# MEASURING DIFFERENTIALS OF INFORMATION POWER BETWEEN ACADEMIC DISCIPLINES USING INTERDISCIPLINARY CITATION PATTERNS AMONG EIGHT SOCIAL SCIENCES FROM 1979-1983 AND 2005-2009

by

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Doctor of Philosophy

Department of Communication

#### Dedication

#### Dedicated to my grandfather, George Harding Pierce

Grampa I have dedicated this whole shebang to you; without your aid and encouragement none of it would have been possible. It is true perhaps that it didn't cost any more for me to live there than you alone. Nonetheless, I will never forget how you told me about life on the farm, life in the navy, Tesla and electricity, helped with my first car and first passport trip—as well as fed my cat whilst I was away driving to Seattle and then Tucson. Thank you. To me, you are not gone.

#### Remember Me

To the living, I am gone To the sorrowful, I will never return To the angry, I was cheated

But to the happy, I am at peace And to the faithful, I have never left.

I cannot speak, but I can listen. I cannot be seen, but I can be heard.

So as you stand upon a shore Gazing at a beautiful sea...
Remember me.

As you look in awe at the mighty forest And its grand majesty... Remember me.

Remember me in your heart; Your thoughts and your memories... Of the times we cried, the times we fought, The times we laughed.

For if you always think of me, ...I will never have gone.

-Anonymous, Veterans Hospital Remembrance Ceremony on May 14, 2011 in Buffalo, NY

#### Acknowledgments

"...we see only what we are ready to see, what we have been taught to see." Jean-Martin Charcot, 1825 - 1893

"One must systematically discard all preconceptions." Emile Durkheim, *The Rules of Sociological Method* (translated 1982 by W.D. Halls)

What I liked most, why I came to grad school at all, was Galileo™. The idea of concepts related spatially in multiple dimensions was fascinating--topography, geometry, algebra, calculus, physics, and all the other stuff I had no clue about notwithstanding. Doing Galileo surveys showed me things about my own thoughts that were useful, making the relationships between objects I'd never consciously connected explicit. The results seemed always surprising, and yet not surprising, both at the same time. I loved that it was surprising.

A bit later relating my own survey results to the results of others became possible (using cgi-forms, the Galileo Matrix, .asp forms, Survey Monkey, LimeSurvey, and then LimeSurvey with sliders). The first time I realized most folks I knew did not regard Pop-Tarts® as a major food group was after one of my innumerable food surveys—and it wasn't until repeatedly running emotion Galileos that I realized how much closer to fear I was at that time than anyone else taking the surveys. I loved running what I thought of as "goof" surveys about anything that came to mind (animals, dogs, weather, snowmen, boys' names, food, plants, my classes, more food, movies, location of objects in my office, soda, food yet again) and then eventually more "serious" projects (emotion words vs. images, Iraq war, organ donation, quality of life, technology, elections, selling socks).

Yet still the goof surveys also continued since you can, after all, Galileo anything; that is especially exciting as cognitive groupings mapped so far appear to be complex systems and display power laws. As Melanie Mitchell says in her 2009 book *Complexity: A guided tour,* "A nonlinear system is one in which the whole is different from the sum of the parts. Jake puts in

two cups of baking soda. Nicky puts in a cup of vinegar. The whole thing explodes..."! and something new is created. Of course timing matters too; if the vinegar has evaporated nothing much will happen. Or, as one of my early food metaphor thought examples went, fruit added to jello at just the right time suspends well; added too soon it may sink to the bottom, wait much too long and the jello has already hardened so nothing will sink at all. Fresh pineapple will also prevent jello gelling but canned pineapple is ok (since it was heated in the canning process). The process parts are simple yet nonetheless lead to a multiplicity of conditions.

Similarly, people from many places and times have helped shape and guide me to this point; indeed that is the nature of significant other theory. I wish to thank my friends at MSKK and the Buffalo Zoo, as well as colleagues from Singapore in fall 2011; their perspective and encouragement enabled me to go on more than once. My family has also made me who I am today, as have my friends, particularly Brenda Battleson, Hao Chen, Cindy (Yixin) Chen, Mike Egnoto, Arch Haller, Hyunjung Kim, Brian LaValley, HyunJoo Lee, Kristen Lovejoy, and EA (Beth) Sears. I also greatly appreciate Mom and Dad's help proofreading the tables; thank you and love always. Last but surely not least I thank the members of my dissertation committee: Arun Viswanath, Michael Stefanone, and especially Joseph Woelfel. Joe what can I really say? You allowed me to keep questioning, observe repeatedly, not assume there was only one reference frame, and go beyond what I'd been taught to see...

