating these among individuals and clusters, discovering many creative expressions in the process, celebrating these together, joining in the sufferings of those less mobile, and as a global community embracing common goals through collaboration.

At the physical level one reflects on the phenomenon of irreversible time and through possibilities of interactions of entire populations. The Big Bang has a resonance echo that is heard throughout time, though this is not fully understood. The physical universe's laws are ordered and do not vary. Resonance at this elementary level is wrapped in a yet undiscovered **mystery** beckoning researchers on to deeper probing of the micro- and macro-universe. Physical Resonance is full of **mystery**.

Chemical Resonance is expressed in the resonating chemical structures that manifest the dynamics of timely chemical reactivity. It is also expressed in excitement of chemical states and return to regularity, leading to radiation

emissions helpful in identifying the vital conditions of the human body and other structures of matter. Resonance at this level is utterly **practical** when applied for our benefit; through irresponsibility and the exercise of human freedom harm may occur. Resonance among researchers, consumers and producers of materials needs to exhibit a sense of **responsibility**.

Biological Resonance manifests the phenomenon of self-organization. All living beings reveal the delicate nature of this stage of evolution and constantly show through long-term emergence and rapid destruction how delicate and fragile all life is. This protection must be part of the awe accompanying an understanding of life in its many forms. The mystery of the origin of life is accompanied by the equal need to enhance the delicateness of life in all its forms. A control of environmental conditions is a mark of an emerging responsible community that is willing to tolerate compromises for the good of the whole. Resonance deserves **mutual respect**.

Communication occurs through mutual benefit of those reaching out on a one-on-one basis; this extends to giving and exchanging information and in educating others individually or in groups. Though modern rapid means such as Internet the world is becoming a single neighborhood of races and cultures, but controls must be placed in order that this communication remains neutral. In the process of organizing for mutual support a sense of growing equality emerges. Resonance opens itself to greater **equality**.

Art involves resonance within artists, the environment in which they find themselves, their inspiration to act at a given time and the appreciation and affirmation of an appreciative world. They work with their head, hands and heart, a trinity of interior activity. Their expressive work is viewed, criticized, commented upon, enjoyed, and invited into the Artistic Commons. Artistic Resonance is **creative**.

Music has forms of resonance that celebrate the creative dynamics within the mind's ear, timely composition, and like other arts is presented for recognition by music lovers who are enlivened through performance and resulting appreciation. Hearers become participants in this and in some other artistic forms such as dance. Musical Resonance is **celebratory**.

Human beings attempt to attain a balance in their lives, both physical and psychological, for individual health issues are always matters of immense personal concern. One way of establishing the needed balance is to engage in the practice of mutual caregiving and receiving through a deeper sense of compassion, where the resonance is more fully given and received. Compassionate Resonance is **participative**.

A globalized **situation** that threatens our civilization and our Earth's climatic balance hangs over us. An atmosphere of urgency hangs over this planet and concerned citizens are moved to respond. Models of proper collaborating efforts exist at the local, regional, national, and even international levels. Barriers must be overcome so that genuine peace might come to our troubled world. This emerging act of collaboration is possible if all focus on working together. This Global resonance is **all-embracing**.

Must one stop here? Hardly, for the program of this embrace in a time of residual racism and terrorism demands looking out for all means possible to overcome barriers and addictive weaknesses, and to move this reflection into a deepening level of spirituality that is scarcely explored to this point. The lack of completeness in the work-in-progress strikes many -- and rightly so. For believers, the practical demands for continued progress moves one to affirming the many acts of resonating as the echo of the Creator. More is in store!

PART TWO: Proclaiming Mystical Resonance

*From everlasting I was firmly set, from the beginning,
before Earth came into being. (Proverbs 8:23)*

Part One (Chapters 1-8) discusses a variety of resonances that are directly or analogously related and are at times understood through empirical evidence. A person hears a resonating chorus or becomes acquainted with acoustical resonance and can test it. In **Part Two** the discussion is one of religious belief, and here specifically Christian belief in the source and unity of all resonance phenomena. While a secular person could affirm much of what was discussed in the first part, that audience may find some difficulty here. This is meant to be a book primarily for believers in the future with emphasis on Christian activists.

Why one book? Chapters 9-16 are more than related to the corresponding previous chapters; they are the fulfillment of them. It is my belief that taking a solely secular position is sterile; it allows a number of people with varied positions to work together, but there is only so much togetherness without the tedium and drain wearing on participants.

Believers bring a persistent sense of enthusiasm or the God Within through prayerful reflection (Chapter 9). Misplaced use of resources has a far deeper mandate to use resources wisely for the sake of future generations (Chapter 10). The purpose of continuing when success seems evasive is that there is a New Heaven and New Earth; a future and vital life looms ahead that redoubles our efforts (Chapter 11). Harmony spoken within authentic communications has greater depths when spiritually motivated (Chapter 12). The nagging doubt that there is no more energy to give is replaced by an empowerment occurring within those Baptized into divine life (Chapter 13). Celebration refreshes the hard-working people who need these added restful moments (Chapter 14). Those who suffer need welcoming and incorporation into the grand restoring of our world in ways of seeing the infinite worth of their ordeals (Chapter 15). A practical mysticism has its own energizing effects that moves the believer forward (Chapter 16).

This is not so much a new understanding as a deeper listening to the vibrations, which move our world. It is more than intellectual insight; it is profound feelings that fly from the sterility of purely secular practices. Here is offered a new paradigm, one not based on seeing as much as feeling but with its own strong intellectual foundation. Only with a deeper enthusiasm can we confront climate change and terrorist issues. As we appreciate the harmony of creation with the creator, we are filled with the mystery in which we participate in utter gratitude, an atmosphere needed to sustain our enthusiasm in the complex battles ahead. The practical imperatives make this akin to such efforts as Albert Einstein's attempts in later life to discover a unified field theory -- the system that hangs together. This is more modest, being spiritually salvific rather than intellectual.

Our goal here is harmony of creation that entails using resources to benefit all and not a privileged few. In this part the basic premise is one Triune God, a community of three persons, Father, Son and Spirit in perfect harmony. The New Testament resounds with testimony of unity: *If you know me, you know my Father too* (John 14:7); *To have seen me is to have seen the Father* (John 14:9); *Father, may they be one in us, as you are in me and I am in you, that the world may believe that it was you who sent me* (John 17:21); *You are my son the beloved; my favor rests on you* (Luke 3:22); *baptize them in the name of the Father and of the Son and of the Holy Spirit* (Matthew 28:19); *... and the spirit like a dove descending on him* (Mark 1:10); *where two or three are gathered together in my name, there I am in the midst of them...* (Matthew 18:20).

An echo of divine harmony is heard, and the vibrations felt on many levels, but it takes spiritual faith to realize where its source and destiny enters

into our sphere of awareness. In the advent of Christ, a believer speaks of and discovers divine imagery, namely, the works of Jesus -- an imagery through process (healing, teaching, liberation, sacrificing). In turn, this intensity in Christ-like action is an unfolding through eyes of faith within selfless service to others in the likeness of Christ's own deeds. For Christians, it is fitting that a reinforcement of sound in a vibrating body, *resonance*, could spring from divine collaboration and be heard throughout our universe.

Perichoresis

Abba
Sophia
Ruah
eternally
ecstatically
dancing

and from that dancing
rise the moon and sun
all creation whirling
universe turning
round the Triple One

Walt Bado, S.J.

Eastern Christianity considers the Trinity like the whirling Greek dance of *perichoresis*, a togetherness that resembles a single moving whole, a visual image, a spectacular blur of a single movement. But the entire created world does not dance -- or does it? And sound and vibration creates a resonance when vision blurs, but imagery is expressed through rapid motion -- divine activity.

Part Two (Chapters 9-16), being patterned after the sequence in the first eight chapters, is more than knowledge for its own sake; it is knowledge as the handmaid of praxis, of the work of saving our Earth and civilization. All and all, this series moves to a practical application, namely, "hastening" the Day of God, *the New Heaven and New Earth* (2 Peter 3:11-14). Nevertheless, the immediate need is to address the threats to our planet and its inhabitants. In attempting to save our threatened world we are actually hastening the coming of the Lord. In fact, this hastening was my primary theological motivational insight in the 1960s and has continued to be for a half century during my period of public interest science work.

Our spiritual journey plunges into the heart of the divine resonating source and herein we find answers to the total collaboration necessary for saving our wounded Earth. Convergence is the order of the day, and a traditional understanding among Christian believers is that theology ties together sciences and arts into a unified activity and destiny -- and theologizing is both scientific and artistic. Some call theology the

science of sciences, faith seeking understanding. Scientific method embracing faith shows us the ongoing path that all believers must follow to become more effective in our own commitment to service for and with others. Theology must be geared to practical solutions if it is to magnify the marvelous work of the ongoing Creator.

Through revelation God's creative is shown in the activity of this world. Resonance, as related to phenomena all around us here and now, takes on a new tone, a sacred character, a promise of eternal life. The writings of active mystics such as St. Theresa of Lisieux¹ tell us of closeness of her suffering with the heart of the Divine. A natural theology (a philosophical course of studies I took in 1960) harks back to find God in the world of Natural phenomena. Looking into Scripture, the words of St. Paul stand out as quite a propos: *Ever since God created the world his everlasting power and deity -- however invisible -- have been there for the mind to see in the things he has made. That is why people are without excuse; they knew God and yet refused to honor him as God or to thank him; instead, they made nonsense out of logic and their empty minds were darkened.* (Romans 1:20-21)

Divine Mystery confronts us; it comes with a call that penetrates the heart of each of us, moving beyond but not abandoning our youthful question-asking power. In older age the loose ends come together; an elder's journey demands reflection, though not idle speculation, for there is growing awareness of the need to answer very shortly for our deeds. Furthermore, urgency at the planetary level makes elders all the more aware that time is short and our mental capacities limited. From this desire to act efficiently comes the demand to trust all the more in God for and through whom we focus our intellectual and spiritual resources. For believers, creation resonates with its maker, finds solace in its merciful redemption in the blood of Christ, and discovers new life with the Holy Spirit as our guide at this critical time.

Francis S. Collins, the American scientist team leader of the Human Genome Project (and a musician), stands at the cutting edge of modern scientific discovery with his DNA work. During the course of his life, Francis Collins has moved from a world of agnosticism to one of Christian belief; he gives testimony to this in his writings,² which he regards as a dialog with a materialistic world that is becoming more vocal in its agnosticism and antagonism to religious belief. Furthermore, Collins testifies in personal interviews of his particular conversion experience: *On a hiking trip through the wilderness, the geneticist saw a frozen waterfall in three parts, thought that the three parts represented the holy Trinity, and fell to his knees to accept God into his life.*³

This Part Two is a believer's testimony to the search to find a resonating God whose love and mercy gives a distinct echo throughout the universe. Through love, the world is created, for God loves all creation; through love, this world is redeemed, for God wishes salvation for all; through love, God enlivens all of us now incorporated into the Divine Family. Love existing between two persons is a godly bond; love uniting all community is divine.

We are invited into a "mystic harmony" that energizes us to the tasks at hand -- hastening the coming of the *Parousia* (the Second Coming). This process involves

confronting (not withdrawing from) the serious work at hand. We are called to resonate with other collaborators and with the God who directs us. We are called to imitate Christ the activist,⁴ and pattern our work according to his saving actions; he saves us in a universal redeeming act; we are to help save our planet and civilization -- with God's grace.

A harmony of the divine within us and our own human receptivity allows the presence of the divine in a mystical manner that stretches beyond a purely contemplative life. This is no judgment on those dedicated solely to prayer (either as a total life vocation or those who in retirement take the task of praying as their final mortal mission). Each must do what she or he is called to do. Many are called to be contemplatives-in-action, to prayerfully reflect and to act in whatever way the health and energy we have left allows us. With that choice to remain activists we return to each area with the intensity of faith.

References Part Two Introduction

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Chapter 9. God Calls Us: Openness

When YHWH called, 'Samuel! Samuel!' He answered, 'Here, I am.'
(1 Samuel 3:4)

Listening to, hearing and feeling the vibrations of the Cosmos beckons for us to go beyond scientific experience and seek something deeper. The sense of physical mystery presents an invitation to both stop and reflect and also to rise up and act. Can we resolve the dual feeling of resting and acting, or must we learn to live with it? To answer this one must be open to the Spirit, the movements of the soul, the awareness of our place and time and togetherness with others.

A spiritual dimension is more than seeing; it is listening and responding to the dual pulls of life. Must a citizen be comfortable to accept the status quo or be moved to upset it? Should a believer work with the limited secular field or

confront it head on at every turn? Can we rise above the material social addictions that paralyze us, and do so in ways that change the course of our troubled world and accepted lifestyles? No one can answer these questions alone, even if one firmly believes in an ultimate victory. We need to be open to the God who calls.

a) **Experiencing HERE**

My favorite youthful place of refuge was a depression in the back field of our Kentucky farm from where one could not see any other dwelling or human construction. Utter quietude, and it was "ours." No one was ever going to take this place from our family, for this was far too valuable to give up. Today, the spot is right under Kentucky Highway 9 with heavy traffic going overhead. So many dreams change over a lifetime.

Our life is a mystery that makes us wonder even in old age. Through the eyes of a child the world is utterly full of mystery of every sort: a butterfly, a flower, a mud pie that holds together, a dog's loyal approach. This mystery gladdens the heart and soul and yet triggers a restlessness beckoning answers, some of which are unrealistic. Amazingly, it is virtually universal for all youth to experience a sense of being, of wondering and dreaming, and of asking questions. But does it end with children?

As a believer, I am keenly aware of being **HERE**, where I am right now. Self awareness involves the conditions of our immediate surroundings, our personal environment and of a vague spiritual horizon out ahead of us. Gradually, personal reflection includes a wider and wider environment and our neighborhood broadens. A restlessness touched on in Chapter 7 takes on different forms; for many people, life can be a shrinking space devoid of others as they focus on their personal problems. Others may not want to touch raw reality and so live in a fictional world -- an idyllic dreamland. On the other hand, those motivated to address today's problems dealing with a threatened environment and civilization want to take a meaningful stance, but wince at the magnitude of the task ahead. A call is to be HERE and to stand on firm but open ground, for this is where I am supposed to be. The call to act cannot be denied, excused or escaped; it comes from the depths of an undefined Mystery to which I profess to be receptive.

Mystery with a capital "M" goes beyond the mysteries of unsolved physical knowledge such as black holes (Chapter 1) or chemical reactivity (Chapter 2), or the origins of life (Chapter 3). Are believers to become like infants exploring their world for the first time? The deep sense of the beckoning unknown only

diminishes with discouragement when the infant's question-asking propensity is dismissed by stressed parents or teachers without ready answers, and questioning loses its sharp edges when answers are not fully forthcoming. However, deeper Mystery never disappears; it seems to accelerate in force with life's accumulated experiences and surges even more in elderhood. Is it time to rest or to move farther into the unknown?

Mystery around consists of other beings exterior to us, but with whom a relationship exists; these defeat the temptation to self-sufficiency, for they constantly tell us that a social life is needed for fullness and call us to be open and ready for our response. Distance separates us from others and it takes effort to shorten what divides us, but we have to make the effort. They are our neighbors and beckon us to meet, share, assist and enter into our lives. However, in many ways socializing is mysterious.

Mystery beyond is up ahead, the hereafter, which draws us as by a teleological force forward to our destiny; believers regard this as incomprehensibly divine and beyond human powers. Yes, it is impossible to determine our exact position in space, and thus we tolerate Mystery even though the not-yet-existing future state impinges upon us, a sort of existential *Heisenberg Uncertainty Principle* (a physical theory that complete accuracy of both position and momentum cannot be simultaneously determined). Pausing to fully describe our stance distracts us from activity that constantly calls us to move forward to the hereafter. A mysterious tension exists and resolution is not easy in our journey of faith, even if open to tension. How much is one worldly and how much otherworldly?

Mystery within is an interior light, a sense of gratitude that allows a certain peace of soul. The light is personal, for God calls from within. Believers vary in recognizing and relating to this spiritual person who is present in some degree of mystery not fully explainable and yet really so when the listener strives to be open to what is within. Believers, especially those near death, emphasize heaven and the fleeing of this mortal domain for a better place. Others, such as St. Francis, see the glory of God shining in all of creation and find comfort in this immediate world of brothers and sisters among animals and plants.

Many believers regard heaven as home, a distant place of final abode of the just; however, here also is our place, for we are not outside our present world. Do we make the best with what we have? To become too "other-worldly" may be as disconcerting as to be too "worldly." If our eyes look beyond then we could trample on the neighbor in need of immediate assistance. However, to look down to Earth with all its raw detail causes us to lose our bearing and fail to see the bigger picture. By being open to looking both ways,

as at the railroad crossing, gives us courage to continue on our journey of faith with some degree of control.

Earth -- HERE -- Hereafter

The HERE at the mid-point may resemble Rahner's *schwebende Mitte* or the person suspended between the world and God... "and this boundary line is the point of his (human being) definition and his destiny."¹ An overly constricted personal HERE is devoid of gifted aspects of external influences, upward motion, and internal mystery. In fact, a spiritual life becomes one of being willing to find comfort in confronting certain inherent ambiguities. That is why one finds comfort in being open to the Spirit within.

A God-given destiny may not be within the immediate purview of non-believers; their struggle, while praiseworthy, lacks a sense of the divine within personal Mystery and the restlessness involved in honestly seeking one's place in this troubled but passing world. An authentic HERE demands balance, lest harsh reality takes its toll on us. Yes, the immediate and the distant are distinct and yet are interrelated and help constitute a single whole situation; they resonate without being resolved. We do not discover this from reasoning alone, but from faith seeking understanding within its strong inner voice. Does the divine beckon from a distance (a future or a neighborhood) or is God within us?

The Mystery of faith is a divine gift, giving restful courage within and yet simultaneously moving the believer forward. Life's journey is grace-laden, a passage span rather than a permanent point in space. Believers called to action are not static and isolated travelers seeking a God-and-me experience apart from the troubled world around us. Certainly sharp winds of reality strike our face involving everyday concerns. An authentic mysticism is what Karl Rahner calls an experience of Grace, or the immense longing experienced in life as a result of the inability of anything finite to satisfy us.² The Spirit moves us to something else not yet realized.

Some may interpret their HERE as isolated space and a totally private domain. For them, spirituality is a limited personal experience isolated from most other neighboring human beings, even though they may include special creatures (friends, associates, or pets). Drug users may define their spirituality completely within their heightened physical, mental and psychic state, apart from others around them or their past experience and future destiny. Subjects of research into *psilocybin*, the active ingredient of the natural "magic mushroom," speak of how it is the "single most spiritually significant experience in their lives." Narrow notions of spirituality as isolated individual experiences are certainly not socially motivating or fulfilling the call for the Christian to see

the hungry and others in need. Our HERE is a place where individuality thrives and yet contains a restless desire to relate to Earth's creatures and especially human beings. Resolution, if possible calls for openness.

b) Acknowledging NOW

I was hitchhiking home on busy U.S. 68. I looked out and saw a logging truck coming and blowing his horn aggressively. Something or someone made me rear my head back and the cut-off logs whizzed right past my peach-fuzzed face. That was not my time, but I do recall the exact spot on the road where it occurred.

NOW is that moment of major decision or visitation. It may be a time of change of life or accepting a spouse, a type of degree, a way of life. Christian believers are reminded of Mary's "yes" at the Annunciation to become the mother of the Messiah (Luke 1: 38). The long past history of divine promise was coming to a moment of decision and it was Mary's choice. Some believers say the NOW today is an awaited Second Coming of the Messiah. Active believers live in the HERE, where ordinary everyday life issues meet grand expectations of the hereafter; yet they feel the need to address current problems. On a level that is the issue of this book, many see the urgency to address climate change and also to a lesser degree terrorism as a NOW that is now.

NOW is an awareness of the urgency that presses upon us not only as individuals but as a community with common concerns that broaden into a global matter. NOW is a combination of past promises, experiences and memories, along with aspirations that constitute a future destiny of which our present decisions are involved. Past confronts future in the present moment.

The past can be deliberately forgotten or considered meaningless. For many believers the past has a meaning; it is partly fading and yet is forgiven. Amazingly, believers may be able to cope with a past partly fulfilled and partly open to fuller understanding. For those who believe in having been forgiven, a fresh start again does not remove the past but becomes a conviction that it no longer holds one back. Restoration has occurred; so it is possible on a grander level. The believer does not want to walk constantly looking to the past, for that leads to inevitable stumbling. Accepting that divine forgiveness is possible and part of a spiritual life lets the past be an experience covered in gratitude that makes the still granted mortal future better -- a happy fault seen as an opening to better possibilities.

The future draws our attention and is a magnet pulling on us; the future cannot be denied nor a subject of utter anxiety. The believer hopes and thus

avoids presumption or despair. To face death in the future can be discomfoting due to its uncertainty as to time, circumstance and what follows. The more one tries to figure it all out, the more the measurement gets in the way (again an existential Heisenberg Uncertainty Principle). Being open to an indefinite future in trust is accepting Mystery in our lives.

