A Framework for Labyrinth Research

The following Framework for Labyrinth Research was developed to provide a structure to serve as:

- a guide as the different types of labyrinth research that have already been done are identified and categorized;
- an aid as types of labyrinth research that are needed are identified and appropriate research designs and methodologies are developed; and
- a catalyst for identifying types of labyrinth research that could be done.

The framework represents categories of research studies, and does not imply a hierarchy or a priority of research studies. However, research designs and research methodologies will vary among the different categories of the framework. Additionally, it should be noted that the framework is equally applicable for studies that investigate the effects/shifts resulting from examining single labyrinth events as well as longitudinal studies reporting labyrinth-related effects/shifts occurring over periods of time and over a number of labyrinth events. This Framework was first presented and discussed at the annual Gathering of the Labyrinth Society in November 2006 in Texas.

1. **Gather, compile, and maintain a bibliography of labyrinth-related research (citations and abstracts) from many sources.** Since the field of labyrinth research is just beginning to emerge, there is a pressing need to create a comprehensive bibliography now, while there still are a relatively limited number of studies to collect and categorize. As the field and the number of studies grow, it will be easier to maintain a bibliography than to create it at a later date. Potential sources for identifying existing research studies include Dissertation Abstracts, journals in health care, complementary medicine and other fields, as well as word of mouth contact. Currently there is a limited bibliography referenced on the research page of the Labyrinth Society's website (http://www.labyrinthsociety.org).

2. **Gather, compile, and report information regarding the historical, archaeological, sociological, and contextual locations and uses of labyrinths around the world.** At the present time, these areas of archaeological, historical, sociological, and contextual labyrinth research and writing are the most extensive area in which labyrinth research has been conducted. Examples are the extensive research and writings of Jeff Saward and others, as well as work reported in 36 issues of *Caerdroia: the Journal of Labyrinths and Mazes*. (http://www.labyrinthos.net)

3. **Gather, compile, analyze, and report the large amount of existing anecdotal information regarding the effects/shifts reported as occurring as a result of various ways of interacting with labyrinths.** A large amount of anecdotal evidence attesting to the various purported effects of interacting with labyrinths has been reported in books, magazines, by word of mouth, and through other sources. Other potential sources of anecdotal information include journals kept at labyrinth events, as well detailed journals kept by individuals describing months or years of labyrinth walking. What is needed is a compilation and analysis of these anecdotal reports.

This compilation and analysis will likely point the way for other researchers as they look for fruitful areas of inquiry. Detailed journals kept by individuals also could provide rich sources of information for qualitative and case study research.

4. **Verify and quantify the effects/shifts reported as occurring as a result of various ways of interacting with labyrinths.** Studies conducted in this category often will be action research type studies. Many studies of this type will take place during actual labyrinth events, rather than under controlled circumstances, so the basic assumption related to intrusiveness is very applicable here. It is also possible for controlled studies with some degree of randomized assignment of participants to be conducted in this category. Many of the studies will be perceptual in nature. Such "soft data" can be very compelling; however, to make a strong case, researchers need to quantify as much as possible, within the conditions of the Basic Assumptions. A large number of action research studies, conducted under variety of conditions, with different populations, using different types of labyrinths, and using a variety of instruments, will provide valuable to verify and quantify the effects/shifts reported anecdotally in Category 3 of the Framework. Examples of research that has already been conducted that would fit under this category of the framework include studies by Lynn Texter and Janine Mariscotti (Texter & Mariscotti , 2003), as well as the author of this article (Rhodes, 2006).

5. **Relate and correlate these reported effects/shifts with existing validated instruments that purport to measure the reported effects/shifts.** Studies in this category likely would be studies conducted under structured conditions using experimental and control groups and experimental or quasi-experimental research designs. Studies in this category would relate reported effects of walking or otherwise interacting with a labyrinth to measurements on instruments that already have been developed and validated to measure these effects. For example, if an anecdotally-reported effect of labyrinth walking is an increased relaxation response, the levels of reported participant relaxation before and after walking a labyrinth could be correlated with scores on an instrument that has already been developed and validated to measure relaxation response, as Lynn Texter and Janine Mariscoti did using Jonathan Smith's relaxation scale (Texter & Mariscotti, 2004).

6. **Conduct, analyze, and report short term as well as longitudinal case studies regarding the effects/shifts reported as occurring as a result of various ways of interacting with labyrinths.** In addition to the "backwards analysis" of existing journals kept by labyrinth walkers suggested in category 3, Category 6 suggests that longitudinal, case study research could be conducted using a "front loaded" design. In these studies, participants would agree to keep journals of their labyrinth experiences in congruence with the study design. Also, the participants would agree to the terms and conditions of the longitudinal study as well as to being interviewed by the researcher at predetermined intervals.

7. **Measure and quantify under controlled situations physiological and/or psychological changes resulting from various ways of interacting with**

labyrinths. Studies in this category of the Framework usually will be studies that meet the strict requirements of rigorous empirical scientific research. Many of these studies will feature experimental/control group designs, as well as randomized assignment of study participants and identification and control of intervening variables. The basic assumption related to intrusiveness is less applicable here than to research in the other Framework categories. It is expected that potential topics for this level of research will be identified from among the action research studies, case studies, anecdotal reports, and other studies conducted in the other categories of the Framework. An example of a study in this category of the Framework is the study conducted by Kay Sandor and published in the American Journal of Holistic Nursing (Sandor and Froman, 2006). Other potential areas of inquiry relate to measured changes in EEG readings of brain waves before, during, and after participants' interaction with labyrinths, as well as studies that investigate empirically the anecdotally-reported impacts of labyrinth walking on the progression of symptoms of diseases such as Parkinson's disease.

How can the Basic Assumptions of Labyrinth Research and the Framework for Labyrinth Research be used to generate ideas for labyrinth research and help structure future labyrinth research efforts? The Basic Assumptions and the Framework can serve as unifying structures for collaboration among potential labyrinth researchers. It is hoped that individuals with an interest in labyrinths who might not be trained as researchers will see within the broad Framework an area of research inquiry that interests them, prompting them to seek the specific research assistance that they might need to make research contributions. For now we need to remember that multiple measures of effects are "better" than single measures. Also, that several people doing the same study in different locations under similar or different conditions with similar or different samples of participants is stronger than one person doing one study. If effects are similar across a variety of studies, this helps address the generalizeability issue discussed earlier in the article.

In conclusion, a number of "random thoughts" might serve as a catalyst for further discussion and future articles. They are presented here for consideration. For example:

- How can research in fields such as music therapy, art therapy, and similar fields inform labyrinth-related research?
- Research is messy and time consuming, and studies seldom unfold exactly as designed. Individuals conducting labyrinth research as well as those requesting information about labyrinth research should keep this in mind. Or, in other words, in theory, there is no difference between theory and practice, but in practice there is.
- We often measure things that are not important simply because they can be measured easily and we often avoid attempting to measure things that are very important because they are difficult to measure and/or because they can not be measured precisely.

Following her question, "How does the labyrinth 'work' in creating the shifts that people describe?" Jill Kimberly Hartwell Geoffrion (Geoffrion, 2003, pg. 8) continues, "While

we wait for scientists and others to investigate more fully, we must admit we don't know. Fortunately, mysteries don't have to wait for full comprehension before bestowing their gifts!"   Also relevant is a quote attributed to Albert Einstein: "If we knew what we were doing, it wouldn't be called research."

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