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#### Abstract

Although social stratification usually calls to mind the hierarchical ranking of individuals, sociology often broadly considers it the ranking of any social objects. The Treiman Socio-Economic Index (SEI), for example, provides a quantitative assessment of the hierarchical ranking of occupations. This dissertation considers the hierarchical ranking of eight social science disciplines (anthropology, communication, economics, geography, library and information science, political science, psychology, and sociology).

The hierarchical ranking of disciplines was operationalized as the degree of asymmetry in cross-discipline citation patterns. Asymmetries in the information flow in the citation data were regarded as indicators of gravitational gradients (making movement in some directions "easier" than others) and the idea that "higher" disciplines exerted greater influence over "lower" disciplines than vice versa was explored. Lower ranking disciplines were expected to cite higher ranking disciplines more than higher ranking disciplines cited lower ranking disciplines.

Interdisciplinary citations in journal citation data from 1979-1983 and 2005-2009 showed considerable asymmetries, and ranking of the status of the eight disciplines investigated was derived from those asymmetries.

#### **Introduction and Research Questions**

In this project stratified proxemic relationship patterns between academic disciplines in the social sciences are considered as collective cognitive phenomena. Stratification theory is usually concerned with the difference in status of particular people or groups of people. Marx's theory of stratification, for example, is concerned with the difference in status of classes (Haller, 2000; Livesey, 1995-2010). Occupational prestige is a bit different as it is concerned with the difference in status among roles, regardless of who fills those roles (Nakao, 2010)—yet whoever fills the roles, they are people. A theory of the stratification of collective representations (Woelfel & Fink, 1980), however, concerns systems of ideas.

Collective cognitive phenomena are considered to be the primary elements of society in this study; individuals are the substrate in which these collective patterns of thought reside. Academic disciplines, e.g., communication, psychology, sociology, and the like, constitute collective representations in this sense. Although manifested as neural patterns in individual brains, these patterns of thought transcend particular embodiments and continue to exist as collective patterns despite the replacement of all individuals every generation (Woelfel & Murero, 2005, p. 59). Collective representations may interact with each other, influencing and being influenced, and it is these asymmetric patterns of influence that were examined as indicators of stratification. In particular, questions such as "Are some ideas more powerful than others and, if so, which ideas dominate?", "Do some academic disciplines primarily appear to influence others or to be influenced by others—and if so is that a reciprocal arrangement that changes over time?", and "How do they interact with one another over time and are they competitive?" were explored.

#### Theoretical Background

#### Durkheim

Emile Durkheim, a French sociologist who wrote in the late nineteenth and early twentieth centuries (although most of his writings were not translated into English until the mid to late twentieth century<sup>1</sup>), referred to collective phenomena variously as *conscience colectif* and as *représentations collectives* (Collins, 1985; 1951). Both phrases are most often translated into English as either "collective consciousness" or "collective conscience"; either translation is acceptable for the purpose of this study. What is relevant is an idea both phrases include, namely, that collective patterns of thought reside in particular individuals but are not formed in each separate individual.

Specific instances of collective representations are what Durkheim regards as social facts, that is, "...the social structures and cultural norms and values that are external to, and coercive<sup>2</sup> over, actors [individuals]" (Ritzer & Goodman, 2004, p. 73). Social facts may represent both manners of acting or thinking and are "general over the whole of a given society" (Durkheim, 1938, p. 59). As such, they are culturally transmitted and learned by each individual in a

<sup>&</sup>lt;sup>1</sup> Durkheim's work was initially translated into English largely through Talcott Parsons' influence. Parsons' commentary and interpretation are now thought to reveal his own perspectives as much as those of Durkheim (Pope, 1973). Although some newer translations do not recognize Durkheim as a functionalist and/or structuralist (Giddens & Turner, 1987; Pickering, 2001), many still do (Lemanna, 2002; Pope, 1975). This diversity of opinions is not entirely surprising in light of the fact that what functionalism itself means is also not always agreed upon (Pope, 1975). All do appear to agree, however, that "The way in which Durkheim's work was presented to American audiences also influenced perception of his theoretical interests" (Lemanna, 2002).