The present is the coalescing of past experience with trust in forgiveness and future destiny with hope. Present time does not stand still, but changes at each moment, as St. Augustine reflects upon in Chapter 10 of *The Confessions*. The immediacy of knowing climate, weather, and sunrise and sunset is part of the ecologically conscious HERE and NOW, and is most praiseworthy but passing. Part of the past is hidden by shortness of memory, just as the emerging future is also veiled to our experience; however, taken together these give direction and magnitude to our place and time. The three (past, future, and present) are really distinct and yet, in coalescing in one's being, constitute a NOW on life's journey, when faith and hope give way to love.

Past ----- NOW -----Future

Through faith we become conscious of time as God-given gift, and this realization grows with life's increasing brevity. With aging, past life is a fading memory; each present moment is all the more precious. Some people live in the past and neglect the future; others fret about the future and forget the present moment. A believer's NOW includes awareness that "my time" is God's time and gift and I must make the best of this moment.

Do We Have Time?

My friend, I do not HAVE time,

for to have is to hold,

and time, for several reasons,

is not something you can hold:

First, time does not belong to me --

and having is belonging.

Second, having time requires that I grasp for it

like reaching for a floating goose feather;

The very breeze created by my hand

sends the floating feather helter-skelter,

and it takes everything I can do to grasp it;

once grasped it is only a crumpled feather.

Third, time flows and does not stand still.

*Our **past** time is history now, of which we learn --*

and have faith that it's worth the learning.

*Our **future** time is not yet, but we help make it --
and have hope that we can truly do that too.
Our **present** is the fleeting moment and hardly time,
a gift from God, something that we truly cherish.
Really, love is what we've got --
and it affords us the instant to share with others;
For time is not ours to have, only ours to share. AF 2011*

Note: One may ask, "Does God know the future which does not yet exist?" God knows all possibilities and yet our free choices are not shaped by fore-knowledge but by our free will. God is the champion of our freedom and allows us to freely choose what is coming to be. The future, before becoming an event, is pure possibility. God give us freedom and freely permits the temporal flow of events; we are participants, not observers.

c) Incorporating WE

In September 2015, I joined two succeeding generations of our family in marching among 400,000 others in New York to change the climate change policies of our world. My young pre-teen grandnieces proudly carried a large "Earth Healing" sign for over eight blocks without flinching. To me a legacy: "The future belongs to all."

Interrelationships include plants and animals as well as social ones with people close and far apart. With exceptions of individuals stranded alone on islands or in prison isolation, no one needs to be isolated if an effort is made to keep connected. Closeness of swarms, schools, pods, flocks, prides, herds, tribes and clans exists -- and the resultant grouping proclaim togetherness. In a harmonious community, life is sustainable and can be lived with some benefit to all. However, disruption and threats to animal and plant communities do occur and those are blessed who become aware of these dangers; some human beings do not have food or lodging security while some in the human family waste precious resources. Others strive to live conservatively and hear the cry of the poor.

Human awareness of these cries invites an authentic spirituality, where believers trust that their efforts can bring on greater solidarity. However, mere opening to hear is not a final solution in itself. This emerging **WE** is multidimensional, for each one of us is related to another (a linear relationship), and the two of us are related to a third (a plane or level of two-dimensional relationship). This surface changes through growing awareness of past and future states (a three-dimensional volumetric relationship); this "field" moves in real time (a temporal dimension). Furthermore, growth of interrelated groups

or clusters forms overlapping communities. **WE** grow in consciousness through the quality of our togetherness. Spirituality is openness to even greater relationships that are vibrations felt ever so faintly.

The **WE** is a foreshadowing of a Trinitarian character that touches once more on the Mystery within, the mystery around, and the mystery beyond. As individual persons, WE confront our self-awareness (mystery within) of limited time and place that can never be fully determined nor secured by our individual resources in isolation. As social beings, WE listen to the cries of the poor and allow our neighborhood to grow and expand (mystery around), and WE are drawn as interrelated beings to a collective but indeterminate future (mystery beyond). These elements may resemble Rahner's philosophical/ theological categories: 1. the existential unity, 2. the historical dimension, involving our connection with space and time, and 3. the transcendental knowledge or experience of God (*Vorgriff auf esse*).³ Rahner applies the transcendental character to human beings. Can "WE" be believers going beyond our individual environments to become concerned about a broader reality of which we are called to be part?

A nagging problem. Yes, I am willing to enter a group for the good of all, but do I keep my individuality amid the masses of the people? Uniqueness is what makes me different and is important within my highly personalized culture. One hears that as part of a multitude individuality can advance with the feeling of solidarity through ever more strengthening relations with others. Am I open for this? Does my presence enhance the bonds that unite the cooperating group? Together do we grow in warmth and fellowship and thus our quality of life as individuals and as a community expand simultaneously? Does this help constitute the WE, which is as much a part of my individual HERE and NOW -- and yet is shared with others? This brings us to ask, is this the domain of an "Ecological Commons?" Will greater solidarity be able address our most troubling issues (climate change and terrorism)?

To give of myself means an openness to share who I am with others for solving our global problems. In some ways, this giving or sharing is an invitation to being open to becoming more effective. Making a difference baffles individuals facing the global change or terrorism problems. When immersed in a culture of individual rights and privileges, questions related to surrender or threat of loss of privileges are all the more important. Answers may be varied and not of a direct spiritual nature. How one responds may depend on peer pressure, psychological factors, or the cultural misgivings of going public. However, some take pride in joining a cause; still others accept that solidarity admits of degrees and a desire for greater solidarity is a challenge to seek furthering a worthy cause.

Believers who go to church may desire greater solidarity by practicing their faith publicly. In this public sense a believer is willing to share the Mysteries within, around, and beyond as part of an expanding social fabric committed to greater inclusiveness. Believing is a Mystery of openness and that includes the risk of losing some individuality in the course of becoming a WE. It involves a communicating where one stands among those to whom they confide. HERE becomes a broader home; NOW becomes a deeper sense of urgency; and **WE** for believers affirm the possibility of a successful outcome. For some of these it means to publicly long for and actually hasten the coming of the New Heaven and New Earth while working together.

Openness to both joining groups working together and to the possibilities of success go hand in hand. WE do not join together if hope of obtaining goals is not forthcoming. Granted, the sense of restlessness found in our seeking place (HERE) and in dealing with the issue of urgency (NOW) seems compounded and intensified when interacting with others. Can the group save our wounded earth from climate change problems such as the power of Big Energy to extend profit making as long as possible. Lest we forget, this same practice was at work with Big Tobacco in the late 20th century and led to many additional cases of harm through uncontested tobacco smoking practices. Is history partly repeating itself?

For Christian believers the Three as One: HERE, NOW and WE grows with spiritual openness. A Trinitarian imprint is found in all dimensions that give rise to an expanded social consciousness: HERE, seen through the eyes of faith, has a creative personal Source of Mystery who creates all and draws all; NOW, experienced in hope, involves a past -- a redemptive Calvary event -- and a future -- bringing all things together and delivering the kingdom to the Father; WE includes various parties associated in neighborly love and animated by the Spirit working among us. With openness one defines a place (home), a time (this moment), and a needed togetherness that may or may not work for the benefit of all. These three components are really distinct and yet form a unity within each of us as individual unique persons -- and, more so, as a body of people working together for the Common Good. For believers that openness leads to God.

A clarification. Leaving out "we" throughout much of Part One of this book was due to refraining from confusion as to how much is included in the personal plural. Certainly, I admit the "us" and "our" in Part One could lead to confusion as well. Does this plural also include all plants and animals? All people? Believing community members? Other believers? Christians?

Catholics? Appalachians? Local folks? Colleagues? Those of "us" who seek to become ever more inclusive find the plural as a wish, a promise and an emerging concept of collaboration, all anticipating a bonding that enhances our social environment. I must concede that "we" is certainly inexact, but such is life!

Summary: In seeking to balance our situation (HERE), our urgent need to act (NOW), and our relationship with others (WE), a reality emerges for believers: God is present in our midst; God is the harmony in our restless lives; and God loves us in this time of crisis and need. The Mystery of God within begins to resonate with the believing activist who feels the harmony being part of a sweep of history and the uniqueness of a calling not afforded our ancestors in the faith. WE resonate with the Almighty and trust in God's presence in assisting us to leave self-centered activities and join with others working on the issues that trouble us. The temptation is to compromise with rising secularity -- and yet with God's help publicly professed WE can succeed together.

References Chapter 9

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Chapter 10. Restoration in Christ

*Faith is seeing the brilliant countenance of
Christ looking up at us from every creature.*¹

Creatures praise God through their very existence, as stated in Pope Francis' *Laudato Si'*.² Certainly, a sense of praise permeates the whole of creation, and believers make praise a major part of their prayer life. Praising

God is an act of gratitude for gifts given to us. Certainly, for believers familiar with Scripture, God (and not a multitude of local deities of primitive cultures) creates EVERYTHING as stated in Genesis. "Thanks," freely given, is the greatest utterance that humans can give back to God -- a blessing that should be the last words in our passing from this mortal life. The chorus of all creation rings out --

*Let the heavens be glad, let earth rejoice,
let the sea thunder and all that it holds,
let the fields exult and all that is in them,
let all the woodland trees cry out for joy. (Psalm 96:11-12)*

Note that in this companion to Chapter 2 human beings show the intensity to responsible action introduced by chemists creating beneficial materials such as plastics, synthetic fibers and medicines. However, along with the freedom to create such materials runs the risk of damage through misuse or overuse -- and negative consequences such as harm from resulting pollution. Here benefit/risk issues are reviewed in moral terms.

a) Creation as Blessing

Easter enhances our springtime. In my youth, my siblings and I carried Easter Water prepared at church on Holy Saturday to bless our farm: the plowed areas and pastures, cattle and horses, garden and orchard, house and barn. This religious practice struck a deep chord. Christ's rising sets an Easter tone that renews all the world, and in joy believers extend the blessing to all creation around us. New life is coming!

Beauty is perceived by the observant as enticing, fleeting, fragile, and enjoyed with others. Our quality of life is intertwined with the health and wellbeing of all creation about us. Human beings are part of and immersed in nature, not divided from it; thus, the beauty of nature is recognized because it is uplifting as well as essential for our quality of life. Americans speak of "purple mountain majesties" and "fruited plains." Woody Guthrie captures the spirit in "This Land Is Your Land," our second national anthem. People of all cultural backgrounds, and especially primitives who live close to nature, have much in common: they all admire the natural beauty of an undisturbed landscape -- a beauty in the eyes of all who gaze in wonder and who feel free to rest before a starry night or colorful sunset.

Unfolding creation to the eyes bears a sound for ears as well, the sound of nature praising God. The gift of life seems to break through in bird songs and breezes through leafy trees, in rustling critter's every movement and in the

distant sounds of cowbells and crickets. God's creation continues in our midst; the attentive can see AND hear it. The divine is involved as creator of beauty and our works-in-process are heard amid the choir of creatures. Certainly, admiration of nature is uplifting and extends as a natural *treasure* seen and heard throughout: mountains, rivers, seashores, and forests. See our book *Mountain Moments*.³

Are all snowflakes of a different design, as some would like to say, but can never verify? Certainly, all creation has charm and variety that only the hand of the Creator within an evolving world can give -- and natural scenes, whether physically visited or observed virtually, bestow peace to the observing and listening soul. Nature's beauty is the gateway to ever-deeper respect; an unmarred, resplendent earthly beauty is our primary **Commons**. It deserves our admiration and collective responsibility.

Respect accompanies our praise of God's glory. We pause to experience life in its great detail -- a buzzing, busy bee going from blossom to blossom, a nestling venturing forth, a shimmering countryside ablaze in spring beauty, or summer, or autumn or winter. In observing a greater sense of solidarity occurs. In Dublin, Ireland a religious brother was alarmed upon seeing the Jesuit poet Gerard Manley Hopkins lying motionless on the ground observing the microcosmos of insects; was he dead or just focusing on creation? In all seasons, WE praise the creator while intensely observing and thus entering the creating process. St. Francis of Assisi had this sense of resonating praise in dealing with animals and plants, sun and moon. In a wonderful and humble way, creatures invite us to enter into nature's resonance.

Creation's Eighth Day

*Look out! Grinding rocks, drifting sands,
earthquakes, seawaves, aftershocked lands,
creeping, calving blue glacier dies,
icebergs form before our eyes,
avalanches of roaring snow,
upturned trees in tornado's tow,
muddy debris on flooded plain,
seashore pounded by hurricane,
sleet-covered trees at bough-lost price,
boulders split by expanding ice,
rivulets on an eroding Earth --
yes, ever-yearning, giving birth.*

AF 2006

The world of marred beauty stands in utter contrast to natural beauty, whether untouched or through human embellishment. Ordinary citizens cannot

help but encounter such disorder: garbage heaps, eroded land, unreclaimed strip mines, damaged wildlife habitat, and polluted air and water. If everything is connected to everything else (Barry Commoner's *First Law of Ecology*), then all parts of this world and all activities for better or worse have some impact on other parts. Lovers of Earth's grandeur want to hold tightly to the purity of natural, untouched beauty, but that can be unrealistic. The free acts of individuals make a difference in society; good acts benefit all -- and bad ones harm all. Thus, beauty is all about, but beauty can vanish through misdeeds either by me or by some or all of us. Wounds are to be attended.

While natural or enhanced beauty is a blessing, any form of misdeed to that beauty is a curse. With inspiration WE are bent on extending blessings, not curses. Thus, mere appreciation of natural beauty untouched by human beings is not sufficient, for blessings mean willingness to do meaningful deeds to protect nature. Is the marred condition permanent or can restorative action be taken to address and correct the situation? Restoration is a deliberate act, but the finished product of our healing can have its own beauty. Restoring beauty contains the gentle human touch, for the treasure of cultivated fields, gardens, and forests is human sweat mingled with creative genius. Is there a possibility that the restoring act is more wonderful than the original creative one?

In a 1971 lecture made before the *American Association for the Advancement of Science* in Washington, DC, Rene Dubos stressed that human ingenuity can enhance the environment and is not always a negative factor when utilizing natural resources. He noted the progress of northern France where he grew up, and said the draining of the marsh lands for cultivated fields was really an *enhancement of nature* -- and the end result was a beautiful landscape that could be appreciated by all residing or visiting. Nature enhancers become part of nature and are part of nature at work. Note that preserving wetlands can be part of that protective process, for they have ecological value.

Human beings are created to praise God in whose likeness all are created. Praise is part of the reason for our creation and, as social beings, all can praise together with surrounding creatures. Beauty proclaims the creative process, and WE are called to praise in words and in enhancing deeds. The emerging image of beauty says something about God, but is not God's visible image, for God is spirit? Artists and scientists express beauty by making a multitude of artifacts that reflect the glory of God and in doing so participate in the creative process. Housewives, artisans, and small farmers join all in ordinary work that can be part of the creative process. Through honest work blessings flow.

Praise God from whom all blessings flow;

Praise him, all creatures here below... Old Hundredth Song

Naturalists hike in wilderness areas, observe squirrels scurry, bird sings and wild turkeys gobble. In soothing our ruffled souls, wilderness becomes an opportunity to turn minds to our Creator. However, these delicate habitats can be easily damaged by human greed, ignorance, and mismanagement -- and these harmed habitats cry to heaven for restoration and return to beauty. Yes, alert naturalists listen as pristine land shouts for joy and mistreated land cries in anguish. Praise extends beyond admiring the pristine and invites us to seek courage to restore what is damaged. For the activist, damaged Earth calls for a new harmony --restoration.

b) Restoration as a Privilege

The voice of YHWH in power!

The voice of YHWH in splendour! (Psalm 29:2)

Once I returned from a trip to our demonstration center and found my spring garden, which meant so much to me as a model for our annual June meeting, had been deliberately ruined; many stalks of tomatoes were pulled up and trampled down. The land seemed to lament aloud such cruel deeds. Only one solution remained for a poor gardener and that was to start all over and accept damages as such. This was to me the only way.

Through free will, our human offerings of praise surpass all other creatures, who offer praise to God by their presence and activity. Could we say amid a plethora of observed misdeeds that our Earth suffers? Does this touch the heartstrings of those who love and care for others? If this touches us who are created to God's likeness, does it not touch divinity also and more so, all the way back to our first ancestors? The mercy of God becomes present in the promise of restoration, and so people through the ages waited for and longed for someone to come and make matters aright. Earth awaited her redemption and subsequent restoration.

Promises kept. Throughout the long period of Old Testament history, believers longed for a promised *Messiah* who would restore what was lost. From our Christian understanding the divine plan was foretold: a suffering servant would justify many, taking their faults on himself who surrenders himself to death (Isaiah 53:11-12). For Christians, the promised one has come two thousand years ago in the person of Jesus Christ. He is the one who endures a redemptive death "once for all" (Hebrews 9:26); his sacrifice fundamentally initiated the healing process of restoration.

Though a long history of human misdeeds, the need for salvation by the

hand of the Almighty resonates within creation. WE are not left alone, but God intervenes in the human condition. God's creation is good and bears the mark of divine providence and harmony; the restoration bears even more distinct marks of God's mercy and love. Oh happy fault! A caring person has the impulse to heal what has been damaged; the perfect human person shows the rest of us the way through an all consuming redemptive offering, an act of dying for us even while all of us are still sinners. When human beings freely offer sufferings to God, the quality of the offering reaches a higher state through the free offering. The freedom of Christ stands out for all to see, for choosing to die for others is an utter act of love. This is a singular event in Salvation History that continues to resound.

Do believers enter into the saving work of Christ? Some of the frightened flee from an accident or leave matters to others more able to respond. Responding comes easier for some people who have the courage and spiritual wherewithal to face reality. Both helping to halt destruction and initiating restoration in some fashion are doubly challenging, especially if damage continues unabated, and WE are aware of our inherent powerlessness in the face of power structures. Only a deep spirituality will welcome the task of restoration of a damaged world.

The temptation is to deny the condition, to excuse oneself, for each act can make so little difference, or to escape to a multitude of promising attractions. However, an uncontrolled anger over what has happened can become paralyzing; the degradation is "sacrilege" for believers who hold creation to be sacred and bought at the enormous price of divine redemption. This becomes a moment of choice when divine words strike us:

I call heaven and earth to witness against you today; I set before you life or death, blessing or curse. Choose life, then, so that you and your descendants may live in the love of YHWH, your God. (Deuteronomy 30:19)

Marred creation is a disturbance of the social order. Damaging creation in any fashion is a desecration of the natural harmony of God's creation. A divine gift has been deliberately spoiled and is in need of repair; justice calls out for bringing back order. It is a double recognition of beauty and our responsibility to a fragile world that calls for action. When injustice is done by privatizing our collective Commons, a sense of justice calls for open resistance to destructive action. The Commons is to be shared by all and protected by all. When a calloused society permits or even rewards greed, the Commons suffer and counter measures are demanded. Is this an actual situation in American today?

Seeing those suffering from food insecurity moves concerned citizens to a deeper level of solidarity. "I learn who are hungry" gives way to "I help alleviate

hunger." But the deepest level of humble service is identity; "WE attack the injustice that causes the hunger," and WE join hands with those to become one in solidarity with those rising to take what is properly theirs (ours) in common. Marred beauty quickens those concerned about justice, harming natural beauty challenges us to greater activism. Nature lovers are tempted to enjoy the remnants of untouched nature and avoid conflict -- but that is betrayal. Through collaboration, WE reinforce each other to do something that individuals are unable to do alone. Within a common cause rests the magnetism of enchanting beauty, and the will and strength to return beauty to its rightful place. It takes a deepening spirituality to admire beauty, halt what is being damaged, and restore a damaged Earth.

WE act with an intensive responsibility by being, in the words of St. Teresa of Avila, the hands and feet of God. As part of our companionship with Jesus WE are called to restore what has been damaged. What WE can do may not be perfect, for our talents and contributions are limited and vary as members of a cooperative team. Some imperfect service must be tolerated for the human hand is not the divine one. If teamwork is to succeed, WE seek to know imperfections and improve our performance. Restoration is process; some past efforts in my Appalachian region to reclaim damaged stripped coal fields included planting an invasive species (Russian olives) that began to do more harm than good. Re-creation does not always have the luxury of long-term experiences, but decisions for improvements can occur more rapidly through corrective teamwork.

The glory of the Creator and Source of all life is present in all creation, from the artifacts we produce to services rendered. Artifacts require a maker and services a renderer, all working with a sharing spirit, a believer's respect expressed through deed. God acts within us and Divine Harmony resonates in the ears of believers. It is like the residual sound billions of years after the Big Bang, but now in deeper harmony of co-workers following the Messiah. Divine Harmony floods the universe with a sound that listening believers can perceive as a deeper calling: let us restore what has been damaged so that order might return.

