

Analytic Domain Analysis of Medical Informatics Ethics:

Identification of ethical-theoretical foundations

by

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A THESIS

Presented to the Division of Medical Informatics and Outcomes Research

and the Oregon Health & Science University

School of Medicine

in partial fulfillment of Master of Science Degree

January 2003

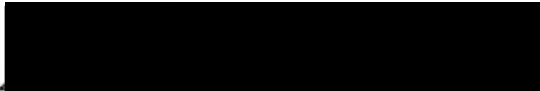
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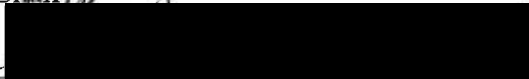
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ACKNOWLEDGMENTS

This thesis would not have completed without the encouragement and contributions of my thesis advisor, Dr. P. Zoë Stavri. Her enthusiasm and insights kept me going. I also want to thank my other committee members, Dr. Holly Jimision and Dr. Dale Kraemer, for their time, encouragement and thoughtful comments.

Dr. Xia Lin, Drexler University, was kind enough to provide me with access the citation analysis tool, AuthorLink. AuthorLink was used in this study.

Dedication

This thesis is dedicated to the memory of Dr. Walter D. Mink and Fredrick K. Gage.

ABSTRACT

This thesis is the result of an unobtrusive study of the domain of Medical Informatics Ethics. The objects of the study are the cultural artifacts (journal articles and text book chapters) of the domain. Study methodologies include the triangulation of two citation analysis techniques (one qualitative and one quantitative) and one qualitative text analysis technique. Bibliometric citation analysis is used to identify foundation authors and artifacts. Standardized content analysis, or frame-set coding, is used in conjunction with bibliometric analysis to complete the evaluation of citation analysis component of this study. Warner previously described this combination of bibliometric and framed coding citation analysis in a similar study of the domain of information science [1]. Using these methods, Warner concludes that linguistics is under-represented in the domain of information science. Using similar methods, I identify 58 journal articles and book chapters, conclude that ethics is not under-represented in the domain of medical informatics ethics, and (using qualitative text analysis consists of ethnographic techniques documented by Spradley [2] and modified for this study) begin a taxonomy, or ontology, of the concepts in the study domain.

INTRODUCTION

“Health-care informatics, like other health professions, encompasses issues of appropriate and inappropriate behavior, of honorable and disreputable actions, and of right and wrong. Students and practitioners of the health sciences, including informatics, share an important obligation to explore the moral underpinnings and ethical challenges related to their research and practice.”

Kenneth W. Goodman and Randolph A. Miller (2002)

Study Domain

Medical informatics has been referred to as medical computer science, medical information science, computers in medicine, health informatics, biomedical computing, healthcare informatics, health computing, medical computing, and clinical informatics [3, 4, 5, 6, 7]. It includes the fields of nursing informatics and dental informatics [8]. Medical informatics is described as a multidisciplinary field because medical informatics takes place at the intersection of computer, information, cognitive, management, decision and biomedical sciences, and draws from the domains of cognitive and social psychology, sociology and cultural anthropology [9, 10, 11]. A variety of professionals perform its work, including physicians, nurses, and computer and social scientists [12].

Notwithstanding the multidisciplinary nature of medical informatics, it is a domain dominated by clinicians and others whose primary research interests are clinical systems. This dominance is reflected in the curricula of medical informatics programs [13]. However, the European Community (EC) guidelines for health informatics curricula include ethics [14]. These guidelines were developed as a part of an EC sponsored three-year survey and study of Education and

Training in Health Informatics in Europe (EDUCTRA) and are contained in a multi-volume publication [15]. Despite such guidelines, the study of medical informatics ethics is generally neglected. Kenneth Goodman, the author of the first systematic study of the ethics of medical informatics, writes, "...unlike other scientific and medical programs, informatics training rarely includes attention to ethical issues, or if it does, it tends to emphasize confidentiality, privacy, and legal issues to the exclusion of other core issues" [16].

Absent from or neglected in the classroom, the study of medical informatics ethics is also under-represented in medical informatics literature. The American Medical Informatics Association is an organizational example of this under-representation. Formed in 1990, The American Medical Informatics Association (AMIA) has a working group on Ethical, Legal and Social Issues. It also publishes one of the most prestigious medical informatics journals, the Journal of the American Medical Informatics Association (JAMIA).¹ From its first publication (January 1994) to the date of the beginning of this research (April 2002), JAMIA has only published 3 articles whose core content is ethics².

The limited availability of courses and research literature in the domain of medical informatics ethics is a barrier to integration of ethics and ethical concepts into the field of medical informatics. From the application developer who would like to incorporate ethical evaluation into her work to the teacher who wants to include ethics into his classroom debate, the dearth of accessible resources is an obstacle to good intentions. To make matters even more difficult,

¹ In 2000, JAMIA was ranked by Science Citation Index as having the greatest impact of journals in the medical informatics domain. In 2001, a change in inclusion criteria that excluded AMIA Proceedings from being factored into the impact analysis, JAMIA's impact in the field of medical informatics has 'declined'. However, JAMIA remains an important medical informatics journal.

² This result was so surprising that I confirmed the results of my initial abstract and title search on ethics and related terms in JAMIA, with an exploded MeSH term heading and subheading search of ethics and related terms using the National Library of Medicine's PubMed interface to its bibliographic reference database, MEDLINE.

authors of medical informatics ethics literature rarely identify the methods used to recognize ethical issues or state the ethical-theoretical foundations that guide their analysis and ground their solutions.

Domain Importance

The EC health informatics curriculum guidelines recommend that students should be able to:

...understand the ethical underpinnings of the concepts of privacy and confidentiality ...understand the ethical basis for informed consent and the consequent limitations on the use to which patient information is put ...discuss ethical justifications for and objections to the use of information and information system from the perspective of ethical theories ...(and) appreciate that the decision to use computer-based information systems is not value-free. Hasman A, Albert A, et. al, (1995) *Education and Training for Health Informatics in Europe: State of the Art – Guidelines – Applications*. ISBN: 90 5199 2343.

In order to accomplish these educational goals, the foundational ethical principles of medical informatics need to be accessible in the medical informatics literature, i.e., they have to be explicit.

Without an understanding of the ethical-theoretical foundations of medical informatics ethics, most students and professionals are unable to incorporate appropriate, purposeful, ethical considerations into the research, design, production and deployment of medical informatics technologies. Perhaps equally troublesome is that without widespread dissemination and discussion of these foundations, those ethical considerations that are incorporated into medical informatics technology will be defined by a small number of people whose ethical belief systems will go largely unstated, underdeveloped and unchallenged.

A related benefit to the identification of the ethical-theoretical foundations of the domain of medical informatics is the ability to broaden the scope of ethical inquiry by bringing new or under-represented ethical-theoretical perspectives to the debate. This study is a first step in identifying the explicit (manifest) and tacit (latent) ethical-theoretical foundations of the domain of medical informatics ethics.

My interest in medical informatics ethics was generated by an emerging awareness of the close, at times identical, relationship between the history of philosophy and the histories of science and mathematics. It is sustained by an increasingly acute awareness of the current divergence of the two intellectual domains.

For example, in philosophy and ethics there is a radical split between analytic and other modern philosophers who respect, or some might argue revere, science, and some postmodern philosophers who believe "...that there cannot be any scientific - or, more generally, rational - foundation for our ultimate norms." [17].

The debate between the ethics and philosophy of modernity and postmodernity is often rabid. Despite the high profile of the debate in many contemporary academic and non-academic forums, my initial exposure to medical informatics ethics barely contained a hint of the split. For the scientist or other readers not previously exposed to this debate, it is succinctly framed in the following excerpt:

My aim is to confront some deeply troubling contemporary questions. For I want to understand why today there are so many "voices" screeching about Reason. Why is there a rage against Reason? What precisely is being attacked, criticized, and damned? Why is it that when "Reason" and "Rationality" are mentioned, they evoke images of domination, oppression, repression, patriarchy, sterility, violence,

totality, totalitarianism, and even terror? These questions are especially poignant and perplexing when we realize that not so long ago the call to “Reason” elicited associations with autonomy, freedom, justice, equality, happiness, and peace.

Richard J. Bernstein, *The New Constellation: The Ethical-Political Horizons of Modernity/Postmodernity*. (3rd edition. 1995) Cambridge: MIT Press.

As the field of medical informatics reaches out to consumers of health and medical services (i.e., to consumer health informatics) the hegemony of medicine comes under scrutiny and the societal debate about modernity and post-modernity ethics has an opportunity to take on real significance. Although it is not the purpose of this study to examine the significance or appropriateness of postmodern ethics to medical informatics, it prepares the way for such an inquiry.

Research Question

In light of all of the above considerations and concerns, the following research question is a first step in the study of medical informatics ethics: what are the explicit and tacit ethical-theoretical foundations of medical informatics ethics?

Identification of the foundations of ethical philosophies currently used in medical informatics is a necessary precursor to discussing the appropriateness and limitations of these philosophies for medical informatics and assuring that the discourse in medical informatics ethics is as heterogeneous as the discourse in related domains.

Literature Review

This thesis reports a systematic quantitative and qualitative literature review of the domain of medical informatics ethics. Although the question asked and methods used are not completely

novel to medical informatics, the combination is. The literature begins with a review of literature on ethics, medical informatics ethics, and related literature in the broader domain of ethics and technology. Prior work in the citation and text analysis (the methodologies chosen for this study) is then summarized.

Ethics

The preliminary investigation of literature begins with the question: "What is ethics?" For the purposes of my research, "Ethics is the arena in which the claims of otherness--the moral law, the human other, cultural norms, the good-in-itself, etc.--are articulated and negotiated." [18].

There are many types and views of ethics: applied ethics, axiological ethics, utilitarian and consequential ethics, deontological and Kantian ethics, Aristotelian, care and virtue ethics and meta-ethics [19]. Also, the question of "right and wrong action" is central to much of the domain debate [20]. Many of the most prominent twentieth century philosophers were dismissive of ethics. Bertrand Russell considered ethics to be a minor branch of philosophy [21]. Others, like Wittgenstein, believed that "morality ... remained one of those areas which could be shown but not commented upon, being revealed in the way people conduct their lives but not susceptible to logical rigor." [22]. However, at the beginning of the twenty-first century, the question of ethics has once again taken a prominent place in philosophy [23]. (Appendix A contains definitions of the philosophical and ethical terms used in this thesis.)

Medical informatics ethics

Goodman's work, *Ethics, Computing, and Medicine - Informatics and the Transformation of Health Care* (Goodman 1998) is said to be the first and only published systematic review on the subject of medical informatics ethics [24]. In the introductory chapter, Goodman identifies the "widespread ignorance among nonphilosophers about significant debates and disagreements over

ethical theory, core concepts and meta-ethics” [25]. In the same chapter Goodman identifies several ethical-theoretical concepts. They include: the four principles approach (respect for autonomy, nonmaleficence, beneficence, and justice) identified by Beauchamp and Childress in their seminal work *Principles of Biomedical Ethics*; the deontological, rule-based approach of Bernard Gert; casuistry or case-based analogical reasoning; virtue ethics, rights-based theories and communitarianism [26]. Ironically, although the remainder of this book identifies ethical issues in medical informatics and values associated with the identification and resolution of the issues, the authors rarely integrate ethical theory into their discussions. In short, despite the importance of his book, as both author and editor, Goodman fails to integrate methodology into his review of medical informatics ethics.

Ethics and technology

One of the many interesting ethical-theoretical debates taking place in this domain is the role “technology has in determining the cultural, political, and economic fate of a people [27].”

Another way of phrasing this question is, “Does technology concretize the Western values of scientific rationality and technological progress in such a way that the technology results in, or is seen as resulting in, the domination of marginalized cultures by first world countries? A specific example of this debate is whether or not the Internet is “computer-mediated colonization” [28].

One response to this debate is that domination of the third world by the first is not inherent in Western technology per se, but that the cultural preeminence of any technology is the result of who maintains control over the design, construction and implementation decisions.

Susan Murcott’s work in water engineering is an example of this response being tested in a real world environment. Murcott has used water-engineering projects as a tool for the liberation of women in third world nations. Her engineering methods incorporate two requirements: the use

local materials to create local technologies that address local conceptions of the “problem”; and give local women the authority to make the relevant technical decisions [29].

Murcott’s methods of integrating of ethics and engineering, from problem identification and to engineering solution, have not been tested in the domain of medical informatics ethics. However, there is ample literature within nursing informatics, a subdomain of medical informatics, that indicates that it might be appropriate to do so [30, 31, 32].

Other interesting recent works in the domain of ethics and technology include: a study of the informatics worldview to determine the extent to which informatics is a continuation of a mechanistic worldview characterized by “postulates of analyzability, lawfulness and controllability” [33]; studies of the ways in which information technology can cause unintended cultural changes [34, 35]; a study of the need for a novel and distinct theory of information ethics [36]; and a dissertation on how to move beyond the pervasive computer ethics of deontology, contractualism and consequentialism by giving information (as an entity) ethical value and rights [37].

Citation and text analysis

In a study similar in design and purpose to mine, citation analysis was used to identify the impact of linguistic theory on information science [38]. Based on prior work, my study assumes that references and citations lay the theoretical foundation of any given academic or scholarly writing [39, 40]. Consequently, collections of related citations are representative of the distribution and acceptance of foundational works and can be used to map intellectual domains [41, 42, 43]. Related to these two features of citations, variations in references between works and across domains represent variance in that foundation.

James Spradley describes the process and methods of analytic domain analysis used for text analysis in three of his books on ethnographic research [44, 45, 46]. His 1980 book, *Participant Observation*, has been cited in more than 500 academic journal articles, including 38 cites in recent, primary scientific literature; and his 1972 book, *Cognition and Culture*, is cited in Medical Informatics literature [47].

In summary, within the current literature of ethics, technology ethics, information ethics and medical informatics ethics, there are common and divergent themes. Although the scope of ethical issues relevant to medical informatics has been studied by Goodman, the theoretical and philosophical foundations of those issues are not well studied. In related domains, qualitative and quantitative methods have proven to be effective tools for the defining the foundations and boundaries of academic fields. In a novel approach, this study uses both qualitative and quantitative methods to identify the theoretical and ethical foundations of the field of medical informatics ethics.

METHODOLOGY

I conducted this study using a combination of quantitative and qualitative methods to analyze scholarly writings in the domain of medical informatics ethics. The objects of study were journal articles and book chapters. My goal for this study was to identify the foundations of medical informatics ethics by understanding, rather than critiquing, the intellectual foundations of domain. The methodologies used reflect the choice and scope of the research question.

Study Boundaries

Scope of research question

The research question, "What are the ethical-theoretical foundations of medical informatics ethics?" can be broken down into four related and sequential queries or steps.

1. Who is identifying, analyzing and addressing ethical issues in medical informatics?
2. What themes and issues do they identify?
3. What methods and knowledge do they use to identify, analyze and address these ethical issues?
4. What are the results of their work?

This study was a step toward answering these questions.

Sample selection

This study is limited to articles and textbook chapters identified by searching bibliographic references in two sources. One source, the National Library of Medicine's Medline, was searched using the PubMed interface. The other, the Institute for Scientific Information's (ISI) Science Citation and Social Science Citation Indices (SSI and SSCI), was searched using both the Web of Knowledge interface and the text publication.

"The first significant attempt to identify and address ethical issues in informatics" was published in the *Annals of Internal Medicine* in 1985 [48]. Therefore, my study was also bounded by this time frame and includes only works published between 1985 and April 2002. To be eligible for this study, articles and book chapters had to be published or available in English. Letters and editorials were excluded from the study sample.

After the collection boundaries were identified by source, chronology and language, the subject matter boundaries were defined. This was a two-step process. The first step was a review of the research question to more carefully define the study sample boundaries. As a result of this process, I defined articles and textbook chapters on medical informatics ethics as: 1) texts that are squarely within the domain of medical informatics, 2) texts that include a discussion of ethics, ethical issues or ethical problems in medical informatics. In order to fall within this definition, medical informatics must be the primary if not exclusive subject of the text. However, ethical discourse does not have to be the primary focus of the text. Figure 1 illustrates the boundaries of the research question as they related to the study sample.

DIAGRAM OF INCLUDED AND EXCLUDED TEXTS BY SUBJECT AREA

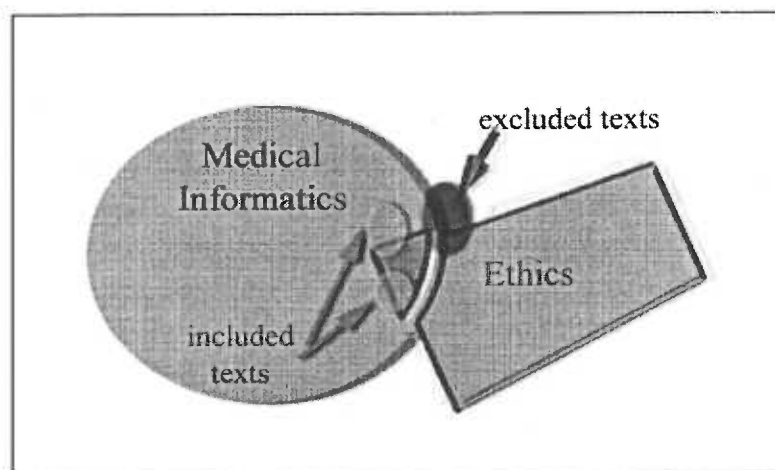


FIGURE 1.

In order to use this definition as part of a search strategy, it was necessary to review the relevant medical informatics resources to define the domain of medical informatics. Table 1 was the result of that review. Included terms are either synonyms or sub-domains of medical informatics. The sources of the included terms are indicated in the key below the just below the Table 1.

DOMAIN OF MEDICAL INFORMATICS

Included Terms	Semantic Relationship	Cover Term
medical computer science [A,B,E] medical information science [A,B,E] computers in medicine [A] health informatics [A,C] nursing informatics [A] dental informatics [A] biomedical computing [B] healthcare informatics [C] health computing [D] medical computing [D] clinical informatics [E]	is-a-kind-of	medical informatics

[A] van Bommel & Musen; [B] Shortliffe & Blois (2000); [C] Goodman & Miller (2000); [D] Goodman (1998); [E] MeSH entry term for medical informatics [49-53].

TABLE 1

It is worth noting that bioinformatics was not an included term. The exclusion of bioinformatics was not a comment on whether or not bioinformatics is a domain distinct from medical informatics, but a result of the exclusive use of the above sources to define this aspect of the study domain.

It was also necessary to translate this domain definition into search strategies for the two bibliographic databases. These final searches, included in Appendix B, went through three revisions before they retrieved a 1-to-2 proportion of relevant to non-relevant documents. The first PubMed search retrieved 352 references to articles. The first ISI search produced over 100 documents. Despite the size of the retrieval sets and significant overlapping coverage of the two

bibliographic databases, only 6 documents were common to both sets. Therefore, the queries, although designed to produce similar retrieval sets, did not function similarly within the overlapping portions of the bibliographic databases.

A careful analysis of the references retrieved by these first two queries resulted in further refinement of search queries. The final ISI and Medline retrieval sets consisted of 52 and 127 references, respectively. Surprisingly, the final ISI and Medline queries retrieved the same 6 co-occurring documents that were retrieved in the first ISI and Medline queries. The fact that the first and last Medline and ISI retrieval sets all had 6 documents in common was viewed as an indication that reducing the retrieval sets did not result in a significant loss of relevant documents. This view was tested in other ways. Because it was important to find a study sample that represented the domain of medical informatics, quality control queries were used to compare the first query results to the final query results. For example, because the term “algorithm” was a pandemic term in Medline, it was excluded from my final Medline query. However, I tested the effects of that exclusion by a specific search for articles indexed with the MeSH heading “Decision Support Systems, Clinical” (a parent MeSH heading for “algorithm”) and the major MeSH heading “ethics” to be certain that I had not inadvertently excluded relevant study references. As a result of this and similar quality checks, I concluded that the final queries were appropriate for my study question.

The bibliographic references retrieved in each database were exported into both EndNote © and ASCII text files. The six duplicate documents retrieved in both databases and earlier identified as part of the query revision process were also identified by EndNote ©. This result indicated that the export and processing methods used to extract the bibliographic references and identify unique articles worked as designed.

The second step in study sample selection was a two-tiered review of the bibliographic records and actual journal articles identified by the ISI and Pub Med searches. The two-tiered review was an elaboration of the sample study definition and documented the specific inclusion and exclusion criteria of the study. These criteria refined the boundaries set out in Figure 1 and are set out below.

Inclusion Test 1. The article's subject matter includes the domain of medical informatics.

1. The article is about Medical Informatics or an included term as defined in Table 1, above. For example, an article on Medical Ethics or Computer Ethics might be logically applicable to the domain of medical informatics; however, unless the article specifically addresses the domain and sub-domains of medical informatics the article is not included.
2. Genetic databases. The primary subject of article is about the sub-domain of genetic databases and the article is concerned with large populations or is otherwise epidemiological in scale. For example, an article about Icelandic legislation authorizing a national genetics database satisfies this test [54].
3. Outcomes Research. The primary subject of article is about the sub-domain of outcomes research and is about a large population or is about computer-based outcomes research. For example, an article about data mining of electronic medical records satisfied this test.
4. Decision Support Systems (DSS). The decision system that is the subject of the article includes either computerized capture and/or processing of health information as part of the decision-making process.

Inclusion Test 2. The article includes a discussion of ethics or ethical issues and problems. However, the ethical discourse does not have to be the primary focus of the article.

1. Misconduct. Discussions of fraud and/or misconduct are not, per se, discussions of ethics. A discussion of what constitutes fraud/misconduct might be.

Exclusion Test 1. The domain of medical informatics is a subject of the article; however, medical informatics is not the primary focus of the article.

1. For example, an article on negligence in data management of clinical and biomedical research might include a specific discussion of negligence in medical informatics research. However, if medical informatics, or one of its sub-domains, is not the primary focus of the article the article is excluded from the study.

Sample Selection: First Tier Review

The first tier review consisted of a two complete readings, several days apart, of the bibliographic record (title, abstract, and keywords or MeSH headings, etc.) of all 179 bibliographic references. The inclusion and exclusion tests were applied during the first reading and verified during the second. If the bibliographic record clearly indicated that the referenced article was not appropriate for the study, the full-text of the article was not obtained. Examples of articles excluded based upon their bibliographic record are included in Appendix C.

The first tier review resulted in the exclusion of 83 potential study articles were from the study sample. The remaining 96 articles were obtained in either electronic or paper format. Roughly

half of the articles were available in full-text electronic format through the OHSU library. The rest were obtained from either inter-library loan or the library stacks. This process also led to the inclusion of 2 articles not identified in the initial searches. These 2 articles were serendipitously returned through inter-library loan because of citation ambiguity. At this point in the process of identifying the study sample, 98 articles were candidates for study inclusion.

Sample Selection: Second Tier Review

The second tier review began with a complete reading of the full-text of the 98 candidate articles for the study sample. The inclusion and exclusion criteria remained the same as in the bibliographic reference review; however, the full-text of the article was the basis for the inclusion or exclusion decision. Articles excluded from the study sample based on the first reading of the full-text of the article were re-read several days after their preliminary exclusion. This second reading was to assure that the standards for exclusion did not shift as I became more familiar with the content and scope of the 98 articles.

Of the 179 article references reviewed in the two readings of the Tier 1 review process, the second reading changed the inclusion designation of 3 articles. Two of these articles changed from excluded to included. One article changed from included to excluded. The degree of judgment reliability, as measured by the Kappa statistic, is .966.

STUDY SAMPLE SELECTION: TIER 1 KAPPA

	Review 1 Included	Review 1 Excluded
Review 2 Included	94	2
Review 2 Excluded	1	82
Total	95	84

TABLE 2

Of the 96 articles read and re-read during the Tier 2 review process, the second reading changed the study sample inclusion designation of 3 articles. Two of these articles changed from included to excluded. One article changed from excluded to included. The degree of judgment reliability, as measured by the Kappa statistic, is .936.

STUDY SAMPLE SELECTION: TIER 2 KAPPA

	Review 1 Included	Review 1 Excluded
Review 2 Included	53	1
Review 2 Excluded	2	40
Total	55	41

TABLE 3

There were two other adjustments to the study sample. Four book chapters of Goodman's aforementioned 1998 text were added to the study sample because they were the subject matter of an article retrieved by the ISI query. Because of citation ambiguity, the OHSU sent two additional articles to me. (They were in the sample journal issue as an article reviewed by the final Medline query and passed the Tiers 1 and 2 inclusion tests). The final study sample consisted of 54 articles and 4 book chapters. A summary of the Tier 1 and Tier 2 review process is set out in Table 2.

STUDY SAMPLE SELECTION: TIER 1 AND TIER 2 REVIEW

	Medline Set	ISI Set
Bibliographic references retrieved with search queries	127	52
Tier 1. Articles excluded by abstract, keyword or Mesh heading review	56	27
Articles in candidate pool after Tier 1 exclusion	71	25
Additional articles included because of citation ambiguity	2	0
Tier 2. Articles excluded after obtaining reading article and applying inclusion rules	32	12
Article remaining after Tier 1 and Tier 2 exclusion	41	13
Book chapters added through retrieved references	0	4
Actual Sample	41	17

TABLE 4

The full study sample of 58 documents was used for the bibliographic or first phase of the study. The results of the first study phase produced a smaller set of core study articles and chapters. In other words, the core sample, used in frame-set and text analysis, was the result of the findings of the first phase of the study. A more detailed description of the selection process is included in both the methodology and results sections of the thesis.

Study boundary summary

Sample selection was non-reactive and purposeful. In this context, non-reactive means that the researcher has no influence on the subjects. The state of the articles and chapters are the same before, during and after this study [55].

In non-reactive text or subject selection, the researcher alone determines whether the texts stand alone in the study. Likewise, only the researcher determines whether the texts can be used to reach conclusions about, or stand as surrogates for, the authors or body of authors represented by the texts, or whether the texts can be used to reach conclusions about, or stand as surrogates for, the topic or domain represented by the texts [56]. Since my study question focused on the foundations of the domain and assumed that the texts represent the voice or voices of the domain of medical informatics ethics, my study is not about the texts themselves, or the authors who produced the texts. My study was about the field of medical informatics.

I used three research methodologies to identify and describe the voice, or voices of medical informatics ethics: bibliometric comparison using citation analysis, standardized or frame-set citation content analysis, and ethnographic text analysis.

Triangulation of Three Research Methods

The purpose of triangulation is to gain difference perspectives on, or address different aspects of, the research question [58]. Triangulation is the use of more than one methodology to study a research question [57]. Although three methodologies are not necessary for triangulation, three methodologies were used in this study. Table 3 associates aspects of the research question with the methodologies.

STUDY STEPS AND THEIR RELATIONSHIP TO STUDY METHODOLOGIES

Study Step	Methodologies Employed
Step 1 - Who produces journal articles and books about medical informatics ethics?	Bibliometric Analysis (distribution of authors and journals in identified and cited work) Standardized Content Analysis of Citation Use (quality control check to verify relationship between citations and use)
Step 2 - What ethical issues do they identify?	Ethnographic Text Analysis (referential and connotative meaning of words and phrases identified as ethical issues) Bibliometric Citation Analysis (identification of the acceptance and diffusion of issues identified)
Step 3 - What methods do they use and how do they use them?	Ethnographic Text Analysis (referential and connotative meaning of words and phrases identified as ethical philosophies) Bibliometric Citation Analysis (identification of the acceptance and diffusion of the philosophies used)
Step 4 - What are the results of their work?	Ethnographic Text Analysis (referential identification of words and phrases synonymous with products and or results) Bibliometric Citation Analysis (identification of the acceptance or impact within and outside of the domain of medical informatics ethics.)

TABLE 5

Citation analysis

Because of the intertextuality of journal articles and other scholarly or academic texts, citation analysis can be used to identify the breadth and depth of the research domain. Intertextuality

"suggests that a text is always related to preceding or simultaneously occurring discourse, and on the other hand it also implies that there are formal criteria that link texts to each other in particular genres..." [59]. In scientific and academic literature, authors formally declare these relationships with references. Therefore, citation analysis is way to explore and exploit the intertextuality of scholarly and academic texts.

The first study method, citation analysis, was bibliometric comparison. Bibliometric comparison consists of identifying the frequency and distribution of citations within a domain's literature [60]. In this study, bibliometric measures were used to identify theoretical and ethical-philosophical influences in medical informatics. This identification was accomplished by analyzing citation distribution as a reflection an article's "diffusion within the 'scientific community,'" and the degree to which the work has "gained acceptance" and its theories have "been adopted or applied" [61].

Bibliometric analysis, specifically co-citation and co-occurrence have a long history of use in the scientific community. For instance, using co-citation vectors and co-citation clustering algorithms, researchers have shown 30% to 50% gains in the information retrieval measurements of precision and recall [62, 63], and citation analysis is used to define both the core journals and major contributors to a domain [64, 65]. Because of their ability to identify author and subject-matter relationships, co-citation and co-occurrence were used to identify the core sample from the study sample. This core sample was the used for the frame-set and text analysis phase of the study.

Co-citation and co-occurrence are simple concepts that can be implemented inside more complex processing formulas. For the purposes of this study, co-citation and co-occurrence were kept at their most elemental meaning. Co-citation is the relationship that exists between 2 or more

articles, books or authors that are referenced in 1 or more articles or books. Co-occurrence is the relationship that exists between 2 or more documents that each reference 1 or more of the same articles, books or authors. Co-citation and Co-occurrence are illustrated in Figure 2.