<sup>&</sup>lt;sup>2</sup> Although it might sometimes be the case, the English word "coercive" should not necessarily be taken to imply social facts are consciously restrictive. A particular social fact may seem so natural to an individual that its influence is imperceptible, much as Dewey surmises that fish do not notice water; it is merely a fact of their existence, their environment (Campbell, 1995). In this same manner, particular social facts may be perceived in varying degrees as restrictive or "natural" depending on the perceiver(s).

particular society (Pickering, 2000, p. 101). Regarding social facts as "things" (Durkheim, 1938, p. 34), rather than ideas in an individual mind, allows data to be acquired through observation and experimentation. This allows individuals and groups in a society to be investigated empirically (Durkheim, 1938, p. 12) as both main and sub culture(s)--even if they disagree about how particular social facts are to be interpreted or recognize different social facts.

This mechanism should not, however, be taken to indicate that a social fact merely represents the average of any coherent group of individual representations "for in that case they [collective representations] would be poorer than the latter [individual representations] in individual content, while, as a matter of fact, they contain much that surpasses the knowledge of the average individual" (Durkheim, 1968, p. 483). As suggested by Woelfel, Danielson, & Yum "The key question for analysis above the individual level is whether or not the group—audience, society, or culture—has group properties above and beyond the aggregate properties of its individual members" (2009, p. 2). Durkheim believes this to be so, stating that groups and individuals are not the same, each having their own laws (1982, p. 40), and the groups' laws may "differ from those displayed by the parts from which it is formed" (1982, p. 128).

This third sense that Durkheim outlines, that is, that group properties are distinct from both individual representations and the aggregate representation, relates to Schelling's idea that people's choices and behaviors that are dependent upon behaviors or choices made by others "...are the ones that usually don't permit any simple summation or extrapolation to the aggregates" (1978, p. 14). For example, individuals may each have their own memories of an event and may have also heard via media the perceptions of others regarding that same event. Yet when aggregated, what each individual knows and what others know may merge--destroying neither the personal nor public parts but rather, transforming them into a new "shared" created

meaning. This is similar to the idea of a complex system, that is "a system composed of many interacting parts, such that the collective behavior of those parts together is more than the sum of their individual behaviors" (Newman, 2011, p. 800). In this manner such systems may create patterns, potentially evolving and learning, that exhibit "nontrivial emergent and self-organizing behaviors" (Mitchell, 2009, p. 13).

#### Shared (collective) knowledge

The Internet appears to especially foster such creation of shared knowledge, meaning, and "selves" by merging private and public representations and then transforming them into something new. This situation agrees with Woelfel's definition of a communication network, namely, that it is "sets of nodes [individuals in this case] whose state is at least partly a function of the states of other nodes in the set" (1990, p. 1).

Individuals may or may not be consciously aware (Lewicki, 1986) of a collective's ability to function as more than the sum of its parts, like a network. As Doty's classical conditioning work demonstrated, however, "...the brain does not require motivation: it simply requires the pairing of two stimuli" (Kandel, 2006, p. 161); that is, purposeful conscious awareness is not necessarily required even at an individual level. That an object as collective representation is something shared among individuals, among the "parts" (Piepmeyer, 2007) is what matters in this study--not that this shared nature, formed perhaps by ritual and education (Gane, 1992, p. 91), is necessarily recognized by the individual(s) as something outside themselves in which they participate.

Society as a whole may be considered an information processing system which has attitudes, beliefs, scripts, plans, and "goals" that no individual or set of individuals within the society holds (Woelfel, et al., 2009, p. 2; Woelfel, Newton, Holmes, Kincaid, & Lee, 1986).

Since it has been previously demonstrated that individuals are influenced by others, albeit at times even by factors beyond their conscious awareness (Lewicki, 1986), this study will assume it possible that culture(s) possess ideas not found in any particular individuals that may, nonetheless, influence individuals.

This sort of interrelationship has frequently been considered at the individual level in both developmental psychological and educational research. For example Vygotsky's learning theory indicates individuals' "developmental change occurs via the internalization of socially shared processes" (Siegler & Alibali, 2005, p. 110). That is, children learn to perform cognitive tasks with social partners and only later perform tasks on their own. Considering this it is clear the learner was not initially aware of the "pattern", what was to be done, prior to doing it.