*No longer are you to be named 'Forsaken',
and your land 'Abandoned',
but you shall be called 'My Delight'
and your land 'The Wedded';
for YHWH takes delight in you
and your land will have its wedding. (Isaiah 62:4)*

Awareness of creation as gift is followed by a deeper call to repair damages caused by human misdeeds to Earth and civilization. God blesses us

in all creation; in turn, WE bless God for gifts and all created things around us. What is freely given is freely recognized through God's double blessing to us in our existence and what WE can do. In turn, concerned believers resonate with God in created beauty, recognizing marred creation, and in restoration. If WE are blessed by the presence of God with us, then it is imperative that blessings are returned in gratitude through cooperative activism. Blessings extend from more than ordained in formal settings or at meals and special occasions. Since God is the origin of all blessings, our response is to act in a godly manner in freely blessing all around us: butterflies, mushrooms, lichens, evergreens, berries, birds, amphibians, and the entire blue-green planet tarnished by exploitation and human greed and thoughtlessness. We bless wounds so they may heal quickly.

Success to some degree depends on the faith of blessing agents. Jesus speaks of the lack of faith in his native place. As agents of change we feel blessed vibrations within our work: the gifts given including the power to act to help restore through our cooperative efforts. Damage observed amid vulnerable natural beauty makes us aware of original blessings, deep down and yet wrapped around with the paradox of fragility needing respect. God's favor is perceived as "ours," not mine or yours alone. Our joint blessings acknowledge togetherness in the Lord. This includes correcting the stark grasping of resources by the superrich. WE cannot remain silent and do nothing, but must confront doers of misdeeds. Enclosure of the Commons has been practiced over centuries and involves forests, pasture lands, and other resources; these restrict those who are true sharers of the Commons. Privatizing can be stealing from the Commons and has occurred too long without confrontation. Jesus directs his anger within the supposed Temple Commons: *Take all of this out of here and stop turning my Father's house into a market* (John 2:17).

c) Effective Partakers in Salvation History

The fact WE are called to save our threatened Earth has caused me to pause, for this planet and all creation has been saved in Christ; what more can I do? On second thought, I may not redeem, but I can help save through being redeemed and in that grace to extend that redemptive act to all the world. I am impelled to go out to the whole world and proclaim the Good News to all creation (Mark 16:15). This imperative is broader based than merely focusing on past generations who targeted people in evangelical efforts. This new theological frontier includes all creation. We work with the Savior in saving our Earth.

Through a willingness to enter into the saving work of the Lord, WE become other "christs." This Christ-likeness includes repeating the activism of Jesus (healing, teaching and public corrective activity).⁴ To reclaim the Commons means that we must act, not merely admire, or cast blame, or stand back at a distance; WE discover the root of problems, confront curses that are paralyzing, and bless the work that must be done. WE find in Christ's actions an emerging Trinitarian design, for the creative act is ongoing, the redemptive is restorative, and the Spirit re-energizes us to help make things new. *Such is the richness of the grace he has showered on us in all wisdom and insight...* (Ephesians 1:7-8). Responsible action on our part means harmonizing with Christ who has sacrificed himself for us.

Effectiveness means more perfect harmonizing. A personal harmony with Christ is really the goal of many practicing Christians. WE are to break with allurements that hold us back and commit ourselves to come ever closer to him. WE realized this growth in interior life is God working within us, so through cooperative efforts and prayer life WE are saved along with others working with us. Salvation may be perceived as rescue from hell or in a more cooperative sense as accompanying others in saving all our sisters and brothers. That reaches beyond our local body of believers or our denominational boundaries to include the entire human family. Does it even reach further into the world of animals and plants and Earth herself?

The act of saving both enhances our spiritual wellbeing and becomes praise in itself for this is a returning respect for all that is precious in the eyes of God. Christians are convinced that the redemption through the sacrifice of Christ was not limited to a few, but extended to the whole of creation -- and this awareness when shown in respect is part of the Good News. The universality of the redemptive act itself has an additional sharing aspect in the degree in which we participate in respect for a troubled Earth. Added is the sense of responsibility granted to all who realize both benefits and risks to tinkering with creation itself.

The Christians added response is not only to save from immediate harm, but that damage is more than individual acts. When we accept a consumer product made in unjust labor conditions, we are all at fault. If we fail to act when injustice is committed to workers or when pollution fills the air and water (see Chapter 2), then we all bear some of the blame. In this extended sense of solidarity we accept a deepening responsibility that is found in an extended Salvation History. The failure to accept responsibility by those who blame others or deny any social addictive problem strikes us today. This demands our speaking out, for no one can remain silent in the face of our troubles. WE are called to help save the Earth herself, and that emerges as a frightening

responsibility.

Through familiarity in Scripture (Good News), which has both individual and communal aspects, WE discover the long story of salvation. WE are inspired to become a companion of Jesus and say with Peter, "Depart from me a sinful person." However, the Lord comes ever closer amid protestations and overcomes our hesitation through utter mercy and forgiveness. Only in drawing closer to companionship with Jesus do WE learn to resonate with him in a special work ahead of us. Our combined respect for creation and our duty to help restore marred beauty make us look closely at his examples of healing and teaching for ways to conduct our actions.

Some would say Earth is lost and so don't try, for the superrich have the power to be suicidal when consumed by their greed. Many citizens, even calling themselves devout Christians, are paralyzed to resist that power. Counter to this despair is the other extreme secular argument that one does not need God to save our Earth -- but is that so? The third option, the activist believer's position, is that human beings cannot save Earth alone, but with God's help WE can. It is quite possible in the short-term that the forces of resistance (fossil fuel profit-makers) will place the planet in grave danger. For believers the "can do" becomes a "must do," and that means all the help WE can muster when working closely with Christ our rock. The climate change deniers will not win -- though as of this writing the picture looks bleak.

Closeness means hearing the word of the Lord and turning word into deed. God speaks to us in human words, just as God took on the flesh of human weakness.⁵ Through the words of Sacred Scripture, God speaks only one single Word, his own utterance *the Son that he has appointed to inherit everything and through whom he made everything there is* (Hebrews 1:2). Through the love and mercy shown in the Incarnate Word, God resonates with us all the more as companion. Quoting St. Augustine, *You recall that one and the same Word of God extends throughout Scripture, that is one and the same Utterance that **resounds** (emphasis added) in the mouths of the sacred writers, since he who was in the beginning God with God has no need of separate syllables; for he is not subject to time.*⁶

God resonates with us through inspired words spoken and written. The original words were written down by faithful believers; these inscribed through divine inspiration over a millennia of time in the book's production. Reading Scriptures occurs within an atmosphere of profound respect that includes veneration of Christ as Messiah and inspiration of the Holy Spirit. Christian faith is not as St. Bernard says, a "religion of the book," but a religion of the "Word" of God, *not a written and mute word, but incarnate and living.*⁷ The study of the

words WE read, hear and pray over become part of our conversation with the Lord, who gives us the gift of words. With confidence WE hold this form of sacred resonance affirmed by the Holy Spirit to be given for the sake of our salvation, and for us to help save our Earth.

Companionship with Christ becomes the journey we take to accept God's gift of our salvation and that of our world. Does this mean every person becomes a companion before meaningful action occurs? That likelihood is not to be realistically expected -- and can lead to some sort of pious silence awaiting the results to occur. The reality is that some are called to do the meaningful work at hand, work that recognizes God's presence even when a secular world does not. Collaborative efforts are on two levels: we, working in a secular world for the Common Good, and WE, working as a more intensive group awaiting and hastening the coming of the New Heaven and New Earth through spiritual cooperative efforts. Hopefully, believers become effective partakers in Salvation History.

Summary: Creation is a blessing that is recognized by caring human beings; the more the reflection, the deeper the resonance with all creatures. Free acts of thankfulness stand in contrast to the equally free act of marring creation through misdeeds. These misdeeds are acts that do not resonate with those bestowing blessings; they affect us all in some way and act as poison in our world. God promises a definitive redemptive act and, for Christian believers, this occurs through Christ's coming and redemptive act. However, like the ongoing creative act, the redeeming one receives its full effects in time. Those blessed are doubly blessed to be invited to extend that act through saving our threatened Earth. As responsible believers WE have a part to play that is new and never before undertaken. WE allow Christ to speak to us in a continuing and directed fashion and we resonate in the Word, Christ himself; that Word goes out to all creation and WE are the ones who proclaim it.

References Chapter 10

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Chapter 11. Holy Spirit Gives Life

Life is more than that unique phenomenon found unto now only on our Earth (Chapter 3), though other planets may be discovered having life as well. This life is fragile and precious and deserving of respect. Concerned citizens see threats to our fragile planetary life due to greedy polluters, ignorance, and terrorists. Vitality in its many vulnerable forms is deserving of our intense dedication. Let's move to the deeper level of protection that includes working in communion with a Higher Power. The Almighty enhances our spiritual life so that WE become more fitting advocates of life in all its forms. Being pro-life is a calling that demands prayer and includes a resonance of its own.

a) The Spiritual Life and Enthusiasm

On rare occasions when I must speak, a distinct impression comes that I am not speaking, but someone else is speaking through my own vocal cords and distinct voice. I thought this was only my unique experience until others told me they have had similar sensations. My conclusion is that the Holy Spirit enlivens the enthusiastic response that I find hard to muster simply on my own.

The Spirit invites us to become part of God's family and to partake in professing the word that includes a defense of life in all its forms. This mysterious prompting is "hidden by the veil of faith and enveloped, so to speak by a kind of darkness" (Vatican I terms), and yet we are called to discover the light (Vatican II's *Lumen Gentium*) in which courage to speak occurs. As believers, our primary inspiration is to accept Mystery (Chapter 9) and recognize our responsible role to play in Salvation History (Chapter 10). Furthermore, God is revealed in our world through our proclamation. Can WE improve our performance through the power of the Spirit.

Believers discover an inner creativity to work in solidarity using our hands, heads, and hearts. Believers see deeper meaning: a New Creation is emerging from works undertaken. In healing our Earth and defending our civilization, believers usher in renewed life that has eternal value, and the urgency to act is intensified. *And God's spirit hovered over the waters* (Genesis 1:2). The mighty Spirit, *Ruah* (translated breath, air, wind, and soul) moves about the world from the first moment of creation, for the echo of the divine resounds. As Yves Congar says, this word "ruah" appears 378 times in the Old Testament and

means in various places: the wind or breath of air; the principle of life and the seat of knowledge and feeling; and the force by which God acts and causes action at both physical and spiritual levels.¹

In the New Testament, the Spirit enters as a messianic gift in the conception (Luke 1:35), baptism (Mark 1:1ff.), and activity of Jesus². The Holy Spirit overshadows Mary at Christ's coming, and God gives the world Emmanuel, God-with-us (Matthew 1:23). Jesus, as befits his true and full humanity, grows in wisdom and favor with God (Luke 2:52); he is inspired by the Spirit throughout his human maturation; the Spirit leads him into the desert to be tested (Matthew 4:1; Mark 1:12; and Luke 4:1) as to his obedience to God. *The Spirit of the Lord has been given to me* (Luke 4:18a). Jesus works marvelous deeds; he battles the powers of the evil spirit throughout his ministry: *God had anointed him with the Holy Spirit and with power, and because God was with him, Jesus went about doing good and curing all who had fallen into the power of the devil* (Acts 10:38).

The Holy Spirit comes to the disciples and those gathered in the room at the first Pentecost (Acts 2:1-13), as Jesus had promised (Acts 1:5, 1:8), and at the Last Supper (John, Chapters 13-17). And finally, in our own time, the Holy Spirit comes to each one of us at our Baptism and Confirmation. Like Jesus' disciples, all believers in Christ are inspired by the Holy Spirit: in the Scriptures, in Tradition, in the Church's Magisterium, in the religious celebration, in prayer, in charisms and ministries, in the signs of apostolic and missionary life, and in the witnesses of the saints.³

The Spirit's Titles are numerous and include: Paraclete (consoler), (John 14:17, 26, 16:13),⁴ Spirit of promise (Galatians 3:14, Ephesians 1:13), Spirit of adoption (Romans 8:15, Galatians 4:6), the Spirit of Christ (Romans 8:9), Spirit of the Lord (II Corinthians 3:17), Spirit of God (Romans 8:9, 14; 15:19; I Corinthians 6:11; 7:40) and Spirit of glory (I Peter 4:14).⁵

Christians describe the Holy Spirit through the use of symbols: baptismal water, anointing with oil, fire, cloud and light, seal, hand, finger, and the dove. WE discover that the Spirit defies being chained, her freedom and unanticipated movement is like the moving air. The Spirit breaks through our self-made shells by softening our hearts, and freshening our prayer life through a special spiritual resonance -- new life.

Certainly the Spirit speaks in unique ways to all of us. However, some basic characteristics that unfold during our personal journeys of faith are worth listing: unlocking the closed doors of our hearts and penetrating our beings with their flimsy walls of supposed security; coming as a great and restless wind in

power and suddenness to give us a prophetic spirit and to encourage us to speak and act boldly; descending on us as tongues of fire showing the uniqueness of the gifts each person is given in the Spirit; impelling us to speak publicly to others in a manner that allows them to understand (a gift of tongues) by using our own talents and manner of personal communication; healing and consoling us and thus manifesting God's compassion; and urging and empowering us to perform unique deeds through inspiration.

This inspiration is present in many ways. People are deeply inspired in writings, art, science, exploration, homemaking, and every human undertaking. Carl Philipp Emanuel Bach (1714-88) was so inspired when he played music that he would go until 11:00 at night without taking an intermission. Natural inspiration is known to us all, as mentioned in Chapter 5 and 6, and involves people in all cultures and beliefs. Thus the inspired products of art and music are familiar and could in a broad interpretation be called godly deeds. Believers acclaim inspiration and realize the Spirit cannot be chained. Inspiration is a grace-filled moment of life and leaves a mark on our ordinary and extraordinary undertakings.

Resonating with the Lord involves our listening and response. In this age of troubles, the call goes out to all the world to attend to what is damaged and to initiate healing. Perhaps it is unnerving to some, for it means accepting added responsibility beyond the ordinary duties of life. Listening is demanded of all human beings of whatever race, economic status, or religion. God the gift-giver calls; not all are willing to listen and prefer to deny the message, excuse themselves, or pass over to allurements that take the mind off of present allurements. Believers in some prayerful period give some time to this call and move in their own way beyond faith-seeking-understanding to faith-seeking-to-serve effectively. The quality of projects undertaken depends on the degree of **enthusiasm** or openness to discern the God within.

Never try to suppress the Spirit, or treat the gift of prophecy with contempt; think before you do anything -- hold on to what is good and avoid every form of evil.
(I Thessalonians 5: 19-22)

The interior life of a "believer in the future" justifies an inherent restlessness that stands in sharp contrast to the comfort levels sought by those who champion the materialistic status quo. Faith is turning to the Source of all gifts, the Gift (Christ), and the Spirit enlivening us to give in return for what is received. Gratitude for these gifts is shown through involvement, not only by sincere words of thanks, but through effective deeds that are energized from within. When listening, a restlessness is detected. Is it a spiritual wind blowing about and only faintly detected at first? Can it turn into a gale? A discerning person soon finds that this restlessness is real and must be listened

and discerned, not dismissed. Is it living faith seeking to profess itself in deed and not just in word?

Today it takes courage to profess one's faith with vitality; enthusiasm is that outward expression of that life within. Every great gift reveals the Giver; if I appreciate the gift of faith I look within, and I am inspired to externalize what is there. To our surprise, the path is not trod alone, for others are moving on their journey of faith as well. They crave to resonate with like-minded people to encourage them and enhance their effectiveness. By being Spirit-centered, the locus is an individualized **HERE** not content in being isolated, but desiring a wider neighborhood. Urgency is not merely a personal matter apart from the troubled world; God's gift involves the many, and an individual's **NOW** becomes the expanding moment of a community of faith. A **WE**, who are also God's gift as an outward glow, merge with similar groups into a multidimensional source of light.

Enthusiasm is an intense or eager interest, a zeal or fervor. When founded in Mystery, this enthusiasm takes on the character of supernatural inspiration -- an expression of her divine source. How can one describe the spontaneity or the springing forth from a source within, a motion that is often unpredicted and yet full of risks? It involves a hidden restlessness to obtain results, even when not fully able to describe the hidden energizing source. Enthusiasm is publicly manifested -- through facial features, body language, and words. It is both fulfilling personally and also directed to the benefit of others, though malefactors and the demented can operate with misinterpreted eagerness. It takes faith to recognize, detect, and encourage authentic enthusiasm.

The test for authenticity is willingness to share fruits of the Spirit with others: charity, joy, etc. A feedback mechanism allows us to be receptive and thus comforted in the enthusiasm and blessings of others. God gives us a communal invitation to be partners in the work of saving the threatened planet and civilization. It takes grace to heal a wounded planet. Our determination to move out and proclaim even with risks, is itself a gift that demands openness and gratitude. Now the mystery of the sending of the Holy Spirit after Jesus' glorification reveals the fullness of the Mystery of the Holy Trinity,⁶ spiritual dynamics caught up in sharing with others. Hopkins sums it ever so well:

God's Grandeur

*The world is charged with the grandeur of God.
It will flame out, like shining from shook foil;
It gathers to a greatness, like the ooze of oil
Crushed. Why do men then now not reck his rod?*

*Generations have trod, have trod, have trod;
And all is seared with trade; bleared, smeared with toil;
And wears man's smudge and shares man's smell; the soil
Is bare now, nor can foot feel, being shod.*

*And for all this, nature is never spent;
There lives the dearest freshness deep down things:
And though the last light off the black west went
Oh, morning, at the brown brink eastward, springs --
Because the Holy Ghost over the bent
World broods with warm breast and with ah! bright wings.*
Gerard Manley Hopkins, SJ (1844-89)

b) Confronting Good Versus Evil

In 1992, I was invited to speak at the World Council on Religion in Chicago, on a panel dealing with eco-spirituality. I told the organizer that I would speak of distinctions between good and bad spirits; he was shocked and directed that I be on a separate panel of one. How could anyone dare to introduce evil spirits at such a time? My session was well attended.

Inspiration involves spirit, and more intensive inspiration involves the works of the Good Spirit? But is there a possibility that in a spirit world some evil lurks as well. That was the question raised by St. Ignatius of Loyola in the early sixteenth century, a period of immense turmoil; it has been asked ever since within his Society as well as others delving in spirituality. Yes, there is good and evil -- and good and bad spirits. The issue is to discern differences, which seem so simple. But is that so?

Many regard spirituality to be good at best or at least neutral, and tend to forget that Hitler had his own "spirituality" as do despots, ISIS, and those who traffic with humans. Choosing a false spirituality may for a time be energetically pursued and yet brings ultimate disharmony: crooked business practices, cheating, unsound investments, or greed. Some have asked me, "How dare one in this age of diverse spiritualities to mention the possibility of the evil spirit -- or is the source of this hesitancy from the Evil One? In this age of political correctness, when many flaunt their personal spirituality in contrast to others "religiosity," the term spirituality has been so neutralized by relativism to be whatever one chooses to allow.

All spirits have vibrations of their own. The Holy Spirit, source of goodness, hovers over this broken world, touching it with Love. Each person

who is filled by the Spirit testifies to that Spirit among us as other Christs, extending Godly love to a troubled world. Inspiration is more than a rare occurrence; she is the energy that excites us, the fresh air needed for our souls' life; she enhances our blessed uniqueness and encourages love's radical sharing.

In counter-distinction, the Evil One exists and moves about "inspiring" terrorists and disturbing the social order: at 9/11, in Paris, San Bernardino, Orlando, Istanbul, Nice, over and over in Baghdad, and on and on. Evil exists deep in our consumer culture. Evil is present and at work as personified with all its frightening implications; evil prods believers not to believe that it exists, of at best it is a joke. Jesus engages in this ministry of exposition and struggle as do his apostles; so do Christians in community today. The battle is ongoing and continues in all its ferocity between good and evil, and at times makes us think evil is winning; it is worth discussion beyond this book.⁷

Our age entertains the evil one's message that no one really sins -- except perhaps in cases where someone ELSE is designated as a political incorrect "outcast." Jesus challenged this false class designation held by Scribes and Pharisees: "sinners, felons and others are at a distance from me." Within our current culture is a growing belief by many parents that their children are always right; their own deserve no punishment by teachers who give some punishment to a misbehaving child; in fact, the threat of lawsuits loom in school work. Too often people prefer to think of themselves and their offspring as perfect, and thus with no need of being shamed. Perhaps this attitude is no better than the opposite, namely, those who regard their faults as unforgivable.

Certainly, present day evil cannot be addressed by denial, excuse, or escape. St. Ignatius of Loyola, as a bed-ridden knight recovering from battle wounds, delved into the good/evil spirit problem during his convalescence in 1521; he began to question his long-held aspirations of being a valiant knight; he noticed that vain thoughts did not last and left him with an empty feeling. However, when thinking about the lives of saints with whom he happened to be reading, Ignatius experienced a different feeling of joy that persisted long afterwards. He came to gradually realize that these were very different spirits, "one from the devil, the other from God."⁸ Jesuits promote individual discernment that can be undertaken using Ignatius' long thought out *Spiritual Exercises*.

Spiritual discernment has a long history and often undertaken with a wise and experienced director. Through external guidance with accompanying prayer and reflection, one comes to realize the Good Spirit at work within us. Those undergoing a formal or informal retreat resolve to cut off all forms of evil

allurements. This process has decisive moments of acute inspiration (special events), but is more often a long process of maturation in faith. In due time believers, aspiring to be agents of change, recognize the Holy Spirit is our life, empowering us, and encouraging us through the graces of Baptism/Confirmation -- and process becomes a lifetime's journey of faith.