CO-CITATION AND CO-OCCURRENCE

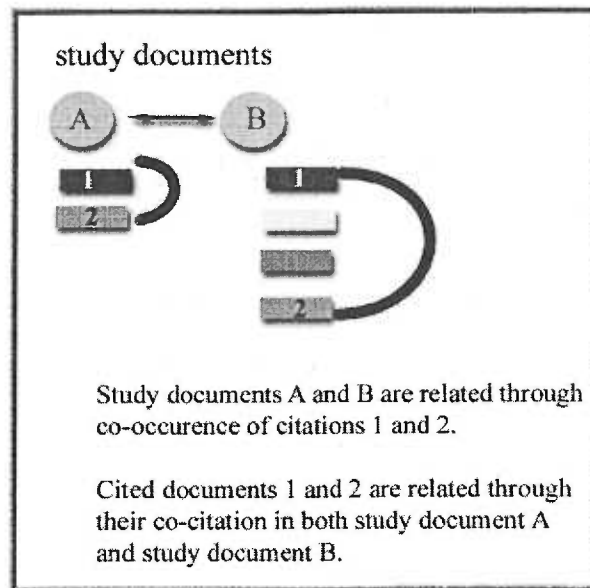


FIGURE 2

Use of descriptive statistics in citations analysis

Perl scripts were written and used to process the references cited in the study sample articles and books. The frequency and distribution of study authors were calculated, as were the frequency and distribution of cited articles (and books) and cited authors. The frequency and distribution of publications sources were also measured.

These measures were used to define the boundaries of the domain of medical informatics ethics as represented in scholarly or academic literature. The same measurements were also used to identify, from the study sample, a smaller set of the core study articles and chapters. This core of

important or foundation works and authors was used as the study sample for both qualitative parts of this study.

Standardized content analysis of citations

The second study method, standardized content analysis, was used to determine the quality of the citations within the core sample. Specifically, standardized content analysis, using frame-set coding, was used to gauge whether citations to articles that identify ethicists, philosophers, ethical theories or ethical methodologies in the medical informatics literature are "over-cited". For the purposes of this study, "over-citation" is the over-representation of the influence of cited authors or works within a domain. Although the quality issues are not always identified as "over-citation" problems, this method is used in other studies to measure the quality of citations [66].

In appropriate circumstances, triangulating frame-set coding and bibliometric citation analysis can be used to control for the inability of bibliometric citation analysis to measure the quality of the citations. The quality of citations is important in studies that rely on the use bibliometric citation analysis [67]. In particular, bibliometric citation analysis is prone to over-citation. Some of the types of "over-citation" that affect bibliometric citation analysis are: 1) the citing author/study is actually critical of the cited author/work; 2) the citation is a self-citation; or 3) the cited work is not central to the citing work. Studies have identified the phenomenon of "over-citation" in the fields of information science [68] and discourse analysis [69], without referring to it by that name.

One reason for over-citation is related to the prominence of the authors, ideas or texts cited. This kind of over-citation might be akin to "name-dropping", where the importance of the author, article or concept is accepted in the field and citation to them is used to enhance the validity of the citing study without actually using the referenced work in a meaningful way. Over-citation can also be representative of the fact that the author, idea or text is common knowledge in the

field. Referencing the cited work is like taking judicial notice of the authority of the person, work or idea, i.e., one does not need to further incorporate the truth of the matter represented by the citation. Over-citation can also occur when the author or work is misunderstood or misrepresented. In this case, the use in the citing work does not represent the meaning of the cited work.

Finally, over-citation may be associated with self-citation. For instance, imagine that there are 10 known articles about a particular subject and that the purpose of the study is to identify the foundations of the work done on that subject. Each of the 10 articles is written each by a unique author and each contains 10 references. In the 100 cited texts, only one author is cited more than 3 times and she is cited 8 times. When you look at the distribution of authors within the 100 cited texts, you reach the conclusion that the author cited 8 times must be one of the foundational thinkers on the matter. However, if you look more closely you discover that all 8 of the citations are self-citations and that none of the other 10 articles on the subject include a reference her work. This may or may not be a case of over-citation. However, simply looking at the distribution of cited authors is not going to identify a problem with a simple descriptive analysis.

In this study, standardized content analysis, or frame-set coding was used to identify when the citing work is actually critical of the cited author/work, when the citation is a self-citation, and when the cited work is not central to the citing work. Standardized content analysis utilized pre-defined coding frame-set to classify the subject matter. A frame-set is simply a set of hierarchical or non-hierarchical categories, and the study methods included placing study objects into the appropriate categories.

Warner's frame-set coding schema was developed as part of a study identifying the true influence of linguistic theory on information science [70]. Because of the similarities between this study

and Warner's, it seemed appropriate to use her schema as the starting point for a frame-set to measure the foundational or true influences of ethics within medical informatics literature. Warner's citation coding categories were: S = Supplementary; R = Review; E = Essential; X = Not Classifiable and N = Negational. The essential code was applied to cited work used to support an important or essential feature of the citing article. The supplementary code was applied to cited work used in a subordinate or non-essential way. In Warner's study, the negational code was applied to works that were rebutted within the citing work. The review code was applied to review articles; and the not classifiable code indicated works cited in the bibliography but not in the article [71].

This study went through 2 iterations of a coding frame-set, both based on the prior work of Warner. The first iteration is displayed in Table 4.

PROPOSED STUDY CODING SCHEME

Citation to Ethical Works	Other Citation
philosophical-ethical works incorporated in study = PE mention and use of works about ethical issues = MU mere mention of works about ethical issues = MM self-citation = SC negative citation = NEG	OTHER

TABLE 6

Warner's supplementary classification is equivalent to my "mere mention" category. In this study, Warner's "essential" category is broken down into two categories: (1) philosophical-ethical works incorporated and mentioned and (2) use of works about ethical issues. This categorical distinction allowed me to differentiate between works that are clearly about ethical issues, for instance an article on the ethical codes for computer scientists, and works within the intellectual discipline of philosophy. In my schema, citations to review articles were classified

according to their content, and citations that were “not classifiable” fell into the “other” category. Because I was very interested in reducing the affects of over-citation on my bibliometric analysis, I added the self-citation classification. (Warner simply excluded self-citations from her analysis.)

The frame-set displayed in Table 4 and described above was difficult to apply. Within philosophical and ethical discourse, contrasting views are often discussed as an integral part of the reasoning. A negative citation does not necessarily represent a waning of the importance of the cited work. It could, in fact, indicate an increasing prominence of the contrasting view. Therefore, after initial attempts to use the frame-set set forth in Table 4, the frame-set was modified by removing the negative citation category. Another adjustment to this coding scheme was required in order to be able to appropriate classify the large number of statutory and regulatory citations. This new category, legal and ethical codes, also includes citations to ethical codes and guidelines. The frame-set used in this study is displayed in Table 5.

FINAL STUDY CODING SCHEME

Citation to Ethical Works	Other Citations
cite to work of philosophy or ethics = PE mention and use of works about ethical issues = MU mere mention of works about ethical issues = MM self-citation = SC cite to legal authorities and ethical codes = LEC	cited not re: ethics = OT self-citation = SC

TABLE 7

Even with modifications, this coding scheme was difficult to apply in the domain of medical informatics ethics. Two primary issues surfaced in my attempt to use the classification system set forth in Table 5: (1) lack of familiarity with the specific cited work, and (2) lack of familiarity with the specific cited author. Absent reading all of the cited works, the title, authors and

publisher did not always give enough information for a confident classification. For example, consider the following citation:

Broday, B.A. 1988. *Life and Death Decision Making*. New York: Oxford University Press.

I am fairly confident that any book on life and death decision-making will include a discussion on ethics, but how do I gauge the significance of the ethical component of this book? The citation context gives me some help; however, it too can be ambiguous. In other words, my classification using the schema in Table 5 depends on disambiguating both the citation context and the context of the use of ethics within a work which I have not read. One way past this dilemma is to have more information on the author. For instance, if Broday is on the surgical faculty of a teaching hospital, the citation would be classified MU. If Broday is the department chair of the philosophy department of a university, the citation would be classified PE.

Recognizing that knowledge of the author is a way to disambiguate the citation brings me to the second problem I encountered using this classification schema. That problem was my callowness in the domain of philosophy. Because I do not know the less renowned philosophers and ethicists in the applicable domains, I could not always distinguish between a citation to a work of philosophy, a citation to a work of ethical guidance created without an underlying philosophical or moral structure, and a citation to a dilettante's first foray into the arena of applied ethics.

These two problems, unfamiliarity with cited works and unfamiliarity with the cited authors, led to the creation of an additional step to measure the general validity of the citations used in the study sample. Using an experimental database developed at Drexler University, the ISI Arts and Humanities literature was searched to find patterns of co-citation between the study sample authors and cited authors, and the authors in the ISI Arts and Humanities collections. This

additional method for disambiguating citations was based on the assumption that if an author in the domain of medical informatics ethics has significant co-citations with an author or authors outside of the domains of medicine, medical informatics, computer ethics, etc., then she is more likely to be engaged in philosophical discourse than if her co-citations patterns are limited to domains of science. Although no systematic test of this assumption was made, a comparison of citations to Karl Popper and Thomas Beauchamp gives some external validity to this assumption. (Appendix D)

Text analysis

The genre of scholarly journal articles and texts can be both argumentative (using contrast to explain or differentiate) and/or instructive (using both contrast and similarity to explain or differentiate) [72]. The “scholarly genre” identifies sameness and otherness both within (the text) and outside (the citations) of the work. Consequently, the study sample is amenable to text analysis as a way to both understand the content of a particular work and to identify how the content differs or agrees with similar works in the research domain. This scholarly structure was exploited to identify themes as well as the dimensions of contrast within the foundational works.

In a recent book on the methodologies of text analysis, Titscher, Meyer, Wodak and Vetter identified 12 methods of text analysis [73]. Three of these types of methods have objectives appropriate to the research question: content analysis, grounded-theory and ethnographic methods [74], but only ethnographic text analysis is based upon discovering of the meaning given to the text by the authors. An overview of these three methods is included in Table 6.

CHOICES OF TEXT ANALYSIS METHODOLOGIES

Method	Objectives	Sampling	Problems for this part of the study
Content Analysis	Description of the manifest content of communication - the coding scheme and research thesis hypothesis is set prior to data analysis	Probability or purposive sampling.	The coding scheme needs to be flexible because study does not assume content categories. The content may not be explicit.
Grounded Theory	Coding scheme and theory is inductively derived (by the researcher) from constant comparison of the data. The hypothesis is not established prior to data analysis and it focuses on the individual case and generally sets out of find theoretical concepts and explanation of which the authors are not (or need not be) aware.	No specific methods, data collection is not done before analysis, theoretical sampling expands the collection.	Study is not primarily interested in inductively derived interpretation of the data.
Ethnographic Methods	To interpret texts against the background of cultural structures or to use texts to reconstruct those cultural structures .. that is to identify a system of inherited conceptions expressed in symbolic forms. Therefore, the coding scheme will emerge out of the data, the hypothesis will not be set prior to data analysis and sets out to discover what the authors know or are aware of (even if the language used is not explicit).	Not specified.	Text analyses are most often found in fringe areas (using documents as cultural artefacts) of ethnography where they fulfill an auxiliary function.

TABLE 8

According to Titscher, et al, [75] every text must have cohesion and coherence. Coherence is the term for the semantics or meaning of the text. Cohesion refers to the syntactic connectedness of the text. For instance, in a scientific thesis, part of coherence is a standard structure that includes the table of contents, acknowledgments, abstract, introduction, methods, results, etc. To a certain extent, citation analysis relies on the cohesion of academic and scientific writing. This study's third methodology, ethnographic text analysis, is used to investigate the coherence or meaning of the journal articles. Although ethnography is not commonly used outside of field research or

observational studies, between 1991 and 1998 ethnographic techniques have been used in at least 65 studies of text [76]. In this study, the ethnographic techniques outlined by Spradley [77] were used to conduct the text domain analysis.

Spradley's definitions of culture, cultural knowledge, cultural artifacts and ethnography fit the study question. According to Spradley, there are "three fundamental aspects of human experience: what people do, what people know, and the things people make and use. When each of these are learned and shared by members of some group, we speak of them as cultural behavior, cultural knowledge and cultural artifacts." [78]. In academic or scholarly fields (like medical informatics and ethics) creating texts is an important cultural behavior ("publish or perish"). Academic or scholarly texts are the tools used to convey cultural knowledge, gain and maintain cultural status and dominate discourse. And finally, these texts are the cultural artifacts used to record the history of the domain or culture. Therefore, the four study steps: "who produces the texts; what issues have they identified; what methods do they use; and what are the results of their work?" are closely related to Spradley's "three fundamental aspects of human experience ... what people do, what people know and the things people make and use" [79].

Spradley's ethnographic methods can be adapted to text analysis because they identify, organize and explore cultural domains through the semantic relationships that exist between the domains. Domains and relationships are then used to create a taxonomy of the cultural domain. Although all of the steps in Spradley's taxonomy development are not applicable to the text analysis phase of this study, the methods are appropriate to begin the process of defining the cultural domain and taxonomy of medical informatics ethics.

As mentioned earlier, I used ethnographic text analysis methods because they are best suited to studying the meaning given by the author and culture to the texts. Spradley's methods do

distinguish between explicit (manifest) and tacit (latent) meaning and includes steps to find both. However, because the use of ethnographic techniques for text analysis has significant limitations when it comes to discovering tacit meaning, the majority of this study was concerned with explicit meaning. None-the-less, the study results can be used to hypothesize tacit meaning and this thesis includes some discussion of the tacit meaning of the texts.

Another reason for the choice of this text analysis methodology was my own familiarity with it. I took an introductory ethnographic research course from Drs. McCurdy and Spradley at Macalester College in the mid-1970s. Over the last 20 years, I have used the skills acquired during that course to create taxonomies for legal domains.

There were many steps in my text domain analysis of the core study sample. First, I read each of the study articles for the third time. (The first two times were during the study sample selection.) Next, I divided the articles into four general subject matter categories: medical informatics ethics; ethics & health information systems (which consisted most of patient records); decision support systems; and genetic databases. Then, I began my fourth reading of the core sample; however, this time the order in which I read the articles was related to which their general subject category. During the fourth reading I used both pencil and yellow marker to identify the portions of the texts that I thought were relevant to the study. I also used index cards to create domains for names of things I found in the articles and book chapters. An image of one of my index is shown in Figure 3.

DOMAIN INDEX CARD

H10	is a kind of	ethical dilemma
comprehension		
confidentiality		
complexity of informed consent		
freedom of choice		
right to know		
right not to know		
involvement in genetic testing		
DNA banking		
requirements of research		

FIGURE 3

On my fifth reading of the articles and chapters, I added other semantic relationships and domains to my collection. By the end of the fifth reading I had created almost 900 of these cards and organized them, by article or book chapter.

Finally, I translated the collection of cards into an inventory of domains for each document. In many cases, this also included a re-review or 6th reading of the source text. The inventory is the basis for the subsequent text analysis results.

Summary of Units of Analysis and Variables

Table 7 is a summary of the methods, units and analysis and variable used in this study.

STUDY UNITS OF ANALYSIS & VARIABLES

Method	Unit of Analysis	Variables
Bibliometric Citation Analysis	Article or Chapter	Author (frequency) Source (frequency) Times Cited Cited References: Author (frequency) Cited References: Source (frequency)
Standardized Content Analysis	Article or Chapter	Citation Code
Ethnographic Content Analysis	Article or Chapter	Cultural Domain (words or phrase) semantic relationship

TABLE 9

STUDY ASSUMPTIONS

The range of study assumptions includes presumptions about study methods and software, hardware and author integrity. A simple inventory of my study assumptions includes:

1. Methods:

- 1.1. The assumption that ethnographic techniques are appropriate for scholarly text analysis.
- 1.2. The assumption that authored articles and books represent or stand for the field of medical informatics ethics as a whole.
- 1.3. The assumption that if an author in the domain of medical informatics ethics has significant co-citations with an author or authors outside of the domains of medicine, she is more likely to be engaged in philosophical discourse than if her co-citation patterns are limited to domains of science.

2. Hardware and Software Integrity:

- 2.1. The assumption that the Medline and ISI databases were fully functional and that all of their content was available at the time of my searches.

3. Author Integrity:

- 3.1. The assumption that study authors describe genuine opinions and methods in the articles and books they author; e.g., they are not being disingenuous, solicitous, etc.

STUDY VALIDITY

Assessing the internal and external validity of qualitative research is analogous to, but not identical to, quantitative research. In qualitative research, internal validity is assessed by both the credibility and reliability of the study. External validity is judged by the transferability of the study. Researcher bias is much more difficult to measure in qualitative research than it is in quantitative research. However, the confirmability of a study can be discussed by reviewing the study methodologies.

Credibility

The use of well-established quantitative and qualitative research techniques, as well as my experience using these techniques, enhances the credibility of the study.

Reliability

Following the methods set out in this study enhances the study's reliability. By following each step of the sample selection and coding processes and reading my research notes, other researchers will be able to replicate this research.

Transferability

This study does not apply outside of the domain of medical informatics ethics. However, the methodology explicated could be used to study another multi-disciplinary academic field.

Confirmability

The researcher assumes that the results of this study do, in some way, represent the bias of the researcher. However, the methodologies chosen to select the domain texts and the content analysis both contain measures to minimize these biases in the study. Text selection takes place

using computerized and other indexes within a rule-based process. Other than testing retrieval queries for the size and general content of the results, no domain analysis proceeded prior to the acquisition of the documents collections. Use of a no-frames coding procedures for text analysis, in which concepts and terms are not pre-selected, also reduces investigator bias.

STUDY LIMITATIONS

This work is limited by several factors that fall into three main categories: limitations associated with the use of Medline, limitations associated with the use of ISI, and researcher limitations.

Medline

This work is limited by the quality of MeSH taxonomy to represent the study domain.

Preliminary attempts to define study methodology indicated that both the quality of available MeSH headings in the field of medical informatics and the consistent application of those headings by indexers was less than optimal. The PubMed search interface also presented a research problem. Specifically, the inability to search by MeSH heading numbers prohibited development of more precise research queries. Finally, this research was limited by the inclusion or exclusion of appropriate study literature within PubMed.

Science and Social Science Citation Indices (ISI)

Because I only had electronic access to 1990-2002 SCI and SSCI references, my search of 1985-1989 literature included only the PubMed database. (I could have used the paper versions of SCI and SSCI to extend the search of these indices to 1985-1990; however, the human resources required for such a paper search were prohibitive.) The study was also limited by inclusion or exclusion of appropriate literature within ISI, which is known to under-represent English language articles from journals and authors from non-English speaking nations [80].

Single Researcher

Study limitations associated with the use of a single researcher include:

1. The quality of my search strategy and queries.
2. The exclusion of non-English language articles and books.
3. The inability to perform quality or validity checks on the standardized content analysis coding.

4. The inability to perform quality or validity checks on the text analysis and taxonomy development.

RESULTS

Study Artifacts - Articles and Book Chapters (N=58). See Appendix F.

Author distribution

109 people authored the 58 study articles and book chapters. The 58 articles and books originated in a number of countries with several of the articles resulting from international collaborations. Although 23 of the 58 articles and books came from U.S. authors, other countries of authorship included: Canada (n=10); UK (n=6); France (n=5); Germany (n=4); Sweden (n=3); Ireland and Belgium (n=2); and South Africa, China, Norway and the Netherlands (n=1). Only 9 of the 109 authors produced 2 or more of the study articles or study book chapters. Three of those 9 authors co-authored the same 2 articles. Those nine authors (with their country of origin) are listed in Table 8.

STUDY AUTHOR DISTRIBUTION

Author	# Study Artifacts
Kluge, E.H.W. (Canada)	7
Gremy, F. (France)	5
Goodman, K.W. (U.S.)	4
Alpert, S.A. (U.S.)	2
Knoppers, B.M. (Canada)	2
Rigby, M.; Draper R.; Hamilton, I. (Ireland)	2
Timpka, T (Sweden)	2

TABLE 10

Source distribution

The 58 study articles and book chapters came from 38 different journals and 1 textbook. Seven of these sources published 2 or more of the study articles or book chapters. Those 7 sources are listed in Table 9.

STUDY SOURCE DISTRIBUTION

Source	# Study Artifacts
Methods of Information in Medicine	9
International Journal of Medical Informatics	5
ETHIC, COMPUTING and MEDICINE - Informatics and the Transformation of Health Care (Goodman 1998)	4
Computing in Nursing	2
Journal of Nursing Administration	2
MEDINFO	2
Nurse Management	2

TABLE 11

Bibliometric Citation Analysis

Cited author distribution

The study sample of 58 articles and book chapters contained citations to 1165 documents. Only 162 of the 1165 cited references had authors (individual or institutional) who were cited 2 or more times.

The main purpose of the citation analysis was to help determine who produces the foundational works in medical informatics ethics. Although an unrefined list of top cited authors is valuable, I preferred using a more refined analysis of the cited author distribution. Therefore, the distribution of cited authors was not the measurement of cited authors per study article or chapter. Instead, it was the number and distribution of cited authors cited per study author. The latter measurement reduces the inflation of a cited author's importance simply by virtue of her use by a small number of study authors or inflation because of her tendency to be cited by a study author who has 2 or more articles in the study sample. As discussed in the methods section pertaining to frame-set analysis and over-citation, self-citations were discarded from this measurement. Using

these measurements, there are 939 unique study author-to-cited author pairings in the study. The 52 authors who were cited by 2 or more study authors are listed in Table 10.

CITED AUTHOR DISTRIBUTION

Cited Author	Times Cited	Cited Author (continued)	Times Cited
BEAUCHAMP TL	8	GRITZALIS D	2
ANNAS GJ	5	GULCHER JR	2
DICK RS	5	HEDGES LV	2
ALPERT S	3	HEIDEGGER M	2
BENNER P	3	HODGE JG	2
COUNCIL OF EUROPE	3	HUGO ETH COMM	2
FLAHERTY D	3	HULLEY SB	2
KLUGE EHW	3	LAST JM	2
KNOPPERS BM	3	MALHERBE JF	2
MILLER RA	3	MARWICK C	2
SAFRAN C	3	MILLER MW	2
SHORTLIFFE EH	3	MUSEN MA	2
ALLEN AL	2	PELLEGRINO ED	2
AMERICAN NURS ASS	2	RICOEUR P	2
ANDREWS LB	2	RIND DM	2
BARBER B	2	SCHWARTZ PM	2
BARROWS RC	2	SILBERG WM	2
BISKUP J	2	SPIELBERG AR	2
BLUM BI	2	THOMPSON SG	2
CAMPBELL MK	2	VANBEMMEL JH	2
DREYFUS HL	2	VANDERLEI J	2
ENGELHARDT HT	2	WAGNER I	2
EPSTEIN AM	2	WEED LL	2
GOLDMAN J	2	WESTIN AF	2
GOSTIN LO	2	WOODWARD B	2
GREENES RA	2	WYATT JC	2

TABLE 12

These authors accounted for 125 or a little more than 13% of the 939 unique study author-to-cited author pairings in the study. For the purposes of this study, this list of 52 cited authors was considered the “foundational core of cited authors” (FCCA) in the literature of medical informatics ethics.

Cited source distribution

The 1165 cited works were distributed among 730 distinct journals, book publishers, government agencies, newspapers, etc. The 15 most frequently cited sources are listed in Table 11.

CITED SOURCE DISTRIBUTION

Cited Source	# of Citations
Journal of the American Medical Association	55
New England Journal of Medicine	26
Methods of Information in Medicine	20
Annual of Internal Medicine	18
Literature and Medicine	18
British Medical Journal	17
Critical Care Clinician	16
Science	16
Journal of the American Medical Informatics Association	15
COMMUN ACM	14
Critical Care Medicine	13
Lancet	11
Journal of Clinical Epidemiology	9
Principles of Biomedica	9
Statistics in Medicine	9
Sage Publications	8
Total Citations Top 15 Sources	274

TABLE 13

The top 15 cited sources account for 274 or almost 38% of all of the cited sources in the study.

Foundational core study subset (FCSS)

From the 58 study articles and chapters, a foundational core of 12 study documents was determined by triangulating 4 bibliographic measurements:

- Test 1: All study articles or chapters that have been cited 9 or more times (no self-citations).
- Test 2: All study articles or chapters whose author produced 2 or more of the study artifacts.

- Test 3: All study articles or chapters whose author is cited by 2 or more of the foundational core of cited authors.
- Test 4: All study articles or chapters that cite 8 or more of the foundational core cited authors and are themselves cited at least 1 time.

The test thresholds for inclusion in the FCSS were determined by obtaining the mean measurement of each of the 4 criteria. An arbitrary cut point of criteria values at or above the 90th percentile of the FCSS sample were selected for inclusion in the Foundational Study Core Subset. Jmp® software (version 3.2.1) was used to calculate this cut point. For example, the mean number of citations to study sample documents is 3.9 and the FCSS cut point (top 10%) begins at 9 citations to an article. Table 12 lists the first authors of the articles and chapters selected using the 4 test thresholds of bibliometrics measures.

ARTICLES THAT MET FCSS INCLUSION TESTS (LISTED BY FIRST AUTHOR)

Test 1 (n=5)	Test 2 (n=24)	Test 3 (n=11)	Test 4 (n=5)
Annas (n=1)	Alpert (n=2)	Annas (n=1)	Alpert
Gostin (n=1)	Goodman (n=4)	Alpert (n=2)	Goodman
Kay (n=1)	Gremy (n=5)	Kluge (n=7)	Kay
Kluge (n=2)	Kluge (n=7)	Miller (n=1)	Kluge
	Knoppers (n=2)		Wynia
	Rigby (n=2)		
	Timpka (n=2)		

TABLE 14

Although some articles met more than one of the inclusion criteria for the FCSS, weighting was not done by either the number of inclusions tests met, or the type of inclusion test satisfied. However, one additional test was used when an author had more than 1 article that met the core study subset selection criteria. Only 1 article was included in the core subset for authors with ≤ 2 study articles; the chosen articles was the one with the most citations. Two articles were included in the core subset for authors with ≥ 3 study articles; the chosen articles were the most

frequently cited and the most current. Table 13 lists the author, title, and times cited of the 12-study core subset.

FCSS LISTED ALPHABETICALLY, BY AUTHOR (N=12)

First Author	Title	Times Cited
Alpert, S. A.	Chapter 5: Information, confidentiality, and good practice (Goodman)	3
Annas, G. J.	Drafting the Genetic Privacy Act science, policy, and practical considerations	17
Fessler, J. M. (2nd author Gremy, F.)	Ethical problems in health information systems	1
Godard, B.	Ethical issues involved in establishing a registry for familial Alzheimer's disease	8
Goodman, K. W. and Miller, R. A.	Chapter 6: Ethical challenges in the use of decision-support software in clinical practice	9
Gremy, F.	Scientific Context and the Human Meaning of Informatics Applied to Health-Care	5
Kay, S.	Medical records and other stories A narratological framework	18
Kluge, E. H.	Professional codes for electronic HC record protection ethical, legal, economic and structural issues	1
Kluge, E. H.	Advanced patient records some ethical and legal considerations touching medical information space	23
Rigby, M.	Towards an ethical protocol in mental health informatics	1
Timpka, T.	Professional ethics for system developers in health care	3
Wynia, M. K.	Shared expectations for protection of identifiable health care information - Report of a national consensus process	1

TABLE 15

To reiterate, using bibliographic analysis and 4 different measurements of importance, I identified the core sample subset of the study. The textual or semantic content of this sample subset was analyzed using standardized content and ethnographic analysis techniques.

Standardized Content Analysis

Standardized content analysis using a frame-set coding scheme was constructed to perform as a quality assurance check on the study citations. As mentioned earlier, this method did not work as

well as hoped. Consequently, an additional citation quality check was performed. The purpose of both of these checks was to make certain that domain literature was appropriate incorporating, by reference, philosophical and ethical works from this and other domains. Additionally, the frame-set analysis was used to test for over-citation.

No evidence of over-citation was discovered. Table 14 shows the standardized content analysis on the 12 core subset artifacts.

FRAME-SET CITATION CLASSIFICATION: STUDY CORE SUBSET

First Author	PE Cite to work of philosophy or ethics	MU Cite & use of work about ethical issues	LEC Cite to legal authoritie s and ethical codes	MM Mere mention of cited work about ethical issues	SC Self- citation	OTHER Citations	TOTAL
Alpert	10	14	1		2	35	62
Annas		3		1	19	4	27
Fessler	3				4	1	8
Goodman & Miller		4			6	22	32
Gostin		5	3	1	4	20	33
Gremy	7	4			3	9	23
Kay	6	8				105	119
Kluge ('93)	2		5		1		8
Kluge ('99)	6	2	2		4		14
Knoppers		3	5		3	4	15
Timpka	10	7				5	22
Wynia	1	70	6			6	83
TOTAL	45	123	23	2	47	217	457

TABLE 16

Because of the limitations to the frame-set analysis of citations (discussed in the methodology section of this thesis) an additional analysis was undertaken. In this process, "very important" cited authors (those cited by 3 or more study authors) and the study authors were merged into a

single set of authors. This set was then checked for co-citation patterns outside of the domains of medical informatics, medicine and computer science. Specifically, the ISI Arts & Humanities bibliographic reference database was checked for co-citation patterns. The purpose of this was two fold: first, to verify what the frame-set analysis results indicated, i.e., that there is appropriate citation to ethical and philosophical works within the domain of medical informatics ethics; second, to determine schools of thought among the “very important” cited authors and the study authors. This analysis found that 17 of the authors of the 58 study texts were co-cited in the Arts & Humanities literature. Additionally, within the foundational core of cited authors, co-citations to major philosophers were common. Therefore, this data confirmed the results of the frame-set analysis, i.e., that philosophy is “appropriately” or “adequately” cited within the domain of medical informatics ethics.