Another more recent developmental psychologist, Katherine Nelson, also invokes Vygotskian social constructivism; she indicates that using language children adapt their understanding to agree with their linguistic community (Remmel, 2008). Since the present project is concerned with interaction between concepts developed by groups of individuals, rather than the development of those group concepts within individuals, this educational literature will not be reviewed further.

#### Significant Other Project

One model that exemplifies and extends the idea of interrelationship between a focal individual and a group of individuals is the Wisconsin Significant Other Model. The Wisconsin Model is a social psychological model demonstrating how individuals form their educational and occupational aspirations and move through a status trajectory throughout their lives (Woelfel & Murero, 2005, pp. 60, 64). This model assumes that "preferences are formed and modified

largely on the basis of information from others about the occupational structure and self" (Saltiel, 1988, p. 336).

In the significant other<sup>3</sup> project 30 students in various Wisconsin high schools were interviewed; data was then collected from 100 high school seniors in a small Wisconsin city high school. Significant others, people who exercised major influence over the attitudes of these students,<sup>4</sup> were identified for each student and the educational and occupational expectations for each of these significant others, as well as for the student, were measured. Finally, expectations from the significant others for each student were averaged together as it was hypothesized that "...there should be a relationship between the aggregate value of the expectations of others and the aspirations of ego, although the precise nature of that aggregate was (and is) a matter for conjecture" (Woelfel & Haller, 1971, p. 79).

It was found that the aspiration level of the students was substantially related to the expectation level their significant others held for them (Haller & Woelfel, 1969) and students' aspirations were indeed strongly related to the mean expectations of their significant others, no matter how many others a particular student had. That is, the students' aspirations were not the same as the expectations of particular significant others but were an aggregate of the expectations all their significant others held for them—and not only were those expectations of others related to the students' attitudes, they were the main factor determining them (Haller & Woelfel, 1972, pp. 616-617). Further, both the expectations of the significant others and the

<sup>&</sup>lt;sup>3</sup> The first known occurrence of the term "significant other" was in 1953 by US psychiatrist, Harry Stack Sullivan, a former editor of the journal Psychiatry, in his posthumously published work, *The Interpersonal Theory of Psychiatry*.

<sup>&</sup>lt;sup>4</sup> Significant others were defined more specifically as those people who influenced the attitudes of the high school students either by defining objects (occupations or the students themselves) via personal communication or representing an occupational example by their actions (Woelfel & Haller, 1971, p. 75).

students were influenced by social structural factors such as the father's occupational level (Saltiel, 1990; Woelfel & Haller, 1971).

The present study assumes that since these cognitive and structural elements influence each other, the reverse, that individual cognitive factors influence collective structural elements, is also true. Yet although collective representations as experienced by an individual begin at that individual's birth, such representations as experienced by society have no clear beginning<sup>5</sup>. Nonetheless it is proposed that it is this overlap of individual perspectives that allows cultural representations to continue beyond the lifetime of particular human beings. The initial significant other work suggests, but does not directly uphold, such a notion; subsequent studies that generalize the Wisconsin Model as the Linear Force Aggregation Model (which in the multidimensional case is Galileo Theory), however, do support this assumption.

#### Linear Force Aggregation Model

The Wisconsin Model specifically indicated that "...others are significant in direct proportion to the amount of information they convey to an ego about the categories he used to define objects and self, either by word (definers) or examples (models), affective factors notwithstanding" (Woelfel & Haller, 1971, p. 76). Therefore it was the total amount of information conveyed that mattered, not whether the significant other was liked or disliked by the student. The Linear Force Aggregation Model, originally built on the Belief Certainty Model and also sometimes referred to as the Accumulated Information Model (Blau & Katerberg, 1982), notes that the rate of a behavior (or strength of a belief) equals a linear aggregate of information from all sources (Blau & Katerberg, 1982; Woelfel, Hernandez, & Allen, 1973;

<sup>&</sup>lt;sup>5</sup> See Woelfel, J., & Barnett, G. A. (1990). *Procedures for controlling reference frame effects in the measurement of multidimensional processes* at http://www.galileoco.com/CEtestLit/literature.asp for more information on reference frames.