Note that the expression of presumption (the sin against the Holy Spirit) is sometimes heard within the believing community, "I'm saved; are you?" This attitude requires the same caution as the temptation to despair of any salvation; it involves salvation without help from on high, or hoping for forgiveness without conversion, or glory without merit.⁹ In reality, our lives involve hope, but to exercise this virtue well takes effort and here is where discernment enters -- and can become a community exercise as well as personal decision-making.

c) Individual and Community Discernment

In 1968, I was a chaplain in a dorm at Loyola University in Chicago, and our house received a request to allow some community organizers to move in temporarily from a Southside neighborhood that was in the midst of racial riots. Would our dorm offer hospitality? A long meeting among the students who governed the hall ensued. Some students voiced their racial prejudices and others were forced to speak out on issues they never before confronted. Certainly it was a moment of communal discernment and endured long into the night. Proper discernment comes to a head at the most improbable moments.

Discernment means weighing options: to act or not act; to act in this fashion or that. Individuals have major choices in life that require quality time such as their field of study or marriage; they must involve assembling the pluses and minuses of deciding to come to some decision. These actions by individuals are utterly necessary as all know in the course of life. This applies for each of us to become effective agents of change. Much is written on this matter of individual decision-making.

This book is concerned about recognizing social addiction and how to respond. What must one do about seeming powerlessness of people to make critical choices as communities? Addiction in a 12-Step Program seeks a Higher Power. About 70% of Americans think the system is rigged against them. Pollsters tell that this is not limited to certain ethnic, racial or religious groups, or political persuasions. Only an economically privileged 1% may not join in this feeling of malaise. Social addiction is paralyzing, but WE can detect it and we must rise above it. Communally, healing our Earth is a major social challenge but cannot occur without a citizenry that is able to distance itself from the

allurement of rampant consumption.¹⁰

Examples of need for communal discernment exist today. One is promotion of fracking as a cheap and relatively "clean" energy method for obtaining mainly natural gas and petroleum. The leaders of this recent practice seek to ensure continuation of the fossil fuel economy. Fracking has its environmental issues: escape of methane a more serious climate altering emission than carbon dioxide, induced earthquakes, use of later, radioactive sludge, etc. However, continuing a viable fuel economy occurs when environmentalists strive to bring about a sustainable renewable energy economy. Solar, wind, hydro, geothermal and tidal choices are free of major harmful side effects; they are friendly to people and environmentally benign; they must be developed so as benefit all and not just a privileged few. We need good energy choices.

Social discernment deals with transferring from a fossil fuel economy to a renewable energy one, and to do so in the fastest time possible. Unless collaborative action is undertaken, increases in climate of 2 degrees Celsius or above could do untold damage to our planet and grave harm to poor people caught under threatening circumstances of sea-rising, flooding and other extreme effects. Ice at both Polar Regions is melting at record levels with each year warmer than the previous. Here a discerning process demands global participation in decision-making, for benefits to the vulnerable is of foremost importance.

Some specific steps in the communal discernment include:

* **Willingness to change.** One can recognize that retention of the status quo by powerful interest groups suppresses a willingness to change. Affluence has a powerful sway on groups along with a media dependent on past advertising. Many of the upwardly mobile attempt to accommodate the economically privileged; and the spineless remain quiet so as not to disturb the holders of power. Complacency and greed must be identified and exposed.

* **Openness to listen.** Openness demands an atmosphere of prayer, and yet we know some resort to prayers while others are somewhat remiss. One can hardly expect all in a secular world to come to prayerfulness, but we can expect that those seeing the value of prayer will contribute meaningfully to the outcome.

* **Participation by all.** Inclusion of all in decision-making is a major goal. The poor and voiceless, the **anawim** of the world, must have equal voice with others. Proper discernment involves listening to all and magnifying the voices of the often silent. Happily, the Internet offers a forum for broader

ongoing dialog.

* **Realistic goal.** The ultimate goal is to resolve the problem and to complete all practical steps. The fruit of discernment is a peace of soul, knowing God's will to be done. Agents of change must act prayerfully begging for divine guidance.

* **Practical steps.** Exposing the problem for all to see is a precondition to discerning the healing process. To say that nothing can be done is despair. To presume that automatic healing will occur or a miracle will have to result is equally dangerous. A listening global community could learn much from the poor who are more resourceful, know how to avoid wastefulness, and are now living simply through low-cost, community-forming options.

The problem of social addiction is deep, widespread and rapidly infiltrating simpler societies within developing countries. All want to be part of the consumer culture. Returning to a simpler lifestyle is a very hard sell. Here believers must take a leadership role in immersing in choosing resource conscious practices, and bringing these to the rest of a secular world while retaining their fidelity to the Lord.

I am not asking you to remove them from the world, but to protect them from the evil one. They do not belong to the world any more than I belong to the world.
(John 17:15-16)

Materialism confronts us from many sides; it desensitizes affluent people who become excessively concerned about secure places, safer food, adequate insurance and a host of daily distractions that crowd out major concerns. For believers, these concerns remain but require a priority of importance. The burden is eased by sharing in a companionship with Jesus, who invites us to focus on what is important and avoid distracted peers; these seek to influence us to join in their allurements of big homes, cars, boats or a multitude of electronic devices and gadgets. Say "no" to material distractions and "yes" to living simply.¹¹

Simplification of life is needed to confront materialism:

- * It affords the quiet time needed to reflect and discern;
- * It curbs the rat race for additional funding and added tension to work harder to meet increasing consumer demands;
- * It promotes discipline demanded for healthy self-control;
- * It proposes healthier alternatives to peer demands; and
- * It refuses to accept the propaganda that this or that consumer product is better than a quite recent one.

Prayerful discernment is part of spiritual growth and involves resonance with the God within. Through a formal process WE come to realize with God's grace what the right decision is. Can our soul distinguish between a peace within, even while the raging turbulence of a materialistic world that exists all about? Yes, the peace is within; it is the anchor allowing us to venture **without**. WE resonate with the Holy Spirit and come to realize that our journey involves ongoing **processes** and not enduring things.

Through the process of discerning one finds communion with our resonating Spirit. This is a far more productive way to approach reality and it lays the foundation for an emerging **Mystic Resonance** that will be treated more in subsequent chapters. We do not first exist and then act, but find ourselves immersed in activities, and then in due time come to a deepening self-identity through ongoing discernment. A believer's balanced spiritual life embraces a resonance with the Holy Spirit who gives vitality in order for us to discern the path to follow. Through focusing and listening one gains true peace of soul and energy to act in the world around us.

The reduced numbers involved in formal religious practice, the "nones," is being noted in Europe and the Americas. Some argue that following their spiritual inclinations is sufficient, and that generally means privatized faith apart from communal practice for the encouragement of all. Note that authentic religious practice is a public commitment, just as is a concrete religious procession or a worship gathering to celebrate a religious feast. At the end, private faith can be best expressed as gift by uniting publicly with others who have the courage to proclaim their joint beliefs. Private faith needs to be public to usher in a sustainable economy.

Summary: The process of laying out the various options for action given our spiritual state and physical conditions moves believers to seek spiritual direction. The presence of the Spirit is manifested by increased enthusiasm for collaborative efforts. WE focus on the Spirit within, the wind and fire of Pentecost, who blows freely with degrees of intensity. However, the power of evil must be recognized within the discerning process. Fruitful discernment is needed at moments of critical individual and communal decision-making, especially with the need to check climate change at a communal level today. Ensuring and strengthening the resolve to continuing critical discernment takes a commitment to a simplified lifestyle by believers who wish to be vital agents of change in the paralyzing world of consumerism.

References Chapter 11

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Chapter 12. God Is Triune

*The grace of Our Lord Jesus Christ, the love of God the Father,
and the Communion of the Holy Spirit. (II Corinthians 13:13)*

Divine communication is worthy of special treatment, for all who are close share more intimately. God shares with us so that WE may gain a power to resonate with others as does the Triune God. This chapter couples with that of Chapter 4 dealing with communicative resonance. Here the self-communication of God with us introduces a Mystery hidden in past ages and made known to those who believe in Christ. God is a community of persons, and thus the core of our godly service must be community-oriented. Human beings resonate because God resonates within, as do all created entities patterned to the characteristics of their resonating Creator. This is the heart of this book.

Describing this Triune Mystery has challenged believers down through the centuries, from use of shamrocks to arrangement of numbers and symbols; none of these efforts do more than touch an element of this vast Mystery. The Almighty reveals Godself to us all: the Triune God, one God and three persons: Father, Son and Spirit. The Father is God, the Son is God, and the Spirit is God; we recall that, while $1 + 1 + 1$ is 3, still $1 \times 1 \times 1$ is ONE. The credal formula tells us that there are three persons in one God, an expression that came from divine grace after immense reflection and struggle by the Early Christian community.

How rich are the depths of God -- how deep his wisdom and knowledge --

*and how impossible to penetrate his motives or understand his methods! Who will ever know the mind of the Lord? Who could ever be his counsellor? Who could ever give him anything or lend him anything? All that exists comes from him; all is by him and for him. To him be glory forever! Amen.*¹ (Romans 11: 33-36)

a) The Mystery of the Trinity

As a youngster at Sunday Mass I would look up at the large west window of our parish church in Maysville, Kentucky. Saint Patrick stands tall, holding a shamrock before a Celtic king and his subjects. Three-in-one. Yes, I could make the sign of the cross, but what does it all mean? I never really abandoned the question and find it looming ever larger in mind and heart as I age. How unexplainable the Mystery! Can I describe the Trinity without holding up shamrocks to do so? Can we find the Triune God patterned in some way throughout all of creation?

Through some effort, natural mysteries can be unraveled. Divine mysteries are never even fathomed except by the revelation of the Almighty; they invite an eternity and still remain mystery. All Christian believers stand in awe of Mystery known only by Divine Revelation. Yes, our concepts and words fail us. Karl Rahner says that God is a mysterious Being who is incomprehensible apart from God's self-communication to the world. But from an activist standpoint, word fails us, but deed becomes a sureness that Mystery has touched us in some manner. Let us find where awareness of Mystery enhances our way of serving others.

Our inspiration says "go on," and so the movement to service contains a trust that what is known about God gives some color and character to what deeds will be done. The call is to heal the Earth and preserve civilization -- God's work, wherein human beings participate. My delving into Divine Mystery is more a community work than that of a reflecting individual acting alone. The energizing power to continue this work comes through the Spirit who resonates with us and calls us to be the hands, feet and heart of God. This involves our total being, not just our brain. In its fullness our interior resonance takes on a deeper quality of Godself. Being created in God's likeness does not mean to "lord" over creation as an overbearing tyrant. Since our enthusiasm and our work dynamics are gifts from the God of action, then gratitude permeates our actions performed in love and mercy.

Ignatius [of Loyola] had great devotion to the Most Holy Trinity, and so each day he prayed to the three Persons separately. But as he also prayed to the Most Holy Trinity, the thought came to him: why did he have to say four

*prayers to the Trinity? But this thought gave him little or no difficulty, being hardly important. One day while saying the Office of Our Lady on the steps of the same monastery, his understanding began to be elevated as though he saw the Holy Trinity in the form of three musical keys. This brought out so many tears and so much sobbing that he could not control himself... As a result, the effect has remained with him throughout his life of feeling great devotion while praying to the Most Holy Trinity.*²

Ignatius' spirituality was thoroughly Trinitarian, and that expresses itself in his being a planner and organizer. In fact, he was "probably the first person in the history of spirituality to perceive the Trinity as God at work, always filling up the universe and actively awakening the divine life in all things for the salvation of humanity".³ A single insight into the Mystery of the Trinity becomes the deepest spiritual illumination in his early life while finding his vocation at the River Cardoner in Spain. Ignatius experienced the divine "circumincession," the total self-giving and indwelling of the Divine Persons in one another, and this gave him intense joy.⁴

In the Book of Genesis God says, *Let us make man in our own image, in the likeness of ourselves...* (Genesis 1:26a), in a resemblance that marks us off from the animals and involves a general similarity of nature: intellect, will, authority, freedom. The human being is a person who shares in dignity through the union of the physical and the spiritual in one nature. In the atmosphere of love for us and in a desire to have us close, almighty God creates us. *If we do not believe that God's love is almighty, how can we believe that the Father could create us, the Son redeem us, and the Holy Spirit sanctify us?*⁵ It begins to emerge that the likeness of the way God acts is the perfect pattern in which those vowed to service are to operate. *He gave the power to become children of God* (John 1:12).

In the atmosphere of creative love we freely raise our voices and praise God for such a privilege as to be part of the Divine Mystery. Adopted children are invited into the divine action in this world, especially to saving and healing this wounded planet and in preserving and enhancing civilization. Authentic service strives to be godly; this is creative in methods, redemptive in addressing human ecological misdeeds, and holy in its preparing for the New Heaven and New Earth. The love Jesus expresses in his farewell address (John 13:33 to 17:26), gives us an insight into the love of Father and Son, and the love that makes us friends and companions of the Triune God. Speculative smugness or tyrannical attitudes of lordship have no place in service.

The master model of ecology, our redeeming Lord, shows us how to conserve our physical energy (pray always, work in teams, don't encumber

yourselves with excess baggage, shake off the dust when rejected, etc.). Jesus promises the Spirit who inspires and invites us to focus our attention on the task ahead. Being called as agents of change allows us to discover our own restlessness, which has benefits and liabilities: a restless enthusiasm is good; expending energy, where less useful, is not. Earthhealing takes planned and concerted effort to be effective service for others. I work with others to bring about a New Heaven and New Earth.

b) The Trinity Revealed

This work on Resonance is really driven by an inward energy. There is little support, because few value the efforts or they find the subject difficult. However, the Trinity drives me relentlessly forward, and in a way I cannot explain. I must see this to becoming public even knowing it is an uncompleted task ahead.

Christians are baptized "in the name of the Father and of the Son and of the Holy Spirit" (Matthew 28). Early Christians began seeing this as an expression of the Trinitarian Mystery. Jesus declares an equality with the Father in a solemn manner before a hostile audience, *I tell you most solemnly, before Abraham ever was, I Am* (John 8:58). His audience knew full well what he meant in this claim to divinity.

The Trinitarian affirmation was generally accepted by the time of St. Paul.⁶ Origen, the great second century thinker, reflected on the oneness and threeness in God. Irenaeus, during the same period, expanded this affirmation into a confession of faith: *That is why, when we are born again, baptism takes place through these three articles and gives us the grace of new birth in God the Father by means of his Son in the Holy Spirit.*⁷ "In the name of".... Pope Vigilius (537-555) said, NOT "in their names;"⁸ there is only one God: The Most Holy Trinity.⁹ The word "Trinity" is not found in Scripture and yet the early Church struggled with this spiritual reality. Sacred Tradition embraces Scripture, and the final books are inspired and an institutionally-compiled product. The credal formulation is the monument and fruit of that struggle to understand and to translate understanding into action.

Yes, a historic controversy ensued. Further understanding comes through effort and some human struggle and divine inspiration. The Arian position became prevalent in the fourth century, namely, Jesus is an exalted being but not of the same substance as God. Athanasius argues that Christ has to be divine in order to cause our *divinization*.¹⁰ In his *De Incarnatione*, Athanasius states that "For the Son of God became man so that we might become God."^{10a} After much reflection Athanasius settles on the term

homoousios, which means "identical in substance" rather than "of like substance." God is unique and indivisible and yet the Persons are distinct. Augustine in great detail discusses how these three Divine Persons are of the same substance.¹¹

The manner of expressing this controversy differs in the East and West. The Greeks in the East think in terms of the one **God and Father**, the Father is "**the God**," the one and only principle of the Godhead, which he also gives to the Son (*God from God and light from light*) and finally also the Holy Spirit. They are like three stars, one after the other; each gives their light to the next, but believers can only see one.¹²

The early ecumenical councils of the Church (both East and West) -- (Nicaea (325), Constantinople I, Ephesus (431), Chalcedon (451) and Constantinople II (553)) -- strived for Trinitarian clarity and precision. From these massive undertakings emerged a basic formula or creed along with an articulated system of formulated doctrine that becomes the core of our Trinitarian theology. From an activist standpoint, this struggle of coming to an understanding of three-in-one is ultimately a focusing of spiritual resources leading to meaningful action on our part.

The history of Trinitarian thought has not ceased. No, the West continued the discussion. Hans Kung writes of the "higher mathematics of the Trinity." The Church speaks of how the Father, Son and Spirit are distinct from one another and in the Lateran IV Council (1215, after the Greek cleavage) states, *It is the Father who generates, the Son who is begotten, and the Holy Spirit who proceeds*. The divine unity is triune.¹³ These Divine Persons are relative to one another, but everything in them is one, where there is no opposition of relationship.

There are four relations: paternity (Father generates the Son), filiation (Son is generated by the Father), spiration (Father and Son breath forth the Holy Spirit) and procession (of Spirit from Father and Son). These relations are what constitute the distinction between the Divine Persons. They cannot be distinguished by any absolute attribute, for every absolute attribute must belong to the infinite Divine Nature, and this is common to the Three Persons. Whatever distinction there is must be in the relations alone.¹⁴ Kung says the real issue rests with "belief that God the Father works in a revealing, redeeming and liberating way in us through his Son Jesus Christ in his Spirit."¹⁵

Gregory Nazianzen, the fourth century Patriarch of Constantinople, talked about this gradual revelation of God to us over time: *The Old Testament preached the Father openly and the Son more obscurely, while the New revealed*

*the Son and hinted at the deity of the Spirit. Now the Spirit dwells in us ... (It was much more suitable that) by gradual advances and, as David said, by partial ascents, moving forward and increasing in clarity, the light of the Trinity should shine on those who have already been given lights.*¹⁶

Revelation of Father, Son and Holy Spirit is definitely a historical "procession," for the Son comes among us in time and then sends the Spirit for our enlivening work. Thus, time enters into our first perceptions of an eternal Mystery. St. Augustine deals with the process of human knowledge as trinitarian in its very nature and writes on this subject, especially in his major opus, *The Trinity*. The very movement of the mind -- memory, intellect and will -- is described as through a temporal sequence.

As Kung comments, Augustine begins his Trinity reflection with the one divine nature or substance, the one divine essence, glory, majesty common to all three persons. "This one divine nature (is) for him (Augustine) the principle of the unity of Father, Son and Spirit, within which these three differ only as eternal relationships (these are the foundation of life within God): the Father knows himself in the Son and the Son in the Father, and proceeds from this as the personified love of the Spirit."¹⁷ Saint Augustine highlights the extent of this procession that has divided the East from the *Filioque* now found in the Western Creed, that the Spirit "proceeds from the Father. Through theological discussion in an ecumenical and prayerful atmosphere, differences between East and West will surely be resolved.

Thomas Aquinas and other medieval scholars adapted and yet expanded beyond Augustinian insights, or theo-psychology of the soul. Aquinas utilized insights from Greek, Pagan, and Arab sources and developed a theology of the analogy between eternal Begetting of the Word and Breathing forth of the Spirit and human knowing and loving. Thomas' mystical experience of God towards the end of his life was so profound that he was tempted to abandon his major works. He writes that "the ultimate human knowledge of God is to know that we do not know God."¹⁸

Perhaps we need a word of caution. YHWH is the Creator; Jesus comes among us as our Redeemer; the Spirit sanctifies us. Yes, these statements are true, but caution is important. Father, Son, and Spirit; creation, redemption, spiration; uncreated Love, begotten Word, overflowing Spirit. And we say, following the Second Council of Constantinople, "One God and Father from whom all things are made, and our Lord Jesus Christ through whom all things are, and one Holy Spirit in whom all things are." The Father, Son and Spirit create, redeem, and inspire together truly a "community" action. Thus, the whole divine economy is the common work of the three Divine Persons. The

Trinity has only one and the same nature and only one and the same operation -- the Council of Florence (1431-45). "Each Divine Person performs the common work according to his unique personal property... ..It is above all the divine missions of the Son's incarnation and the gift of the Holy Spirit that shows forth the properties of the divine person."¹⁹

Assigning exclusive operations to Divine Persons could smack of tritheism and omit the oneness of God. But Karl Rahner makes an additional point when he says that, despite their orthodox confession, Christians are, in their practical life, "almost mere 'monotheists.'"²⁰ However, some in academic circles argue with this critique and focus on the question of whether the Son was the Person who had to become incarnate (Rahner affirms he was). Further, there is controversy with Rahner's treatment of the economic/immanent Trinity; Rahner holds an identity between the economic Trinity (the divine persons as they are revealed and act in Salvation History) and the immanent Trinity (the divine persons with respect to one another).²¹

Rahner says many spiritual writers dismiss the classical "vestiges" and the "image of the Trinity," as possibly a collection of pious speculations, unobjectionable once the doctrine has been established, but telling us nothing, either about the Trinity itself or about created reality, which is not already known from other sources.²² However, our Down to Earth Spirituality drives us to seek the Higher Power to rescue us from our paralyzing social addictiveness. In reaching out for common cause among concerned citizens WE discover the paradox that God's own inner harmony resonates with us in our moment of deepest need.