Because drawing inferences about schools of thought among the study and cited authors was not within the scope of this study, these results are not included in the body of the thesis. However, the co-citation results, without comment on relationships and schools of thought are included in Appendix E.

Ethnographic Text Analysis

An inventory of the cultural domain of medical informatics as represented by the core subset of domain artifacts is fully set out in Appendix F. Each article has its own taxonomy. Most of the time that taxonomy is fairly shallow. Development of a deep taxonomy is beyond the scope of this study and probably beyond the methods used.

The creation of a complete taxonomy of the field of medical informatics ethics would require, at least, face-to-face interviews and observations with medical informatics ethicists. It would also probably require studying other cultural artifacts and observations of the ethicists at work in their

domain. However, it was possible to begin the process of discovering some common cultural themes by creating tables of dimensions of contrast at the highest level of the domain hierarchy. Table 15 includes 4 kinds of medical informatics ethical domains and the major ethical problem associated with each core subset artifact (n=12).

MEDICAL INFORMATICS ETHICS DOMAINS: MAJOR PROBLEMS

Medical Informatics Ethics Domain	Major Problem or Issue	Author(s)
Health Information Systems	Need to know vs. right to privacy	Alpert, SA
	Unrealistic expectations of electronic medical record	Kay, S
	Failures of health information systems	Fessler, JM; Gremy, F
	How to achieve comprehensive system of health care	Gostin, LO
	conflicting ethical standards	Wynia, MK
	Mental health not addressed in ethical principles & legislation	Rigby, M, et.al.
	Reification of gnostic patient analog ³	Kluge, EHW
	Jurisdictional stipulations in ethical guidelines	Kluge, EHW
Decision Support Systems	Appropriate uses & users of medical decision support systems	Goodman, KW; Miller RA
Genetic Databases	Identify ethical guideposts for mutation databases in order to achieve 5th stage genomics	Knoppers, B
	Create Model Legislation to Protect Genetic Privacy	Annas, G
Medical Informatics	Illusions and Delusion of Medical Informatics	Gremy, F
	Failure of Medical Informatics During System Design	Timpka, T

TABLE 17

Tables 16-19 take the problems identified in table 15 and distinguish them from one another with dimensions of contrast. Each table represents a different subject domain. Table 16 is the dimension of contrast table for the domain of health information systems.

³ Reification is the mistake in reason when you think of the symbol as the thing. Gnosticism is a dualist set of teachings that distinguishes the spiritual and good world from the evil and material world.

DIMENSIONS OF CONTRAST BY PROBLEM AREA: HEALTH INFORMATION SYSTEMS

Problem	Conflict(s) Identified	Privacy Issues	Confidentiality Issues	Autonomy	Anonymity	Informed Consent	Universality	Ethical-Philosophical Analysis	Ethical & Intellectual Concepts	Dehumanization	Physician-patient relationship	Development Competence
Need to Know vs. Right to Privacy	more efficient, life enhancing medical care vs. eroding patient and provider privacy	yes	yes	yes	yes	yes	no	yes	deontology; utilitarianism; Kantianism	no	yes	no
Unrealistic Expectations of Electronic Medical Record	Holy Grail vs Heretics; holistics vs. reductionist; gnostic model vs. information model	no	no	no	no	no	no	yes	narratology	yes	yes	no
Failure of Health Information Systems	struggle for power	no	y	no	no	no	no	y	Rawls: Social Justice	no	no	no
How to Achieve Comprehensive System of Health Care	societal health care benefit vs. loss of personal privacy	yes	yes	yes	yes*	yes	no	yes	utilitarianism; primacy; social contract (not Rawls)	no	yes	no
Conflicting Ethical Standards	business vs. public health vs. personal vs. medical professional ethical standards	yes	yes	yes	yes	yes	yes	no	-----	no	no	no
Mental Health Not Addressed in Ethical Principles & Legislation	-----	no	yes	no	no	yes	no	no	-----	no	yes	no
Reification of Gnostic Patient Analog (see fn #3)	ethically appropriate patient record vs. financially motivated patient record	yes	no	yes	no	yes	no	yes	deontological & pragmatic	no	yes	no
Jurisdictional Stipulations in Ethical Guidelines	ethics vs. law	yes	no	yes	yes	yes	yes	yes	deontological	no	no	no
* inferred by antonym "personally identifiable"												

TABLE 18

Table 17 is the dimension of contrast table for the domain of decision support systems.

DIMENSIONS OF CONTRAST BY PROBLEM AREA: DECISION SUPPORT SYSTEMS

Problem	Conflict(s) Identified (name them)	Privacy Issues	Confidentiality Issues	Autonomy	Anonymity	Informed Consent	Universality	Ethical-Philosophical Analysis	Ethical & Intellectual Concepts	Dehumanization	Physician-patient relationship	Development Competence
Appropriate Uses & Users of Medical Decision Support Systems (MDSS)	replication of finest human decision making vs. human functional uniqueness; use of MDSS vs. skill degradation	no	no	no	no	yes	no	yes	appropriate tool use	no	yes	yes

TABLE 19

On the following pages Table 18 is the dimension of contrast table for the domain of genetic databases, and Table 19 is the dimension of contrast table for the domain medical informatics.

DIMENSIONS OF CONTRAST BY PROBLEM AREA: GENETIC DATABASES

Problem	Conflict(s) Identified (name them)	Privacy Issues	Confidentiality Issues	Autonomy	Anonymity	Informed Consent	Universality	Ethical-Philosophical Analysis	Ethical & Intellectual Concepts	Dehumanization	Physician-patient relationship	Development Competence
Identify Ethical Guideposts for Mutation Databases in order to achieve 5th Stage Genomics (see article for definition)	conflict of interest	no	yes	no	yes	yes	yes	no		no	yes	yes
Create Model Legislation to Protect Genetic Privacy	maximize benefits vs. minimize harms	yes	yes	yes	yes	yes	no	no		no	no	no

DIMENSIONS OF CONTRAST BY PROBLEM AREA: MEDICAL INFORMATICS

Problem	Conflict(s) Identified	Privacy Issues	Confidentiality Issues	Autonomy	Anonymity	Informed Consent	Universality	Ethical-Philosophical Analysis	Ethical & Intellectual Concepts	Dehumanization	Physician-patient relationship	Development Competence
Illusions and Delusion of Medical Informatics	scientism vs. medicine and health	no	no	yes	no	no	no	yes	scientific model	yes	no	yes
Failure of Medical Informatics During System Design	employer vs. business client vs. patient standards of behavior	no	yes	yes	no	yes	no	yes	case study	no	no	yes

DISCUSSION and CONCLUSIONS

Who Produces Journal Articles and Books about Medical Informatics Ethics?

There are a small number of core authors in the field of medical informatics ethics. Some of them are professional ethicists. Many of them are co-cited outside of the traditional domains of medical informatics, i.e., citations in Arts and Humanities literature. Although published in many different journals, the journals that most frequently publish articles on medical informatics ethics are medical informatics journals. The two highest impact journals - *Methods of Information in Medicine* and the *International Journal of Medical Informatics* – are not U.S. publications. This result is not unexpected because the majority of informatics journals are published in Europe. The core authors are frequently cited (mean = 7.5 times).

What Ethical Issues Have They Identified?

There are three common themes in the ethical issues these authors have identified. The themes are:

- ◆ Medical informatics has the potential to greatly improve the quality of medical care as well as to make medical care more efficient and to help conserve health care resources. Good ethical practices and policies are necessary to achieve these goals.
- ◆ Medical informatics has had many failures. Good ethical practices and policies are necessary to prevent system failures, or, in some case, to fight dehumanization in medicine and reductionism in medical informatics.
- ◆ There are many conflicting ethical codes and guidelines. Good ethical practices and policies are necessary to reduce confusion. International standards are required.

Interesting moral issues that were identified in the larger study sample, but that did not fall into the core of the medical informatics literature, include: the use of virtual reality in the treatment of the disabled, ethical obligations to respond to unsolicited email, and a taxonomy of health information systems.

What Methods Do They Use?

By far the most common analysis method or philosophical perspective seems to be the tacit common sense or analytical approach. Given the strong co-citation pattern identified with study and cited authors to Kant, this is a bit unexpected. However, a closer examination of the co-citation patterns shows authors in the core subset of the study documents (n=12) are more closely associated with Beauchamp, who mixes notions of beneficence, justice and autonomy to derive a set of principles unique to medical experimentation.

It should also be noted that two study authors who had substantial co-citations to foundational thinkers (identified in Appendix E) did not meet the criteria of the core subset of documents. Like Annas, Sass and Schaffner are ethicists with a prolific body of work. Unlike Annas however, citation patterns place Sass and Schaffner outside the center of medical informatics ethics. In his study article, "Genotyping in Clinical Trials: Towards a Principle of Informed Request", Sass associates progress in genotyping to the "Age of Reason's vision of individual self-determination and autonomy [81]." Schaffner's article, "Medical Informatics and the Concept of Disease", addresses a problem not asked in any of the core subset articles. Schaffner's paper "attempts to address the general question whether information technologies, as applied in the area of medicine and health care, have or are likely to change fundamental concepts regarding disease and health [82]."

Either of these papers would have been welcome additions to text analysis portion of the study. Their failure to make the core subset may indicate that the selection criteria were not optimal. However, their exclusion from the core study subset might also indicate that established medical ethicists are under-represented in the domain of medical informatics ethics.

What are the Results of The Foundational Work?

The most common product of the work represented by the core subset is a set of recommendations for codes or principles of ethical conduct. In fact, five of the core study authors have worked on codes of ethics that, in one form or another, have been implemented by the informatics, medical or legal communities. In a more novel approach, Timpka conducted a case-study to examine the effects of ethical conflicts and unethical communication on the design success of a medical informatics application [83].

Future Research

This thesis is the groundwork for future studies in the domain of medical informatics ethics. That work could include: (1) studying the inclusion of postmodern or continental thought in the domain of medical informatics; (2) examining the taxonomy for other domains of contrast, (3) using the taxonomy as the basis for an ethnography of medical informatics ethicists; (4) examining the legal and moral theories used to study the ethical appropriateness of anonymizing patient data as an alternative to obtaining informed consent for the collection and use of a patient health or genetic information; and (5) examining ethical issues associated with the electronic medical record.

Conclusion

It is often stated that information systems have the ability to transform cultures in both intended and unintended ways [84, 85]. Based on my own experience of professional and consumer information systems, as well as the previously cited literature, I believe that such statements are true. It is this truth that creates many of the ethical issues in medical informatics.

There are at least two discernable camps in the medical informatics ethics literature. Their ethical philosophies and signature morality plays deeply conflict. In one, a central character announces that broader access to patient records will produce much better, cheaper, more efficient healthcare. The archetype for this character is a single author, Dr. Richard S. Dick. In this story, informaticists often declare – with no sense of irony – that the electronic patient record is the Holy Grail of Informatics. (Perhaps these people aren't familiar with the result of the Crusades?)

The other camp's ethical stage is set with a painted backdrop of the failures of medical informatics applications, the failures of AI research, and a large question mark suggesting that the "truth" of the medical record is over-stated. Against this background, the actors focus their quest on applications that re-humanize healthcare. That is not to say that they have abandoned medical informatics, they have not - they embrace it, but for the purpose of satisfying the individual patient and the clinicians who treat him.

Is it possible to reconcile these views? Probably not. The two camps are almost perfectly divided along national lines - Americans vs. Europeans. Although medical informatics ethics is an emerging discipline, this split is an old one. American vs. continental, modern vs. postmodern ... these divides exist in philosophy, many other academic fields, and in politics.

My deepest satisfaction from conducting this study is the identification of a number of influential medical informaticists and ethicists with whom I share beliefs and convictions. Discovering the works of Francois Gremy and, to a lesser extent, EHW Kluge has revitalized my interest in and hopes for medical informatics. In Europe, Francois Gremy is acknowledged as one of the founders of medical informatics [86]. Like Dr. Gremy, I am concerned about scientific reductionism and the "delusions and illusions" upon which many in medical informatics build their work. In an address to an international conference on medical informatics, Dr. Gremy humbly asked. "... Where is the delirium: in them or in me?" [87].

My greatest disappointment in the findings of this study is in the most commonly identified solution to the issues of privacy and informed consent. That solution is the de-identification or anonymizing of patient data or subject data.

Reading ethical and philosophical works can inform and improve the work of medical informaticians. In my case, this study and reading other works of philosophy and ethics have helped me in at least three ways. First, they helped me identify a recurring flaw in medical informatics research. Second, they helped me adopt a personal method for identifying ethical issues in medical informatics. Third, they helped me understand that the flaw I've identified and the ethical methodology I've adopted fit into an intellectual tradition and ongoing debate about the nature of science, knowledge and moral right. The flaw, as illustrated by the dogged pursuit of the EMR and the Human Genome project, is "that sciences provide not only the *means* for human perfectibility but also reveal the *ends* to be achieved" [88]. My method for identifying ethical issues - asking myself whether I have a conflict of interest and whether I am competent to perform that task. - is to "test and risk .. (my) convictions and prejudgments in and through an encounter with what is radically "other" and alien" [89]. This ethical method is in harmony with my understanding of Karl Popper's description of what science is. And, although I do not believe

that science or rationality can tell us how to live, I do believe that asking how we should live and what we can know will improve medical informatics, medicine, and science.

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APPENDIX A

*Definitional excerpts from the 1995 Edition of the Oxford Companion to Philosophy,
Editor Honderich, T.*

Analytic Philosophy. Characteristic of much twentieth-century anglophone philosophy, of the type which describes itself as 'analytic' to express alliance to rigour and precision, science, logical techniques and -- perhaps most distinctively of all--careful investigation of language as the best means of investigating concepts. Analysis has sometimes been claimed to involve 'reduction of one kind of item--in the linguistic mode, a statement or preposition, or set of them; in the material mode, entities of given sorts--to items of another kind. The second kind of reductive analysis is eliminative, unlike the first, in holding that it is the reducing class of phenomena which is real or fundamental.

Applied ethics. Since the 1960s academic work in ethics dealing with practical or 'applied' questions has become a major part of both teaching and research in ethics. This development is a revival of an ancient tradition. Greek and Roman philosophers discussed how we are to live, and die, in quite concrete terms.

Aristotelian ethics. Regards matters of right and wrong as unencapsulable in rules and describes the virtuous individual as someone who perceives and fairly effortlessly acts upon situationally

Autonomy. The moral agent's own freely and rationally adopted moral policy (Kantian). Others view autonomy as the individual's total sovereignty over his or her 'choice of moral values and self-construction.

Axiological ethics. The portion of ethics that is concerned specifically with values. Unlike the portions concerned with morality and with social justice, axiological ethics does not focus directly on what we should do.

Benevolence. To be possessed by a desire for the good of others and a willingness to forward that good actively. Benevolence, may take the form of compassion, mercy, kindness or generosity. The term has also come to be used more recently in a much narrower sense, to refer to acts of charity. An act of charity occurs when some benefit is freely bestowed by one individual with a surplus on another who is in need. This narrowing of the meaning of benevolence means what was initially a term used to describe an uncontroversially desirable attitude to others has come to be used, perhaps, to put a good face on the largess of the better-off to the worse-off.

Care ethics. A group of moral reflections about the moral emotion and virtue of care that emerged from feminist theory. The ethics of care promote traits in intimate personal relationships, such as sympathy, compassion, fidelity, discernment, love, and trustworthiness.

Cauistry. the art of resolving problems of conscience. The starting-point for the exercise of casuistry is the individual case of conscience.

Consequentialism. A term now used for the view that all actions are right or wrong in virtue of the value of their consequences.

Contract, social. A philosophical fiction developed by early modern theorists to show how political obligation rests on individual consent--that is, on the consent that rational individuals would give were they ever to experience life without obligation and authoritative rule.

Deontological ethics. Moral theories according to which certain acts must or must not be done, regardless of some extent of the consequences of their performance or non-performance. According to deontology, certain acts are right or wrong in themselves.

Justice. In one sense is identical with the ethics of who should receive benefits and burdens, good or bad things of many sorts, given that other might receive these things. Although discourse about justice is often influenced by models of law, the ethics of justice is a subject in itself.

Kantian ethics. Ethical theories which have their origins in, or are constructively influenced by, the moral philosophy of Kant. Kant's outstanding contribution to moral philosophy was to develop with great complexity the thesis that moral judgements are expression of practical as distinct from theoretical reason. Kant argues that willing is truly autonomous if but only if the principles which we will are capable of being made universal laws. Such principles give rise to 'categorical imperatives', or duties binding unconditionally.

Meta-Ethics. The philosophical study of the nature of moral judgement. So instead of being concerned with questions of what actually is right or wrong (or good or bad), it is concerned with the meaning or significance of calling something right or wrong. It also includes the problems of moral philosophy.

Rights. Rights are justified claims to the protection of persons' important interests. When the rights are effective, this protection is provided as something that is owed to persons for their own sakes. The upholding of rights is thus essential for human dignity. unique moral requirements.

Utilitarian ethics. An approach to morality that treats pleasure or desire-satisfaction as the sole element in human good and that regards the morality of actions as entirely dependent on consequences or results for human (or sentient) well-being.

Virtue ethics. Play down the importance or even deny the existence of generally valid moral rules or principles, and claim that morality is most fundamentally to be understood in terms of inner traits, virtues, that cannot be cashed out in terms of rules or goals.

APPENDIX B

Search Queries Used to Identify the Study Sample.

ISI: SCI and SSCI search

Topic=((medical informatics OR medical computer science OR medical information science OR computers in medicine OR health informatics OR nursing informatics OR dental informatics OR biomedical computing OR healthcare informatics OR health computing OR medical computing OR clinical informatics) AND (ethic* OR moral* OR conscience OR social responsibility OR virtue* OR bioethical issues OR bioethics OR complicity OR conflict of interest OR relativism OR humanism OR feminism OR moral obligations OR principle-based OR beneficence OR personal autonomy OR social justice OR philosoph* OR personhood OR existentialism));

DocType=Article, Abstract of Published Item, Correction, Correction, Addition, Meeting Abstract, Meeting-Abstract, Review; Language=English; Databases=SCI-EXPANDED, SSCI; Timespan=All Years; (sorted by latest date) ⁴

Pubmed: Medline search

Ethics Search: ethics[MAJR] OR philosophy, medical[MAJR] OR philosophy, nursing[MAJR] OR philosophy, dental[MAJR]

AND

Medical Informatics Search: medical informatics[MAJR]

NOT

(data display[Mesh] OR programming languages[Mesh] OR word processing[Mesh] OR video games[Mesh] OR computer graphics[Mesh] OR algorithms[MAJR] OR computer systems[Mesh] OR staffing information systems[Mesh] OR Personnel staffing[Mesh] OR office automation[Mesh] OR community networks[Mesh])

Limits: Publication Date from 1985 to 2002, English, Human, NOT: Letter, Editorial

⁴ ISI currency is from 1990 to the present. Therefore, this search did not identify all the intended study samples available in this source.

APPENDIX C

Examples of Articles Excluded on the Basis of the Bibliographic Reference Review

UI - 21831124
PMID- 11841644
DA - 20020213
DCOM- 20020313
IS - 0736-8046
VI - 18
IP - 6
DP - 2001 Nov-Dec
TI - The true and the false: pixel-byte syndrome.
PG - 523-6
AB - The possible use of retouched images for fraudulent purposes in scientific articles, posters, and conferences is not a future but a present possibility (probably already used) that poses serious questions as to the need for additional control mechanisms other than scientific peer quality review in evaluating and accepting articles. We propose the term "pixel-byte syndrome" to illustrate how easy it might be to electronically create a new syndrome for fraudulent purposes. The aim of this article is to stimulate discussion among professionals, add some examples of easy-to-realize frauds and sow the seeds of doubt in the minds of some of the referees of journal articles and the scientific secretariat of congresses in reviewing digitally retouched images.
AD - Unita Operativa di Pediatria, Ospedale Umberto I Mestre, Venice, Italy.
FAU - Cutrone, M
AU - Cutrone M
FAU - Grimalt, R
AU - Grimalt R
LA - eng
PT - Journal Article
CY - United States
TA - Pediatr Dermatol
JID - 8406799
SB - IM
MH - Human
MH - *Image Processing, Computer-Assisted
MH - *Photography
MH - *Scientific Misconduct
MH - *Skin Diseases
EDAT- 2002/02/14 10:00
MHDA- 2002/03/14 10:01
AID - 1862009 [pii]
PST - ppublish
SO - Pediatr Dermatol 2001 Nov-Dec;18(6):523-6.

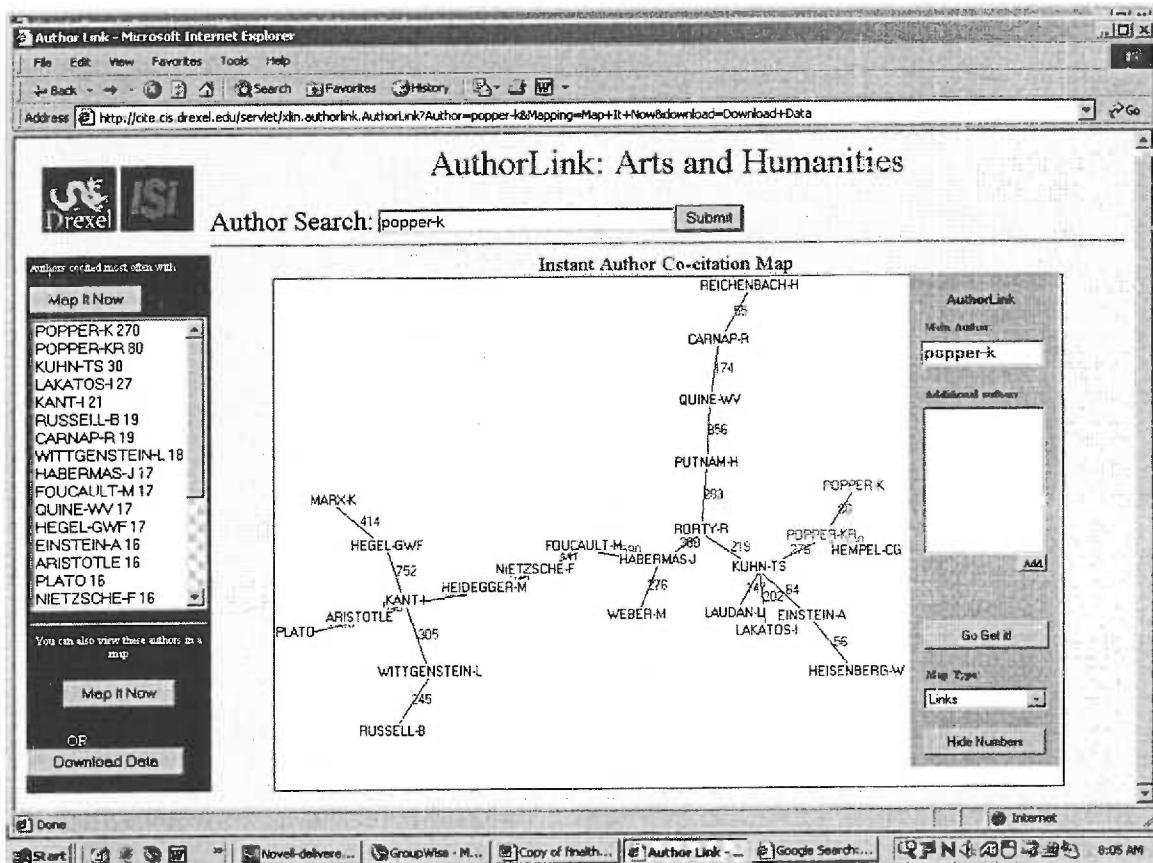
UI - 21922305
 PMID- 11924315
 DA - 20020401
 DCOM- 20020416
 IS - 1079-3739
 VI - 23
 IP - 3
 DP - 2000 Winter
 TI - The role of a county health department as a linking-pin organization in a network.
 PG - 324-60
 AB - This is a case study of a local health department's role in the formation and operation of a network of health care providers. The local health department served as a linking-pin organization in the network and engaged in actions to legitimize itself and the network it formed. Legitimacy management requires the development of pragmatic, moral, and cognitive strategies that can be used for gaining, maintaining or repairing legitimacy. The results of this study indicate a unique government legitimacy management profile in which there is a predominant use of cognitive and pragmatic actions intended to gain legitimacy. The implications of this profile are discussed.
 AD - University of Albany, State University of New York, USA.
 FAU - Zanetich, J
 AU - Zanetich J
 LA - eng
 PT - Journal Article
 CY - United States
 TA - J Health Hum Serv Adm
 JID - 9501928
 SB - H
 MH - Community Health Planning/*organization & administration
 MH - Community Networks/*organization & administration
 MH - Community-Institutional Relations
 MH - Consumer Participation/statistics & numerical data
 MH - *Cooperative Behavior
 MH - Decision Making, Organizational
 MH - Delivery of Health Care/trends
 MH - Health Services Accessibility
 MH - Health Services Research
 MH - Local Government
 MH - Needs Assessment/organization & administration
 MH - Organizational Case Studies
 MH - Public Health Administration/*methods
 MH - *Social Responsibility
 MH - United States
 EDAT- 2002/04/02 10:00
 MHDA- 2002/04/17 10:01
 PST - ppublish
 SO - J Health Hum Serv Adm 2000 Winter;23(3):324-60.

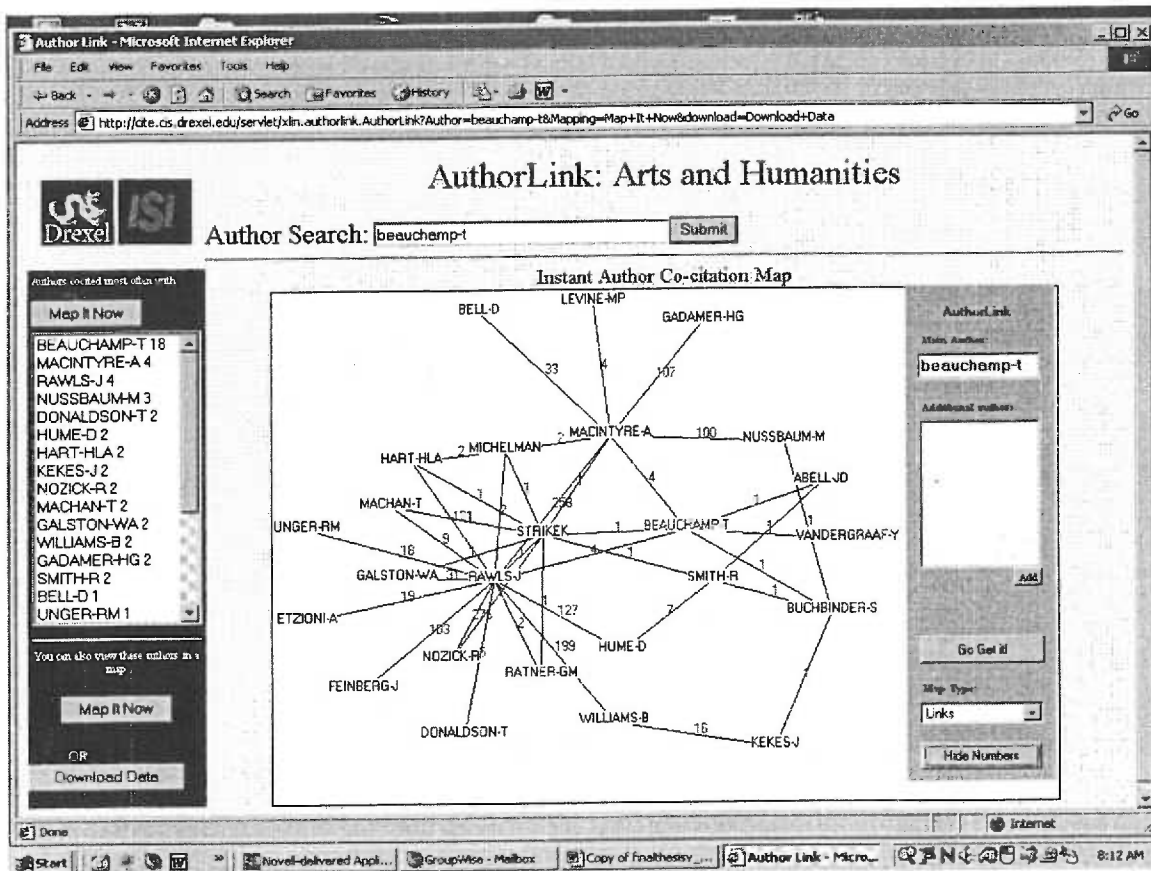
UI - 21506876
PMID- 11656064
DA - 19920128
DCOM- 19920128
LR - 20011128
IS - 0887-0373
VI - 5
IP - 3
DP - 1991 Jul
TI - A decision-theoretic reconstruction of Roe v. Wade.
PG - 243-58
FAU - Lockhart, Ted
AU - Lockhart T
LA - eng
PT - Journal Article
CY - United States
TA - Public Aff Q
JID - 100971761
SB - E
MH - *Abortion, Induced
MH - Civil Rights
MH - *Decision Support Techniques
MH - *Fetus
MH - Human Rights
MH - *Individuality
MH - *Jurisprudence
MH - *Life
MH - *Personhood
MH - Pregnancy
MH - Privacy
MH - Social Control, Formal
MH - Social Justice
MH - State Government
MH - Texas
MH - United States
MH - Value of Life
EDAT- 2001/10/20 10:00
MHDA- 2001/11/02 10:01
PST - ppublish
SO - Public Aff Q 1991 Jul;5(3):243-58.