In the twentieth century, in the spirit of Vatican II, an impetus to move away from traditional Trinitarian treatments emerged. Some regard the classical Trinitarian formulations as similar to structures and boiler plates -- but both skeletons and steel sheeting are lifeless. Karl Rahner calls for distancing ourselves from a more isolated scholastic Trinitarian treatment and finding a "liberation" using more modern approaches and concepts.²³ In this regards our twenty-first century battles demand a community cooperative effort that finds expression in the dynamics of the Trinity always at work.

For Rahner, human history is the event of transcendence (a characteristic of all human beings). For him, only within this condition of human transcendence are we able to experience and receive God's self-communication through historical mediation, which is actually Salvation History. Christ is the prime expression of our Triune God, the divine self-communication. Rahner says that *God's self-communication is necessarily triune and constitutes salvation history to be what it is.* This is the domain of God's

self-communication, specifically God's self-revelation and activity through Christ and the Spirit.²⁴ This is *the total offer of God's self through Christ to the human being who is created as the recipient of the self-communication of God, and who is made capable by the Spirit of receiving God's free gift.*²⁵

Gutierrez holds that profane and sacred history are not juxtaposed, but are one single history assumed by Christ the Lord of History; the history of salvation is at the heart of human history and the salvific action of God underlies human existence.²⁶ Rahner, however, holds that the history of salvation and the whole world history are co-existent but not equated, because there is a corresponding history of guilt in world history.²⁷ In an attempt to engage in this struggle of a place in history, the two parts of this book are meant to convey an overlap showing that WE resonate within a world in need of salvation and that the presence of a Triune God gives answer to our struggles in current history.

As Ignatius has insisted, all contemplation on the loving Triune God leads to a refinement in our own action -- and we desperately need assistance from our Triune God in the service of healing Earth and preserving civilization. Does our merciful God continue to reveal this divine Mystery at critical moments in Salvation History? WE are called to further the grand events of Incarnation and Pentecost today. New critical issues (saving our wounded planet and preserving our civilization) have arisen; this urgency requires an ever deepening insight into God's action.

c) Basic Trust in God

I treasure our American national motto "In God we trust." However, with consternation I discover that these words are challenged by secularists who seek to remove God from civic life. I have given time to defend our motto in our recent book.²⁸

The Trinity is a revealed Mystery, one God and three persons. This is something that we would not come to believe without a divine revelation, a communication of God to us in and through the Body of Christ, the Church. For some non-believers this action on our part is inconceivable; for those Christians who wish to be politically correct the Trinity is not spoken openly. Profession of faith in the Triune God takes courage, something desperately needed today during this Administration.

Our Christian faith is founded on trust. Children trust parents and guardians. Jesus discusses our openness to God with a child in mind, though childlikeness is not childishness. Our trust in God as Father is the trust in God of our patriarch father Abraham, a person who trusted completely in God. The

beginnings of our journey is a sharing in a basic Abrahamic trust in God and all that had been revealed through the Old and New Covenant periods of history. The journey in faith is a pilgrimage from elementary faith to maturation. Bob Sears describes a **Faith Development Dynamics**²⁹ in five specified stages as cumulative with presupposing the preceding stages. Sears says that we discover ourselves more when we help develop another's uniqueness. Growing in faith is a journey on self-awareness of the early Church coming to its sharing mission as described in *Acts of the Apostles*. WE mature along with others, and a great opportunity comes with control of climate change conditions, which are called for right now.

Basic trust in God includes the journey of the early Church in coming to know itself. That history involved the divinity of Jesus as expressed in the Mystery of the Trinity. At this most basic level, God has communicated to us a glimmer into the divine life, and we, as dutiful children of God, accept what is revealed just as Abraham trusted when listening to the communication of God to him. At this stage in Salvation History WE place a trust in the struggles that have gone before. This trust involves the history of believers in Christ who made progress and efforts were not in vain. A secular person would regard that struggle as worthless because process in the pass did not really exist. Christians trust in a meaningful past history.

Society expects levels of trust involving highway safety, police protection, and on and on. All citizens realize that operations need improvement and so seek where advancement can be made, while retaining basic trust lest becoming paralyzed in fear. In faith, believers trust that they can come closer to God along a believing community. To move forward in the new problems of our age means WE must be able to address successfully new problems. Those who say they distrust everything open themselves for a distrust that their utterance is true. Really do they distrust their own reasoning power, ability to achieve results, or the state of their current condition? Even the distrustful have basic trust of the worth of their money or the soundness of their bank.

Our basic trust in God moves us forward. The difference in admitting and failing to admit trust is that faith is not founded on an interior idolatry of self knowledge, but on a gift to which WE give gratitude. The past is one of fidelity; the future one of hope. God is with us and so in enthusiasm the invitation is to move forward with the Lord. The dynamic to hasten the movement is from our God within, an internal resonance that draws us to reflect more deeply. Thus, in trust WE accept the development of Salvation History; this unfolds in critical times both internally to each believer and as a group journeying together.

Summary. The Triune God is at the heart of this discussion, for our

participation in Salvation History includes saving our Earth. Believers strive to operate in a godly manner and this means to harmonize in the manner of the Triune God's internal resonance. God's self-communication gives us a glimpse of the divine harmony, the working of the Triune God. The history of our reception of that communication is meaningful and worth replicating in the collaboration demanded of us at this time. That harmony among us really must deepen to a human/divine level. We trust in God for tackling climate change is not solely human, but includes Divine intervention that is occurring in our midst -- truly Good News. Believers must bear this message and do so with courage.

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Chapter 13. God Incarnate and Our Divinization

*Love and Loyalty now meet,
Righteousness and Peace now embrace;
Loyalty reaches up from earth and
Righteousness leans down from heaven. (Psalm 85:10-11)*

After millennia, God as creation's master artist prepares the Incarnation as a supreme work of art, God-man. In a world striving for art production and appreciation (Chapter 5) WE discover an invitation to make our journey of faith a production of art, inspired by what God has crafted for us. This is internally satisfying with a special resonance, and it has external resonance as a participation in the human family, as being Christ to others. To work as an extended family, a Divine Family, is part of the mystery of God among us.

a) Divine/Human Meeting

Like other children before the Nativity Scene, as a wide-eyed child I saw the presence of God coming to us as a small infant. It was the -mas part of the Christ event. Yes, this was and is meant for

children all over the world. It is a special spark of faith, a deep trust that God came among us as a helpless infant without a comfortable birthing place, just the warm breath of stabled cattle and sheep. The coming event calls for our response, our own creative work of art.

God kisses Earth in person. The meeting of the divine and human is a grand moment of all creation; here and now the divine resonance becomes palpable -- the taste of God's special mercy. The place is humble Bethlehem; the time is an unexpected duty imposed on a poor couple to go for a census. The angel announces Good News that the Eternal Word is among us. A new age dawns. Mary becomes the focus of attention as only a mother could be; through her cooperation God is among us; Mary's affirmation is a supreme form of human internal resonance with the God within. Mary in her transparency and purity speaks for the whole human race. Hesitancy comes to those of us brought before humble majesty. Mary bears Christ through the gestation period; each believer is expected to bear Christ as Good News to an awaiting world.

God reaches down ever so gently; Earth, personified through Mary's assent, springs up with an eager "yes." From Mary's human womb "buds forth" a savior. This imagery is the opposite of what some painters depict, e.g., a richly clothed Mary before a stain glass window prayerfully meditating on the monumental event of the Annunciation. Rather, hers is a joyful response in a simple setting, but one filled with instant response to journey to a elder cousin who is with child. God being with her magnifies her selfless service that includes sharing supremely Good News. Elizabeth responds and her fetus dances in the womb with joy.

Hollywood extravaganzas would portray the coming of the Messiah differently, but that is not God's way. The Holy One wanted no parade of a political Messiah with sword-wielding angels slaying Roman legions. Even Christ's disciples held out that hope of grandiose messianic expectations at the time of his departure at the Ascension. The divine way involves humble people who suddenly become aware that the lowly are exalted (Luke 1:52), a radical democratic, grassroots movement from bottom up, and gradually becoming realized in the centuries of ongoing Salvation History.

Mary is really the key collaborator in the unfolding redemption drama, the one who says "yes" to God, "let what you have said be done to me" (Luke 1: 38). She becomes *Theotokos* -- the bearer of God; she is full of grace, mother of the Savior, New Eve, foremost model of all women, central receiver of the Good News; and her affirmation is an acceptance from the full freedom in her heart. Her prayer of joy, our daily recitation, is one of the most revolutionary responses

in human history -- the hungry filled with good things and the rich sent away empty (Luke 1:53); all generations will call her blessed, because God has done great things for her, (Luke 1:48) -- a person of utter humility.

*Send victory like a dew, you heavens,
and let the clouds rain it down.
Let the earth open
for salvation to spring up.
Let deliverance, too, bud forth
which I, YHWH, shall create. (Isaiah 45:8)*

Mary conceives and bears a son who is the divine Word, a person with a union of a wholly divine nature and a wholly human nature. For some readers, these theological concepts are unfamiliar terms cast over centuries of heated controversy; these involved leading intellectuals in the early Church and resulting councils of church leaders on these weighty matters: Nicaea (325), Constantinople (381), Ephesus (431), and Chalcedon (451). The Christ does not arrive in Elijah's fiery chariot in an imagined advent of warlike gods. Rather the Word comes as gentle rain on a parched Earth, and WE are invited to spring up as fragile and expectant blossoms. Believers being down to Earth readily peer down into a cave, and see our God coming to us, not in noble and regal attire, but as a tiny fragile being, an infant in swaddling clothes, a human being learning, listening, maturing, healing, and confronting an unjust system.

In our own time, the last days, God has spoken to us through the Son...appointed to inherit everything and through whom he made everything there is. (Hebrews 1:2)

b) Incarnate Sharing: God With Us

God calls me to be closer and to follow. That did not occur for me in a single dramatic event as for some people. Perhaps the first faint call was at age ten when I spontaneously told a saintly pastor Father Danz, while visiting relatives at my maternal great grandparent's homestead, that I wanted to be a priest.

With reverence and reluctance believers tiptoe into the sanctuary of the Incarnation Mystery. To "incarnate" (give flesh to the divine) is not found in Scripture as a theologically developed concept, though present in its vestigial format. From a theological perspective, "incarnation" means what the New Testament says, "the Word was made flesh, he lived among us" (John 1:14); the dictionary says *incarnation* is "the effectuation of the hypostatic union through the conception of the second person of the Trinity in the womb of the Virgin Mary." This divine-human hyphen was the focus of long heated theological

controversy. How God? How Human? How both? It is not the place here to retread battlefields; rather our faith as simple trust (last chapter) says accept progress, since the Spirit dwells with us and guides us gently over time.

God resonates internally, and in time extends that resonance to all of us as gift. The God-man's coming involves Mary; her resonance with the divine is unique and yet is shared to some extent with all believers. Each finds the Lord's humble birth within his local environment (a stable of sorts) and among believing shepherds and attended sheep. The Spirit inspires one to become a simple worshipper, and then still more. The inspiration seeks to be enfleshed; the flesh seeks to be inspired. Both must be simultaneously present in the same person, if we are to be like Jesus and to resonate within the Divine Family. Incarnation for believers involves divine grace finding a person of faith seeking to become a new person. It is certainly an individual experience.

In the spirit of the Incarnation event we look down and see the Earth; we look up and see the transfigured Jesus, a consolation for us all. The reality keeps our feet firmly planted; the vision allows us to remain enthusiastic and still center at least momentarily on the union of Heaven's destiny and Earth's experience within ourselves. The spirit speaks within us to seek the broader picture, and refrains us from being too narrow, whether inwardly, outwardly, upwardly, or downwardly.

Caution precedes our crossing into action. Patristic writers call this bonding a wedding of Heaven and Earth, of God and human beings, a "cosmic communion," which extends now to the community of all beings. The event is the NOW; the HERE is the Holy Land now extended to the whole Earth; and the WE are the participants in the cosmic communion, the ones charged to announce Good News to all. A meeting has occurred with the angelic song at the Messiah's birth.

*YHWH created me when his purpose first unfolded,
before the oldest of his works.
From everlasting I was firmly set,
from the beginning, before the earth came into being.*
(Proverbs 8: 22-23)

WE are invited to be like Christ as friends and companions -- even the hands and feet of God. WE are asked to take on a godly character, with our eyes cast down to Earth for sure footing and up to Heaven for orientation on the journey. Each traveler must pay attention and focus so as to perform the task well. Now those called to bear the Lord to others must periodically recoup our energy and celebrate and resonate together with other believers.

Each believer when baptized enters into a monumental event in which he or she becomes a child of God -- a brother or sister with Jesus. Many Christians do not even know or recall the exact date of their Baptism; yet for believers this is the most important event in our lives next to our own physical birth. Baptism is the great grace of God that none of us merit or deserve; the Incarnation now is extended to becoming an invitation to enter into the Divine Mystery and to participate in a special way in Salvation History. While we do not experience the drama of Jesus' Baptism at the Jordan River, over time when reflecting on that event we grow in faith. That event was the second of Christ's three major epiphanies (first with arrival of the Three King after birth and third being the marriage feast of Cana).

My Baptism initiates a maturing process; it washes away the stain of sin and bestows new life on us, thus preparing us to be bearers of Good News through the graces of the sacrament of Confirmation. Baptism is a launching pad that harnesses the unique talents and aspirations of each of us to do God's work. Our response over time adds drama of our journey of faith, truly a work of art. Our noble state as believers begins with solemn vows to renounce Satan and to profess belief in the major elements of our community of Faith. We are invited to help create the mode of travel on our journey -- and God is with us.

This journey craves companionship for it is long and dangers lurk along the way. Believers are well aware that some falter, forgetting the nobility of the call, and how constant communication with God's is needed. Prayer for success is joined with others on the way for WE do not move alone but within a church community. Church life is more than hatch, match and dispatch. Throughout trying times the communal nature of Baptism startles us; the basic desire to imitate Jesus by doing good deeds can meet with internal resistance and external obstacles. Baptism comes but once yet requires an ongoing energy source of God's sacramental grace to be our built-in GPS. WE must work together to resist allurements.

c) Divinization: Invited into the Divine Family

Each of us has deepest respect for our family of blood and of spirit within a worshipping body; loyalty is second nature. As family members WE believers respect history and trust the path trod through centuries. These who are companions on our journey assist us in finding the right road for this is really a social undertaking and not an individual enterprise taken alone. Really the Lord gives us the community of saints to help us on our way.

Believers are to be like Christ and take on his way of acting, and do so as

part of the Divine Family, a family of compassion and profound activity. Being 'like' means an interior conversion of heart as well as an external cooperation in Church activities as part of the mystical "Body of Christ." Believers are involved in earthly matters, though called to imitate Christ, who is divine and human; WE have earthly concerns and an eternal destiny and enter the incarnation event individually and corporately.

Participating more fully within the Divine Family takes time. WE are called to resonate with the Lord internally in prayer life and externally with our neighbor in works of service.

In making these gifts, God has given us the guarantee of something very great and wonderful to come: through them you will be able to share the divine nature... (II Peter 1:4)

God shares divine life with us. As mentioned before, this sharing was expressed in one blunt fashion by the Eastern fourth-century doctor of the Church St. Athanasius of Alexandria: "The Son of God became man so that we might become God."¹ This sharing through the sacrament of Baptism, is what God is by nature. Athanasius argues that Jesus has to be divine in order to cause our divinization; he proceeds to make clear distinctions in the controversy with Arians, who held Jesus was not divine.

God gave himself to us through his Spirit. By the participation of the Spirit, we become communicants in the divine nature... For this reason, those in whom the Spirit dwells are divinized... (quoting St. Athanasius).² Grace is a participation in the life of God. It introduces us into the intimacy of Trinitarian life: by Baptism the Christian participates in the grace of Christ, the Head of his Body.³ It is the sanctifying or deifying grace received in Baptism.⁴

Maturing within the Divine Family involves openness and effort on our part. As Bob Sears points out in the "Dynamics of Spiritual Growth," the process is not a straight line but crises occur, which in the long run can move the process forward.⁵ Spiritual progress is not an inevitable smooth one, for crises can cause regression of the individual -- who may actually see opportunity in the midst of detours. Failures crop up at times, and a good and loving family helps the wayward regain direction. Sears mentions that we find such in the history of salvation in the post-exilic (post Babylonian Captivity) Israel and in early Christianity as well.

A communitarian faith within a caring family, parish or religious community is needed for authentic correction, without which an increase in legalism and fundamentalism occurs targeted to prevent disintegration. People move away from the spirit of founders and the pure trust of Abraham, the father

of the faith. Too often the trust of early faith results in a familial faith that is, as Sears says, afraid to trust in God's Spirit. The road to maturation can contain detours needing recognition as such.

The individual's maturation process of divinization is not an automatic and deterministic path. While some souls become more godlike with age, still humans are free agents who can and do miss the mark with minor or major severity. The goal to be active within the Divine Family is ideal; the actual process may have a strong streak of realism that could include devolution or growth and development. Solemn vows at Baptism can be broken. Family life includes encouragement and acceptance of imperfect members is necessary at times so that all can stick together. Forgiveness is slow like the unforgiving brother in the Prodigal Son Parable.

Our journey of faith is taken with others and can become a spiritual art form (much like the artist's life as described in Chapter 5). Each as a sense of appreciation or an interior resonance with our companion God, and this grows as we respond to the graces given. WE look about and find exterior materials (food, lifestyle, work and general environment) that all enhance the flavor of our journey. WE discover that others are creating their own masterpiece and that our assistance and goodwill enhance their lives through a deeper layer of resonance. Finally, WE realize that we are part of a commons of long standing, a communion of saints who will beckons us forward through intercession.

The road is not all hardship but contains times of authentic celebration and fulfillment include the joy of celebrating marriages, births, birthdays and even funerals of the elderly and those living worthwhile lives. Nourishment comes in feasts as it comes in the Food from Heaven as discussed in the next Chapter. Energizing our spiritual life is needed during perilous times. Closer connections and opportunities for confidence-building strengthen bonds. Family members gradually see the need and act through godly love and mercy so that all grow together spiritually. Artistic resonance takes on a spiritual and collective character.

Summary. Awareness of the Spirit working in our lives gives ever greater opportunities to utter sincere thanks:

- * God's self-communication takes on deepening intimacy when the Messiah comes through love and mercy.
- * God as master artist of salvation resonates with external resources, and this includes a companion of divine preparation, Mary the immaculate virgin and new Eve.
- * Jesus as God-man seeks to resonate with all with whom he comes in

contact, though not all receive him as Messiah.

* Through Baptism WE are invited into the Divine Family: God the Father, Christ as brother, and the Spirit who inspires us through grace to imitate the Triune God in our own work.

* WE resonate with the human family on our individual and collective journey of Faith.

* This journey becomes a spiritual art form with internal life, support materials, forgiving companions for God is forgiving, appreciating co-workers, and commons found in the lives of saints.

* WE need to resonate deeply among the People of God.

References Chapter 13

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4. CCC., #1999.

5. *Earth Healing*, pp. 70-71.

Chapter 14. God Is Love: Eucharist as Divine Communication

Now we are seeing a dim reflection as in a mirror; but then we shall be seeing face to face. The knowledge that I have now is imperfect; but then I shall know as fully as I am known. In short, there are three things that last: faith, hope and love, and the greatest of these is love.

(I Corinthians 13: 12-13)

God communicates a special love for us in the person of Jesus Christ who resonates with us. WE marvel in a resonance of love shown by the Almighty in the form of the nourishment received in formal religious celebration. This chapter couples with chapter 6 on music, with a spiritual resonance felt and enjoyed as a growth of individual and communal faith -- the faith community on

Earth and the Communion of Saints in heaven. Responses are in the form of loving deeds that this meeting with our God triggers; we are encouraged to feel a presence and respond in deed.

In our maturing faith several levels have included a basic **trust** in God (Chapter 12) and that of a **familial faith** relationship (Chapter 13). Often the failure to have our goals satisfied causes a readjustment in our faith life, a period of deepening reflection. At times our journey of faith can be a rocky road; WE call out for help and in deeper yearnings of soul say "God help us!" WE crave the personal touch of Jesus that brings a celebration needed for a sense of togetherness.

a) God's Love

I give you a new commandment: love one another; just as I have Loved You. (John 13:34)

My own experience is shared with many other believers who affirm that the First Communion was the happiest day in their life. Jesus comes to us. In May, 1941 I stood in front of the blooming bridal wreath spirea beside our home place for a photograph in a white Communion suit, a happy event that has never faded.

Love remains a mystery, for this act on our part touches the divine. Much depends on how close that connection becomes, for God can be close to us or far removed, much depending on our openness to love others in a divine manner. *Anyone who fails to love can never have known God, because God is love. (1 John 4:8).* How many ways is this statement subject to various interpretations?

* **Love** is a philosophical ideal standing alone as does "freedom," "justice" or "equality," idealized and lacking in interiority;

* **Love** could exist in the one I know best, "me." It may be a personalized and not yet attained goal of mind and heart, since I know I do not love sufficiently. I champion "love" in the abstract or within the improving of my own actions. But I am not a god.

* **Love** is related to others, for there must be a social relationship in order that love be authentic. As St. Paul says, we can do marvelous works and yet if we do not have love, it is worthless. Love is connected to others in charity and enhanced relationships. Love's social dimension includes offering and receiving and ultimate reciprocity.

* **Love** is freely offered another, but what if they do not accept? While two parties are expected in true love, one party may distance him or herself from another. Love first exists in the free gift that God offers a wounded world and to

each of us. How open are WE to this love?

* **Love** is offered and accepted even though the receiving person lacks the fullness of receptivity but is open to it. The imperfect receiving agent opens the door to **the God within**. Only in realizing my imperfections am I able to say, **God is love**.

The First Commandment: Love of God with everything we have. *You shall love YHWH your God with all your heart, with all your soul, with all your strength (Deuteronomy 6:5).* Millions of words are spoken, written, or sung about love, and yet love is better expressed in deeds -- to sacrifice for another. I yearn to break out of the prison of self-love, and to be related with others. I want to fly, hang-glide, rappel, experience a skipping child, or leap with a scooter -- but age and stiffness of muscles refrain me now, though I envy those who can. To love is to be really free, to avoid selfishness, and have a personal relationship with God.

The Second Commandment: Love of Neighbor. Leviticus says, "*You must love your neighbor as yourself.*" The *Shema*, or prayer of hearing, follows immediately after the Ten Commandments. The second passage that Jesus relates to love of God is taken from the "Holiness code" in Leviticus -- the collection of the principles on how to be holy. Jesus couples the two commandments, because love of God is truly expressed in love of neighbor, while love of neighbor is not truly expressed unless one recognizes the source, a loving God. An infinite ocean of love stretches before the potential lover. The motivation to love one's neighbor springs from love of God; the test of authenticity of love of God is love of neighbor. Biases towards others can hinder universal love.

Loving our neighbor can be a major challenge, especially when dislikes run deep. The **Good Samaritan** parable in St. Luke's Gospel (Chapter 10) immediately follows the text on the great commandments; this parable identifies our neighbor, our love of everyone near and far, friends and even those who my imperfect culture tempts me to dislike. Today the Internet, TV and radio bring neighbors from around the globe almost instantly into our own living rooms -- a new and truly global phenomenon. This raises our consciousness to the cries of those Jesus loves, such as our most needy neighbors near and far. Mother Teresa saw urgent need and responded immediately, thus testifying that *catholic* truly means universal. Those suffering from the lack of essentials of life become our special focus of neighborly love, who and wherever.

In the Gospels it becomes evident that Jesus loves each of us with intensity, inclusively and universally; he invites us to imitate this love. Our spiritual resolution is to extend this same attitude to others. People can't be

totally inclusive when they resent and dislike and even at times hate others. A true sense of love sweeps aside negativities; it even challenges the modern terrorists who blow themselves up while threatening our very civilization. An urgency to reaffirm love confronts all believers.

Awareness of God's love and the need to show it through serving others takes us quickly to materially and spiritually hungry folks. Theirs is not a pretty sight, and so our approach is often hesitant. Certainly, this day's meals cannot be shared with sufferers in a distant continent. Perhaps something can be done in lower food resource choices, and free surplus for others. The conscientious consumer directs attention to diet choices by vegetarians and moderate meat eaters; these have direct effects on price and availability of food supplies. Users of corn-turned-into-auto fuel have a global impact often overlooked.

Believers who now recite the *Our Father* and say "Give us this day our daily bread" soon realize that they are God's distributing hands and feet. The prayer is not for a miracle from God but a plea for the will power to reapportion the generous resources of the world for ALL on this planet. The prayer calls us to be moved by a universal generosity and to participate in the mandate to feed the hungry in every land. True citizen participation can make this happen, but it is part of the universal challenge to love others.

b) Divine Nourishment

When calloused hands stretch out in humble request to receive the Lord, I as a Eucharist distributor pause; I become aware that these hands resemble those of Jesus after years of work in Joseph's carpentry shop. They seem to help pray through honest work.

The person seeking closer companionship with Jesus is more willing to engage in private prayer as well as formal celebration. Thus, strengthened resonance occurs in two directions: towards the God who is within and WE greet as companion in our time of need; towards those regarded as companions of faith, preferably those to whom we are particularly committed and an exterior community of shared faith. WE may also welcome the "anonymous Christians" (Rahner's terms), who are people of good will but lacking formal profession of faith. Resonance in companionship grows at times of personal crises and pending decision. These are such times.

Our pilgrimage of service to others is a road to discovering our own transformation or metamorphosis into authentic lovers of the expanded human family. This becomes an invitation to participate in the transformation of bread and wine into the Body and Blood of the Lord, the nourishment within our

services. Believers are called to be partakers in a miracle not spectators alone. Even in our unworthiness, this supreme divine/human act is perceived as a gift within the Divine Family -- collaborative participants in hastening the New Creation. This transformative nourishment is a foretaste of the heavenly banquet. All invitees can say "thank you" to God for gifts received within the Divine Family-- and this is achieved through thanks or "Eucharist."

The early Fathers of the Church said believers cannot receive the Eucharist worthily without first addressing the needs of the hungry around them. Thus the close connection between God's eternal food as nourishment and our love expressed in needed service such as immediate food security to and for our neighbor. Discipline is required to focus our minds on real needs; this is best achieved through the formal religious celebration itself, the reverence, thankfulness, time, opportunities, talents, and energy. Service expands to include restoring our needy troubled world.

Through Eucharist WE are empowered to bring about restoration but that power is troubling in itself. Lord Acton says: "Power corrupts and absolute power corrupts absolutely." Thus a humble willingness to share must accompany spiritual empowerment. Through Baptism, believers are called into the Family of God; through Communion they are energized to act in the world as agents of change. As previously mentioned, this energy comes in the lordship of Christ risen from the dead and now shared through companionship and presence of the Lord within an empowered faithful community.

The Lord Jesus is always present in his Church, especially in the liturgical celebrations. He is present in the sacrifice of the Mass, not only in the person of the minister, but especially under the Eucharistic species. By his power he is present in the sacraments, so that when one baptizes it is really Christ who baptizes. He is present in his word, since it is he himself who speaks when the holy Scriptures are read in the Church. He is present finally when the Church prays and sings, for he promised: Where two or three are gathered together for my sake, there am I in the midst of them (Matthew 18:20).¹

Previous generations did not have such a serious call to service as do twenty-first century believers -- namely to save our threatened Earth. Only **God as our food** can impress upon us the seriousness and respect into which the believer is called. Eucharistic Mystery now becomes even more awesome, for the work has serious consequences not just for ourselves but also for our neighbors. Respect for the Real Presence of the Lord in a number of external gestures: through the manner and tone of our prayer, through bowing and/or genuflection, by awesome silence, or by participative singing or dance. The Presence of the Lord is shown by a burning sanctuary light in places where the

Eucharist is reserved for the sick and shut-ins.

In this troubled world with its allurements, nourishment calls for extra spiritual energy and more frequent visits to the Lord's banquet table. Through the Eucharist, union with Christ makes us sharers in a single body of believers formed to proclaim the Word. For a long period during the Middle Ages, the Eucharist was more frequently adored at a distance and regarded as too sacred to be at the reach of ordinary lay persons. Thus the first reception of Communion was reserved to later in life, and then received only at major occasions and after dramatic preparation (personal confession lest unworthiness overwhelms the recipient). Current devotion involves frequent reception of Communion at the age of reason, and realization that small misdeeds are forgiven at the communal penance rite at the start of the celebration.

Eucharist is the glorious ray of the heavenly Jerusalem. While Eucharist is nourishment for our ordinary life, still a vision of what lies ahead emerges, "a New Heaven and New Earth (Revelations 21:1). This is the vision first implanted at the first Pentecost and emerges in greater clarity in time. *The Mass of All Ages*, as recorded by St. Justin about 150 A.D. would be familiar to us today: the readings from Scriptures; the sacrificed lamb as Jesus himself; the bread and wine transformed into Christ's body and blood; the solemn memorial of God's gift to the people; the memorial of the passion, death and resurrection; the group of disciples assembled as one body; and the Eucharist healing and making all things new. In this celebration the assembled faithful participate in divine action, hear music, smell incense and flowers, taste bread and wine now transformed, and feel close as a worshipping community in the sign of Peace.

Eucharist is the incarnational work of our hands. St. Irenaeus says in a figurative manner that God created the world by the Son and the Spirit or "His two hands."² If such was said of God two millennia ago (in order to show that the Second and Third Person are not substantially distinct from the First), why have the works of the hands been belittled? Were such works the sole domain of servants, slaves and serfs and beneath the radar of professional or theologically trained academics? Ancient Greek and Roman culture looked down on such slave or serf labor and never utilized energy sources as labor-saving. However, medieval monks regarded labor-saving as giving time to workers to rest and pray, thus sponsoring windmills and water power -- and thus ennobling human work. Christianity brought both liberation and a nobility of work in and through the work of a vast multitude of humble hands.

Jesus is the living bread. The early Church devoted herself to the teaching of the Apostles, to fellowship, to the breaking of bread and to prayers (Acts 2:42). Bread-breaking involves physical elements that are shared with

the larger community: human effort and divine intervention. The Food from Heaven is grown on Earth as wheat and grapes; these earth-grown products are ground into flour, baked into bread, and crushed and fermented into wine, the "work of human hands." Processed materials (not natural products, e.g. strawberries and milk) are now transformed into the Eucharist, the Lord's Body and Blood. Processing gives divinity to our work, for God is with us creating and acting. Our hands, head and heart are needed to prepare gifts for a spiritual transformation, and thus WE collaborate with God at the altar in a divine/human action.

The Calvary event of 2000 years ago is made ever present in the Eucharist. Yes, it certainly occurred in space on Calvary outside the walled city of Jerusalem and in time around 33 A.D. However, the event is not repeated but extended in such a way that our formal celebration is part of the Calvary event. WE were there and are HERE. From Calvary comes a definitive deliverance of the Kingdom to the Father; the New Heaven and New Earth stands before us as a collective future, a promise of Christ's return -- Marana tha! Come Lord Jesus! (Revelation 1:4, 22:20) This linear trajectory from redeemed past to eternal future gives breadth to the NOW of personal life, gives direction, and is itself a gift from a loving God, a miracle of grace. Our past is forgiven; our future is eternal life.

*At the Last Supper on the night before he was betrayed, our Savior instituted the Eucharistic sacrifice of his Body and Blood. This he did in order to perpetuate the sacrifice of the cross throughout the ages until he should come again, and so to entrust to his beloved Spouse, the Church, a memorial of his death and resurrection, a sacrament of love, a sign of unity, a bond of charity, a Paschal banquet 'in which Christ is consumed, the mind is filled with grace, and a pledge of future glory is given to us.'*³

* **Our way of thinking** *is attuned to the Eucharist, and the Eucharist in turn confirms our way of thinking.*⁴

* **Mystery of faith; Heart of the Church's mystery.**⁵

* **Breaking of the bread.** (Acts 2: 42), (Luke 24:21)

* **Memorial of the Lord's passion and resurrection.**

* **Holy Sacrifice** -- Eucharist is a sacrifice of Christ.

* **Sacrament of love** St. Ephrem wrote that Jesus filled the Eucharist with His Spirit. Augustine wrote: **O sacrament of devotion! O sign of unity! O bond of charity!**

* **Bread of life; Cup of eternal salvation.**

* **Gift par excellence** -- Christ's person and his saving work.

* **Pledge of eternal glory** -- Eucharistic devotion goes beyond being a memorial of the Passover.

* **A Cosmic Act**, uniting Heaven with Earth and permeating all creation. This one act of praise restores all creation in the One Who created it, giving back to the Father a redeemed creation.⁵

* **A Summary of Faith**, a union with the Lord present within the worshipping community who celebrate as public witnesses.

Music as treated in Chapter 6 enters the picture. Incarnation penetrating our soul is like music to our ears -- the gateway to Divine Harmony and promise of future glory. Musical notes are how Ignatius of Loyola perceives a glimmer of Trinitarian Mystery.⁶ The new internal resonance comes with Baptism and grows with a faithful journey through life. It is also a fragile journey to protect from succumbing to a noisy world. Spiritual music keeps us in tune.

*Let Israel rejoice in his maker,
and Zion's children exult in their king;
let them dance in praise of his name,
playing to him on strings and drums!* (Psalm 149:2-3)

Spiritual food brings believers together. Eucharist is both local community building and globalizing in its very nature. St. Ephrem writes that Jesus filled the Eucharist with His Spirit and the one who eats it with faith, eats fire and Spirit.⁷ Thus nourished, we can light a fire that sparks a global conflagration. As Jesus says: *I have come to bring fire to the Earth, and how I wish it were blazing already!* (Luke 12:49) WE carry this fire.

c) Divine Liturgy as Celebration

My faith is more than a cultural expression, a fidelity to family bonds and early friendships. In the teen years many wonder about this very stance -- and I was no exception. Mere cultural faith lacks the intimacy needed when confronting real situations in which maturing occurs. Celibate life calls for intimacy at a deeper level, companionship with Christ, and that too becomes a difficult struggle.

Lone spiritual marines, such as confined persecuted believers, can thrive by the grace of God. However, in normal circumstances our individual faith needs the encouragement of others in family life. While some individuals take detours or suspend their journey of faith, believers find Jesus as a companion within a loving community of support. This local togetherness includes the Eucharist as communal encouragement and love. Such celebrations may include music-making and songs, flowers, cultural art, and special events with food and hospitality. For Christians, this is a religious event. All need time to celebrate.

A Haitian Jesuit friend became angry when critics questioned his poor neighbors celebrating with precious resources, and he said, "but all have to celebrate on occasions." The Church grows through learning and teaching, scattering and gathering, offering and receiving, and of working hard and celebrating fruits of labor. Church gatherings anticipate Christ's ultimate coming; all came from God and all return to the Father (*a Patre ad Patrem*). The Church, as Pope Francis says, is a gathering and organized distributing center, not a hoarding place.

Over time, the concept of "Church" emerges first as a local liturgical assembly, a point of departure for individuals on mission, and then as a universal community of believers with whom all the local churches are ideally in communion. Thus Church is an icon of the Trinity and the unity of persons. Church is a rare English feminine word, designated by being a "mother." Faustus of Riez says, *We believe in the Church as the mother of our new birth, and not in the Church as if she is the author of our salvation,*⁸ for salvation comes from God alone. Church is mother teacher and also is sheepfold,⁹ cultivated field,¹⁰ building of God or Temple,¹¹ and Jerusalem and spotless spouse of a spotless lamb.¹² *Ecos* or home place involves comings and goings of a community, including hospitality and joyful arrivals and departures. It involves a resonance among members who feel at home. "See how they love one another" and "see how they feel at home together."

Christ invites us to see and magnify his presence to a troubled world as witnesses to the radiance of his risen glory. He resonates with us as baptized believers in local and global overlapping communities. This intensive belonging together with all baptized Christians is the most powerful ecumenical testimony; WE are one Body in Christ. Intensity shows our togetherness and desire to defend and protect those within our body whether kin, local community or global Church. The ISIS persecution affects different Middle East Christian communions, but all witness together through compassion (next chapter).

Interiority shows itself in external religious expression. Those who spend quality time in respectful prayer have hearts that resonate with the Lord and strive to become public. Our psychological health bears the divine presence radiating enthusiasm, especially when proclaiming our beliefs. Public expression enhances one's commitment within a community of faith. "WE believe" adds meaning to "I believe." Believers publicly glorify God and broaden their hearts for ever greater sensitivity to further concentric circles of glory. The open heart receives the God within; this freedom to thank God is the reason for human existence, and courage to express faith in a secular world.

WE are more than dutiful slaves obeying their master; we are companions with God and the divine work of salvation. Our focus is our joint mission and not worldly allurements. Those invited to the table exercise their freedom to glorify the Lord; it is the freedom of determination, of saying "yes," while others say "no," making the WE those who are willing to exercise their inherent freedom as a body. The impulse is to broaden our bonds. Mother Teresa caressed an infant, not first asking whether it was Christian or not. Christ's love goes out to all the world; so must ours. If believers are intense in their worship space, it is so that these become extensive in their service to others, and this includes "anonymous" Christians.

In order for respect to grow, hearts must be constantly purified. The intensity of work to be achieved can only be performed by people with genuine hearts; these are opposite to "obtuse" hearts (meaning blunt or rounded, dull or insensitive, or lacking in alertness). Obtuseness is failure at understanding the meaning of true solidarity, or failure to see the need for virtues flowing from the Good Spirit's prompting. While believers weep on Good Friday and rejoice on Easter Sunday, the obtuse find no variation in and out of season. Purified hearts come through simplifying one's lifestyle¹³ or the spiritual exercises of prayer, fasting or works; they are loving, forgiving and solicitous of others' needs; they practice the corporal and spiritual works of mercy, and refrain from allurements. Purification accepts the need to improve outreach and motivation -- and seeing others as Christ.

The Old Testament tells the reason for formal regulations: "observing commandments gives evidence of your wisdom and intelligence to the nations" (*Deuteronomy* 4:1-2, 6-8). Public worship adds to this formal appreciation for God's love for us. Rules and regulations should be guide posts on our journey of faith, not stumbling blocks. WE welcome them with open hearts; WE open the door to let fresh air in, not to throw the furniture out. Pope Francis speaks of openness of heart in spreading the Good News to a waiting and troubled world.¹⁴ *This people honors me only with lip-service, while their hearts are far from me.* (Mark 7:6)

Liturgy is a memorial celebration. Believers find in the Liturgy, "the work of the people," a continuation of Jesus' solemn ritual of the Passover feast, repeated as a perpetual remembrance in which all participate. Sunday celebrations are remembrances of the Lord's Resurrection in accessible space and convenient time for maximum gatherings. This Breaking of the Bread is faithful to the first Christian Liturgy as St. Justin explained to the Roman Emperor (mentioned earlier).

Believers hold the gift is Christ himself, a priceless offering, a participative

happening. WE come in our imperfection and so begin with contrition to overcome imperfections; WE chant our glorious praise; WE reflect on Scripture reading, manifest our common beliefs; and WE offer prayers and petitions. Then WE move to formal prayers of thanksgiving, which is "Eucharist." *Then they told their story of what had happened on the road and how they had recognized him at the breaking of the bread.* (Luke 24: 35)

Divine Liturgy under divine guidance, is an entrance into the **Heavenly liturgy** where God will be all in all (I Corinthians 15:28). As John Paul II says, "to build a world in harmony with God's plan."¹⁵ As members of the Divine Family WE call God the Father "Abba." Through consecrating prayers we enter into the restoration of a wounded world: *Father, in restoring human nature you have given us a greater dignity than we had in the beginning.*¹⁶ The Liturgy's high point is profound transformation, when community is consecrated to restoring a wounded Earth and people. Calvary extends in time, Earth becomes altar, believers join in the sacrifice of Christ, bread becomes Christ's Body, Earth receives its new destiny, and Mystery is unveiled.

Orthodox theologian Nicolas Zernov says it is no accident that a scientific civilization that not only tries to understand the structure of matter, but also to use acquired knowledge for the benefit of all, has arisen among nations trained in Eucharistic worship. It is in this unique sacrifice that we begin to regard the physical universe as friend, instead of fearing and despising it. Worshipers learn, Zernov says, the sacredness and dignity of every type of labor, including manual work, which was considered degrading both by the classical Greek-Roman civilization and by non-Christian religions of the East.¹⁶

Ancient Greeks used steam to operate toys for household amusement, but never for labor-saving devices due to lack of concern about their servants. Monks, ironically in the "Dark Ages," were enlightened; their monasteries harnessed wind and water for sawing wood, operating forges, grinding grain, and pumping water. Monks firmly believed that all were entitled to pray and celebrate and have breaks from servile work on Sundays and feasts.

Through Liturgy WE lose fear of unknown forces of nature. An authentic "dominion" (as mentioned in the Book of Genesis) is an ability to control natural forces for the benefit of all, giving us a role in the act of creation. This dominion is not a lording over but, as exemplified by Jesus' washing the disciples' feet, accepting social responsibility through service. WE care for our brothers and sisters within creation. Individualistic devotions encourage us to move out and work with others through service. Here Christ is our companion to bring a global vision. Respect, is the hallmark of Godliness, and allows global action to flourish. WE accompany God's creative, saving and inspiring work. *May*

*heaven and earth together acclaim you as king; may the praise that is sung in heaven resound in the heart of every creature on earth.*¹⁷

Summary: God is love. The divine love of our Triune God goes out to all creation, heard most clearly by those closer to God in the heavenly realms (Communion of Saints) and then by those in communal celebrations among believers, and finally as background to all beings. Love of God is shown on our part through service to neighbor and this requires divine nourishment. Eucharist, God's food to us, is our thanksgiving for an undeserved invitation to serve others. This empowerment to do God's will includes interior resonance from which springs the desire to go out to others. This gathering with others is in Divine Liturgy, a magnet, drawing ALL through Christ's blood. This is a divine/human moment, an incarnating and redeeming event, a verbalizing of God's presence and saving deeds, and a primary healing of human misdeeds. Heaven touches Earth so that renewal occurs. Past and future converge in anticipation of an eternal Liturgy and is proclaimed in music.