APPENDIX D

Citation maps in the Arts and Humanities Index to the philosopher of science, Sir Karl Popper and the medical ethicist, Professor Thomas Beauchamp.

Author Search: popper-k





APPENDIX E

Arts & Humanities co-citation analysis of study and "important" cited authors in the field of medical informatics ethics

FOUNDATIONAL THINKERS	ALLEN,	ANDREWS	ANNAS	BAIRD	BARBER	BEAUCHA MP	BENNER	CHADWICK	CURRAN	DAWSON	DOERFLER	DREYFUS	FLAHERTY	GODARD	GOODMAN	GOSTLIN	KANT	KAY	KLUGH	RIGBY	SASS	SCHAFFNE R,	SIMPSON	WEBER	WESTIN	WHALLEY	# CO-CITED FOUNDATIONAL	TOTAL CO-CITATION FOUNDATIONAL
HEGEL																	752				6						2	758
HEIDEGGER							3					80					552				5						4	640
ARISTOTLE						16											593		3								3	612
HABERMAS					27							69					385				3						4	484
FOUCAULT					17			3				177	2				270								4		6	473
DERRIDA												63		21			372										3	456
HUME						17											363										2	380
WITTGENSTEIN												1					305										2	306
GADAMER												49					241				5						3	295
RAWLS-J					15	26						55					240										3	281
RORTY					14							33															2	69
BOURDIEU					13							39															2	46
PUTNAM																											2	45
MACINTYRE					16	19									1												3	36
PELLEGRINO		5				20																					2	25
VEATCH		5				19																					2	24
MARX-K					12																7						2	19
GILLIGAN	3					12	3																		4		3	18
ARENDT					13																						2	17
PARSONS					14																			2			2	16
WALZER					14																			2			2	16
DUBY																		13			2						2	15
KANT			5																								2	11
ANNAS		7																			6						2	10
ROSENBERG																3											2	10
SINGER			6																			8	2				2	10
FEINBERG		3	4																		4						2	10
RADIN	3	3																									2	7
COHEN		3																									2	6
KOLATA		3											2														2	5
SCHMIDT				2																							2	5
KANTER-RM																					2	3					2	5
LI						1																			3		2	4
KAUFMAN																										2	2	3
STEWART				1																				1			2	2
TOTALS	6	19	25	3	155	130	6	3	1	1	1	566	4	21	1	3	4073	13	3	4	39	14	5	2	11	2	84	

APPENDIX F

Domain Inventory

Medical Informatics	71
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WYNIA, MK.	97
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KAY, S.	106
KLUGE, E.H.W. (1993)	113
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RIGBY, M.	127
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GOODMAN, K.W.	133
Genetic Databases	138
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Medical Informatics

GREY						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
MEDICAL INFORMATICS		PROGRESSES ON FIELD OF LEXICAL MINES	IS-ATTRIBUTE	MEDICAL INFORMATICS		
		ILLUSIONS	IS-A-PART	MEDICAL INFORMATICS		
		DELUSIONS				
	MEDICAL INFORMATICS RESEARCH	MAIN TASK IS EPISTEMOLOGIC HELPFUL IN TREATMENT OF DISEASE	IS-ATTRIBUTE	MEDICAL INFORMATICS RESEARCH		
		USELESS IN TREATMENT OF PATIENT				
		WHEN IS SPLITTING OFF A PART OF REALITY ACCEPTABLE: WHERE SHOULD WE LOCATE THE BOUNDARY?	KIND-OF	EPISTEMOLOGICAL TASK IN MEDICAL INFORMATICS RESEARCH		
		MORE USEFUL THAN DANGEROUS	WAY-TO	TEST SPLITTING OF REALITY		
	ILLUSIONS AND DELUSIONS					
		MISCONCEPTION ABOUT THE INTELLECTUAL CAPABILITIES OF COMPUTER MACHINES	IS-CAUSE-OF	ILLUSIONS AND DELUSIONS		
		EPISTEMOLOGIC IN NATURE	ATTRIBUTE-OF	ILLUSIONS AND DELUSIONS		
		INTOXICATION BY WORDS	IS CAUSE-OF	ILLUSIONS AND DELUSIONS		
		ASSIGNING ANTHROPOMORPHIC PROPERTIES TO COMPUTING MACHINES	KIND-OF	LINGUISTIC PITFALL		
		INTRODUCTION OF COMPETITION BETWEEN HUMAN MIND AND ITS CREATION (COMPUTING MACHINE)				
ILLUSIONS & DELUSIONS	ANTHROPOMORPHISM		RESULT-OF	ANTHROPOMORPHISM		
MI	FAILURE OF MI APPLICATIONS	ILLUSION OF COMPETITION BETWEEN HUMAN MIND AND MACHINE	IS-CAUSE-OF	FAILURE IN THE DEVELOPMENT OF MEDICAL INFORMATICS APPLICATIONS		

MI	SUCCESSES OF MI APPLICATIONS	IN AREAS WHERE HUMAN MIND IS RELATIVELY IMPOTENT	ATTRIBUTE-OF	SUCCESSES IN MEDICAL INFORMATICS
		HEAVY ALGEBRAIC COMPUTATION	KIND-OF	AREA WHERE HUMAN MIND IS RELATIVELY IMPOTENT
ILLUSIONS & DELUSIONS	ANTHROPOMORPHISM	ELECTRONIC BRAIN	KINDS-OF	ANTHROPOMORPHISM
		MEMORY		
		INFORMATION		
		LANGUAGE		
		KNOWLEDGE		
MI	PREDICTIONS	RADICALLY IMPROVE EFFICIENCY OF MEDICAL CARE	KIND-OF	PREDICTIONS FOR COMPUTERIZED MEDICAL RECORD (1960s)
		RADICALLY IMPROVE QUALITY OF MEDICAL CARE		
		PERMANENT AVAILABILITY OF EVER-EXPANDING MINE OF INFORMATION FOR CLINICAL RESEARCH		
		AUTOMATIC LANGUAGE PROCESSING AND DECISION SUPPORT TRANSFORM MEDICAL PRACTICE		
		REVOLUTIONIZE MEDICAL TRAINING		
		IDENTIFY MENTAL PROCESSES OF PROFESSIONAL ACTIVITY	WAY-TO	ACCURATE BENEFIT OF COMPUTERIZED MEDICAL RECORD
		FORMALIZE MENTAL PROCESSES OF PROFESSIONAL ACTIVITY		
ILLUSIONS & DELUSIONS	MISCONCEPTIONS ABOUT COMPUTER MACHINES	MISLEADING	IS-ATTRIBUTE-OF	MISCONCEPTION OF ... COMPUTER MACHINES
		ARROGANT		
	ARROGANCE	TRANSFORMING HYPOTHESIS INTO DOGMATIC CERTITUDE	IS-PART	ARROGANCE
		REGARDING METHODOLOGICAL APPROACH AS IF IT DEFINED THE ONTOLOGICAL PROPERTIES OF THE WORLD		
	MORAL DISEASE	MORAL DISEASE	IS ATTRIBUTE	ARROGANCE

		REGARDING PHYSICAL SYMBOL HYPOTHESIS AS DOGMA	IS-KIND-OF	ARROGANCE
		BETRAY SCIENCE FOR IDEOLOGY		
		REDUCING HUMAN THOUGHT TO COMPUTATION		
	INTELLIGENCE	CANNOT BE SUMMARIZED BY DELIBERATING AND COMPUTING RATIONALITY	ATTRIBUTE-OF	INTELLIGENCE
		CREATING MODELS AND CRITICIZING THEM		
		UPHILL OF MODEL MANIPULATION		
		DOWNHILL OF MODEL MANIPULATION		
		UPHILL OF COMPUTATION		
		DOWNHILL OF COMPUTATION		
		ONLY PARTIALLY ACCESSIBLE TO FORMALIZATION		
RESISTANT TO FORMALIZATION	CONSCIENCE	CONSCIENCE	KINDS-OF	AREAS OF INTELLIGENCE THAT RESIST FORMALIZATION
	SEMANTICS	SEMANTICS		
	RESPONSIBILITY	RESPONSIBILITY		
	SCIENTIFIC MODEL	DISTORTION OF REALITY	ATTRIBUTE-OF	SCIENTIFIC FORMAL MODEL
		SOMETIMES AN ACT OF VIOLENCE AGAINST REALITY		
		REFLECTION ON HUMAN SIGNIFICANCE OF SCIENCE	IS-A-WAY-TO	ANALYZE MISCONCEPTION ...
		DRIFT TOWARD SCIENTISM		
	HUBRIS	SUBJECTIVITY TREATED AS PURE ILLUSION	KINDS-OF	HUBRIS
		COMPLEX SYSTEMS EXPLAINED COMPLETELY BY ELEMENTS		
		NOTHING THOUGHT TRUE THAT IS NOT DEMONSTRATED AND IDENTIFIED BY SCIENCE		
		EVERYTHING THAT IS INACCESSIBLE TO SCIENCE IS DEPRIVED OF VALIDITY AND INTEREST		
INACCESSIBLE TO SCIENCE	FREEDOM	FREEDOM	KINDS-OF	THINGS INACCESSIBLE TO SCIENCE
	DIGNITY	DIGNITY		

SCIENCE	PHILOSOPHICAL POSTULATE	PHILOSOPHICAL	KIND OF	POSTULATE OF WESTERN SCIENCE
	METHODOLOGICAL POSTULATE	METHODOLOGICAL		
SCIENTIFIC POSTULATE	PHILOSOPHICAL	GENESIS	PART-OF	PHILOSOPHICAL POSTULATES OF WESTERN SCIENCE
		WORLD IS INTELLIGIBLE		
		MAN IN OUR IMAGE	PART-OF	GENESIS
		FILL THE EARTH		
		SUBDUCE THE EARTH		
		RULE OVER EVERY LIVING THING UPON THE EARTH		
		CAN BE OBSERVED	PART-OF	WORLD IS INTELLIGIBLE
		CAN BE EXPLAINED		
		CAN FORECAST ITS CHANGES		
		CAN BE MASTERED		
		CAN BE MANIPULATED		
		WAY TO OBEY GENESIS	ATTRIBUTE OF	WESTERN SCIENCE & TECHNOLOGY
		YIELD IMPRESSIVE ACHIEVEMENTS		
METHODOLOGICAL POSTURAL	OBJECTIVITY	OBJECTIVITY	KIND OF	METHODOLOGICAL POSTULATE OF WESTERN SCIENCE
	REDUCTIONISM	REDUCTIONISM		
	DISJUNCTIVISM	DISJUNCTIVISM		
	CONSIDERATION OF INVARIANT FEATURES	CONSIDERATION OF INVARIANT FEATURES		
	FORMAL METHODS	FORMAL METHODS		
	OBJECTIVITY	REDUCING VARIABILITY OF HUMAN OBSERVATION	ATTRIBUTE OF	OBJECTIVITY
		REDUCING UNRELIABILITY OF HUMAN OBSERVATION		
	REDUCTIONISM	EXPLAIN THE COMPLEX IN TERM OF ELEMENTS	ATTRIBUTE-OF	REDUCTIONISM
	DISJUNCTIVISM	STUDY ELEMENTS INDEPENDENTLY OF EACH OTHER	ATTRIBUTE-OF	DISJUNCTIVISM
		STUDY ELEMENTS OF THE OBSERVER		

INARIANT FEATURES	LOOK SUSPICIOUSLY AT WHAT SEEM TO BE PURE SINGLE EVENTS	ATTRIBUTE-OF	CONSIDERATION OF INVARIANT FEATURES
	REGARD SINGLE EVENT AS NOISE	KIND-OF	SUSPICIOUS LOOK
FORMAL METHODS	CLASSIFICATION		
	LOGICAL COMBINATION OF FACTS AND CONCEPTS	KIND-OF	FORMAL METHOD
	MATHEMATICAL MODELS		
SCIENTIFIC REASONING	CAN BE REDUCED TO FORMAL COMPUTATION	ATTRIBUTE OF	SCIENTIFIC REASONING
SCIENTIFIC METHOD	IMPLIES SEARCH FOR CAUSAL CHAINS		
	PERFORM MODEL OF DETERMINISM	ATTRIBUTE OF	SCIENTIFIC METHOD
	MANY HUMAN QUESTIONS OUTSIDE		
OUTSIDE SCIENCE	WHAT IS IT TO BE A PATIENT	KIND-OF	QUESTION OUTSIDE SCIENCE
	WHAT IS IT TO BE A PHYSICIAN		
	WHAT DOES IT MEAN FOR A PERSON TO CARE FOR ANOTHER		
	WHAT IS IT TO BE A HUMAN BEING		
HUMAN BEING	DYNAMIC CREATURE	ATTRIBUTE OF	HUMAN BEING
	DESTINY TO ACQUIRE PERSONAL AUTONOMY		
AUTONOMY	MASTER OWN MORAL DECISIONS	IS-PART-OF	ACQUIRE PERSONAL AUTONOMY
PERSONAL AUTONOMY	REQUIRES THE AUTONOMY OF OTHERS	ATTRIBUTE OF	PERSONAL AUTONOMY
	INCREASING OTHERS INCREASES OUR OWN		
DEHUMANIZATION	THREATENS PATIENT AUTONOMY	ATTRIBUTE-OF	DEHUMANIZATION PROCESS OF PRESENT MEDICINE
	THREATENS AUTONOMY OF THOSE WHO CARE FOR PATIENTS		
SCIENTISM	INTELLECTUAL BASIS FOR SCIENTIFIC ARROGANCE	ATTRIBUTE-OF	SCIENTISM
	THREATENS WORLD OF MEDICINE AND HEALTH W/ETHICAL ROUT		

		THREATENS WORLD OF MEDICINE AND HEALTH W/CONCEPTUAL ROUT		
		TOTALITARIAN IDEOLOGY		
		REGARDS ITSELF AS THE UNIQUE SOURCE OF ABSOLUTE KNOWLEDGE		
		TRIUMPHED A FEW DECADES AGO NOW DISPARAGED BY MOST PHILOSOPHERS		
		NOW DISPARAGED BY MANY SCIENTISTS		
		REMAINS IMPORTANT PART OF BELIEF SYSTEM OF SOCIETY		
		REMAINS DANGEROUS PART OF BELIEF SYSTEM OF SOCIETY		
		SUBTLE PERVERSIVE INFLUENCE AMONG LAY PEOPLE		
		SUBTLE PERVERSIVE INFLUENCE AMONG SCIENTISTS		
		SUBTLE PERVERSIVE INFLUENCE AMONG PHYSICIANS		
	SCIENTISM	HUBRIS	RESULT-OF	SCIENTISM
		TECHNOLOGICAL MESSIANISM		
		EXCLUSIVE HYPERSPECIALIZATION		
	TECHNOLOGICAL MESSIANISM	WHAT IS TECHNOLOGY POSSIBLE MUST BE REALIZED	PART-OF	TECHNOLOGICAL MESSIANISM
		NO HUMAN PROBLEM THAT TECHNOLOGY CAN'T SOLVE		
		LEADS MEDICINE TOWARD SELF-DESTRUCTION		
	HYPERSPECIALIZATION		ATTRIBUTE OF	EXCLUSIVE HYPERSPECIALIZATION
		FOVEAL COMPETENCE		
		THREATENED BY INCOMPETENCE	ATTRIBUTE OF	EXCLUSIVE HYPERSPECIALISTS
		THREATENED BY DANGEROUSNESS		
		DISQUALIFIED FROM ACTION		
		MASTER MICROWORLDS OF KNOWLEDGE		
		CORRELATES WITH PROFICIENCY OF TECHNICAL ACTION		

		CORRELATES WITH QUALITY OF TECHNICAL ACTION		
		NOT DANGEROUS TO STATUS QUO		
		ROLE LIMITED TO PERFORMANCE OF MEDICAL ACTS		
	MEDICAL ACTS	DOCTOR FRUSTRATION	RESULTS OF	ROLE LIMITATION TO MEDICAL ACTS
		DOCTOR IMPOVERISHMENT		
		PATIENT FRUSTRATION		
		HYPER SPECIALIST ARE HANDICAPPED AS CITIZENS	REASON FOR	LACK OF DANGER TO STATUS QUO
	MICROWORLDS	INSUFFICIENT DANGEROUS	ATTRIBUTE-OF	COLLECTION OF PERFECT MICROWORLDS SPECIALISTS
		SEQUENCE OF PERFECTLY REALIZED ACTS DOES NOT IMPLY RELEVANT AD USEFUL MEDICAL ACTION	REASON FOR	INSUFFICIENCY AND DANGER
		HYPERSPECIALIZATION	CAUSE-OF	THREATENED ROUT
	APPROPRIATE MI	APPROPRIATE USE OF INFORMATICS IN MEDICAL PRACTICE	PART-OF	SOLUTION FOR THREAT OF SCIENTISM TO MEDICINE AND HEALTH
		NEW DISTRIBUTION OF HEALTH CARE COMPETENCIES		
		FORMAL DESCRIPTION OF MICROWORLDS IS DESIRABLE	REASON-FOR	USE OF INFORMATICS AGAINST THREAT OF SCIENTISM
		EACH DISEASE	KIND OF	MICROWORLDS
		MAKE HYPER SPECIALIST LESS INDISPENSABLE	REASON-FOR	DESIRABILITY OF FORMAL DESCRIPTION OF MICROWORLDS
		CONTRIBUTE OF DEMOCRATIZATION OF KNOWLEDGE		
		EXTEND COMPETENCE		
PROFESSIONAL OF MEDICINE	COMPASSION	COMPASSION	ATTRIBUTE OF	PROFESSION OF MEDICINE
	RESPECT	RESPECT		

LOVE	LOVE			
SUFFERING	CONFRONTED WITH SUFFERING			
ANGUISH	CONFRONTED WITH ANGUISH			
SIGNIFICANT OF HUMAN LIFE	CONFRONTED WITH SIGNIFICANCE OF HUMAN LIFE			
COMPETENCE	COMPETENCE			
KNOWLEDGE	KNOWLEDGE		ATTRIBUTE OF	AUTHENTIC LOVE IN MEDICINE
PROFICIENCY	PROFICIENCY			
LOVE	LOVE			
COMPASSION	COMPASSION		REASON FOR	SCIENCE AND TECHNOLOGY IN MEDICINE

<i>TIMPKA, T</i>						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
MEDICAL INFORMATICS		DEVELOP COMPLEX TECHNICAL SYSTEMS	ATTRIBUTE-OF	MEDICAL INFORMATICIANS		
		SYSTEM SUPPLIERS TO HEALTH CARE				
		MULTIDISCIPLINARY GROUP OF PROFESSIONAL				
		DISTINGUISHED FROM OTHER PROFESSIONS BY AUTONOMY				
AUTONOMY		LEGITIMATE CONTROL OVER THEIR WORK	ATTRIBUTE-OF	AUTONOMY OF MEDICAL INFORMATICIANS		
		EMPLOYED BY CORPORATION	KIND-OF	MEDICAL INFORMATICIANS		
		SEVERAL STANDARDS FOR EVALUATION BEHAVIOR	ATTRIBUTE OF	EMPLOYMENT BY CORPORATION		
		NOT ALWAYS COMPATIBLE	ATTRIBUTE OF	CORPORATE STANDARDS FOR EVALUATION OF BEHAVIOR		
SYSTEM DESIGN FAILURE		ECONOMIC LOSS POSSIBLE	ATTRIBUTE OF	SYSTEM DESIGN FAILURE		
		SEVERE HUMAN SUFFERING POSSIBLE				
PRELIMINARY CODE OF ETHICS		CASE STUDY	STEP-IN	DERIVING A PRELIMINARY CODE OF ETHICS		
		LITERATURE REVIEW: RISK THEORIES				
		BUILD MODEL OF DESIGN FAILURE FROM CASE DATA				
		BUILD MODEL OF SYSTEM DEVELOPMENT MORALS FROM CASE DATA				
		LITERATURE REVIEW OF PROFESSIONAL ETHICS				
CASE STUDY		INVESTIGATE HOW CODE OF ETHICS CAN KEEP INFORMATICIANS FROM FAILING DURING SYSTEM DESIGN	REASON-FOR	CASE STUDY		
ETHICAL GUIDELINES		WHEN TO INTRODUCE COMPUTER SUPPORT	KIND-OF	ETHICAL GUIDELINES FOR MEDICAL INFORMATICIANS		
		HOW TO USE SYSTEMS				
		DEVELOPMENT PRACTICES				

DEVELOPMENT FAILURE			NOT REACHING PROFESSIONAL GOALS NOT KEEPING OBLIGATIONS	KIND-OF	DEVELOPMENT FAILURE
BASIS FOR ETHICAL GUIDELINES			PATIENT CONSENT MULTIDISCIPLINARY COLLABORATION SOCIETY RESONSIBILITY	KIND-OF	BASIS FOR HEALTHCARE ETHICAL GUIDELINES
			PATIENT CONSENT MULTIDISCIPLINARY COLLABORATION SOCIETY RESONSIBILITY	KIND-OF	BASIS FOR HEALTH INFORMATICS ETHICAL GUIDELINES
			ADDRESS DESIGN FAILURE CAUSED BY CONSCIOUS DEVIATIONS FROM PLANS		
			ADDRESS DESIGN FAILURE CAUSE BY DEFECT IN PLANS		
			CONFIDENTIALITY ACCURACY PROPERTY RIGHTS ACCESSIBILITY RESPECTUFL GENERAL ATTITUDE CONTRIBUTION TO HUMAN WELL-BEING AVOIDING HARMS TO OTHER	PART-OF	FIRST GUIDELINE FOR COMPUTER PROFESSIONALS
CONFIDENTIALITY ACCURACY PROPERTY RIGHTS ACCESSIBILITY			CONFIDENTIALITY ACCURACY PROPERTY RIGHTS ACCESSIBILITY RESPECTUFL GENERAL ATTITUDE CONTRIBUTION TO HUMAN WELL-BEING AVOIDING HARMS TO OTHER	PART-OF	GUIDELINE FOR HEALTH INFORMATICIANS
HARM					
			SYSTEM SAFETY AND RISK MANAGEMENT	PART-OF	AVOIDING HARM TO OTHERS
		CONFIDENTIALITY	CONFIDENTIALITY	PART-OF	RISK OF HARMING PATIENTS
			ENHANCING RESPONSIBLE COMMUNICATION ABOUT DESIGN	PART-OF	SYSTEM SAFETY AND RISK MANAGEMENT
			ENHANCING OPEN COMMUNICATION ABOUT		

		DESIGN			
	SOCIALIZATION	SOCIALIZATION			
	EDUCATION	EDUCATION		ATTRIBUTE-OF	DERIVED CODE OF ETHICS
	COOPERATION	COOPERATION			
DERIVED CODE		..SHALL BE DEDICATED TO PROVIDING COMPETENT PROFESSIONAL SERVICE TO THOSE WHO SUFFER		PART-OF	DERIVED CODE OF ETHICS
		..SHALL ASSUME SOCIETAL RESPONSIBILITY AND ACCOUNTABILITY FOR INDIVIDUAL ACTIONS AND AVOID HARM TO OTHERS			
		..SHALL DEAL HONESTLY WITH CLIENTS AND COLLEAGUES AND STRIVE TO EXPOSE THOSE HEALTH INFORMATICIANS DEFICIENT IN CHARACTER OR COMPETENCE, OR WHO ENGAGE IN FRAUD OR DECEPTION			
		..SHALL PARTICIPATE IN THE PROFESSIONA'S EFFORTS TO PROTECT THE PUBLIC FROM MISINFORMATION AND MISREPRESENTATION AND TO MAINTAIN THE INTEGRITY OF THE FIELD OF HEALTH INFORMATICS			
		..SHALL COLLABORATE WITH OTHER PROFESSIONALS AND CITIZENS IN PROMOTING COMMUNITY AND NATIONAL EFFORTS TO MEET THE HEALTH CARE NEEDS OF THE PUBLIC.			

Health Information Systems

ALPERT, S.A.					
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS	
INFORMATION TECHNOLOGY	HEALTH CARE	INCREASING RELIANCE IN HEALTH CARE INTERCONNECTIONS AMONG SYSTEMS WILL INCREASE	ATTRIBUTE-OF	INFORMATION TECHNOLOGY	
	ELECTRONIC PATIENT RECORD	ELECTRONIC PATIENT RECORD	KIND-OF	INFORMATION TECHNOLOGY	
		ALLOW MORE EFFICIENT INTERACTION	ATTRIBUTE-OF	ELECTRONIC PATIENT RECORD	
		ALLOW MORE LIFE-ENHANCING INTERACTION			
		POTENTIAL TO ERODE PATIENT PRIVACY			
		POTENTIAL TO ERODE PROVIDER PRIVACY			
		PATIENT	KINDS-OF	PEOPLE INTERACTING	
		PROVIDERS			
		PAYORS			
	PRIVACY	DETIMENT TO ENTIRE HEALTH CARE SYSTEM	ATTRIBUTE OF	EROSION OF PRIVACY	
		NEED TO KNOW	PARTS-OF	TENSION	
		RIGHT TO PRIVACY			
	STAKEHOLDERS	PATIENT	KIND-OF	STAKEHOLDERS IN HEALTH CARE DATA	
		PROVIDERS			
		PAYORS			
		EMPLOYERS			
		INSURERS			
		COMPANIES IN MEDICAL FIELD			
		RESEARCHERS			
		SOCIETY			
PRIVACY	SOLITUDE	SOLITUDE	PART-OF	PRIVACY	
	AUTONOMY	AUTONOMY			
	INDIVIDUALITY	INDIVIDUALITY			
		ALLOWS US TO BE WHO AND WHAT WE ARE	ATTRIBUTE-OF	PRIVACY	

		ABILITY TO CREATE AND MAINTAIN DIFFERENT SORTS OF SOCIAL RELATIONSHIPS WITH DIFFERENT PEOPLE			
		INACCESSIBILITY OF PERSON			
	SECRECY	RELATED TO SECRECY			
		RELATED TO SOLITUDE			
	ANONYMITY	RELATED TO ANONYMITY			
	RESPECT	FUNDAMENTAL TO RESPECT			
	LOVE	FUNDAMENTAL TO LOVE			
	FRIENDSHIP	FUNDAMENTAL TO FRIENDSHIP			
	TRUST	FUNDAMENTAL TO TRUST			
		RELATED TO AUTONOMY			
		IS A VALUE			
		ENCOMPASSES RIGHT TO EXERCISE AUTONOMY			
		ENCOMPASSES RIGHT TO LIMIT ACCESS TO PERSONAL DOMAIN			
		INACCESSIBILITY OF MENTAL STATES	PART-OF		INACCESSIBILITY OF PERSON
		INACCESSIBILITY TO SENSES OF OTHERS			
		INACCESSIBILITY TO SURVEILLANCE DEVICES OF OTHERS			
ANONYMITY	ENJOY PRIVACY	ANONYMITY	WAY-TO		ENJOY PRIVACY
		DEFINED BY HOW MUCH PERSONAL INFORMATION IS AVAILABLE FROM SOURCES OTHER THAN THE INDIVIDUAL			
INFORMATION AGE			ATTRIBUTE-OF		INFORMATION AGE
	THREAT TO INTEGRITY & AUTONOMY	THREAT TO PERSONAL INTEGRITY & AUTONOMY OF PERSONS TRADITIONALLY LACKING CONTROL OVER HOW OTHER USE INFORMATION ABOUT THEM IN DECISION MAKING	KIND-OF		STAKES IN USE OF PERSONAL DATA BY PUBLIC AND PRIVATE SECTOR ORGANIZATIONS
THREATS	LIMIT OPPORTUNITY	LIMIT OPPORTUNITY	KIND-OF		THREAT TO PERSONAL INTEGRITY & AUTONOMY OF PERSONS TRADITIONALLY LACKING CONTROL OVER HOW OTHER USE INFORMATION ABOUT THEM IN DECISION MAKING
	ENCOURAGE CONFORMITY	ENCOURAGE CONFORMITY			
	LOSE OF INSURANCE BENEFITS	LOSE OF INSURANCE BENEFITS			
	LOSE OF JOBS	LOSE OF JOBS			
	SOCIAL STIGMA	SOCIAL STIGMA			