References Chapter 14

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Chapter 15. Suffering Servants

*His soul's anguish over
he shall see the light and be content.
By his sufferings shall my servant justify many,
taking their faults on himself. (Isaiah 53: 11)*

Suffering is all about and makes us hesitant as to how one can give meaning to what appears worthless. Christ comes among us not in kingly triumph but as a poor infant born in a stable, a refugee, a simple craftsman in a remote village, an itinerant willing to accept fishers and ordinary folks as followers, and as one who is not afraid to confront the system. His ministry is cut short in plots and conspiracies to the point of betrayal and accusation, physical suffering and death. His resurrection defines his conquest over death, but still remains present among those who suffer with him. He was, is, and always remains a suffering servant as foretold by Isaiah the prophet.

The road to perfection for each traveler on the journey of faith is to resonate with Jesus, but that takes personal commitment. Note that simple people resonated throughout his mortal tenure: a perfect mother, a dancing John the Baptist in the womb, a set of close disciples, and the blind, beggars, lepers, ignored, and sinners. Note also that a number during that period did not resonate: powerful leaders, Pharisees, and high priests, those expecting a more illustrious messiah. For us today, to resonate with Christ involves a commitment to sacramental and service-oriented nourishment. A deepening call is to suffer both in personal passivities and as active caregivers to others who suffer. The call is to compassionate companionship.

a) Compassionate Resonance Intensified

In 1992, when I touched the rock of Calvary in Jerusalem I heard a message deep inside saying "Look what they have done to my Earth." This lamentation was a pivotal experience in my journey of faith, for it marked an initial period of intensive eco-compassion.

Compassionate resonance is introduced in Chapter 7 as a form of social concern where a caregiver resonates with an ill or physically-impaired person. The noble act of being with and comforting persons who suffer has a history as old as humanity. The art of nursing care and hospice treatment has become highly refined and is being renewed attention in today's world of aging people not living in family units but rather often in homes for the elderly. The challenge faces aging populations throughout the world; for instance, Japan has an aging population and not lacks sufficient local caregiving but has set high

hurdles for anyone interested in immigrating or working there.

Caregivers commit themselves to resonate with others, for they hear the echo of their own emerging infirmities and an ongoing desire for human togetherness. God hears this call and enters into the human condition, and so the God-man suffers for all of us; he beckons us to come closer and be companion in a more intimate way. The invitation is to take up our own crosses, which include personal problems and risks of arousing opposition by what WE do. Following Jesus faithfully involves willingness to enter into suffering as a companion. *Come to me, all you who are weary and find life burdensome, and I will refresh you. Take my yoke upon your shoulders and learn from me, for I am gentle and humble of heart.* (Matthew 11:28-29)

Christ a solitary and prophetic witness. At various times in Jesus' life he stands as a solitary witness: the cleansing in the Temple, the challenges to his authority by the Pharisees; the moment he is condemned on Good Friday. The witnessing is often truly solitary, for disciples are either in the background or scattered. It is the time when Jesus is most alone and without companionship, but still stands in witness before the authorities as one willing to suffer for others. When the cock crows, Peter comes to realize that he is denying his Lord just when Jesus needs him most. The companions, who promise to stand behind Jesus and walk proudly near him on Palm Sunday, scatter at time of greatest need. Jesus is totally abandoned, and only his innocence accompanies him. The accusations ring throughout the courtyard in the early morning hours: *He says he could destroy the Temple and rebuild it in three days. He considered himself equal to God.*

The formal listing of accusations and the silence of Jesus is like a clash of cymbals with intermediate silence. It is the conduct of a Messiah whom the most creative fiction writer could not have dreamed up. At this most decisive moment in human history he is silent. "The messiah has come," is announced next to the Holy of Holies -- the center of religious life in the world--, and he is received with jeers by the authorities and bystanders present. A nation prepared for millennia to witness this moment does not know what it is really experiencing; Temple leaders are full of accusations; the aroused mob rejects him as Messiah.

There is a time to speak and a time to remain silent. Should one be silent when the accusation is directed at oneself, but speak strongly when against another? That is what Jesus does. Ask whether Saint Paul follows that procedure when he appealed to Caesar as an individually accused Roman citizen and is sent to Rome to stand trial. In the *Acts of the Apostles*, Stephen, the first martyr, speaks boldly at the time of his stoning to death and even sounds

provocative as a solitary witness. The Spirit prompted both Paul and Stephen to act the way they each did; Scriptures contain these unique responses. Accusations make the accused vulnerable and, as in Jesus' case, leads to even greater hostility.

When someone says a falsehood or a partial truth or misinformation, does it become a time to fight back in various ways or to stand in silent witness to the truth? Certainly a person should defend another who is falsely charged, or even defend the rights of some who may be guilty but presumed innocent until proven so. Furthermore, accusations and rumor can destroy a person's character or ministry with very little effort, for credibility and veracity are not always coextensive. This haunts all in times of massive social media accessibility and within this age's troubles.

Jesus is compassion itself. This shows in encounters with the ill and forgotten in his ministries and death. Jesus has risen and gone before us; yet Jesus is present with each suffering person in the extension of Calvary in space and time. Companions of Christ are called to assist others and to be God's hands and feet in this world. Jesus suffers in each persecuted person as he says to Saul years after his own glorification: *I am Jesus and you are persecuting me* (Acts 9:5). Jesus' solidarity with the suffering of this world is a reality, which each believer accepts. Jesus suffers in the travails of all people on Earth and by extension of all creatures threatened and endangered. Companions are called to do the same in being more like him whom they follow and walk beside. We are called to resonate intensely with Christ, a resonating that deepens when we are willing to suffer with others.

God is very close to those who suffer. In turn, WE as consecrated people are to share with others as co-sufferers. God makes covenants with humanity and the Chosen People and even with all living things at the time of Noah (Genesis 9: 8-15). Jesus is the fulfillment of God's successive covenants (with Adam and Eve, with Noah, with Abraham and Sarah, with David); Jesus suffers and dies for all of us in a new covenant relationship. Jesus gives us strength to face today's burdens; out of love he suffers and dies for us even while sinners. For our part as co-sharers, WE experience a deepening spirituality when we enter into the sufferings of others, even of the animal and plant species under attack by thoughtless human endeavors.

Here is my servant whom I uphold, my chosen one in whom my soul delights. I have endowed him with my spirit that he may bring true justice to the nations. (Isaiah 42:1; 49: 1-6; 50: 4-10; and 52:13-53:12).

Jesus willingly makes his way with his reluctant disciples to Jerusalem, the hostile city, where confrontation is to occur. He goes freely as a person of

spiritual power (the one who calms the storm at sea and heals the sick) and with apparent successes in his public ministry, to confront a situation where he permits himself to be totally powerless before worldly forces. Jesus opens himself to being vulnerable, all as a loving servant par excellence. He invites us to follow in our lives, but also through symbolic exercises showing closeness to him in today's world.

b) A Social and Ecological Way of the Cross

A few years ago, a poor Hispanic migrant in Powell County drowned in a pay lake while fishing to supplement his family table. His family and friends asked me to come and bless the spot of the death; upon getting there our group was blocked (even after my persistent begging to the owner) to go directly to the tragic location; he utterly refused. All of us gathered at the public roadside entrance a short distance from the site and held a prayer service with blessing. All felt deeply hurt by the refusal, as well as saddened by the tragic accident and family devastation.

Since Calvary is the singular event of redemptive suffering, let us resonate with Jesus on the way to Calvary and make his journey part of our journey of faith:

1. **Jesus in the Garden of Gethsemane.** (Matthew 25:36-41)
Social -- People are tortured by the ravages of poverty.
Eco -- Garden areas are mistreated and unproductive.
2. **Jesus is Betrayed by Judas and Arrested.** (Mark 14:43-46)
Social -- People take advantage and betray friends.
Eco -- Plants and animals are mistreated and endangered.
3. **Jesus is Condemned by the Sanhedrin.** (Luke 22:66-7)
Social -- Caregivers give a helping hand to victims.
Eco -- Greed scars landscape through waste pollution.
4. **Jesus is Denied by Peter.** (Matthew 26:69-75)
Social -- Residents suffer from effects of foul air.
Eco -- Air pollution weakens immunity of the biosystems.
5. **Jesus is Judged by Pilate.** (Mark 15:1-5, 15)
Social -- People condemned to poverty in slums.
Eco -- Merchants of doubt belittle climate-change.
6. **Jesus is Scourged and Crowned with Thorns.** (John 19:1-3)
Social -- Many people suffer from mental distress.
Eco -- Unmanaged land becomes unproductive.
7. **Jesus Bears the Cross.** (John 19:6, 15-17)
Social -- People have cholera from lack of potable water.

- Eco -- Rivers and lakes suffer from water pollution.
8. **Jesus is Helped by Simon of Cyrene.** (Mark 15: 21)
 Social -- Citizens take up the cross to assist migrants.
 Eco -- People neglect friendly pollinators.
9. **Jesus Meets the Women of Jerusalem.** (Luke 23: 27-31)
 Social -- Abortion defies the right to life for all.
 Eco -- Controlling climate change is a right to life.
10. **Jesus is Crucified.** (Luke 23: 33-34)
 Social -- Crass commercialism makes fun of virtue.
 Eco -- Earth suffers from rampant visual pollution.
11. **Jesus Promises His Kingdom to Good Thief.** (Luke 23: 39-43)
 Social -- We must abolish the death penalty.
 Eco -- Wounded Earth has promise of new life.
12. **Jesus Speaks to His Mother and John.** (John 19: 25-27)
 Social -- Good souls assist the hungry and homeless.
 Eco -- We must be willing to radically share with others.
13. **Jesus Dies upon the Cross.** (Luke 23: 44-46)
 Social -- People die without proper hospice care.
 Eco -- Threatened species are extinguished from Earth.
14. **Jesus is Placed in the Tomb.** (Matthew 27: 57-60)
 Social -- Assist all who suffer loss of loved ones.
 Eco -- By our help Earth can become renewed.

It makes me happy to suffer for you, as I am suffering now, and in my own body to do what I can to make up for all that has still to be undergone by Christ for the sake of his body, the Church. (Colossians 1:24). St. Paul speaks of suffering with Christ and this is what each Christian is called to do. This involves making known to others that the community of suffering is meaningful and to be part of this undertaking. In co-sharing with Jesus WE give all suffering a resonating social dimension.

c) Heart to Heart Reparation: No Suffering is Lost

She was the musician at the retreat house and told me about her paraplegic husband, who saw little reason for continuing to live. He had to be totally cared for. I encouraged her to urge him to offer his sufferings for others in order to help save the world, for this is the most powerful spiritual endeavor possible. She told me at a subsequent retreat that her husband accepted the role of co-sufferer and was deeply comforted before passing.

Compassion means suffering with another whether up close as a personal loved one or a caregiver. Jesus suffers in his passion and death at Calvary in an

act of solidarity with all of us. His is universal compassion from a loving heart. It is difficult to co-suffer when experiencing good health. Still those willing to enter closely with Jesus become engaged in co-suffering with him. His companions take responsibility to repair the social order (**reparations**) caused by personal or the social sin committed by ourselves or others. This includes repairing the damage done by the greedy and exploitative forces comprising a wayward human family. In a heart-to-heart manner in which Jesus leads us, WE are called to halt damage and start repairing a wounded planet.

Opening of our hearts to resonate with the compassionate Jesus starts in gratitude for the invitation to be a companion; this means asking for the energy it takes to undertake this endeavor. This is a unique opportunity to freely accept the burden of suffering and associated reparations -- and this is done with greater intensity in an atmosphere of whole-hearted gratitude. Saying thanks is for the privilege to help transform the suffering into a creative act; it includes becoming more loving and merciful. But it extends to greater dimensions: for others who are moved by another's compassion to does the same; and for an effort to help build a New Heaven and New Earth.

Gratitude in the midst of suffering has salvific power, for how can a merciful Creator fail to look kindly on thankful hearts. In a selfish world of comforts, "I deserve it," and sufferings "I don't deserve it," comes resonating counterpoint, "I am grateful" and "I accept it." God has done great things for us, and WE are willing to collaborate as willing companions and co-participants in making the world better in spite of downfalls. With grateful hearts Christ's companions accept a new and unique mission of helping to save our severely threatened Earth and civilization. Three participative aspects of compassion are involved: engaging in lifestyles that are not harmful to our fragile Earth; halting those ongoing practices that are harmful; and repairing damages that have been caused by our negligence whether they be mine in particular or those of society, of which could be collectively termed as "ours."

Conservation of resources demands a simplified lifestyle: eat wholesome locally grown food with low meat content; use energy efficiency methods along with renewable energy sources for heating and cooling with avoidance of air conditions when able; choose public transportation if possible; resist media advertisements; refrain from over-purchase of consumer items and electronic devices; and limit lodging to moderate space. Jesus lived simply and so ought all seeking to resonate with him.

Confrontation is more difficult, but involves the challenges to the existing establishment of waste and materialism in imitation of the lifestyle of Jesus. As mentioned in Chapter 7, social addiction colors the actions of the secular world.

Christian activism must be up front and take a lead along with activists of all stripes. The Christian activist hears Christ beckoning to come and carry the cross with him. Persistence and merciful love are the hallmarks of Christ's action and ours as well. It goes further for the sake of a public that lacks full equality: insist on fair taxes, no tax havens, and no super-rich privileges. Tall orders!

Restoration through reparations is a very great challenge. **Reparations** are prayers and spiritual sacrifices as well as physical deeds undertaken to repair and restore a social order damaged by individual sin or the larger wrongdoing of people. While primarily spiritual in action, this still has a physical component often shown in the corporal works of mercy (feeding the hungry and repairing injustices) as well as restored what has been damaged. Sinners look beyond forgiveness to restoration of damage done to a vulnerable society and world social. Unattended wounds retard the process of hastening the day of the Lord's coming; they are broken homes, human trafficking, terrorism, climate deterioration, resource waste and substance abuse. In contrast, reparations, especially by those suffering or compassionate bring new health and vitality and genuine renewal of the social order. WE join Christ in his work of salvation.

Restoration involves family wholeness, rebuilding social capital, cleaning rivers and air, reclaiming damaged and eroded land, giving adequate housing to the poor, making health benefits accessible to all people, and providing plant and animal habitats. **Eco-reparations** expands a devotion of making spiritual reparations for the misdeeds of the individual and the large social community to include specific environmental damage. Love and mercy includes a compassionate concern for all of God's creation including restoring habitats of threatened plants and animals.

The Sacred Heart devotion is a Catholic religious practice developed in the 17th century as a counter to rigid Jansenism (exaggerating human sinfulness) and secularism in France and Western Europe. Cold-heartedness is replaced by a warm loving heart of Christ. From 1673-75 Visitation nun, St. Margaret Mary Alacoque, received visions from Jesus. The messages called for a universal feast of the Sacred Heart along with some specified devotions of reparation. Pope Pius XII in the mid-twentieth century wrote an encyclical defending this devotion.

Companions of Jesus as co-suffers develop an I-thou relationship with him; WE enter into his saving work; as he took on our offenses, WE too must help repair our damaged social (and environmental) order. WE resonate with the sacrificing Jesus, and thus come ever closer to a heart-to-heart relationship (his **Sacred Heart**) that vibrates with the love and mercy of the Triune God.

Many are restricted by the lack of energy or mobility to imitate the active Jesus through direct environmental action (repairs, civic actions, etc.). Often the shut-ins, isolated, or imprisoned are not mobile enough to participate. Here the spiritual dimensions of reparation takes on greater importance, for genuine spiritual offerings of heart-felt prayers and deeds lead to integral participation in restoring the social order. When accomplishing this with the entirety of love as performed by the invalid but deeply loving St. Theresa, the Little Flower, a physically limited person becomes spiritually a dynamo active in reparation. God has a special regard for the little ones with kind and generous hearts.

No suffering is lost; all suffering has value. Our works of compassion are testimony to the ultimate spiritual value of suffering. From a secular view, such happenings are meaningless, and yet Christ suffered for all and enters into the suffering of all. Christian believers in becoming other Christs testify to a spiritual power that becomes ever more powerful through faith in God's power. Nothing is lost, especially suffering itself. God is in all, creates all as good, and Christ as the suffering servant makes all suffering a gain. Both through active or passive entry into suffering believers testify to the blessings of little things offered for all in the world. WE resonate with the Suffering Servant by entering into suffering and begin to perceive its power.

A planetary spiritual community exists and breaks into visibility. The activity of repairing damage extends to the arena of the suffering Holy Souls in purgatory, who hasten on their journey to the face of God. Resonating takes on a cosmic dimension and includes the "communion of saints in heaven." Community transcends the struggles of those on this planet and gives us a vision of being empowered to do great things no matter how physically weak we happen to be at this time. As a global community, WE enter into the glorification of the world through compassion, a co-suffering that cements solidarity.

Summary: Suffering occurs and is exemplified in the sacrifice of Christ. WE are struck by the mystery of suffering, endured, redeemed, and offered in loving sacrifice of Christ. WE do not avoid sufferers but find them choice subject of God's love. Liberated through a sense of gratitude for gifts, WE undertake both actively and passively the privilege of coming closer to Christ as suffering servant. Nothing is lost in the economy of salvation, for through the cross all suffering has value. As co-sufferers WE help restore our damaged world. In accepting this invitation, WE enter the resonance of a loving God who in Jesus suffers for us.

Chapter 16. Proclaiming Good News

My heart is ready, God -- I mean to sing and play. (Psalm 108:1)

Today, global citizens have the unique task of collaborating to save a planet threatened by human misdeeds, greed and despair. The task before us is challenging and takes our efforts along with divine assistance. As described in Chapter 8 our mission is urgent and demands a truly **communitarian approach**. Harmony must be forthcoming, social addictions addressed, nationalism overcome, and a new renewable energy economy championed and initiated. Can all of this be done while the window of opportunity is closing on saving our planet from destructive climate change? .

Collaboration at a global level requires a degree of openness and harmony never before achieved. Realistic activists turn to a Higher Power lest they tolerate the paralyzing and distracting consumerism of the current culture and its utter reliance of ever greater military might for national security. This collaborating includes a wide variety of activities from citizens of all walks of life and conditions who want to contribute in their own way. All must resonate globally in the highest degree possible. Thus, all forms of genuine harmony are needed to sustain a massive global effort that can transform dire predictions into Good News. This struggle has several facets: confronting the materialism of climate change deniers, despair of terrorists, and closed minds of the secularists. In God we Trust; with God's help WE can succeed.

a) Trinitarian Community

I am hard at work and suddenly a name or face flashes before me. Very soon the phone rings and it is that person. Had that happened to you? Perhaps if only once in a lifetime it could be dismissed, but it occurs frequently. Unexplainable actions do happen. Can we resonate across distances to build a better world?

The Triune God's creative love permeates the universe; the "oneness" of God mentioned seen in Chapter 14 that is reflected within our worshipping communities encourages us. The community's compassion of those willing to

take responsibility for damages done to the social order (Chapter 15) inspires us to always look more deeply into the needs of our troubled world. Care for others including respect for Earth and all its creatures is still not sufficient without welcoming an atmosphere of global collaboration. Believers realize that WE are to be regarded as a "Trinitarian community of creative love."¹

In order to save our threatened world the call is to a deeper communitarian mission, one loving and merciful, participative and universal, compassionate and inclusive. The difficult task demands an abiding enthusiasm; through accepting suffering and giving it value a closer union with all parties is possible to restore what has been damaged. The "oneness" of God is proclaimed within hearts resonating with God's creative, redemptive and unitive love.

It takes two to make a pair and three to make a community. The Trinity is the primary community that all creatures are drawn to imitate. All creation exhibits some elementary form of community. Genesis says "Let us make...". The Spirit hovers over the waters; the Wisdom of God speaks a word and it comes to be. The Creator's vestiges show plainly in the world to those with eyes to see God's ever-present love. As noted before, examples of community abound all saying something about the God who creates us. However, communities as such are nouns whereas the resonance within them manifest inherent verbal activity.

Unfortunately, human freedom opens the door to misdeeds; Babel is an ongoing temptation. Humans freely come together in family, clans and tribes, but some of the mean-spirited disrupt and divide person from person and community from community. Believers who seek to help reestablish order and community enter into the sufferings of others in the manner of the redemptive Jesus who suffers for all. As noted in the previous chapter, this act of coming together restores what has been lost through misdeed; it involves recognition that suffering becomes the bonds of a community of love in resonance with God's creative and redemptive love. If willing sufferers are included then all can participate, for they express the wholeheartedness of God in a special way. Loving hands, heads and hearts move to common beneficial results -- and move in unison. A global community inspired by the Spirit can emerge -- God is at work and all including victims can participate.

Community is either a noun or in its acting has verbal aspects. What WE are creating, co-suffering, and restoring have not yet come to be, but are in process -- a communal process. The results will come to be in an irreversible arrow of time with an emerging future. Our manner of thinking must not be Aristotelian substances (things) but systems of such individual entities in

dynamic interrelation.² For Christian believers, the Triune God is origin of the cosmic process and the communal nature of beings reflects the community of Father, Son and Spirit. Our social nature desires community being created in the image of God. Our personhood is an ongoing process of acting in a godly manner.