		DOES NOT CREATE RIGHTS FOR PATIENT	ATTRIBUTE-OF	OATH OF HIPPOCRATES
		RECOGNIZED THAT PHYSICIAN MAY HAVE GREATER ETHICAL DUTY TO SOCIETY	ATTRIBUTE-OF	AMA CODE OF MEDICAL ETHICS
		PHYSICIAN OBLIGATION IS TO GREATEST POSSIBLE DEGREE		
		BETTER HEALTH DATA	REASON FOR	USE OF INFORMATION TECHNOLOGY
		ASSESS HEALTH OF PUBLIC	WAY-TO	USE BETTER HEALTH DATA
		ASSESS PATERNS OF ILLNESS AND INJURY		
		IDENTIFY UNMET HEALTH NEEDS		
		DOCUMENT PATTERNS OF HEALTH CARE EXPENDITURES		
		IDENTIFY COST-EFFECTIVE CARE PROVIDERS		
		PROVIDE INFORMATION TO IMPROVE QUALITY OF CARE		
PROTECTION OF CONFIDENTIALITY	RESEARCH	REMOVAL OF IDENTIFYING INFORMATION	WAY-TO	PROTECT CONFIDENTIALITY IN RESEARCH
		BROAD, ROBUST COMMITMENT TO INFORMED CONSENT		
		INSTITUTIONAL REVIEW BOARD SCRUTINY		
PATIENT INTERESTS	VALID CONSENT	VALID CONSENT	PART-OF	PATIENT PRIVACY INTERESTS
		INFORMED	PART-OF	VALID CONSENT
		VOLUNTARY		
PROVIDER INTERESTS		PHYSICIAN-PATIENT RELATIONSHIP	KIND-OF	PROVIDER INTERESTS
		EVALUATION OF PROVIDERS' EFFECTIVENESS		
		MEDICAL UNDERGROUND		
		PUBLIC DISCLOSURE OF OUTCOMES DATA		
		PSYCHIATRIC CARE	KIND-OF	MEDICAL UNDERGROUND TREATMENTS
		SEXUALLY TRANSMITTED DISEASES		
		SUBSTANCE ABUSE		
		CORRUPT DATA SETS	RESULT-OF	OFF-THE RECORD CARE
THIRD PARTY INTERESTS		PAYORS	KIND-OF	THIRD PARTIES' INTERESTS
		PHARMACEUTICAL COMPANIES		
		EMPLOYERS		

	GOVERNMENT AGENCIES			
	CREDIT BUREAUS			
	INSURERS			
	EDUCATION INSTITUTIONS			
	MEDIA			
	TREATMENT MEDICALLY NECESSARY	KIND-OF		PAYOR INTERESTS
	TREATMENT COST-EFFECTIVE			
	TREATMENT COVERED BY PAYMENT POLICIES			
	TREATMENT ACTUALLY ADMINISTERED			
	PROMOTION OF PRODUCTS	KIND-OF		PHARMACEUTICAL COMPANY INTERESTS
	PROMOTION OF DRUG STUDIES			
	PUBLIC POLICY APPROACH	WAYS-TO		ADDRESS AFFECTS OF COMPUTERIZED MEDICAL INFORMATION ON PRIVACY AND CONFIDENTIALITY
	TECHNOLOGICAL APPROACH			
	LEGAL PROTECTIONS	PART-OF		PUBLIC POLICY APPROACH
	DEFINE CONTENT OF MEDICAL RECORD	PART-OF		NECESSARY LEGAL PROTECTIONS
	DEFINE PATIENTS' RIGHT			
	DEFINE WHAT CONSTITUTES LEGITIMATE ACCESS			
	PROHIBIT NON-LEGITIMATE ACCESS			
	OVERSIGHT AND ENFORCEMENT			
	CIVIL REMEDIES			
	CRIMINAL REMEDIES			
	RETENTION SCHEDULES			
	PATIENT RIGHT TO NOTIFICATION OF USE			
	PATIENT RIGHT TO CORRECT			
	PATIENT RIGHT TO LIMIT USE AND DISCLOSURE			
	AUDIT OF USE AND REQUEST FOR DISCLOSURE			
	AUDIT INFORMATION AVAILABLE TO PATIENT			
	UNIQUE IDENTIFIERS PROHIBITED FROM ANYTHING BUT DIRECTLY PROVIDING HEALTH CARE			
	DEFINE GENETIC INFORMATION AS A SPECIAL CASE WORTHY OF ADDITIONAL PROTECTIONS			
	SPECIAL CASE FOR GENETIC INFORMATION	REASON-FOR		SPECIAL CASE FOR GENETIC INFORMATION
	ADEQUATE PROTECTION REQUIRES NATIONAL HEALTH PLAN			
	ADEQUATE PROTECTION REQUIRES ANTIDISCRIMINATION MEASURE			

		NOT TIED TO SPECIFIC SYSTEMS			TECHNOLOGICAL APPROACH
		DEFINE SYSTEM GOALS			
		DO NOT SPECIFY HOW GOALS WILL BE REACHED			
		PATIENTS NOT WELL REPRESENTED IN DESIGN, DEVELOPMENT AND OPERATION OF INFORMATION SYSTEMS			
	TECHNOLOGICAL STANDARDS				
		STANDARD DATA SETS		PART-OF	NECESSARY TECHNOLOGICAL APPROACH
		DATA EXCHANGE STANDARDS			
		FINE GRAINED AUDIT TRAILS AND ACCESS CONTROLS			
		EDUCATION AND TRAINING			

FESSLER & GREMY					
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS	
HEALTHCARE ORGANIZATIONS		MULTIPLICITY	ATTRIBUTE-OF	HEALTHCARE ORGANIZATIONS	
		MULTI-PROFESSIONAL			
		COLECTIVE CHARACTERISTIC			
COLLECTIVES		DEFINITION AND RESPECT OF COMMON AIMS	PARTS-OF	COLLECTIVE CHARACTERISTIC	
		DEFINITION AND RESPECT OF RULES OF LIVING			
		DEFINITION AND RESPECT OF DUTIES			
		DEFINITION AND RESPECT OF RIGHTS			
ETHICS		ETHICS	WAY-TO	COMMON DEFINITIONS & RESPECT	
		AT ROOTS OF PHILOSOPHY	ATTRIBUTE OF	ETHICS	
TECHNOLOGY		SETS RELATIONSHIP BETWEEN HUMAN BEINGS AND THEIR ENVIRONMENT	ATTRIBUTE-OF	TECHNOLOGY	
		NOT MERELY INSTRUMENTAL			
		PHYSICAL	KINDS OF	RELATIONSHIPS SET BY TECHNOLOGY	
		HUMAN			
HEALTH INFORMATION SYSTEMS		EXCHANGE OF RELEVANT INFORMATION TO DEAL W/DIVERSE ACTIVITIES BEST POSSIBLE PATIENT CARE TO POPULATION SERVED IN PRESENT AND AND FUTURE	REASON FOR	HEALTH INFORMATION SYSTEMS	
		ORGANIZATIONAL DECISIONS			
		MEDICAL DECISION	KIND-OF	DIVERSE ACTIVITY	
		MANAGEMENT DECISION - DAILY ROUTINE	KIND-OF	ORGANIZATIONAL DECISIONS	
		STRATEGIC DECISIONS - LONG-TERM EVOLUTION			
		INTEGRATION TOOL	ATTRIBUTE OF	HEALTH INFORMATION SYSTEM	
		SERVE COHERENCE OF INSTITUTION			
	COHERENCE OF INSTITUTION	PREDOMINANTLY APPEARS AS SOCIAL SYSTEM			
	SOCIAL SYSTEM				

	PEOPLE ARE CONTENT	PEOPLE ARE CONTENT			
		PSYCHOLOGICAL FEATURES		PART OF	HIS SOCIAL SYSTEM
		SOCIOLOGICAL FEATURES			
		ETHICAL FEATURES			
		SERVING COHERENCE OF INSTITUTION		REASON FOR	SPECIAL ETHICAL REFLECTION
ETHICS	INFOETHICS	INFOETHICS		KIND OF	SPECIAL ETHICAL REFLECTION
		HUMAN RELATIONSHIP THAT EXISTS IN ANY INFORMATION SYSTEM		PART-OF	INFOETHICS
		ADDED DIMENSION HEALTHCARE INSTITUTIONS			
	HUMAN RELATIONSHIPS	PEOPLE LINKED TO EQUIPMENT		REASON FOR	HUMAN RELATIONSHIP IN INFORMATION SYSTEMS
		PEOPLE LINKED THROUGH EQUIPMENT			
		HARD		KINDS OF	EQUIPMENT
		SOFT			
		HUMAN SERVICE ORGANIZATIONS		ATTRIBUTES OF	HEALTHCARE INSTITUTIONS
		AIM TO CHANGE HUMAN BEINGS			
		CAN CAUSE CONFLICTS		ATTRIBUTE-OF	COLLECTIVE INFORMATION SYSTEM (CIS)
		CAN BE SOURCE OF VIOLENCE			
		ALL CHOICES MADE IN CIS DEPEND ON KIND OF RELATIONSHIP BETWEEN USERS AND WITH MANAGERS			
		VALUABLE THROUGH RELATIONSHIPS IT CREATES			
		SYMBOL OF HUMAN INTERACTION		PART-OF	INFORMATION RELATIONSHIPS
		KEY OF HUMAN INTERACTION			
		CONDITION OF HUMAN INTERACTION			
INFORMATION SYSTEM CHOICES	SOCIAL	SOCIAL		KIND-OF	CHOICES
	IDEOLOGICAL	IDEOLOGICAL			
	CULTURAL	CULTURAL			
	ETHICAL	HAVE ETHICAL BACKGROUND		ATTRIBUTE-OF	CHOICES
ETHICAL	DUTIES	SHARING DUTIES		PART-OF	ETHICAL BACKGROUND

			PROCESS OF DIAGNOSIS FOR INDIVIDUAL PATIENT	PART-OF	BACKBONE PATIENT CENTERED HIS
			PROCESS OF PROGNOSIS FOR INDIVIDUAL PATIENT		
			PROCESS OF THERAPY FOR INDIVIDUAL PATIENT		
			PROCESS OF FOLLOW-UP FOR INDIVIDUAL PATIENT		
			MEDICAL RESEARCH DERIVED FROM	ATTRIBUTE OF	BACKBONE OF PATIENT CENTERED HIS
			MANAGEMENT OF INFORMATION DERIVED FROM		
			SHARED CONVICTION THAT CIS IS PRIMARILY A TOOL FOR SOCIAL COHERENCY	WAY-TO	ENSURE TRUE ETHICS OF HIS
ETHICAL HIS	ENSURING		DEMOCRATIC DEBATE AMONG ALL CONCERNED ACTORS		
			COMMON CONVICTION THAT COMMON OBLIGATION TRANSCENDS PROFESSIONAL AMBITIONS TO BUILD PATIENT CENTERED INSTITUTION		
ENSURING	DEMOCRATIC DEBATE		TRANSPARENCY OF CONTENT	ATTRIBUTES OF	DEMOCRATIC DEBATE
			CONFIDENCE OF DEBATE CONDUCT		
			MULTI-PROFESSIONAL DEFINITION, ACCEPTANCE AND IMPLEMENTATION OF COLLECTIVE OBJECTIVES		
			COMMON SEMANTICS		
			MUTUAL RESPECT FOR ACTORS		
			FRANK AND FAIR DISCUSSIONS		
			MUTUAL CONFIDENCE		
			QUALITY OF CARE IS PERMANENT, SIMULTANEOUS CONCERN OF EVERY ACTOR	ATTRIBUTES OF	PATIENT CENTERED INSITUION
			RESPECT TOWARD PEOPLE IS PERMANENT, SIMULTANEOUS CONCERN OF EVERY ACTOR		
			CONSIDERATION FOR DEMANDS OF PATIENTS IS PERMANENT, SIMULTANEOUS CONCERN OF EVERY ACTOR		
			CONSIDERATION FOR WISHES OF PATIENTS IS PERMANENT, SIMULTANEOUS CONCERN OF EVERY ACTOR		
ENSURING	TOOLS	AUDITS		KINDS OF	TOOLS TO ENSURE TRUE ETHICS OF HIS

		CENTERS OF GUIDANCE FOR GOOD INFORMATION PRACTICE			
		ISSUING ETHICAL CHARTS			
		COMMITTEES FOR INFOETHICS TO SOLVE CONCRETE CASES			
		ORGANIZED FORUMS			
		MODELS ANTICIPATING FUTURE PROBLEMS			

GOSTIN, L.O.						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
U.S. HEALTH CARE		DATA ON ALMOST ANY SUBJECT	ATTRIBUTE-OF	VISION OF HEALTH CARE IN THE U.S.		
		ACCESSIBLE TO DIVERSE USERS				
		ACCESSIBLE TO A SUBSTANTIAL NUMBER OF USERS				
		COMPREHENSIVE SYSTEM OF HEALTH CARE INFORMATION				
	COMPREHENSIVE SYSTEM OF HEALTH CARE INFORMATION	TECHNICALLY FEASIBLE				
		MIGHT ACHIEVE SUBSTANTIAL HEALTH CARE BENEFITS FOR SOCIETY	ATTRIBUTE-OF	COMPREHENSIVE SYSTEM OF HEALTH CARE INFORMATION		
		PROVIDE CONSUMER CHOICE ABOUT HEALTHCARE PLANS	REASON FOR	BROAD COLLECTION AND USE OF HEALTHCARE DATA		
		PROVIDE CONSUMER CHOICE ABOUT HEALTHCARE PROVIDERS				
		ASSESS QUALITY OF HEALTHCARE				
		ASSESS COSTS-EFFECTIVENESS OF HEALTHCARE				
		PROVIDE MORE EFFECTIVE HEALTHCARE				
		MONITOR FRAUD				
		MONITOR ABUSE				
		EVALUATION OF SERVICES TO UNDERSERVED POPULATIONS				
		RESEARCH CAUSES, PREVENTION AND TREATMENT				
		SUBSTANTIAL LOSS OF PERSONAL PRIVACY	ATTRIBUTE OF	SYSTEMATIC COLLECTION OF HEALTHCARE DATA		
U.S. SOCIETAL VALUES		INDIVIDUAL RIGHTS	KIND OF	U.S. SOCIETAL VALUE		
		AUTONOMOUS DECISION MAKING				
		PROTECTION OF PRIVATE SPHERE FROM INTRUSION				
HEALTH CARE RECORDS		INTIMATE FORM OF PERSONAL INFORMATION	ATTRIBUTE OF	HEALTH CARE RECORDS		
	INTIMATE SENSITIVE	SENSITIVE FORM OF PERSONAL INFORMATION				

RULES OF PRIVACY	MORAL JUSTIFICATIONS	MORAL JUSTIFICATIONS	ATTRIBUTE OF	RULES OF PRIVACY
	PROTECT RIGHTS OF INDIVIDUALS	PROTECTING RIGHTS OF INDIVIDUAL		
MORAL JUSTIFICATIONS				
	RESPECT FOR AUTONOMY	PRINCIPLE OF RESPECT FOR AUTONOMY	KINDS OF	MORAL JUSTIFICATION FOR RULES OF PRIVACY
	RESPECT FOR PRIVACY	RESPECT AUTONOMOUS WISH NOT BE OBSERVED	WAY TO	RESPECT FOR PRIVACY OF OTHERS
		RESPECT AUTONOMOUS WISH NOT TO HAVE INFORMATION ABOUT THEMSELVES RELEASED		
		ENHANCES DEVELOPMENT OF TRUSTING RELATIONSHIP	RESULT OF	RESPECT FOR PRIVACY OF OTHERS
		ENHANCES MAINTENANCE OF TRUSTING RELATIONSHIP		
		PATIENTS CONFIDING WITH PHYSICIANS	RESULT OF	EXPECTATION OF PRIVACY
PROTECTING PATIENT PRIVACY	ETHICAL JUSTIFICATIONS	ECONOMIC DAMAGE	PART-OF	ETHICAL JUSTIFICATION FOR PROTECTING PATIENT PRIVACY
		SOCIAL DAMAGE		
		PSYCHOLOGICAL DAMAGE		
		HAS INSTRUMENTAL VALUE	ATTRIBUTE-OF	HEALTH CARE PRIVACY
	UTILITARIAN 'FEATURES' OF PRIVACY	UTILITARIAN FEATURE OF PRIVACY	REASON	IMPORTANCE OF HEALTH CARE PRIVACY
UTILITARIAN 'FEATURES' OF PRIVACY	COMMUNICATION	PROMOTES EFFECTIVE PATIENT-PHYSICIAN COMMUNICATION	KIND OF	UTILITARIAN FEATURE OF PRIVACY IN HEALTH CARE
	AUTONOMY	ENHANCES AUTONOMY		
	ECONOMIC HARM	PREVENTS ECONOMIC HARM		
	EMBARRASSMENT	PREVENTS PERSONAL EMBARRASSMENT		
	DISCRIMINATION	PREVENTS SOCIAL DISCRIMINATION		
ETHICAL CLAIMS FOR HIS	COLLECTIVE BENEFIT	COLLECTIVE BENEFIT TO SOCIETY	ATTRIBUTES	ETHICAL CLAIMS FOR MORE EFFICIENT SYSTEM OF HEALTH CARE INFORMATION
		MORE EFFICIENT USE OF HEALTHCARE INFORMATION	KIND OF	COLLECTIVE BENEFITS
		MORE COST-EFFECTIVE SERVICES		
		BETTER SCIENTIFIC RESEARCH		

		MORE EFFECTIVE PUBLIC HEALTH INTERVENTIONS			
		ASSURANCE OF HEALTHY LIVING CONDITIONS			
MORAL THEORIES	PRIVACY	NONE DEMONSTRATES PRIMACY OVER OTHERS	ATTRIBUTE-OF	MORAL THEORIES	
	SOCIAL CONTRACT	LACK OF PRIMACY	REASON FOR	SOCIAL CONTRACT	
		BALANCES VALUES OF MORAL THEORIES	ATTRIBUTE-OF	SOCIAL CONTRACT	
		LAW ENFORCEMENT	KIND-OF	SACRIFICE OF PRIVACY FOR COLLECTIVE BENEFIT	
		PUBLIC SAFETY			
		TAX COLLECTION			
		NATIONAL SECURITY			
		NOT PRIVACY ISSUE	ATTRIBUTE-OF	DISCLOSURE OF PHYSICIAN DATA	
		PHYSICIANS HAVE PROPRIETARY INTEREST IN			
	PHYSICIAN PATIENT RELATIONSHIP	MORAL RIGHTS NOT RECIPROCAL	ATTRIBUTE-OF	PHYSICIAN PATIENT RELATIONSHIP	
		DISCLOSURE OF INTIMATE INFORMATION			
		PROVIDING SERVICES			
	PROTECT PRIVACY	RIGOROUS LEGAL SAFEGUARDS	WAY-TO	PROTECT PRIVACY	
		BASED ON SPECIAL RELATIONSHIP BETWEEN PHYSICIAN AND PATIENT	KINDS-OF	LEGAL PROTECTION OF PRIVACY	
		OWNERSHIP BY ONE PARTY			
	ETHICAL ANALYSIS	BASED ON HIPPOCRATIC OATH	KINDS-OF	ETHICAL ANALYSIS OF PRIVACY	
		INFORMATION NOT GENERATED SOLELY FROM PHYSICIAN-PATIENT RELATIONSHIP	REASON FOR	COMMON FLAW IN LEGAL PROTECTION & ETHICAL ANALYSIS	
	FLAW	FLAW	REASON TO	SAFEGUARD HEALTH CARE DATA NOT THERAPEUTIC RELATIONSHIP	
	SAFEGUARDS	FAIR INFORMATION PRACTICES	WAY TO	SAFEGUARD HEALTH CARE DATA	
		PATIENTS SHOULD BE ABLE TO CONSENT TO COLLECTION AND USE OF PERSONAL INFORMATION			
		HEALTH CARE PROVIDERS SHOULD ADHERE TO PRINCIPLES OF LEAST-INTRUSIVE DISCLOSURE			
		INDUSTRY-WIDE SECURITY INFRASTRUCTURE			

		DATA PROTECTION AND SECURITY BOARD			
	PATIENT CONSENT	RIGHT TO KNOW ABOUT COLLECTION AND USE OF IDENTIFIABLE INFORMATION	PART OF		PATIENT CONSENT
		RIGHT TO CONSENT TO COLLECTION AND USE IDENTIFIABLE INFORMATION			
		LENGTH OF TIME INFORMATION WILL BE STORED	PART OF		KNOWING
		CIRCUMSTANCES UNDER WHICH IT CAN BE EXPUNGED			
		DEGREE OF THIRD PARTY ACCESS			
	FAIR INFORMATION PRACTICES	RIGHT TO CONTROL USE OF PERSONAL DATA	PART OF		FAIR INFORMATION PRACTICES
		SECRET DATA SYSTEMS NOT PERMITTED TO EXIST			
		INDIVIDUALS HAVE RIGHT TO REVIEW AND CORRECT			
		DATA COLLECTED ONLY FOR IMPORTANT HEALTH CARE PURPOSES			

<i>WYNIA, MK</i>						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
HEALTH CARE	DELIVERY	AFFECTED BY ETHICAL STANDARDS OF MANY OTHER PARTICIPANTS	ATTRIBUTE-OF	PARTICIPANT IN HEALTH CARE DELIVERY		
	ETHICAL STANDARDS	DERIVED FROM VALUE SYSTEMS	ATTRIBUTE-OF	ETHICAL STANDARDS		
ETHICAL STANDARDS	BUSINESS	BUSINESS	KIND-OF	VALUE SYSTEMS AT WORK IN HEALTH CARE		
	PUBLIC HEALTH	PUBLIC HEALTH				
	PERSONAL	PERSONAL				
	MEDICAL	MEDICAL PROFESSIONAL				
		MAY CONFLICT WITH ONE ANOTHER	ATTRIBUTE-OF	VALUE SYSTEMS AT WORK IN HEALTH CARE		
		ACCOUNTABILITY MATRIX	WAY-TO	ADDRESS CONFLICTS BETWEEN VALUE SYSTEMS		
		BALANCE DIVERSE VALUES	ATTRIBUTE-OF	ACCOUNTABILITY MATRIX		
		CREATE SHARED EXPECTATIONS FOR ETHICAL BEHAVIOR				
	EVALUATION THROUGH PERFORMANCE STANDARDS	EVALUATION THROUGH PERFORMANCE MEASURE FOR EACH DOMAIN OF ETHICS	WAY-TO	CREATE SUCCESSFUL ACCOUNTABILITY MATRIX		
		ETHICAL FUNDAMENTAL OBLIGATIONS REPORT CARD EVALUATIONS (E FORCE) PROGRAM	WAY-TO	DEVELOP PERFORMANCE MEASURES FOR ALL DOMAINS OF ETHICS		
		PROTECTION OF HEALTH INFORMATION PRIVACY	KINDS-OF	ETHICAL DOMAIN SELECTED BY E FORCE		
INCREASING ACCESS TO HEALTH CARE INFORMATION	RATIONALE	IMPROVED ACCESS TO RELEVANT HEALTH CARE INFORMATION CAN INCREASE EFFICIENCY	REASON-FOR	SELECTION OF PROTECTION OF HEALTH INFORMATION PRIVACY		
	OUTCOMES	IMPROVED ACCESS ... IMPROVE PATIENT OUTCOMES				

	PUBLIC HEALTH AND SAFETY	IMPROVED ACCESS ... BETTER PROTECT PUBLIC HEALTH AND SAFETY		
	REDUCE MISTAKES	REDUCE MISTAKES		
	LOWER COSTS	LOWER COSTS		
COMPUTERIZED MEDICAL INFORMATION SYSTEMS		COMPUTERIZED MEDICAL INFORMATION SYSTEMS	WAY-TO	IMPROVE ACCESS
	PRIVACY CONCERNS	PRIVACY NORMS INCONSISTENT	REASON-FOR	CONCERN ABOUT PRIVACY AND CONFIDENTIALITY IN MEDICINE
		EMPLOYERS USE HEALTH CARE INFORMATION TO MAKE EMPLOYMENT-RELATED DECISIONS		
		INDIVIDUALLY IDENTIFIABLE HEALTH INFORMATION HAS BEEN RELEASED TO THE PUBLIC		
		INDIVIDUALLY IDENTIFIABLE HEALTH INFORMATION HAS BEEN SOLD OR TRADED TO OTHERS		
		ADVENT OF ELECTRONIC COMMUNICATIONS AND RECORD-KEEPING		
		ACCIDENTAL	KIND-OF	RELEASE OR SALE OF INDIVIDUALLY IDENTIFIABLE HEALTH INFORMATION
		MALICIOUS		
		RESEARCHERS	KIND-OF	PEOPLE WHO OBJECT TO 'OVERZEALOUS' PRIVACY CONCERNS
		PUBLIC HEALTH OFFICIALS		
		HEALTH CARE DELIVERY ORGANIZATIONS		
		COULD THWART EFFORTS TO USE INFORMATION TO IMPROVE PATIENT CARE	KIND-OF	OBJECTIONS TO 'OVERZEALOUS' PRIVACY CONCERNS
		COULD THWART EFFORTS TO USE INFORMATION TO IMPROVE PUBLIC HEALTH		
		VAST MAJORITY OF PATIENTS AGREE TO LET THEIR RECORDS BE USED FOR LEGITIMATE PURPOSES		

		USE OF IDENTIFIABLE HEALTH INFORMATION TO PROTECT THE PUBLIC IS WELL-ACCEPTED		
		COST OF IMPLEMENTING PRIVACY PROTECTIONS		
		IMPACT ON EMPLOYER-SPONSORED DISEASE MANAGEMENT PROGRAMS		
		PATIENTS' FAMILY MEMEBERS		
		MEDICAL RESEARCH		
		HEALTH CARE IS IMPROVED WHEN PATIENTS CONFIDE SENSITIVE PERSONAL INFORMATION TO THEIR CAREGIVERS		
AREAS OF AGREEMENT			KIND-OF	AREAS OF AGREEMENT
		PATIENTS WHO DOUBT SECURITY AND CONFIDENTIALITY OF THEIR INFORMATION CAN SERIOUSLY IMPAIR HEALTH CARE DELIVERY		
		IMPORTANCE OF AUTONOMY		
		IMPORTANCE OF FAIRNESS		
	AUTONOMY	ALLOWING INDIVIDUALS TO MAKE DECISIONS THAT AFFECT THEIR PERSON	ATTRIBUTE-OF	RESPECTING AUTONOMY
	FAIRNESS	INDIVIDUALS SHOULD BE GIVEN INFORMATION NECESSARY TO MAKE IMPORTANT DECISIONS	ATTRIBUTE-OF	RESPECTING FAIRNESS
ETHICS	CREATE VALID PERFORMANCE MEASURES	BREAK DOMAINS OF ETHICS INTO RELEVANT CONTENT AREAS	STEPS-IN	CREATE AND VALIDATE PERFORMANCE MEASURE FOR ETHICS
		DELINEATE SPECIFIC EXPECTATIONS FOR EACH PARTY IN EACH CONTENT AREA		
		CREATE PERFORMANCE MEASURES BASED ON EXPECTATIONS		
		TEST PERFORMANCE MEASURES FOR RELIABILITY		
		TEST PERFORMANCE MEASURE FOR VALIDITY		
		TEST PERFORMANCE MEASURES FOR FEASIBILITY		
		ASSESS CONTENT VALIDITY	PART-OF	STEPS IN CREATING AND VALIDATING PERFORMANCE MEASURES FOR ETHICS

		FIELD TEST FOR CONSTRUCT VALIDITY, RELIABILITY AND FEASIBILITY			
	CONTENT VALIDITY	ASK RELEVANT EXPERTS WHETHER ALL AREAS COVERED THAT SHOULD BE	WAY-TO		ASSESS CONTENT VALIDITY
		ASK RELEVANT EXPERTS WHETHER AREAS COVERED THAT SHOULD NOT BE			
		APPOINT EXPERT ADVISORY PANEL (EAP)	STEPS-IN		ASSESSMENT OF CONTENT VALIDITY
		HAVE PANEL EXAMINE EXISTING NORMS			
		HAVE PANEL SUGGEST MEASURABLE EXPECTATIONS FOR PERFORMANCE			
CONTENT VALIDITY	EXPERTS	MEDICINE	KINDS-OF		EXPERTS ON ADVISORY PANEL
		PRIVACY			
		ETHICS			
		LAW			
		ACCREDITATION			
		INFORMATICS			
		PUBLIC HEALTH			
	EXISTING NORMS	LITERATURE	PARTS-OF		EXISTING NORMS
		EXISTING POLICIES			
		INTEREST INDIVIDUALS HAVE IN THEIR PERSONAL CONTROL OVER SENSITIVE ASPECTS OF THEIR LIVES	KIND-OF		PRIVACY
	PRIVACY				
		PERSONAL HEALTH	KIND-OF		SENSITIVE ASPECT OF LIFE
		INDIVIDUAL'S INTEREST IN DISCLOSING PERSONAL INFORMATION TO OTHERS AND FOR WHAT PURPOSES	KIND-OF		INFORMATIONAL PRIVACY
	HEALTH INFORMATION PRIVACY	ONE'S HEALTH STATUS	KIND-OF		HEALTH INFORMATIONAL PRIVACY
		ONE'S HEALTH HISTORY			
		HELD IN TRUST	ATTRIBUTE-OF		DISCLOSED PRIVATE INFORMATION
		PROTECTED AGAINST FURTHER DISSEMINATION OR USE AGAINST THE WISHES OF INFORMATION SOURCE	ATTRIBUTE-OF		INFORMATION HELD IN TRUST

	CONFIDENTIALITY	CONDITION THAT IS ESTABLISHED TO PROTECT PRIVACY	ATTRIBUTE-OF	CONFIDENTIALITY
		POLICIES	PART-OF	CONFIDENTIALITY SAFEGUARDS
		PROCEDURES		
	SECURITY	TECHNICAL PROCEDURES AND POLICIES	PART-OF	SECURITY
		ADMINISTRATIVE PROCEDURES AND POLICIES		
		MEASURES		
		TOOLS		
		PROTECT CONFIDENTIAL INFORMATION	REASON-FOR	SECURITY
		LOSS	KINDS-OF	PROTECTION OF CONFIDENTIAL INFORMATION
		UNAUTHORIZED DISCLOSURE		
		UNAUTHORIZED ACCESS		
		UNAUTHORIZED DESTRUCTION		
		UNAUTHORIZED ALTERATION		
		UNAUTHORIZED USE		
	CONSENSUS	EAP SUGGESTED CONTENT AREAS	STEPS-IN	CONSENSUS DEVELOPMENT
		OVERSITE BODY MODIFIED		
		EAP RANKED MODIFIED CONTENT AREAS		
		RANK CONTENT AREAS SENT TO OVERSITE BODY		
		OVERSITE BODY RANKED		
		RESULTS OF RANKING		
		SCALE (1-10)	PART OF	EAP RANKING
		IMPORTANCE OF EXPECTATION		
		UNIVERSAL APPLICABILITY OF EXPECTATION		
		FEASIBILITY OF MEETING EXPECTATION		
		SCALE (1-10)	PART OF	OVERSITE RANKING
		IMPORTANCE OF EXPECTATION		
		UNIVERSAL APPLICABILITY OF EXPECTATION		
		FEASIBILITY OF MEETING EXPECTATION		
		REALISTIC TO IMPLEMENT		

NORMS	CONSENSUS		1973 DHEW REPORT 1974 PRIVACY ACT HIPAA 1988 JCAHO AND NATIONAL COMMITTEE FOR QUALITY ASSURANCE MODEL STATE PUBLIC HEALTH PRIVACY PROJECT HEALTH PRIVACY PROJECT 1988 HEALTH INFORMATION PRIVACY MODEL ACT - NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS AMERICAN MEDICAL ASSOCIATION PRIVACY POLICIES AMERICA BAR ASSOCIATION HEALTH PRIVACY RECOMMENDATIONS 1999 AMERICAN ASSOCIATION OF HEALTH PLANS RECOMMENDATIONS FAIR INFORMATION PRACTICES (FIP)	PART-OF	SOURCES FOR NORMS OF HEALTH INFORMATION PROTECTIONS
CONSENSUS	CONTENT AREAS		TRANSPARENCY CONSENT COLLECTION LIMITATION SECURITY INDIVIDUAL ACCESS DATA QUALITY INFORMATION USE LIMITATION ACCOUNTABILITY APPLY TO USES OF IDENTIFIABLE HEALTH INFORMATION	PART-OF	CONTENT AREAS IDENTIFIED BY RANKING CONSENSUS
CONTENT AREAS	TRANSPARENCY		HEALTH INFORMATION TRUSTEE PUBLICLY AVAILABLE DESCRIPTIONS OF POLICIES AND PROCEDURES CLEAR AND UNDERSTANDABLE LANGUAGE OF POLICIES AND PROCEDURES	PART-OF	EXPECTATIONS FOR TRANSPARENCY EXPECTATIONS FOR TRANSPARENCY EXPECTATIONS OF PRIVACY IN CONTENT AREAS

		POLICIES AND PROCEDURES ARE PERIODICALLY UPDATED AND REDISTRIBUTED			
	CONSENT	VALID INFORMED CONSENT	PART-OF		EXPECTATIONS FOR CONSENT
		PROCESS FOR WAIVER OF INFORMED CONSENT			
		OPT-OUT PROVISIONS			
	COLLECTION LIMITATIONS	DATA COLLECTORS RECEIVE TRAINING ON FIAR AND LAWFUL MEANS OF INFORMATION COLLECTION	PART-OF		EXPECTATIONS FOR COLLECTION LIMITATIONS
		WRITTEN POLICY ON RETENTION, DESTRUCTION AND DEFINITIONS FOR DISCARDING, DEIDENTIFYING OR ARCHIVING			
	SECURITY	WRITTEN POLICIES	PART-OF		EXPECTATIONS FOR SECURITY
		SECURITY FOR INFORMATION STORED AND TRANSMITTED ON PAPER			
		SECURITY FOR INFORMATION STORED AND TRANSMITTED ELECTRONICALLY			
		SECURITY OFFICER OR SECURITY TEAM			
	ACCESS	HEALTH INFORMATION TRUSTEE PROVIDES INDIVIDUALS ACCESS TO REVIEW AND COPY THEIR IDENTIFIABLE HEALTH INFORMATION	PART-OF		EXPECTATION FOR INDIVIDUALS ACCESS
		SPECIFIC AND LIMITED EXPECTATIONS			
		TRUSTEE ALLOW INDIVIDUAL TO APPEND AMENDED INFORMATION			
	DATA QUALITY	PERIODIC AUDITS FOR ACCURACY	PART-OF		EXPECTATION FOR DATA QUALITY
		REVIEW OF SECURITY MEASURE TO ENSURE THAT THEY DO NOT UNDULY INTERFERE WITH TIMELY AND ACCURATE TRANSMISSION OF INFORMATION NECESSARY FOR PATIENT CARE			
	USE LIMITATION	IDENTIFIABLE INFORMATION COLLECTED FOR DEFINED PURPOSE NOT USED FOR ANOTHER PURPOSE WITHOUT EXPLICIT CONSENT	PART-OF		EXPECTATION FOR INFORMATION USE LIMITATION

		LEGAL AND AUTHORIZED EXCEPTIONS TO CONSENT		
		ACCESS PRIVILEGES TIED TO JOB FUNCTIONS		
		NO COMMERCIALIZATION OF IDENTIFIABLE HEALTH INFORMATION WITHOUT INFORMED CONSENT		
		WRITTEN POLICIES REGARDING RELEASE OF IDENTIFIABLE HEALTH INFORMATION TO LAW ENFORCEMENT OFFICIALS		
		TRUSTEE NOTIFIES PATIENT WHEN IDENTIFIABLE HEALTH INFORMATION IS SUBPOENAED		
	ACCOUNTABILITY	TRUSTEES FURNISH CLEAR POLICIES AND MATERIALS TO ALL AGENTS	PART-OF	EXPECTATION FOR ACCOUNTABILITY
		TRUSTEES ENSURE THAT INDIVIDUALS ARE PROPERLY TRAINED, ON REGULAR BASIS ON SECURITY AND CONFIDENTIALITY STANDARDS		
		REPRIMANDS, FEEDBACK, EDUCATION, PROBATION AND OTHER ENFORCEMENT		
		WRITTEN POLICIES SPECIFYING LEVEL OF PENALTY FROM SPECIFIC BREACHES		
		INDIVIDUALS DISPLAY KNOWLEDGE OF PROTECTIONS AND PENALTIES		
		FORMAL INTERNAL MECHANISM FOR BRINGING FORTH COMPLAINTS OF INAPPROPRIATE COLLECTION, STORAGE OR USE OF PERSONALLY IDENTIFIABLE HEALTH INFORMATION		
		EXTERNAL REVIEW OF UNRESOLVED COMPLAINTS		
		TRUSTEES REQUIRE WRITTEN STATEMENT OF ADHERENCE TO STANDARDS FROM ALL AGENTS		
	SOCIAL CONSENSUS	ALL USES OF IDENTIFIABLE HEALTH INFORMATION SHOULD BE REVIEWED BY AN ACCOUNTABLE REVIEW COMMITTEE	PART-OF	SOCIAL CONSENSUS AROUND EXPECTATIONS
		ALL USERS OF IDENTIFIABLE HEALTH INFORMATION SHOULD BE TRAINED IN CONFIDENTIALITY AND SECURITY PRACTICES		

Patient Health Records

<i>KAY, S.</i>					
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS	
PATIENTS		OFTEN MISUNDERSTOOD	ATTRIBUTE-OF	PATIENTS	
		OFTEN MISREPRESENTED			
MEDICAL RECORD		OFTEN REGARDED AS REPRESENTING ABSOLUTE TRUTH	ATTRIBUTE-OF	MEDICAL RECORD	
		REPOSITORY SUSPECT			
		PROCESS OF CREATION SUSPECT			
		TERM 'MEDICAL RECORD' SOURCE OF CONFUSION			
		NEVER SIMPLY A MATTER OF THE FACTS			
		NOT SIMPLY A CREATION OF THE IMAGINATION			
		IS ABOUT A TANGIBLE, MATERIAL SITUATION			
		HAS BECOME A MECHANISTIC ENTITY			
		IMPLIED READERS			
		DIRECT PATIENT CARE	REASON-FOR	MEDICAL RECORD	
		QUALITY ASSURANCE			
		EDUCATION			
		MEASUREMENT	PART-OF	MEDICAL RECORD	
		OBSERVATION			
		QUANTITATIVE	ATTRIBUTE-OF	MEASUREMENT	
		OBJECTIVE			
		QUALITATIVE	ATTRIBUTE-OF	OBSERVATION	
		SUBJECTIVE			
		RE-DEFINITION			
		CAPTURE ESSENCE WITH NEW TECHNICAL TERM	REASON-FOR	NEW TERMS FOR MEDICAL RECORD	
		MEDICAL RECORD REMAINS ENIGMA			
		CONSENSUAL DEFINITION REMAINS ELUSIVE	RESULT-OF	NEW TERMS FOR MEDICAL RECORD	
		DUBIOUS CONNOTATIONS	ATTRIBUTE-OF	NEW TERMS FOR MEDICAL RECORD	
		DUBIOUS CONNOTATIONS	REASON-FOR	USING OLDER TERM STORY	

		REFOCUS ATTENTION UPON THE ROLE THAT THE MEDICAL RECORD CAN PLAY WITHIN MEDICAL INFORMATICS		
		ACCEPTABLE ACROSS DISCIPLINES		
		CORRECTS ASSUMPTIONS ABOUT THE TRUTH OF THE MEDICAL RECORD		
		PROVIDES INSIGHTS INTO ITS USAGE		
		PROVIDE UNIFYING AND COHERENT FRAMEWORK		
		HARMONISE DISPARATE ISSUES		
		CONSIDERING STORY'S ROLE FOR EFFECTIVE COMMUNICATION	WAY-TO	PROVIDE FRAMEWORK AND HARMONISE ISSUES
	USE	EDUCATION	KINDS-OF	USAGE INSIGHTS
		CLINICAL PRACTICE		
		TECHNICAL PRACTICE		
		FOR CLINICIAN	KIND-OF	REFOCUSING
		FOR PATIENT		
		STORY	PART-OF	CLINICAL NARRATIVE
	CLINICAL NARRATIVE	STORY	ATTRIBUTE-OF	CLINICAL NARRATIVE
		THERE MAY BE MORE THAN A STORY		
		THERE IS NOT LESS THAN A STORY		
		SUBSTANTIAL ROLE IN EDUCATION	ATTRIBUTE-OF	STORY
	STORY	THEORETICAL VALUE WITHIN MEDICAL INFORMATICS		
		PRACTICE VALUE WITHIN MEDICAL INFORMATICS		
		CANNOT BE EQUATED WITH FICTION		
		FOR RESEARCHERS	KIND-OF	VALUE
		FOR PRACTITIONERS		
	VALUE	HEALTHCARE RECORD	KIND-OF	CANDIDATE TERMS
		PATIENT RECORD		
		CHART		
		PATIENT REFERENCE DOSSIER		
		ATTEMPT TO CONVEY MEANING ABOUT DOCUMENT DERIVED FROM UNIQUE CULTURAL CONTEXT	ATTRIBUTE-OF	CANDIDATE TERMS
		HELPFUL FOR SOME UNSUITABLE FOR OTHERS		

		NO CONSENSUS ON CONCEPTUAL COVERAGE			
		NO CONSENSUS ON BOUNDARIES			
		BELIEVED TO BE FUNDAMENTAL TO PROCESS OF CARE	ATTRIBUTE-OF		DOCUMENT REFERRED TO BY CANDIDATE TERMS
		BELIEVED TO BE FUNDAMENTAL TO MEDICAL INFORMATICS			
		WORSENERD ENTANGLE OF TERMINOLOGICAL ISSUES	RESULT-OF		TENDENCY TO CONSIDER TECHNOLOGY AS PANACEA
		PREFIXES ADDED TO CANDIDATE TERMS			
CANDIDATE TERMS	PREFIXES	ELECTRONIC	KINDS-OF		PREFIXES
		COMPUTERISED			
		COMPUTER-BASED			
		DOES NOT CLAIRFY THE SUBSTANCE OF THE DOCUMENT	ATTRIBUTE-OF		PREFIXES
		PUTS TECHNICAL MEANS BEFORE THE SUBJECT OR PURPOSE OF THE RECORD			
		LIKELY TO CONFOUND PROBLEMS THROUGH THE INTRODUCTION OF COMMERCIAL INTEREST			
		PATIENT MEDICAL RECORD CONSTRAINED BY TOO RIGID UNDERLYING MODEL	KIND-OF		MEANS BEFORE SUBJECT
		PATIENT MEDICAL RECORD CONSTRAINED BY SUPPLIER'S WORKSTATION			
	SUFFIXES	RECORD	KIND-OF		DESCRIPTIVE SUFFIX
		CHART			
		CARD			
		DOSSIER			
		INDIVIDUALISTIC NATURE OF MEDICAL PRACTICE	REASON-FOR		LACK OF CONSENSUS
MEDICAL RECORDS	ELECTRONIC MEDICAL RECORDS	TORRID HISTORY	ATTRIBUTE-OF		ELECTRONIC MEDICAL RECORDS
		CATALOGUE FAILURES			
		ARTEFACTS			
ELECTRONIC MEDICAL RECORDS	HOLY GRAIL	HAS BECOME HOLY GRAIL OF MEDICAL INFORMATICS			

		PEOPLE'S UNREALISTIC EXPECTATIONS OF ARTEFACTS	REASON-FOR	TORRID HISTORY AND FAILURES
		PEOPLE'S UNREALISTIC PERCEPTIONS OF ARTEFACTS		
HOLY GRAIL	PURSUIT OF	IDEAL WILL PROVIDE DEFINITIVE TRUST	REASON-FOR	PURSUIT OF GRAIL
		IDEAL WILL RESOLVE MANY HEALTHCARE PROBLEMS		
	HERETICAL WORKS	STATE THAT MEDICAL RECORD DOES NOT HAVE THE TRUTH	ATTRIBUTES-OF	HERETICAL WORKS W/IN MI
		STATE THAT RECORD IS DEPENDENT UPON OPINIONS		
		STATE THAT OPINION MAY OR MAY NOT REPRESENT THE TRUTH CONCERNING THE ACTUAL STATE OF THE PATIENT		
		NOT UNCOMMON		
		STATE THAT CONSIDERING MEDICAL RECORDS AS STORY MAY HELP UNDERSTANDING OF ITS ROLE WITHIN HEALTHCARE	WAY-TO	TAKE HERSEIES FURTHER
MEDICAL RECORD	METAPHOR OF STORY	EXPLORE THEMES OF MEDICAL RECORD AS NARRATIVE	USE-FOR	METAPHOR OF STORY
NARRATIVE	CLINICAL DECISION MAKING	AT HEART OF CLINICAL DECISION MAKING	ATTRIBUTE-OF	NARRATIVE
		GOOD DETERMINED BY CLINICAL INSTITUTION & PROFESSION AT TIME OF PRESENTATION	ATTRIBUTE-OF	CLINICAL NARRATIVE
	NARRATIVE REASONING	CAN INCORPORATE MANY DIFFERENT PERSPECTIVES	ATTRIBUTE-OF	NARRATIVE REASONING
		ISN'T LIMITED TO TEXTS		
		CAN BE A MODE OF SPEECH		
		HAS SOME FOUNDATIONS IN COGNITIVE PSYCHOLOGY		
		HAS NOT BEEN APPLIED TO MEDICAL INFORMATICS		
NARRATIVE REASONING	PERSEPCTIVES	NURSING	KIND-OF	PERSPECTIVE INCORPORATED INTO NARATIVE REASONING
		PSYCHOLOGY		
		THERAPY		
		MEDIAL SOCIOLOGY		

		LAY INPUT FROM PATIENTS				
GOAL	PATIENT-CENTERED CARE	APPLYING NARRATIVE REASONING TO MEDICAL INFORMATICS		WAY-TO	ACHIEVE GOAL OF PATIENT-CENTERED CARE	
PATIENT-CENTERED CARE	ETHICAL	ETHICAL		REASON-TO	ACHIEVE PATIENT-CENTERED CARE	
	TECHNICAL	TECHNICAL				
MEDICINE	DEHUMANIZATION	DEHUMANIZATION		ATTRIBUTE-OF	MEDICINE	
		AFFECTS PATIENTS				
		AFFECTS HEALTHCARE PROVIDERS		ATTRIBUTE-OF	DEHUMANIZATION IN MEDICINE	
		PROCESS OF DEVALUATION				
		DANGER OF ACCELERATING PROCESS OF DEVALUATION		ATTRIBUTE-OF	COMPUTERIZATION OF CLINICAL PRACTICE	
MI	GRAND CHALLENGE OF MI	COUNTER PROCESS DEHUMANIZATION IN MEDICINE		KIND-OF	GRAND CHALLENGE OF MI	
		MI WILL BE DEPRECATED AS A SUBJECT		REASON-TO	COUNTER PROCESS OF DEHUMANIZATION	
		LIMIT MORAL GROWTH		WAYS-TO	DEPRECATED AS A SUBJECT	
	REDUCTIONIST RESTRICTIVE	REDUCTIONIST PRACTICES		WAYS-TO	LIMIT MORAL GROWTH	
		RESTRICTIVE PRACTICES				
		EVERY PATIENT TELLS A STORY		PART-OF	HEALTHCARE DOMAIN	
		CLINICIANS INTUITIVELY USE NARRATIVE DEVICES				
NARRATOLOGY		STUDY OF FORMS OF NARRATION AND VARIETIES OF NARRATOR		ATTRIBUTE-OF	NARRATOLOGY	
		CAN EXPRESS ISSUES AT A NUMBER OF DIFFERENT LEVELS				
		MEANS OF CLASSIFYING DIFFERENT PARADIGMS, MODELS AND IMPLEMENTATION				
		CAN EXPRESS THE DISTINCTION BETWEEN THE CONTENT PLANE AND THE EXPRESSION PLAN				
		CAN DISTINGUISH DIFFERENT CONCEPT LEVELS WITHIN THE MEDICAL RECORD				
		CAN IDENTIFY THE TRANSFORMATION PROCESS FROM ONE LEVEL TO ANOTHER				

MI	HOLISTIC FRAMEWORK	LACK OF HOLISTIC FRAMEWORK FOR MI	CAUSE-OF	MEDICAL RECORD AND CONTEXT BEING DEVALUED
		INHIBITS EXAMINATION OF SOLUTIONS FROM OTHER CULTURES	RESULT-OF	DEVALUATION OF MEDICAL RECORD ... IN MI
		INHIBITS EXAMINATION OF SOLUTIONS FROM OLDER TRADITIONS		
		MI FRAMEWORKS THAT ARE UNHELPFUL TO CLINICIANS		
		TOO TECHNICAL	WAY-THAT	MI FRAMEWORKS THAT ARE UNHELPFUL TO CLINICIANS
		TOO DISTANT FROM PRACTICE		
		ATTEMPT TO ELEVATE MEDICAL HISTORY TO LEVEL OF SCIENTIFIC DOCUMENT	ATTRIBUTE-OF	PROBLEM ORIENTED MEDICAL RECORD (WEED)
MEDICAL RECORD	PROBLEM ORIENTED	PHYSICIAN CENTERED		
		ASSUMES OBJECTIVITY OF CLINICAL OBSERVER		
		NO SUBJECT IN THE NARROW CASE HISTORY		
		A TRISOMIC ALBINO FEMALE OF 21	KIND-OF	NARROW CASE HISTORY WITH NO SUBJECT
		IN DANGER OF REDUCING SEMANTIC RICHNESS AND DEGRADING THE STORY	ATTRIBUTE-OF	MI
		HOLISTIC PROPERTIES		
		LIMITED CODES	WAYS-TO	REDUCE SEMANTIC RICHNESS AND DEGRADE STORY
		WEAKLY CONNECTIVE PHRASES		
		GNOSTIC ANALOGUE (KLUGE)	KIND-OF	TAXONOMIC MODELS FOR MEDICAL RECORDS
MEDICAL RECORD MODELS	GNOSTIC	INFORMATION MODELS (BLOIS)		
	INFORMATION	NARRATIVE MODEL		
	NARRATIVE MODEL	META-MODEL	ATTRIBUTE-OF	NARRATIVE MODEL
		MONAGE CONCEPT		
		SHARED POWER OF AUTHORIZING		
		USE NARRATIVE STRUCTURE TO FACILITATE UNDERSTANDING AND COMMUNICATION		
		INVITES US TO CONSIDER ETHICAL PERSPECTIVE	ATTRIBUTE-OF	GNOSTIC ANALOGUE
	GNOSTIC	FOCUSES ON THE TECHNICAL	ATTRIBUTE-OF	INFORMATION MODEL
	INFORMATION			

	NARRATIVE	SEEK VALUE IN NARRATIVE FROM A MORE DISCIPLINED PERSPECTIVE	REASON-FOR	NARRATIVE MODEL IN MI		
		CENTRAL TO PROGRESSION OF MI AS A PROFESSIONAL DISCIPLINE				

KLUGE, E.H.W. (1993)						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
ELECTRONIC DATA STORAGE AND RETRIVAL		ALLOWANCE OF EVOLUTION OF HEALTH-CARE DECISION MAKING STRUCTURES	RESULT-OF	ADVENT OF ELECTRONIC DATA STORAGE AND RETRIVAL		
		PATIENT NO LONGER PRIMARY DECISION RESOURCE	ATTRIBUTE	EVOLVED HEALTH-CARE DECISION MAKING STRUCTURES		
		CENTER ON THE INFORMATION PACKAGE THAT DESCRIBES AND DEFINE THE PATIENT FROM A HEALTH-CARE DECISION MAKING PERSPECTIVE				
PATIENT DATA PACKAGE	MODEL	MODEL OF PATIENT	KIND-OF	FUNCTION OF DATA PACKAGE THAT DESCRIBES PATIENT		
	GNOSTIC ANALOG	GNOSTIC ANALOG OF THE PATIENT				
GNOSTIC ANALOG	UNIQUE	IS UNIQUE TO THAT PERSON	ATTRIBUTE-OF	FUNCTION OF DATA PACKAGE THAT DESCRIBES PATIENT		
		FROM MODEL TO ANALOG	STAGE-IN	EVOLUTION OF HEALTH-CARE DECISION MAKING		
		FACILITATION OF REIFICATION OF GNOSTIC ANALOG	RESULT-OF	DEVELOPMENT OF ADVANCED COMPUTER-BASED PATIENT RECORDS		
	REIFICATION	CHANGE OF QUANTUM-LIKE PROPORTIONS	ATTRIBUTE-OF	REIFICATION		
		POTENTIAL FOR FUNDAMENTAL RESTRICTING OF ETHICS OF THE PHYSICIAN/PATIENT RELATIONSHIP				
		POTENTIAL FOR FUNDAMENTAL RESTRICTING OF ETHOS OF CONTEMPORARY HEALTH-CARE DELIVERY				
		RAISES SEVERAL IMPORTANT ETHICAL PROBLEMS				
	SPECIAL ONTOLOGICAL STATUS	ADVANCED PATIENT RECORDS FUNCTION AS GNOSTIC ANALOG OF THE PATIENT THEMSELVES	REASON-FOR	RECORDS ASSUMPTION OF SPECIAL ONTOLOGICAL STATUS		

		DECISION-THEORETICAL ROLE THE ANALOG PLAYS			
		INNAPPROPRIATENESS OF PERSPECTIVE OF OWNERSHIP AND MODEL OF PROPERTY RIGHTS FOR ISSUES SURROUNDING RECORDS DISPOSITION AND USEAGE		RESULT-OF	SPECIAL ONTOLOGICAL STATUS
		USE OF PERSON-ORIENTED PERSPECTIVE			
ETHICAL PRINCIPLES	APPLICABLE TO PERSONS	ETHICAL PRINCIPLES THAT ARE APPLICABLE TO PATIENTS AS PERSONS		PART-OF	PERSON-ORIENTED PERSPECTIVE
APPLICABLE TO PERSONS	PRIVCY	PRIVACY			
	CONTROL	CONTROL			
	PERSONAL DIGNITY	PERSONAL DIGNITY			
		INFORMED CONSENT FOR USE AND RETRIEVAL OF THE DATA			
	INFORMED CONSENT	ACCESSIBILITY			
	ACCESSIBILITY	SECURITY			
	SECURITY				
	OWNERSHIP	OWNERSHIP OF DATA STRUCTURE THEMSELVES			
LIABILITY	ACCURACY	LIABILITY FOR ACCURACY			
	COMPLETENESS	LIABILITY FOR COMPLETENESS			
	USAGE	LIABILITY FOR USAGE			
		COORDINATED INTERNATIONAL MANNER	WAY-TO		APPROACH ETHICAL AND LEGAL PROBLEMS OF PATIENT RECORD
		APPROPRIATE LEGAL EXPRESSION			
		INCORPORATED INTO CODES OF ETHICS FOR RELEVANT PROFESSIONS			
DECISION SPACE		NESTED SUBSPACES	ATTRIBUTES-OF		DECISION SPACE
		NOT MATERIAL REALITY			
		FORMAL ANALOG OF MATERIAL REALITY			
		HAS NO CAUSALITY			
		ONTIC ANALOG OF CAUSALITY IS PARTICULARIZATION OF OPTIONS			
DECISION SUBSPACE	DIAGNOSIS	DIAGNOSIS	KINDS-OF		DECISION SUBSPACE
	TREATMENT	TREATMENT OPTIONS			
	AUTHORIZATION	LINE OF AUTHORIZATION			

		POSSIBLE ACTIONS	PART-OF	DECISION SUBSPACE
		SUB-SUBSPACE		
		REDUCTION OF POSSIBLE ACTIONS TO SINGLE PATH	WAY-TO	SPECIFIC DECISION
		ENTERING DECISION SPACE	WAY-TO	ENTER DECISION SPACE AS PATIENT
		MATERIALLY GNOSTICALLY		
		TRADITIONAL FAMILIAR	ATTRIBUTE-OF	MATERIALLY ENTERING DECISION SPACE
		AS SET OF DATA	KIND-OF	GNOSTICALLY ENTERING DECISION SPACE
		MATERIAL PATIENT OBJECT OF HEALTH CARE DECISION MAKING	ATTRIBUTE OF	DECISIONAL THEORETICAL PERSPECTIVE
		MATERIAL PATIENT OBJECT OF HEALTH CARE EFFORTS		
		GNOSTIC PATIENT ANALOG OBJECT OF HEALTH CARE DECISION MAKING		
		GNOSTIC PATIENT ANALOG OBJECT OF HEALTH CARE EFFORTS		
		COMPLEXITY OF PATIENT ANALOG	KIND OF	CHANGE TO RELATIONSHIP BETWEEN MATERIAL AND PATIENT ANALOG
		ONTOLOGICAL STATUS OF PATIENT ANALOG		
		ELECTRONIC STORAGE AND MANIPULATION OF PATIENT ANALOG	CAUSE OF	CHANGE TO RELATIONSHIP ...
		INTERCONNECTION BETWEEN PATIENT AND PATIENT ANALOG WAS CLOSE	ATTRIBUTE OF	RELATIONSHIP PRIOR TO ELECTRONIC STORAGE ...
		PATIENT COULD INTERRUPT DECISION -MAKING PROCESS BY REMOVING HIMSELF FROM SETTING		
		DECISION STRUCTURE WAS NOT GEARED TO DEALING WITH GNOSTIC ELEMENTS ALONE		
		GEARED TO DIRECT PERSONAL INTERACTION AT ALL LEVELS		
		VERIFICATION	KIND-OF	DIRECT PERSONAL INTERACTION