From Joe Bracken's discussion one can describe the Triune God of Christian belief as a communicating of an ongoing process or system, the process wherein the three divine persons as subprocesses or subsystems are fully integrated within a higher order process or system of the **divine community** (emphasis added). This is conceived through influence from an A.N. Whiteheadian metaphysics where the essence or nature of God is not in the first place an entity but an activity.³ For the Christian, God is a community of co-equal divine persons who share in love and acting in harmony -- in what theologians call in "subsistent relations," that is three intrinsically interrelated but still radically different ways of being one God. An interpretation here is of the divine resonance from which all resonance types mentioned in the preceding chapters take their origin. When resulting in harmony, these are from God and bear a mark of godliness.

Furthermore, Bracken speaks of a systems approach to the Trinity that this *is paradigmatic for an understanding of human communities and other socially organized realities within the cosmic process.*⁴ The activity of creating unity out of multiplicity is in the first place the nature of God and this becomes the principle of activity or essence of every finite entity within creation. The multiplicity of parts becomes a unity in diversity. Bracken notes that for Whitehead in his book *Process and Reality* makes God and every finite entity a creature of creativity.⁵ Human beings working together are evolving into a global community that is better understood through a systems approach; this community is an integration of the various social levels (personal, local, regional, national and international) that form a group of common goals through collaboration (Chapter 8). A new unity while respecting diversity is forthcoming, all working for a higher quality of life for all. Would that this be the order of the day!

Ignatius of Loyola with his special devotion to the Trinity also extended his talents at global unity through communication; he wrote 6,800 letters and received reports from his scattered members who still were "in community" with him. He inspired this global efficient network of communication as the world's first "body of discourse representing a global conversation with participating voices from around the world".⁶ Note that this development occurred when mail took months to reach far-flung destinations. The astounding body of information included science, climate, theology, cultural anthropology, martyrs,

travel narratives, and Jesuit churches and colleges.⁷ Trinitarian devotion of believers leads to broadening global resonance, a necessity in solving climate change problems today.

b) Global Resonance as Empowerment

*Yet you have made him little less than a god,
you have crowned him with glory and splendour,
made him lord over the work of your hands,
set all things under his feet,...* (Psalm 8:5-6)

Working on the Internet makes me sense a power of coming together when contacting folks in several continents in a matter of minutes. The feeling, simply put, is one of the opportunity to come together quickly and efficiently on pertinent global issues.

Our global resonance is empowering. It is heart-to-heart with Christ, who is redeemer and restorer of order through his resurrection. We enter into the saving work of the one who has redeemed us all and allowed us to be recipients of empowerment through our belief and sharing in his Resurrection. WE believe that Christ suffered, died and rose from the dead; WE affirm that in entering into the sufferings of Christ all as one collaborate in bringing about Earth's renewal. Including the suffering empowers us to become totally inclusive. All suffering has value in the risen Lord, and in co-suffering we come to understand this.

Jesus Christ our Lord was proclaimed Son of God in all his power through his resurrection (Romans 1:4).

The power of the Resurrection is part of Easter faith and is worthy of profound respect. If WE believe that our salvation comes in part through our efforts working with God's grace, then the saving of our Earth comes in a similar manner. My free acts are now transformed into our free acts. If some think it can be achieved by a higher technology or grander working schemes devoid of God's grace, then secular efforts are doomed in an addicted world. The Evil One grips those who lack hope in the Lord and those who think they alone can bring salvation. The phenomenon of modern terrorism teaches us that injustice cannot be overlooked in efforts to reduce the destructive forces at work. Furthermore inequality in use of resource causing food insecurity is a subtle form of terrorism that cannot be tolerated. Through faith, victory can be achieved -- and it must be done in love and justice.

WE wonder at times whether all people must resonate with the Lord before authentic change can occur. Unanimity is virtually impossible with the nature of

diverse freely choosing human beings. WE cannot afford to await an ideal situation when dealing with people some of whom are mean-spirited. The answer is the same as in the last chapter on the power of offering suffering by agents of change for the salvation of the world: believers accept the privilege to being with Christ in performing compassionate AND restorative deeds. Faith is empowering, and deeper faith leads to greater deeds. If a critical mass of believers in the future collaborate and invite all to participate, then faith calms present world storms. This collaborative group with confidence in God can bring about change demanded for a better world. We believe in the New Heaven and New Earth; we hasten its coming through faithful work, but we may not have global unanimity, for it to occur. All in theory are empowered by the risen Lord; believers can use it.

Unity as empowerment is expressed in that of the oneness of Father and Son found in the Last Supper discourse "that all may be one." Believers who are part of faithful communities have a certain resonance that has a sense of empowerment in the risen Lord. This is expressed in a confidence found in faithful togetherness in local or broader communities united -- and this ripple effect reaches around the entire planet. Through mutual sharing, believers act in common and respond to appeals for assistance from the less fortunate. Though the degree of that response varies over time and space, still it is a community of concern for others that has been from earliest Christian times the template to which this global movement is patterned. Believers are part of the Mystical Body of Christ wherein a relationship of love flourishes, and an ever deepening I-thou relationship is achieved.

Healing our wounded Earth involves the creative power of our accumulated experience as believers working together; this occurs through crafting, research, engineering, medical, legal, economic, and political efforts -- and more. Hands are essential for spreading the Good News, but so are heads and hearts. Medieval theologians following in the footsteps of Augustine saw a Trinitarian pattern in the human thought process, with memory giving way to understanding and intelligible word, and this to willing deeds. Human beings think, engage in keen observation, utilize rational principles, help test and design properly, and turn plans into effective action.

The primacy of action done as service for others involves the **hands** (the practical aspects of life) (see Chapter 5). These are ready to join in the Body of Christ as taking an effort to bring about needed change. We are ready to spring to action, and thus our creative instincts are at work, alert to the needs of others. This acceptance of work demands continued planning and design through use of our **head**. To heal takes ingenuity and does not come automatically; there's trial and error involved. It also takes **heart**, for the process involves mercy and

love internally generated and expressed through heart-to-heart actions with others. The entire body is inspired to act, and a well functioning body is the model of the Triune God at work.

Caregiving is an godly act required of each of us. The more WE give of ourselves in loving service, the more the interior shines forth as God acting within us. The entire interior of our communal being radiates God who works through our hands, head and heart that beats with the Heart of Jesus. In the process of opening ourselves to the work at hand with the universal love of Christ, WE call for all people of good will and show special attention to learn from those who continue to be enthusiastic even while they suffer. Our commitment to service, while specified by our local conditions and limited resources, still show our humble lack of total self-sufficiency; WE need the Lord; WE need each other, for all are interdependent beings. The search for greater harmony resonates with other people of good will. This harmony shows the power of performing the saving of our Earth.

*I tell you most solemnly, whoever believes in me
will perform the same works as I do myself,
he will perform even greater works
because I am going to the Father.* (John 14:12)

Interior harmony of hand, head and heart break from isolation and announces that salvation is possible by openly working together. It takes faith to believe in the power of that great work of God through our participation. With divine help WE can save a wounded Earth and its people. Nothing is lost; and the invitation goes out to all to work together to bring restoration. Faith brings results; deeper faith brings greater results when those empowered through the grace of Christ's Resurrection are fruitful. The image is what WE can do in the HERE and NOW with God's help. *Faith is like that: if good works do not go with it, it is quite dead.* (James 2:17)

The deepest resonance for faith-energized believers inspired by the Spirit is to work for justice, an integral part of Christ's Salvation History. Jesus Christ brings redemptive salvation; our collaborative deeds can help restore what has been redeemed and yet marred by human misdeed. The harmony of mutual work energizes and allows believing local communities to resonate with each other more easily, and thus be able to break loose from any tempted discord. **NOW** our Earth becomes the **HERE** of restoration and the divine image involves the emerging action of the resurrected Christ with us. God acts through us; **WE** are God's people acting together within a divine/human harmony where the divine is distinct and yet united by a special union with us. Christ is incarnate in our work and is seen by all people of good will.

Inspired beneficial products and services have power to renew the face of our Earth -- and so God works through us in creating a more glorious Earth. Yes, WE emphasize works, i.e., Earthhealing and civilization preservation; WE affirm that they are possible. God invites us to enter into the re-creative process, to be conservation-minded in use of resources, to confront those doing misdeeds, and to engage in restoring the damaged social order. The Spirit moves us to dance together, sing as one in harmony, work together to heal others, hope for a better life for all, establish food safety and security, educate and generate the good talents of all, and pray together for the coming of God's Kingdom. WE must all be united male and female, young and old, white or colored. I hesitate to say rich and poor, for unjust enrichment must be confronted not accepted in a cooperative manner.

Uniting actions by all males and females raises a question of roles involving gender differentiation. If works of the head have been characterized as stemming from a masculine mentality, works of the heart are so intimately feminine that eyes turn to who can do this best -- the world's women. Is the heart that the Holy Spirit permeated with love so feminine that one could call Spirit a "she"? That may allay fears of many feminists about the total Trinitarian Mystery. The Hebrew *Ruah* for spirit is feminine (as is the word in Aramaic) while the Greek word *Pneuma* is neuter). Furthermore, Mary is the heart of our Earth, saying "yes" to its redemption, the re-creation of its "glory" as God's dwelling, the "eternal feminine" (in Teilhard's words) who delights in God -- and God in her (see Coste's *The Magnificat*.⁸ Restoration has male/female complementary.

The greater the call for global community life, the more the unique talents of each individual are invited for universal inclusivity. Over and over, this demand for participation is a believer's imperative that has deep social justice implication. The political power of those with billions of dollars of wealth is most unsettling, for this does not allow true democratic process. The wealthy in a world that has no regulations on amount controlled by individuals have an autocratic veto on changes in the status quo; they deny the ability to proceed in true participation.

Truly, the whole is greater than the sum of its parts, and so the universal effort of all people of good will goes beyond a host of individual deeds. Ideally the community's emerging benefits through proper global regulation draws individuals to more loving participation, a necessity in conquering global climate change.

c) Collaborative Service as Mystic Resonance

I have sought to collaborate in every way possible in a number of public interest activities, even though some may find fault with my imperfect inclusivity. I need to grow. Part of the grand plan is to show godliness through sharing such work, and to strive to be collaborators and to believe that all can contribute something.

Christians are called to be special "agents of change;" they do not possess a gnostic secret healing procedure or spiritual knowledge about radical change. Rather, believers unite with all people of good will and do so with a sense of inclusiveness, not as if they will be an elite who are destined for salvation. Extreme wealth cannot be tolerated. Rather, universality of all manifests the power of the Triune God in the lives of the believers. Christians must show a profound sense of hope that global action leads to our collective destiny. The expected collaboration is open to contributions from all varieties of people of good will:

Earthhealers -- People must leave our Earth a better place; where wounds exist all must engage in healing first ourselves and then the world around us. These are people who conserve resources, eat less animal products, live simply and champion a renewable energy economy. A revolution is called for,⁹ one questioning the economics of the status quo, and one willing to protect threatened plants and animals. Believers add a dimension of deeper mystery and reverence to the work at hand.

Prophets -- While convinced that healing Earth can and ultimately will occur, moving others to action takes committed agents who inspire others to act. Appropriate technology, which is less costly and more community friendly is available¹⁰ and must be championed openly. True prophets do not foretell the future; they speak conditionally, "If greenhouse gases are not curbed, then surely harm will come to our Earth."

Cooperating Citizens -- Truth can be proclaimed in many ways -- softly, deliberately, and courageously, or self-righteously, defiantly, and arrogantly. Truth is best proposed and not imposed; it is proclaimed through free and dedicated human service. The Spirit leads each of us to speak and act publicly, but in a loving and respectful manner and yet in full participation with others.

Migrants and refugees -- People seek to move to places of greater opportunity or away from conflicts that threaten their lives and that of their families. Many of those who migrate are willing to do humble tasks shunned by residents. They need to be welcomed by the godly who are called to show divine hospitality.

Artisans -- Creative activity focuses on those with special types of talents combined with generous hearts. Artisans plan, prepare, and promote their work, all hopefully done with enthusiasm. Materials are reviewed, advice sought and sometimes accepted, public display is fostered, and criticism rendered. Artisans resonate with a discerning public and believers proclaim the world of different cultures expressed in art as Good News.

Scientists -- Scientific discovery is further Good News and experimentation leads to still greater knowledge. Those who advance science in every field are inspired and inspiring. However, not all that is termed "science" works for the common good, e.g., weapons of mass destruction or distracting and wasteful consumer goods. Believers show that all knowledge and applications must benefit all people, not the privileged few.

Peacemakers -- God fortifies our interior peace not by removing us from service to others, but by accelerating our interrelationships through inspired collaboration. *Happy the peacemakers; they shall be called children of God* (Matthew 5:9). Peace cannot be secured without a psychological foundation devoted to sharing -- in the manner in which God has shared with us?

Leaders -- The process ahead is of a global nature and requires leaders who facilitate contributions from all walks of life. Political leaders focus attention on what must be done, either immediately or in the longer term. They need to be supported through encouragement and prayer for God works through them. Religious leaders set a moral tone and encourage collaborative efforts as facilitators with all people of good will.

Mystic resonance is more than a deep withdrawn contemplative spiritual state -- a personal communion with God. This form of resonance can be a full commitment to inclusivity in working with all God's people through a resonance that streams from Triune harmony. This earnest effort becomes a union with the God within in, and includes direct addressing current problems affecting our planet and civilization. This involves an openness to volunteers, willing sufferers, caregivers, environmental regulators, those establishing a new renewable energy economy, and to designers of a federated world order (introduced in Chapter 8), in which all global actions move to the Common Good. This is a mysticism that is truly down to Earth and yet looking to heaven; it is social and not primarily individualistic; it is communitarian and not elitist.

Summary: The task before us demands harmonious cooperation among peoples. A focus is on communitarian resonance. Thus WE look beyond ourselves to a Triune God empowering and inspiring us to loving service. When done justly, compassionately and with inspiration, service resonates with the Trinity. So inspired, WE are encouraged to broaden our efforts to include all people of good will. Joyful vibrations lead to global sharing within the various sub-communities in which WE belong. Through harmonious endeavors joy in serving others is the prelude to a coming of God's Kingdom. God beckons us to Mystic Resonance; collaboration is initiated; justice is preserved; restoration is accelerated.

References Chapter 16

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Conclusion: Urgency to Act

A particular work in progress has only a temporary pause, not a definitive conclusion. Hopefully the problem has been laid out and even that not totally. Resonance at various levels calls for human participation and points to a unique global resonance that is sought by collaborating people of good will. This is something new and will be subject to adjustments over time. The urgency to act does not need to be proved by anyone who is not a denier, a false humility to defer to others, or who is willing to become distracted and go off on one's own entertainment. Time is short and yet continual discernment is necessary.

The believer concludes that the task cannot be done by secular people calling the shots, for they do not allow the divine component to be voiced. The successful saving of our Earth requires divine cooperation -- not a miraculous intervention. With this in mind we can reach a preliminary conclusion: speak out about the need to emphasize a trust in the Almighty. A shared broader perspective calls for the replacement of a fossil fuel economy with a renewable ones and a world with terrorism by one that curbs vast inequality and returning resources from billionaires to the commons for the benefit of all the people. Overcome terrorism through just deeds where inequality in resources is being actively challenged. Success is possible by trusting in God, not a new mandate but as old as the Republic itself and the attitude of our Founders.

The final temptation. If the deniers have their way as the current American administration proposes at this moment of writing, we are moving to a

climate change of catastrophic proportions. Are we tempted to withdraw and ask God the almighty to right our collective misdeeds through some grand miracle? The Creator has given us the gift of freedom through which we can choose the good. What has been collectively spoiled needs to be corrected by responsible citizens working together and empowered from on high. A non-participative or spectator approach (waiting for God to act) permits the continuation of an unjust status quo. Furthermore, the blind belief that God will extract us from this mess is a form of presumption -- a sin against the Holy Spirit, for our efforts appear unneeded when thinking that all is already finished and God will clean up the mess.

Rather than placing all actions in the hands of God, WE believers are discovering with ever greater urgency that a role opens before us. WE can succeed with God's help. Even amid current difficulties WE have a vision of a New Heaven and New Earth that energizes us to act, moving us both individually and communally. We can be misled by autocratic tempters who say "trust me;" these seek to overcome the democratic spirit in which we operate, a spirit of enthusiasm that must be preserved and enhanced. This spirit cannot be sustained amid the sterility of secularism; it is the spirit that calls for hastening the day of the Lord. We must feel the vibrations, the levels of resonance that presupposes the previous and becomes in itself a growing echo leading to the divine. Ever deepening resonance leading to the Mystic strengthens an atmosphere wherein we ensure our grounding and act with deliberate speed to save a threatened Earth.

1. Resonance at the physical level involves a thrust to seek yet undiscovered reality in both the micro- and macro-universe. In so many ways the universe contains mysteries that beckon to be revealed. These stand before us in the world all around and draws us to focus on HERE, this rather than unrelated secularity in its many forms. The urgency to act is NOW to save our planet and civilization and not to defer this to later; the expectation is that this must be a collaborative effort on the part of WE who believe in the future, a trinity of place, time, and agents of change. Resonance invites delving into ever deeper **Mystery**.

2. Chemical Resonance probes the depth of reactivity within the matter of our world. The order of creation is improved when work is undertaken to benefit humanity with new uses of materials for medicines, fertilizers, plastics and fabrics. However, misuse of materials can cause untold harm that is often not immediately evident. This sense of responsibility harkens us back to a world where the possibility of freedom led to misuse and abuse of God's gifts. In time God sends a Messiah to show in his actions the more perfect way to go. To bring this down to the everyday world of responsibility in use of resources

demands a companionship with Jesus to extend the correcting to all consumer goods. Here is a deeper sense of **loving responsibility** when imitating Christ.

3. Biological Resonance manifest the phenomenon of self-organization and the delicate nature of life itself. Mutual respect for living matter brings us to be protectors of all life.

This means not being distracted by conflict of competing rights order, for the right to life is paramount. However, in order to allow this life in its many forms to flourish some forms of compromise are required. This demands spiritual guidance for we are unable to come to preserving that respect without the Holy Spirit inspiring a deeper **vitality**.

4. Communication occurs through mutual benefit and is the exchange of information from one party to another in many ways such as through face to face conversation, mail, phone or Internet. Resonance opens itself to greater **equality** within the act of communicating. The Triune God self-communicates and extends this to the world. Through Divination, human beings are made to God's image and touch the divine through Baptismal transformation. Divine Resonance manifests a oneness in community, something that becomes the model of what human beings as global citizens can do.

5. Art involves resonance within artists, the environment in which they find themselves, their inspiration to act at a given time, and the appreciation and affirmation of an appreciative world. Their art is a work of hands, hands and heart, a trinity of interior activity. Their creative work is viewed, criticized, commented upon, enjoyed, and invited within an Artistic Commons. This creative act is what the believer is invited into by the Incarnate Word-- God dwelling among the people. The invitation is to take on the character of the divine through our Baptism and the power associated with it. The believer is empowered and this strengthens our creative spirit to do the mighty works ahead of us. This resonance with the divine strengthens the **enthusiasm within**.

6. Forms of Musical resonance give a sense of celebration to the world in which we live. When music is incorporated into solemn worship whether in monastic chant or in liturgical settings of Sunday worship it adds intensity, for it celebrates not the work of individuals but of the people -- the body of Christ. Hearers become participants in this and in some other artistic forms such as dance. The intensity of this **public celebration** is enhanced by greater participation wherein a believing community's expression of joy is forthcoming in the resonance of the Liturgy.

7. Human beings attempt to attain a balance in their lives, both physical and psychological, for individual health issues are always matters of immense

personal concern. One way of establishing the needed balance is to engage in the practice of mutual caregiving and receiving through a deeper sense of compassion where resonance is in mutual giving and receiving -- a participative effort. The believer holds that no suffering in this world is ever lost but rather has value. The suffering of Christ gathers all the suffering of people into one holy oblation called Calvary, and allows all who suffer to enter fully in the restoration of the world. Thus WE accept the invitation to be co-sufferers with the Lord and enter into Salvation History through divine/human **compassion**.

8. Threats to our planet and civilization hang over us and demands essential changes in our collective lifestyle and behavior. While models of proper collaborating efforts exist at the local, regional, national, and even international levels, they are not sufficient. Barriers must be overcome so that genuine peace might come to our troubled world and this has limits without recourse to the Almighty. A partial embrace is limited and lacks the firmness needed in a genuine **collaboration** encompassing all people. Here a mystical union generates a sense of togetherness that must be present to conquer global problems. All are to be included.

Proclaiming God's Word to all creation is the most perfect image of God, for it brings forth a more wonderful re-creation, a restoration in Christ and a Spirit-filled vitality. Resonance leads to **mystical union**.

Lord, help us never tire in delving into the grandeur of your harmony vibrating throughout all the universe. May WE address this troubled Earth and civilization in a spirit of collaboration, so as to hasten the day of a New Heaven and New Earth.

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