		REAL DECISION MAKING OCCURS ONLY ON THE GHOSTIC LEVEL; EVEN FOR THE PATIENT PACKAGE WERE THE PERSON		
		GNOSTIC PACKAGE FUNCTIONS AS THOUGH PACKAGE WERE THE PERSON		
PRIVACY	SECURITY CONTROL	SECURITY CONTROL	PART-OF	PRIVACY ISSUES
	OWNERSHIP	OWNERSHIP	WAY-TO	DEAL WITH PRIVACY ISSUES
OWNERSHIP	DISPOSITIONARY POWER	DISPOSITIONARY POWER	PARTS-OF	OWNERSHIP
		DE FACTO REIFICATION OF PATIENT ANALOG IGNORES INDEPENDENT ONTOLOGICAL STATUS OF PATIENT ANALOG	REASON-FOR	ETHICAL INAPPROPRIATENESS OF OWNERSHIP AS APPROACH TO PRIVACY ISSUES
		IGNORES FUNCTION OF PATIENT ANALOG AS STATUS PERSONAE AS FAR AS DECISION-MAKING IS CONCERNED		
		ETHICAL INAPPROPRIATENESS OF OWNERSHIP AS APPROACH TO PRIVACY ISSUES	REASON-FOR	APPROPRIATELY MODIFIED VERSION OF THE PROTECTION AFFORDED INDIVIDUAL PATIENTS SHOULD BE EXTENDED TO THE ANALOG ITSELF
		LEGAL RESTRAINTS REMOVED FROM OWNERSHIP TO PATIENT SELF-DETERMINATION	PART-OF	APPROPRIATELY MODIFIED VERSION OF THE PROTECTION AFFORDED INDIVIDUAL PATIENTS SHOULD BE EXTENDED TO THE ANALOG ITSELF
PRIVACY	FUNDAMENTAL RIGHT	RIGHT OF PRIVACY IS FUNDAMENTAL		
		ANALOG CAN NOT ENTER DECISION-PROCESS AS VOLUNTARY AGENT	KINDS-OF	OBJECTIONS TO APPROPRIATELY MODIFIED VERSION OF THE PROTECTION AFFORDED INDIVIDUAL PATIENTS SHOULD BE EXTENDED TO THE ANALOG ITSELF
		MERELY PHILOSOPHICAL: NO PRACTICAL OR REAL DIFFERENCE		
		REIFICATION DOES NOT MEAN THAT ANALOG ASSUMES ALL PROPERTIES OF A MATERIAL ENTITY	KINDS-OF	RESPONSE TO OBJECTIONS
		ONTOIC STATUS OF ANALOG IS NOT TIED TO THAT OF INDIVIDUAL WHO GAVE RISE TO IT		
		ANALOG IS SUFFICIENTLY COMPLEX TO FUNCTION AS NEXUS OF DECISIONS		

		ANALOG IS IDENTICATE TO THE PATIENT SO THAT DECISIONS MAKE ON THE BASIS OF ANALOG ARE CONSIDERED APPROPRIATE AND APPLICABLE TO THE PATIENT HERSELF.		
		GNOSTIC ANALOGS DO NOT EXHIBIT INDEPENDENT AGENCY		
		CLAIMS BASED ON ASSERTIONS OF OWNERSHIP ARE SUBJECT TO DISPUTES AND CHALLENGES OF A CONTRACTUAL OR PROPRIETARY NATURE		
		INVIOABILITY OF PERSON IS NOT SUBJECT TO CHALLENGES THAT ARE MATERIAL IN NATURE		
		RIGHT TO INVIOABILITY MAY BE OVERRIDDEN FOR ETHICALLY GOOD AND ETHICALLY SUFFICIENT REASONS		
	EXCEPTIONS			
EXCEPTIONS	ETHICAL PRINCIPLES	NOT MATERIAL IN NATURE	ATTRIBUTE-OF	ETHICALLY GOOD AND ETHICALLY SUFFICIENT REASONS
		GROUNDRED IN CONSIDERATIONS FOR ETHICAL PRINCIPLES		
ETHICAL PRINCIPLES	AUTONOMY	AUTONOMY	KINDS-OF	ETHICAL PRINCIPLES THAT GROUND ETHICALLY GOOD AND SUFFICIENT REASONS
	REPECT FOR ERSONS	RESPECT FOR PERSONS		
EXPECTIONS	VOLUNTARY	VOLUNTARY RELINQUISHING OF CONTROL	KINDS-OF	PREVAILING CONSIDERATIONS
	SUPERIOR RIGHTS	OTHERS HAVE RIGHT OF INVIOABILITY OF THEIR PERSON		
ETHICAL STRICTURES	FREEDOM OF ACTION	FREEDOM OF ACTION BY MATERIAL AGENTS TOWARDS EACH OTHER	KIND-OF	ETHICAL STRICTURES
		NOT INHERENT IN MATERIAL AGENTS	ATTRIBUTE-OF	ETHICAL STRICTURES
	CAUSAL BEHAVIOR	RESTRICTIONS THAT APPLY TO ACCEPTABLE CAUSAL BEHAVIOR		
	LICIT OPTIONS	DEFINE DOMAIN OF LICIT OPTIONS AND RELATIONS		
	ILLICIT OPTIONS	DEFINE DOMAIN OF ILLICIT OPTIONS AND RELATIONS		
		BECAUSE DETERMINATIONS MADE IN DECISION SPACE ARE TRANSLATED BY AGENTS INTO ACTIONS DEALING WITH PATIENTS	REASON-FOR	CORRESPONDENCE OF FORMAL STRICTURES ON ACTIONS DEALING WITH PATIENTS and MATERIAL BEHAVIOR FOR THE GNOSTIC ANALOG
		WOULD ENTRENCH RIGHT OF PRIVACY		

		WOUD ENTRENCH RIGHT OF INFORMED CONSENT			
		CONDITIONED BY PARTICIPATION IN SOCIALLY RESPONSIBLE ACTIONS		ATTRIBUTE-OF	ABSOLUTE DISPOSITIONARY RIGHT OVER INFORMATION THAT IS DEFINITIVE OF THE PATIENT
		ONLY NON-NOMINAL ACCESS		ATTRIBUTE-OF	SOCIAL RESPONSIBILITY LICENSES
	LEGAL CONSTRAINTS	RING OF LEGAL CONSTRAINTS		WAY-TO	PROTECT AGNOSTIC ANALOG
LEGAL CONSTRAINTS	PRIVACY CONSTRAINTS INTERNATIONAL	PRIVACY CONSTRAINTS STANDARDIZED INTERNATIONAL LAWS STANDARDIZED INTERNATIONAL REGULATIONS		KINDS-OF	LEGAL CONSTRAINTS
		GNOSTIC ANALOGS ARE DISTRIBUTED ON INTERNATIONAL SCALE		REASON-FOR	STANDARDIZED INTERNATIONAL LAWS AND REGULATIONS
		MOBILITY OF PATIENTS THEMSELVES			
		HEALTH INFORMATICS AND HEALTH-CARE PROFESSIONALS RUN DANGER OF BEING CAUGHT BETWEEN THE ETHICS OF THEIR PROFESSION AND THE LAWS OF THEIR JURISDICTION			
		WITHOUT INTERNATIONAL GUARANTEES PROFESSIONAL MAY THEY CAN USE ADVANCED RECORDS WITHOUT EXPOSING THEIR PATIENTS TO INFORMATICS ABUSE			
		ETHICAL GUIDELINES MIGHT PREVENT DEPLOYMENT OF TOOL (APR)			
		ACCESS AND SECURITY LEVELS		WAYS-TO	EFFECT PROTECTION OF GNOSTIC ANALOG
		IDENTIFICATION OF PROFESSIONAL WHO MODIFIES INFORMATION			
		PERMANENT RECORD KEEPING OF ACCESS, ALTERATION AND OTHER MODIFICATION OF PATIENT RECORD			
	ACCESS	PRAGMATIC FUNDAMENTAL		KIND-OF	ETHICAL REASONS FOR PATIENT RIGHT TO ACCESS HEALTH-CARE RECORD
ACCESS	PRAMATIC REASONS	PATIENTS ARE LESS LIKELY TO SUE		KIND-OF	PRAGMATIC REASON ...

		PATIENT ARE MORE LIKELY TO BE COOPERATIVE			
	FUNDAMENTAL REASONS	PRINCIPLE OF AUONOMY AND RESPECT FOR PERSONS	KIND-OF		FUNDAMENTAL REASON ...
ADVANCED PATIENT RECORDS	CHALLENGES	ADVANCED PATIENT RECORDS	RESULTS-IN		CHALLENGES AND DANGER
CHALLENGES	PRAGMATIC ETHICAL	PRAGMATIC ETHICAL	KIND-OF		CHALLENGES
PRINCIPLE OF AUTONOMY		MOVED TO FOREFRONT OF ETHICAL THEORY	ATTRIBUTE-OF		PRINCIPLE OF AUTONOMY AND RESPECT FOR PERSONS
		UNCONSENTED-TO ACCESS OF INFORMATION CONTAINED IN ADVANCED PATIENT RECORD	KIND-OF		TRESPASS TO THE PERSON
	INTERNATIONAL	INTERNATIONAL IN SCOPE	ATTRIBUTE-OF		MENAS TO PREVENT TRESPASS TO THE PERSON
	PROFESSIONAL ACCEPTANCE	PROFESSIONAL ACCEPTANCE			
	LEGAL FORCE	LEGAL FORCE			
		ABSENCE OF CONSISTENT INTERNATIONAL STATUTORY GUIDELINES	STAGE-IN		DEVOLUTION OF ADVANCED PATIENT RECORDS FROM ETHICALLY APPROPRIATE MEDICAL PRACTICE TO PURELY FINANCIALLY MOTIVATED TECHNICAL TOOL

KLUGE, E.H.W. (2000)						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
ETHICAL GUIDELINES	JURISDICTIONAL STIPULATIONS	STIPULATE CONDUCT IN ACCORDANCE WITH LAWS OF RESPECTIVE JURISDICTIONS	PART-OF	ETHICAL GUIDELINES AND CODES FOR ELECTRONIC PATIENT RECORDS		
JURISDICTIONAL STIPULATION	ILLOGICAL	ILLOGICAL	ATTRIBUTE OF	STIPULATIONS		
	DANGEROUS	DANGEROUS				
	PROFOUNDLY UNWORKABLE	PROFOUNDLY UNWORKABLE				
	ILLOGICAL STIPULATIONS	CONFUSION BETWEEN ETHICS AND LAW	REASONS TO	REFERENCE LAWS OF RELEVANT JURISDICTION IN ETHICAL CODES		
		JURISDICTIONAL DIFFERENCES				
		NATIONS ARE UNIQUE SOCIAL CONTEXT				
		NO OVER-ARCHING ETHICAL CONSTRAINTS	ATTRIBUTE-OF	UNIQUE SOCIAL CONTEXT		
		LAWS MAY BE UNETHICAL	ATTRIBUTE-OF	ETHICS AND LAW REASONING		
		ETHICAL STANDARDS ARE CREATURES OF SOCIETAL PERSPECTIVE	STEPS-IN	JURISDICTIONAL DIFFERENCES REASONING		
		LAWS OF A JURISDICTION ARE REFLECTIONS OF THAT SOCIETY'S PARTICULAR PERSPECTIVE				
		CONSEQUENTLY, THERE IS A COMFORTABLE FIT BETWEEN THE LAWS OF A GIVEN JURISDICTION AND ITS ETHICS				
		COMMUNITY STANDARDS MAY BE UNETHICAL		FALLACY OF NATIONALITY		
		FUNDAMENTAL ETHICAL PRINCIPLES MUST BE APPLIED DIFFERENTLY IN DIFFERENT SOCIAL CONTEXT; HOWEVER, IT DOESN'T MEAN PRINCIPLES MUST BE DISTINCT				
		GO TO ANOTHER JURISDICTION	WAY-TO	EVADE SPECIFIC ETHICAL INJUNCTIONS		
		ENCOURAGES ETHICAL VENUE-SHOPPING	KINDS OF	DANGER OF STIPULATIONS		
	DANGEROUS					

		LEGITIMATES UNETHICAL INFORMATION LAWS		
		MAKES INTERNATIONAL GUIDELINES IMPOSSIBLE		
	IMPOSSIBILITY	IDENTICAL ACTION COULD BE BOTH ETHICAL AND UNETHICAL AT SAME TIME	PART-OF	IMPOSSIBILITY
ETHICS		CORE CONCEPT IS NOTION OF A PERSON	ATTRIBUTE	ETHICS
PERSON		WILL	ATTRIBUTE OF	PERSON
		UNDERSTANDING		
		CAN ENTERED INTO SOCIAL INTERACTIONS WITH OTHERS		
PERSON	SOCIAL DIFFERENCES	DON'T AFFECT WHAT IT IS TO BE A PERSON IN ETHICAL SENSE	ATTRIBUTE-OF	SOCIAL DIFFERENCES
		AFFECT SOCIAL EMBEDDING		
SOCIAL DIFFERENCES	SOCIAL EMBEDDING	DIFFERENT RIGHTS	RESULT-OF	SOCIAL EMBEDDING
		DIFFERENT DUTIES		
		ETHICAL PRINCIPLES DO NOT DIFFER AS		
CODE OF ETHIC		PROVIDE GUIDANCE WHEN REAL LIFE SITUATION PRESENT PROFESSIONAL WITH ETHICAL DILEMMA	ATTRIBUTE-OF	CODE OF ETHICS
		PROVIDE GUIDELINES ON WHAT IS ACCEPTABLE PROFESSIONAL CONDUCT		
		PROVIDE GUIDELINES ON WHAT IS NOT ACCEPTABLE PROFESSIONAL CONDUCT		
		GUIDE BEHAVIOR OF PROFESSIONALS IN EVERY-DAY LIFE		
		EMBEDDED IN SOCIAL CONTEXT	ATTRIBUTE-OF	PROFESSIONAL CONDUCT
		SUBJECT TO LEGAL CONSTRAINTS	ATTRIBUTE-OF	SOCIAL CONTEXT
		SUBJECT TO ECONOMIC CONSTRAINTS		
		SUBJECT TO SOCIAL CONTEXT CONSTRAINTS	ATTRIBUTE-OF	ADHERENCE TO CODE OF CONDUCT
		JURIDICAL CONSEQUENCE	ATTRIBUTE-OF	LEGAL CONSTRAINTS
		DO NOT LIMIT WHAT IS POSSIBLE		
		LIMIT WHAT IS POSSIBLE	ATTRIBUTE-OF	ECONOMIC CONSTRAINTS

	CONFLICT RESOLUTION	CONFLICT RESOLUTION MECHANISM	PART-OF	CODE OF ETHICS
HEALTH INFORMATION PROFESSIONAL	GLOBAL DIMENSION	ACTIONS ASSUME GLOBAL DIMENSIONS	ATTRIBUTE-OF	HEALTH INFORMATION PROFESSIONAL
	JURISDICTIONAL STIPULATION	SETS STAGE FOR IRRESOLVABLE CONFLICT	ATTRIBUTE-OF	JURISDICTIONAL STIPULATION
		FOCUS SOLELY ON ETHICAL PRINCIPLES THAT APPLY TO HEALTH CARE INFORMATION	WAY-TO	AVOID ILLOGIC, DANGER AND IMPRACTICALITY OF JURISDICTIONAL STIPULATIONS
HEALTH INFORMATION PROFESSIONAL	UNIVERSAL PRINCIPLES	APPLY UNIVERSAL PRINCIPLES	ATTRIBUTE-OF	FOCUS SOLELY ON ETHICAL PRINCIPLES ...
UNIVERSAL PRINCIPLES	AUTONOMY	AUTONOMY	KINDS-OF	UNIVERSAL PRINCIPLES
	RESPECT FOR PERSONS	RESPECT FOR PERSONS		
	EQUALITY	EQUALITY		
	JUSTICE	JUSTICE		
	BENEFICENCE	BENEFICENCE		
	NON-MALFEASANCE	NON-MALFEASANCE		
	FIDELITY	FIDELITY		
	IMPOSSIBILITY	IMPOSSIBILITY		
ETHICAL TREATMENT OF MEDICAL RECORDS	PRINCIPLE OF INFORMATION-PRIVACY AND DISPOSITION	PRINCIPLE OF INFORMATION-PRIVACY AND DISPOSITION	RESULT-OF	APPLICATION OF UNIVERSAL PRINCIPLES TO ETHICAL TREATMENT OF MEDICAL RECORDS
	PRINCIPLES OF OPENNESS	PRINCIPLES OF OPENNESS		
	PRINCIPLES OF ACCESS	PRINCIPLES OF ACCESS		
	PRINCIPLE OF LEGITIMATE INFRINGEMENT	PRINCIPLE OF LEGITIMATE INFRINGEMENT		
	PRINCIPLES OF LEAST INTRUSIVE ALTERNATIVE	PRINCIPLES OF LEAST INTRUSIVE ALTERNATIVE		
	PRINCIPLES OF ACCOUNTABILITY	PRINCIPLES OF ACCOUNTABILITY		

	PRINCIPLE OF SECURITY	PRINCIPLE OF SECURITY			
		DO NOT DEPEND ON NATIONAL, ETHNIC OR OTHER VALUES	ATTRIBUTE-OF		PRINCIPLES OF ETHICAL TREATMENT OF MEDICAL RECORDS
		FOCUS ON SUBJECT OF MEDICAL RECORD DERIVE FROM THE UNIQUELY CLOSE RELATIONSHIP BETWEEN INDIVIDUAL AND MEDICAL RECORD			
	DUTIES	SUBJECT-CENTERED DUTIES			
		PROFESSIONAL-CENTERED DUTIES			
		INSTITUTION-EMPLOYER ORIENTED DUTIES			
		DUTIES TOWARD SOCIETY			
		DUTIES TOWARD HEALTH INFORMATICS PROFESSIONALS			
	PRIVACY	ALL PERSONS HAVE FUNDAMENTAL RIGHT TO PRIVACY	PART-OF		PRINCIPLE OF INFORMATION-PRIVACY
		CONTROL COLLECTION, USE AND DISPOSITION OF DATA ABOUT ONESELF	PART-OF		FUNDAMENTAL RIGHT TO PRIVACY
	OPENNESS	COLLECTION, USE AND DISPOSITION OF PERSONAL DATA USE MUST BE DISCLOSED: APPROPRIATE AND TIMELY TO SUBJECT	PART-OF		PRINCIPLE OF OPENNESS
	ACCESS	SUBJECT'S RIGHT TO ACCESS	PART-OF		PRINCIPLE OF ACCESS
		SUBJECT'S RIGHT TO CORRECT			
	LEGITIMATE INFRINGEMENT	FUNDAMENTAL RIGHT TO CONTROL CONDITIONED BY LEGITIMATE, APPROPRIATE AND RELEVANT INFORMATION NEEDS OF A FREE, RESPONSIBLE AND DEMOCRATIC SOCIETY AND	PART-OF		PRINCIPLE OF LEGITIMATE INFRINGEMENT
		FUNDAMENTAL RIGHT TO CONTROL CONDITIONED BY EQUAL AND COMPETING RIGHTS OF OTHER PERSONS			
	SECURITY	APPROPRIATE MEASURE AGAINST LOSS	PART-OF		PRINCIPLE OF SECURITY
		APPROPRIATE MEASURE AGAINST DEGRADATION			
		APPROPRIATE MEASURE AGAINST UNAUTHORIZED DESTRUCTION			
		APPROPRIATE MEASURE AGAINST UNAUTHORIZED MODIFICATION			

		APPROPRIATE MEASURE AGAINST UNAUTHORIZED DISCLOSURE			
	CONFLICT RESOLUTION	LOGICAL IN NATURE ETHICAL IN IMPLICATION	ATTRIBUTE-OF		CONFLICT RESOLUTION MECHANISM
		PRINCIPLE OF IMPOSSIBILITY ECONOMIC CONSIDERATIONS	KIND-OF		CONFLICT RESOLUTION MECHANISM
	IMPOSSIBILITY	ETHICAL RIGHTS AND DUTIES HAVE LOGICAL PRESUPPOSITION STRUCTURE RANKING MECHANISM FOR RIGHTS AND DUTIES THAT CONFLICT ACTION THAT IS PRESUPPOSED BY EXERCISE OF RIGHT OR DUTY ALWAYS TAKES PRIORITY	ATTRIBUTE-OF		PRINCIPLE OF IMPOSSIBILITY
	RANKING	PRINCIPLE OF IMPOSSIBILITY PRINCIPLE OF AUTONOMY	KINDS OF		RANKING MECHANISM
		PERSON WHO HOLDS RIGHT WILLING TO RANK THAT RIGHT LOWER	ATTRIBUTE-OF		PRINCIPLE OF AUTONOMY AS RANKING MECHANISM
	ECONOMIC CONSIDERATIONS	CONSTRAINT ON AGENT NOT THIRD PARTY INABILITY TO PERFORM OUTSIDE CONTROL OF AGENT	ATTRIBUTE-OF		ECONOMIC CONSIDERATIONS
		HAS PROFESSIONAL DONE BEST WITH THE MEANS AT HER DISPOSAL DUE DILIGENCE AND CARE	KIND-OF		MEASURE OF ECONOMIC CONSIDERATION
	DUE DILIGENCE AND CARE	NATURE OF AGENT'S ABILITIES LIMITS OF ONE'S ABILITIES	ATTRIBUTE-OF		DUE DILIGENCE AND CARE
		BRING TO THE ATTENTION OF THOSE AFFECTED LESS THAN PERFECT ACTION	PART-OF		DUTY OF DUE DILIGENCE
		DUTY TO BRING TO THE ATTENTION OF SUBJECTS OF THE RECORDS THAT MEASURES WHICH ARE IN PLACE ARE NOT AS GOOD AS THEY MIGHT BE	KIND-OF		BRING TO ATTENTION OF THOSE AFFECTED BY LESS THAN PERFECT ACTION

		APPRISE INSTITUTION OF LIMITATIONS IMPOSED BY ECONOMIC CONSTRAINTS			
	CONSTRUCT CODE OF ETHICS	BEGIN WITH ORGANIZATIONS THAT REPRESENT THE INDIVIDUALS WHOSE CONDUCT IS BEING GUIDED			CONSTRUCT CODE OF ETHICS FOR HEALTH INFORMATION PROFESSIONAL THAT AVOIDS JURISDICTIONAL STIPULATIONS
		BEGIN WITH ORGANIZATIONS THAT HAVE INTERNATIONAL PRESENCE		STEPS-TO	
		CONSTRUCT GENERALIZED CODE OF ETHICS FOCUSED ON FUNDAMENTAL PRINCIPLES			
		REQUIRE MEMBER ORGANIZATIONS TO SUBSCRIBE TO PRINCIPLES AS A CONDITION OF MEMBERSHIP			
		REQUIRE MEMBER ORGANIZATIONS TO DEVELOP SPECIFIC CODES THAT APPLY PRINCIPLES TO THEIR UNIQUE SITUATION			

RIGBY, M						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS		
HEALTH INFORMATICS		CONTINUALLY ENCOUNTERING NEW ISSUES	ATTRIBUTE-OF	HEALTH INFORMATICS		
	NEW ISSUES	NEW TECHNICAL OPPORTUNITIES	KINDS-OF	NEW ISSUES		
		NEW APPLICATIONS WHICH HIGHLIGHT EXISTING DILEMMAS				
	MENTAL HEALTH INFORMATICS (MHI)	RAPIDLY ENCOUNTERS 'BOTH' KINDS OF NEW ISSUES	ATTRIBUTE-OF	HEALTH INFORMATICS DEVELOPMENTS IN MENTAL HEALTH SERVICES		
		MENTAL HEALTH INFORMATICS RECEIVES COMPARATIVELY LITTLE ORGANIZATIONAL SUPPORT				
		POSSIBLE RECORD STRUCTURES IDENTIFIED				
		POTENTIAL EQUITY BENEFITS IDENTIFIED				
		POTENTIAL QUALITY BENEFITS IDENTIFIED				
		NEED TO BE DESIGNED TO MEET SPECIFIC ISSUES OF THE SECTOR				
		COLLATE INFORMATION FROM DIFFERENT PROFESSIONS & SOURCES	STEPS-TO	IMPROVE INFORMATION AVAILABLE TO HEALTH PROFESSIONAL		
		ANALYZE INFORMATION FROM DIFFERENT PROFESSIONS & SOURCES				
		RESPRESENT INFORMATION FROM DIFFERENT PROFESSIONS & SOURCES				
		COLLATION, ANALYSIS AND REPRESENTATION OF INFORMATION ...	CAUSE-OF	SPECTRE OF OPPRESSIVE DATA NETWORKS		
	DATA PROTECTION PRINCIPLES	DATA PROTECTION PRINCIPLES	PART-OF	FRAMEWORK OF CONTROL OF DATA NETWORKS		
	LEGISLATION	LEGISLATION				
	CODIFICATION	SHOW PRINCIPLES IMPERFECTIONS	ATTRIBUTE-OF	CODIFICATION ATTEMPTS		
		SHOW PRINCIPLES DIFFICULTIES				
		LARGELY PASSED BY	ATTRIBUTE-OF	IMPERFECTIONS AND DIFFICULTIES OF PRINCIPLES		

MENTAL HEALTH SERVICES		AT LEAST 10% OF HEALTH CARE ACTIVITY & EXPENDITURE	ATTRIBUTE-OF	MENTAL HEALTH SERVICES
		MENTAL HEALTH INFORMATICS RECEIVED COMPARATIVELY LITTLE ORGANIZATIONAL SUPPORT		
	CLIENTS	YOUNG PERSONS W/BEHAVIORAL PROBLEMS	KINDS-OF	MENTAL HEALTH SERVICES CLIENTS
		ELDERLY W/SENILE DEMENTIA		
		THOSE W/LONG-TERM CONDITIONS		
		SCHIZOPHRENIA	KINDS-OF	LONG-TERM CONDITIONS
		NEUROSES		
		DEPRESSIVE ILLNESSES		
		ADDICTION AND SUBSTANCE ABUSE		
		VULNERABLE AT TIMES	KINDS-OF	COMMON CLIENT FACTORS
		SELF-ARTICULATION MAY BE DIFFICULT		
		SELF-DETERMINATION MAY BE DIFFICULT OR IMPOSSIBLE		
		RATIONAL DECISION-MAKING COMPROMISED AT TIMES		
	APPLICATIONS IN MHI	MAJOR OPPORTUNITES	ATTRIBUTES	INFORMATICS APPLICATIONS IN MENTAL HEALTH
		RESPONSIBILITY TO ENSURE THAT VULNERABILITY OF GROUP NOT EXPLOITED		
		FAIR OBTAINING	PARTS-OF	EUROPEAN DATA PROTECTION PRINCIPLES
		PURPOSEFUL		
		LIMITED USE AND DISCLOSURE		
		RELEVANCE		
		ACURACY		
		LIMITED RETENTION		
		SUBJECT ACCESS		
		DATA SECURITY		
EUROPEAN DATA PROTECTION PRINCIPLES		FAILS TO CONSIDER ISSUE OF MENTAL COMPETENCE	ATTRIBUTE-OF	EUROPEAN DATA PROTECTION PRINCIPLES
		ASSUME THAT DATA SUBJECTS ARE ADULTS WITH FULL MENTAL COMPETENCE		
	NATIONAL LEGISLATION	ADDITIONAL REQUIREMENTS	ATTRIBUTE-OF	NATIONAL LEGISLATION IMPLEMENTING DATA PROTECTION PRINCIPLES
		DATA CUSTODIAN		
		CLEAR PROCEDURE FOR SUBJECT ACCESS RIGHTS		

			FAIL TO CONSIDER ISSUE OF MENTAL COMPETENCE			
			ASSUME THAT DATA SUBJECTS ARE ADULTS WITH FULL MENTAL COMPETENCE			
DATA SUBJECTS	CHILDREN	CHILDREN		KINDS-OF		DATA SUBJECTS WHO ARE NOT ADULTS W/FULL MENTAL COMPETENCE
	INTELLECTUALLY DISABLED		INTELLECTUALLY DISABLED			
	PEOPLE W/ SHORT-TERM MENTAL ILLNESS		PEOPLE W/ SHORT-TERM MENTAL ILLNESS			
	PEOPLE W/ LONG-TERM MENTAL ILLNESS		PEOPLE W/ LONG-TERM MENTAL ILLNESS			
	VULNERABLE	VULNERABLE	VULNERABLE	ATTRIBUTE-OF		DATA SUBJECTS WHO ARE NOT ADULTS W/FULL MENTAL COMPETENCE
MENTAL HEALTH	DATA PROTECTION THEMES		MENTAL COMPETENCE	KINDS-OF		THEMES FOR CHALLENGES AND UNANSWERED QUESTIONS ABOUT HOW TO APPLY DATA PROTECTION PRINCIPLES AND PROCEDURE ETHICALLY AND RESPONSIBLY IN MENAL HEALTH SETTING
			MENTAL STATE			
			DATABASE DOMINANCE			
			DAILY ISSUES ARE USUALLY TREATED INFORMALLY	ATTRIBUTE-OF		THEME OF MENTAL COMPETENCE
			PROCESSES SHOULD BE SEEN BY DATA SUBJECT AS FAIR			
			MOST HEALTH CARE RECIPIENTS UNDER STRESS OR ANXIOUS	ATTRIBUTE-OF		THEME OF MENTAL STATE
HEALTH CARE RECIPIENTS	STRESS & ANXIETY		FIRST ADMISSION	PART-OF		PARTICULAR STRESS OR ANXIETY OF HEALTH CARE RECIPIENTS
			FIRST CONSULTATION			
			HEALTH INFORMATICS HAS SKIRTED OVER THIS ISSUE	ATTRIBUTE-OF		PARTICULAR STRESS OR ANXIETY OF HEALTH CARE RECIPIENTS
			EVIDENCE CITES PATIENTS' INABILITY TO REMEMBER SIMPLE SELF-INTEREST INSTRUCTIONS			
MENTAL HEALTH CARE RECIPIENTS	STRESS & ANXIETY		GREATER ISSUES RELATED TO STRESS AND ANXIETY	ATTRIBUTE-OF		PARTICULAR STRESS OR ANXIETY OF MENTAL HEALTH CARE RECIPIENTS

		MAY NOT BE AWARE OF REALITY			
		MAY NOT ACCEPT REALITY			
		MAY BE DEMENTED			
		MAY BE DELUSIONAL			
		SOME CLIENTS MAY BE THREATENED OR WORRIED BY INTEGRATED ELECTRONIC PATIENT RECORDS		ATTRIBUTE-OF	THEME OF DATABASE DOMINANCE
		DATA CONTROLS		WAYS-TO	SOME CLIENTS MAY BE THREATENED OR WORRIED BY INTEGRATED ELECTRONIC PATIENT RECORDS
		OPPORTUNITIES FOR SERVICE VARIATION			
MHI	KEY ISSUES	INFORMED CONSENT		KINDS-OF	KEY MENTAL HEALTH INFORMATICS ISSUES
		EXTENT OF CLINICAL CONFIDENCE			
		ADVOCACY			
		SHARING WITHIN THE CLINICAL TEAM			
		QUALITY CONTROL AND SUPERVISION			
	INFORMED CONSENT	GIVEN IN INFORMED SITUATION		PART-OF	INFORMED CONSENT
		WITHOUT EXPLICIT OR CIRCUMSTANTIAL DURESS			
		MAY NOT BE NEEDED FOR ELECTRONIC DATA PROCESSING		ATTRIBUTE-OF	INFORMED CONSENT
		PATIENT NEEDS TO SEE PROCESS AS FAIR			
		CIRCUMSTANCES WHICH REQUIRE AGREEMENT			
	AGREEMENT	OBTAIN		STAGE-IN	AGREEMENT
		RECORD			
		DISADVANTAGEOUS TO PATIENT AND SUBSEQUENT CLINICIAN IF LATTER CANNOT ACCESS FULL CLINICAL RECORD		KINDS-OF	VIEW ON EXTENT OF CLINICAL CONFIDENCE
	CLINICAL CONFIDENCE				
		OPTIONAL RESTRICTION OF ACCESS TO VERY SENSITIVE DATA ITEMS IF PATIENT HAS BEEN COUNSELLED ON THE IMPLICATIONS			
	ADVOCACY	IS OFTEN HELPFUL TO PROTECT INTERESTS OF THE PATIENT AND OF THE HEALTH PROFESSIONAL		ATTRIBUTE-OF	ADVOCACY
		ATTENDANT PROBLEMS			
		RELATIVE OR CLOSE FRIEND MAY HAVE VESTED INTEREST		KINDS-OF	ATTENDANT PROBLEMS

		IMPARTIAL PROFESSIONAL ADVOCATE UNLIKELY TO KNOW PERSONAL VALUES OR WISHES OF PATIENT			
		KEEP SOME INFORMATION HIDDEN	KINDS-OF	VESTED INTEREST	
		ENCOURAGE LONG-TERM HOSPITALIZATION			
	CLINICAL TEAM	WHO IS A TEAM MEMBER	KINDS-OF	ISSUES RE: SHARING WITHIN THE CLINICAL TEAM	
	QUALITY CONTROL & SUPERVISION	CAN TUTOR ACCESS PATIENT RECORD AS PART OF SUPERVISORY PROCESS	KINDS-OF	ISSUES RE: QUALITY CONTROL AND SUPERVISION	
		ACCESS RELATED TO CLINICAL AUDIT AND OUTCOMES STUDIES			
	GUIDELINES CONFERENCE	LOOK FOR ESTABLISHED GUIDELINES CONFERENCE	WAYS-TO	ADDRESS KEY MENTAL HEALTH INFORMATICS ISSUES	
		DID NOT ADDRESS MENTAL HEALTH	ATTRIBUTES-OF	ESTABLISHED GUIDELINES	
		EXPERTS	PARTS-OF	CONFERENCE	
		PAPERS			
		OBJECTIVES			
	EXPERTS	MENTAL HEALTH DATA PROTECTION	KINDS-OF	EXPERTS	
		LOCAL	ATTRIBUTES-OF	EXPERTS	
		IRISH			
		EUROPEAN			
	PAPERS	USE AND DISCLOSURE FAIR OBTAINING AND PURPOSE	KINDS-OF	PAPERS	
		CONSENT AND CONFIDENTIALITY			
		ACCESS AND SECURITY			
	REASONABLENESS	ENSURE THAT APPROACH WOULD MEET PROFESSIONAL AND LEGAL TEST OF REASONABLENESS	KINDS-OF	OBJECTIVES	
		FOCUSED POLICY DOCUMENTS PRINCIPLES & APPROACHES	RESULT-OF	CONFERENCE	
	SOLUTIONS	CLINICAL PRACTICE PRINCIPLES APPLY	WAY-TO	MOVE FORWARD TOWARD ETHICAL PROTOCOL	

		CLINICAL ETHICAL PRINCIPLES APPLY		
		COMPUTERS CAN ENHANCE SECURITY		
		PATIENT LEAFLET ON CARE ENVIRONMENT		
		PUBLISHED PROTOCOLS		
		STRONG SANCTIONS		
		DATA GUARDIAN		
SOLUTIONS	COMPUTER ENHANCED SECURITY	CUSTOMISED AND DIFFERENTIATED ACCESS CONTROLS	ATTRIBUTE-OF	COMPUTER ENHANCED SECURITY
		ENTRY ATTRIBUTION		
		ENTRY DATE STAMPING		
		LOGGING OF EVERY TRANSACTION		
		ALERTS OF ABNORMAL PATTERNS OF ACTIVITY		
	PATIENT LEAFLET	NO REQUIREMENT TO OBTAIN FORMAL PATIENT CONSENT FOR A SPECIFIC FORM OF RECORD KEEPING	REASON-FOR	PATIENT LEAFLET ON CARE ENVIRONMENT
		PATIENTS MUST KNOW AND AGREE THAT RECORD KEEPING FAIRLY OBTAINED AND PURPOSEFULLY PROCESSED		
	FAIR AND PURPOSEFUL RECORD KEEPING	CLEAR AND INFORMATIVE PATIENT LEAFLET	KIND-OF	KEY TO KNOWING THAT RECORD KEEPING IS FAIR AND PURPOSEFUL
	STRONG SANCTIONS	LOSS OF LICENCE	KIND-OF	STRONG SANCTIONS
		CRIMINAL		
		CONTRACT EMPLOYMENT		
	DATA GUARDIAN	IMPARTIAL	ATTRIBUTE-OF	DATA GUARDIAN
		SUPERVISES DATA CUSTODIAN		
		ADVISES DATA CUSTODIAN		

Decision Support Systems

GOODMAN, K.W.					
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATION	COVER TERMS / CONCEPTS	
MEDICAL INFORMATICS		MEDICAL DECISION SUPPORT SYSTEMS (MDSS)	PART-OF	MEDICAL INFORMATICS	
CLINICAL DECISION MAKING		HUMAN	KIND-OF	CLINICAL DECISION MAKING	
		MACHINE			
		STATUS AT APEX OF RATIONAL HUMAN COGNITION	ATTRIBUTE-OF	CLINICAL DECISION MAKING	
		RICHNESS OF HUMAN BIOLOGY	REASON-FOR	STATUS ... HUMAN COGNITION	
		ENEMIES OF HUMAN BIOLOGY			
		STAKES INVOLVED IN CLINICAL DECISION MAKING			
	STAKES INVOLVED	PAIN	KIND-OF	STAKES INVOLVED	
		DISABILITY			
		DEATH			
	MEDICAL DECISION SUPPORT SYSTEM (MDSS)	MEDICAL DECISION SUPPORT SYSTEM (MDSS)	PART-OF	CLINICAL DECISION MAKING	
		USE OF MACHINES	PART-OF	CLINICAL DSS	
		COMPUTER PROGRAMS	PART-OF	MDSS	
		EXCITING CHALLENGES	ATTRIBUTE-OF	MDSS	
		RELATED TO PROGNOSTIC SCORING SYSTEMS			
		RELATED TO META-ANALYSIS			
		PATIENT CHALLENGES	KIND-OF	CHALLENGE	
		CLINICIAN CHALLENGES			
		SOCIETAL CHALLENGES			
		POSSIBLE COMPUTER REPLICATION OF FINEST HUMAN DECISIONS	REASON-FOR	CHALLENGES	
		POSSIBLE REVISION OR ABANDONMENT OF HUMAN FUNCTIONAL UNIQUENESS			

PATIENT WELL-BEING	INDIVIDUAL WELL-BEING	ATTRIBUTE-OF	PATIENT WELL-BEING
	COMMUNITY OF PATIENTS WELL-BEING		
	HEALTH CARE PRACTITIONER ENCOUNTERS QUESTION OR PROBLEM THAT CAN BE EFFICIENTLY AND EFFECTIVELY ANSWERED THROUGH SYSTEM	ATTRIBUTE-OF	WHEN USE MDSS
REMINDER SYSTEM	CLINICAL GUIDELINES	PART-OF	REMINDER SYSTEM
CLINICAL QUIDELINES	THOUSANDS GENERATED BY REPUTABLE ORGANIZATIONS	ATTRIBUTE-OF	CLINICAL QUIDELINES
	MORE EXCEPTIONS THAN RULES	KIND-OF	MAJOR ETHICAL CONCERN RE: CLINICAL GUIDELINES
CONSULTATION SYSTEMS	MEDICAL KNOWLEDGE BASES	PART-OF	CONSULTATION SYSTEMS
ETHICAL CONCERN RE: MEDICAL KNOWLEDGE BASES	QUALIFICATIONS OF BUILDERS	KIND-OF	ETHICAL CONCERN RE: MEDICAL KNOWLEDGE BASES
	QUALIFIACTIONS OF MAINTAINERS		
	TIMELY UPDATING		
	LACK OF STANDARDS FOR UPDATING OF KNOWLEDGE		
	UNCERTAINLY ABOUT ACCURACY AND RELIABILITY OF REPRESENTING MEDICAL KNOWLEDGE		
RISKS OF HUMAN-MACHINE INTERACTIONS	RISKS OF HUMAN-MACHINE INTERACTIONS		
	NO GUARANTEE THAT SYSTEM 'UNDERSTANDS' USER	ATTRIBUTE-OF	HUMAN-MACHINE INTERACTIONS
	NO GUARANTEE THAT USER 'UNDERSTANDS' SYSTEM		
	FEW ANCILLARY CLUES THAT INFORMATION NOT 'RIGHT'		
	ELECTRONIC MEDICAL RECORD CONVEYS CASE HISTORY TO CONSULTATION PROGRAM	KIND-OF	PROGRAM-TO-PROGRAM INTERACTIONS
GREATER RISK THAN HUMAN-MACHINE INTERACTION	GREATER RISK THAN HUMAN-MACHINE INTERACTION	ATTRIBUTE-OF	PROGRAM-TO-PROGRAM INTERACTIONS

ETHICAL CONCERN RE: EDUCATION SYSTEMS	SKILL DEGRADATION	SKILL DEGRADATION	KIND-OF	ETHICAL CONCERN RE: EDUCATION SYSTEMS
		USER'S QUALIFICATIONS	KIND-OF	ETHICAL CONCERN RE: MDSS
		LEVEL OF TRAINING REQUIRED TO USE SYSTEM		
		PROFICIENCY TESTING		
ETHICAL CONCERN RE: MDSS	INFORMED OR VALID CONSENT	INFORMED OR VALID CONSENT		
ETHICAL IMPERATIVE	STANDARD-OF-CARE	STANDARD-OF-CARE	KIND-OF	ETHICAL IMPERATIVE
		PUBLICALLY EVALUATED CRITERIA	ATTRIBUTES-OF	STANDARD-OF-CARE
		PHYSICIAN SERVANT TO HUMANITY	WAY-TO	DEPICT PROFESSIONAL-PATIENT RELATIONSHIP
		FIDUCIARY		
		BASED ON COMPASSION		
		BASED ON BENEVOLENCE AND TRUST		
DEPICTION OF PROFESSIONAL-PATIENT RELATIONSHIP		EMBODIMENT OF VALUES	ATTRIBUTE-OF	DEPICTION OF PROFESSIONAL-PATIENT RELATIONSHIP
		GIVES STRUCTURE TO INTERACTIONS		
		KNOWING AND POWERFUL COME TO AID OF IGNORANT AND VULNERABLE		
		DECISIONS BY PHYSICIAN	KINDS-OF	DECISIONS MADE WITHIN PROFESSIONAL-PATIENT RELATIONSHIP
		DECISIONS BY NURSE		
		DECISIONS BY PSYCHOLOGIST		
		SHARED DECISION MAKING		
CLINICAL DECISIONS		MEDICAL	PARTS-OF	CLINICAL DECISIONS
		SOCIAL		
		PERSONAL		
		ETHICAL		
		PSYCHOLOGICAL		
		FINANCIAL		
		FAMILIAL		
		LEGAL		

SCIENCE		INADEQUATE OR INAPPLICABLE TO SOME DECISION- MAKING	ATTRIBUTE-OF	SCIENCE
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Genetic Databases

ANNAS, G.						
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATIONSHIP	COVER TERMS / CONCEPTS		
PRIVATE GENETIC INFORMATION		personal	is-attribute	private genetic information		
		uniquely private				
		given by individual or individual's legal representative	is-attribute	informed consent		
		informed				
DNA SAMPLE		voluntary				
	COMMERCIAL ACTIVITY	used for commercial activity	is-attribute	DNA sample		
	RESEARCH ACTIVITY	used for research activity				
		genetic analysis	is-a-way-to	test genetic information		
		family history				
		DNA analysis	is-kind-of	genetic analysis		
		biochemical analysis				
		testing gene products	is attribute	biochemical analysis		
		obtained from analysis of individual's DNA	is-attribute	private genetic information		
		obtained from an analysis of DNA or a person to whom the individual is genetically related				
		... from known genetic status of the individual in a pedigree or family history				
		sample confirms the diagnosis of a disease				
		sample determines the presence of genes or gene, or gene markers				
		sample indicates individual is at increased or decreased risk of developing disease as a result of inherited gene				
		sample established that the individual is a carrier				
		is property of DNA source	attribute	DNA sample		
		protect facility interests	is-reason	routine destruction of DNA sample		

		protect source interest			
		force documentation of limitations			
		protect autonomy			
AUTONOMY	LEGISLATION	legislation		is a way to	protect autonomy
		establish sample as property of sample source			
	PERSONAL PROPERTY	exclusive control		attribute of	personal property
		right to share or transfer control			
		in accordance with property law principles			
		duty to warn		is kind of	exception
		emergency			
		identification			
		no exception rule		attribute of	duty to warn
		ethical concerns		reason for	no exception rule
		practical concerns			
		responsibility for informing relatives were it morally belongs			
		family members will act in protective manner toward other family members			
		rules for gene banks		is-a-way-to	protect genetic privacy
		federal legislation			
		Genetic Privacy Act of 1995 (GPA)			
GPA principle		individual has right to determine who may collect DNA		is a-kind-of	GPA principle
		individual has right to determine who may analyze DNA			
		individual has right to know what information can reasonably be expected from genetic analysis			
		individuals has right to order destruction of DNA samples			
		individuals has right to delegate authority to another part to order destruction of DNA sample after death			
		... right to refuse use of DNA sample for research or commercial activities			
		... right to inspect and obtain copies of records containing information derived from genetic analysis of DNA sample			
		can predict individuals likely medical future		is-a-reason	uniquely private
		divulges personal information about parents, siblings, children			
		historically used to stigmatize and victimize individuals			

	govern collection of DNA	is-a-part-of	effective legislation
	govern analysis of DNA		
	govern storage of DNA & information derived from it		
	govern distribution of DNA samples and information derived from DNA samples		
	no collection or analysis on individuals DNA without informed and voluntary authorization	is-a-part-of	general rule
	research on nonidentifiable DNA samples not inhibited		
	written summary of GPA principles	is-a-part	GPA
	provisions governing collection & analysis of DNA samples		
	research provisions		
	no duty to warn exception		
	no emergency exception		
	civil remedies		
	civil penalties		
	injunctive relief		
	no criminal sanction		
	family histories	is-a-part	medical record
	verbal disclosure before collection	is-way	satisfy GPA provisions governing collection & analysis of DNA samples
	require notice of rights and assurance before collection of sample		
	written authorization before analysis		
	prescribe content of written authorization		
	acknowledge DNA sample is property of person who is the source of DNA		
	provide routine destruction of DNA samples		
	provide for genetic counseling		
	pedigree analysis	is-part	GPA research provisions
	family linkage studies		
	objectives		
OBJECTIVES	issue about what belongs to individual and what belongs to pedigree	is a reason for	objectives
	ensure that participants know what kind of information can result from research	kind of	objectives

		ensure individuals have access to information about themselves		
		better deter violations	reason to	add criminal penalties
GENE		cultural icon	attribute of	gene
		symbol		
		magical force		
HUMAN GENOME PROJECT		legal issues	attribute of	Human Genome Project
		ethical issues		
		social policy issues		
GPA		OPA	is way	protect human rights
		is a challenge	attribute	protecting human rights
		maximize benefits to all		
		minimize harm to all	is way	challenge of protecting human rights
		congressional		
		health care practitioner	is a-kind-of	action
		private company		
		state		
		Genetic Policy Act		
		commercial	is-a-kind-of	activity
		research		
		genetic		
		linkage		
		pedigree		
		informed	is-a-kind-of	authorization
		valid		
		voluntary		
		written		
		parental		
		unpreventable	is-a-kind-of	condition
		untreatable		
		employment	is-a-kind-of	decision
		health insurance coverage		
		parental		
		verbal	is-a-kind-of	disclosure

	written			
	court ordered		is-a-kind-of	identification
	dead body			
	law enforcement			
	genetic		is-a-kind-of	information
	genetic misinformation			
	medical			
	non-private genetic			
	personal			
	private			
	private genetic information			
	ethical		is-a-kind-of	issues
	legal			
	social policy			
	informed		is-a-kind-of	practitioner
	supportive			
	GPA		is-a-kind-of	principle
	analysis		is-a-kind-of	provision
	collection			
	research			
	DNA sample		is-a-kind-of	property
	compelling		is-a-kind-of	reason
	ethical			
	practical			
	medical		is-a-kind-of	record
	privacy		is-a-kind-of	right
	no exception		is-a-kind-of	rule
	privacy			
	statutory			
	blood		is-a-kind-of	sample
	DNA			
	identifiable DNA			
	multigeneration			
	non-identifiable			
	stored DNA			
	gene product		is-a-kind-of	testing
	genetic			
	predictive			
	anonymous		is-a-kind-of	use
	future			
	prohibit anonymous use of samples in research		is kind of	limitation

KNOPPERS, BM.					
DOMAIN	SUBDOMAIN	INCLUDED TERMS	SEMANTIC RELATIONSHIP	COVER TERMS / CONCEPTS	
MDB		ALLELIC VARIATIONS ARE DESCRIBED	PART-OF	MUTATION DATABASE (MDB)	
		ALLELIC VARIATIONS ARE ASSIGNED TO SPECIFIC GENE LOCUS			
		REPOSITORY			
		ON-LINE UTILITY			
		CURATOR			
		HOMOLOGOUS VARIATIONS IN OTHER GENOMES	PART-OF	ON-LINE UTILITY	
		PROTEOMIC SIMULATIONS			
		DISEASE SPECIFIC INFORMATION			
		LINKS TO OTHER RESOURCES			
		FAQS			
		TOOL FOR STUDY OF FUNCTIONAL GENOMICS	ATTRIBUTE-OF	MDB	
		FUNCTIONAL GENOMICS	STAGE-IN	UNDERSTANDING PHYSIOLOGICAL GENETICS	
		PHYSIOLOGICAL GENETICS	STAGE-IN	UNRAVEL PATHWAYS LEADING TO HUMAN DISEASES AND SUSCEPTIBILITIES	
	FIFTH STAGE GENOMICS	MDB	STAGE-IN	ACCESS FIFTH STAGE GENOMICS	
		NORMALIZATION OF GENOMES	PART-OF	FIFTH STAGE GENOMICS	
		NORMALIZATION OF ENVIRONMENT'S OF EXPRESSION			
MDB					
		ACCUMULATE VARIATIONS	REASON-FOR	MDB	
		VERIFY VARIATIONS			
		VALIDATE VARIATIONS			
		DESCRIBE VARIATIONS			
	BASIC	BASIC	KINDS-OF	MDB	
	PUBLIC ACCESS	PUBLIC ACCESS			
	INTERACTIVE	INTERACTIVE PUBLIC			

ETHICAL GUIDEPOSTS	HUGO	HUGO INTERNATIONAL ETHICS COMMITTEE STATEMENTS	KIND-OF	ETHICAL GUIDEPOST FOR BASIC MDB
	UNESCO	UNESCO UNIVERSAL DECLARATION ON THE HUMAN GENOME AND HUMAN RIGHTS		
HUGO		COMPETENCE	PART-OF	HUGO STATEMENT ON PRINCIPLED CONDUCT IN GENETIC RESEARCH APPLICABLE TO MDB
		COMMUNICATION		
		CONSENT		
		CONFIDENTIALITY		
		COLLABORATION		
		CONFLICT OF INTEREST		
		CONTINUAL REVIEW		
		ESSENTIAL PREREQUISITE FOR ETHICAL RESEARCH	ATTRIBUTE-OF	COMPETENCE
	COMPETENCE	APPROPRIATE TRAINING	PART-OF	COMPETENCE
		APPROPRIATE PLANNING		
		PILOT TESTING		
		FIELD TESTING		
		QUALITY CONTROL		
		SCIENTIFICALLY ACCURATE	ATTRIBUTE-OF	ETHICAL COMMUNICATION
	COMMUNICATION	UNDERSTANDABLE TO THE POPULATIONS, FAMILIES AND INDIVIDUALS CONCERNED		
		SENSITIVE TO POPULATIONS, FAMILIES AND INDIVIDUALS SOCIAL AND CULTURAL CONTEXT		
		RECIPROCAL PROCESS		
		RESEARCHER MUST STRIVE TO UNDERSTAND	PART-OF	RECIPROCAL PROCESS
		RESEARCHER MUST STRIVE TO BE UNDERSTOOD		
		COMMUNICATION PER SE	ATTRIBUTE-OF	PUTTING WEBSITE ON INTERNET
		MORE THAN PAMPHLET	ATTRIBUTE-OF	ETHICAL WEBSITE
		ACCESS IS UNPROVOKED OR UNSOLICITED		
		IMPLIES SINE QUA NON THAT INFORMATION BE AS ACCURATE AS THE STATE OF ART PERMITS		
		IMPLIES INFORMATION WITHOUT EXAGGERATION OR WISHFUL THINKING		
		CONTINUALLY UPDATED		

	UNDERSTANDABLE			
	CLEAR			
CONSENT	INDIVIDUAL	KIND-OF		CONSENT
	FAMILIAL			
	COMMUNITY			
	POPULATION			
	UNDERSTANDING	ATTRIBUTE-OF		CONSENT
	FREE FROM COERCION			
	EXCEPTIONS			
	NATURE OF RESEARCH	PART-OF		UNDERSTANDING
	RISKS AND BENEFITS			
	ALTERNATIVES			
	POTENTIAL USES OF DNA SAMPLE AND ITS INFORMATION			
	WHETHER SAMPLE OR INFORMATION WILL IDENTIFY THE PERSON, CODE THE IDENTITY, ANONYMIZE THE IDENTITY			
	SCIENTIFIC	KIND-OF		SOURCES OF COERCION
	MEDICAL			
	OTHER AUTHORITIES			
	PROPER AUTHORITY	ATTRIBUTE-OF		EXCEPTIONS TO CONSENT REQUIREMENT
	CERTAIN CONDITIONS			
	ANONYMOUS TESTING FOR EPIDEMIOLOGICAL PURPOSES	KIND-OF		EXCEPTIONS TO CONSENT REQUIREMENT
	ANONYMOUS TESTING FOR SURVEILLANCE			
	NO IMMEDIATE INDIVIDUAL BENEFIT TO PARTICIPATING OTHER THAN OWN STISFACTION IN PARTICIPATING IN BENEFICIAL RESEARCH FOR OTHERS AND FOR MANKIND	REASON-FOR		CONSENT OF INDIVIDUALS AND FAMILY MEMBERS WHOSE DATA IS TRANSFERRED AND REGISTERED IN MDB
CONFIDENTIALITY	THE 'ONE' ETHICAL PRINCIPLE	ATTRIBUTE OF		CONFIDENTIALITY
	ABSOLUTE OBLIGATION TO PERSERVED INFORMATION TRANSFERRED BY COLLABORATOR TO CURATOR			
	NECESSARY FOR COLLABORATION			

	PROPER ACCESS IDENTIFICATION	WAY-TO	ACHIEVE CONFIDENTIALITY
	AUDIT AND AUTHENTICATION		
	ANONYMIZATION PRIOR TO TRANSMISSION BY COLLABORATOR TO CURATOR		
	CONFLICT OF INTEREST	KIND-OF	CONFLICT OF INTEREST
	ACTUAL		
	POTENTIAL		
	HIGHLY COMMERCIALIZATION OF GENETIC RESEARCH	REASON-FOR	DISCLOSURE OF ACTUAL OR POTENTIAL CONFLICTS OF INTEREST
	POTENTIAL FOR EXPLOITATION	REASON-FOR	CONTINUAL REVIEW
	POTENTIAL FOR DUPLICITY		
	POTENTIAL FOR ABANDONMENT		
	POTENTIAL FOR ABUSE		
	IMPERATIVE TO RESPECTING HUMAN DIGNITY		
	PARTICIPANT REPRESENTATIVES IN REVIEW	PART-OF	CONTINUAL REVIEW
UNESCO	PARTICIPATION OF VULNERABLE PERSONS	PART-OF	1997 UNIVERSAL DECLARATION ON THE HUMAN GENOME AND HUMAN RIGHTS
	RESPECT AND PROMOTE SOLIDARITY TOWARD INDIVIDUALS, FAMILIES AND POPULATIONS GROUPS WHO ARE PARTICULARLY VULNERABLE TO OR AFFECTED BY DISEASE OR DISABILITY OF A GENETIC CHARACTER		
	VULNERABLE PERSONS	ATTRIBUTE-OF	VULNERABLE PERSONS
	DOES NOT HAVE THE CAPACITY TO CONSENT		
	LIMITED PARTICIPATION	PART-OF	PRINCIPLES OF PARTICIPATION BY VULNERABLE PERSONS
	HIS OR HER DIRECT HEALTH BENEFIT	KIND-OF	LIMITED PARTICIPATION
	AUTHORIZATION AND PRESCRIBED BY LAW		
	EXCEPTIONS FOR NO HEALTH BENEFIT		
	UTMOST RESTRAINT	ATTRIBUTE-OF	EXCEPTIONS FOR NO-HEALTH BENEFIT
	EXPOSE PERSON ONLY TO MINIMAL RISK		
	EXPOSE PERSON ONLY TO MINIMAL BURDEN		
	RESEARCH MUST BE INTENDED TO CONTRIBUTE TO HEALTH BENEFIT OF OTHER PERSONS IN THE SAME AGE CATEGORY OR WITH THE SAME GENETIC CONDITION		

		CHILDREN				
		INCOMPETENT ADULTS		KIND-OF		VULNERABLE PERSON
		CURATOR VERIFICATION OF ETHICAL REVIEW APPROVAL HAS BEEN GIVEN		WAY-TO		PROTECT VULNERABLE PERSON
ETHICAL GUIDEPOST						
	PUBLIC ACCESS MDB	CIOMS GUIDELINES FOR ETHICAL REVIEW OF EPIDEMIOLOGICAL STUDIES		KIND-OF		ETHICAL GUIDEPOSTS FOR PUBLIC ACCESS MDB
		EPIDEMIOLOGISTS LONG SENSITIVE TO NEED FOR PRIOR COMMUNICATION, CONSULTATION AND NEED TO PREVENT HARM TO GROUPS		REASON-FOR		EPIDEMIOLOGICAL STARTING POINT
	EPIDEMIOLOGISTS					
	RISKS	ECONOMIC LOSS		KINDS-OF		ETHICAL RISKS
		STIGMATIZATION				
		BLAME				
		WITHDRAWL OF SERVICES				
		INTERPRETATIONS OF VARIATION AS ETHNIC WITH RACIAL TONE				
		DANGER OF OTHER MISUSE				
		AWARENESS OF CONTROVERSIES				
		ROLE OF COMMUNITY REVIEW IN USE OF DATA		WAY-TO		ADDRESS MISUSE IN MDB WITH LOCUS WHERE PREVALENCE OF DISEASE IS HIGH IN A COMMUNITY
ETHICAL GUIDEPOST						
	INTERACTIVE MDB	VIRTUAL INTERACTION SEEN AS CREATING VIRTUAL PHYSICIAN-PATIENT RELATIONSHIP		KIND-OF		ETHICAL RISKS FOR INTERACTIVE PUBLIC MDB
	COUNSELING FUNCTION	COUNSELING FUNCTION		ATTRIBUTE-OF		ANSWER STANDARDIZED QUESTIONS (FAQS)
		RECIPROCITY		KIND-OF		DUTIES ASSOCIATED WITH COUNSELING FUNCTION
		MUTUALITY				
		SOLIDARITY				
		UNIVERSALITY				
		EXCHANGE OF KNOWLEDGE IN THE RESEARCH RELATIONSHIP				
	RECIPROCITY			ATTRIBUTE-OF		RECIPROCITY
		RECOGNITION OF INEQUALITY IN RELATIONSHIP BY REDISTRIBUTING KNOWLEDGE TO EMPLOYER THE LESS WELL-INFORMED				