Woelfel & Saltiel, 1978). Resistance to change may therefore be predicted by the amount of previously accumulated knowledge (Blau & Katerberg, 1982; Danes, Hunter, & Woelfel, 1984) and "old" beliefs, those based on greater amounts of information, are less likely to change than weaker "new" beliefs (Danes, Hunter, & Woelfel, 1978). Thresholding in neural networks displays a similar mechanism; unless an input value causes a neuron to exceed a certain preset threshold value, no nodal connection is made (Woelfel, 2009, p. 12; Woelfel & Richards, 1989, p. 35).

A subsequent study by Kincaid, Yum, Woelfel, and Barnett suggested that it was inertial mass that determined the rate of change in acceleration. Even massive objects (strong beliefs formed by a large amount of previous knowledge) could be expected to move as quickly as weaker beliefs once movement began; it was such movement beginning at all that was related to previous knowledge (Kincaid, Yum, Woelfel, & Barnett, 1983). This is similar to the idea of a local minimum in a neural network and has more recently been developed by Woelfel and Stoyanoff in relation to sales funnels (Woelfel & Stoyanoff, 2007).

Sales Funnels and Theory of Reasoned Action

Sales funnels, also sometimes called sales pipelines or sales tunnels, are a concept used by marketing professionals to visually describe different stages prospective customers go through when buying a product (Harry-The-Spider, 2011). The wide top of the funnel is where most potential buyers are located and the width of the funnel is correlated with the number of potential buyers. There are fewer and fewer people located at each stage as one moves through the sales process so the funnel narrows; customers at the very bottom have made a purchase. This is somewhat analogous to the Theory of Reasoned Action (TRA); TRA was developed by Ajzen and Fishbein in 1980 and is often used in health communication (University of Twente, 2010).

Both sales funnels and TRA maintain that a person's intention to perform a behavior (in the case of sales funnels, for example, the intention to purchase a product) determines their subsequent behavior. TRA goes further, introducing the idea that both social norms as well as perceived behavioral control play a role in this intention. What most relates to the present study, however, is the fact that how likely one is to perform a particular behavior correlates with the strength of the intention to perform that behavior; the stronger the intention to perform a behavior is, the more likely it is to be performed.

Relationships between objects in both TRA and sales funnels suggest the importance of viewing variables as continuous in time, else no meaning exists for considering "stages" or process. Woelfel and Stoyanoff (2007) go further and attempt not only to situate continuous variables in time, but also in space. By using a sales funnel type visualization as an overlay for Galileo space, they were able not only to consider concepts in isolation, each in their own funnel, but also model relationships between multiple concepts.

In such a space, massive objects create regions that attract other objects yet also cause objects within to be difficult to move; these regions may usefully be considered to be valleys. Considered in this manner, it is possible to suggest that beliefs at the bottom of a deep funnel (valley) may have more trouble moving than beliefs in shallower funnels or those not in a funnel at all<sup>6</sup>. How likely it is that objects in valleys will begin to move may depend on the strength of the initial beliefs (as evidenced by the depth of the initial funnel); this is consistent with previous

<sup>&</sup>lt;sup>6</sup> Although the terms "funnel" and "valley" are being used here, one might alternately consider the funnels as mountains; the idea that other concepts are attracted somehow to whatever is at the bottom of the funnel (or peak of the mountain) is what matters; "up" and "down" are irrelevant so these ideas are interchangeable.

research (Barnett, 1988; Danes, et al., 1984; Kincaid, et al., 1983; Woelfel, Holmes, Newton, & Kincaid, 1988).

The Galileo Model and Collective Stratification Theory

These relational ideas are at the heart of what is usually referred to as Galileo Spatial Modeling. The Galileo Model has been regarded as both a theory and measurement tool dealing with "the structure and development of social cognitive space" that holds concept meaning to be both relational and situational (Ewert & Linton, n.d.). As such, concepts (sometimes also referred to as objects<sup>8</sup> or terms) may be both directly and indirectly connected.

Spatial representation allows equations used to describe physical movement to be used with non-physical concepts and is an extension of the earlier Wisconsin Model which stated "...each significant other's expectation can be represented as a force vector pulling the adolescent in a specific direction..." (Woelfel & Murero, 2005, p. 61). Indeed, in Galileo space "message" relationships between objects average as vectors (Woelfel, Holmes, Cody, & Fink, 1988; Woelfel & Stoyanoff, 2007, p. 16) and, over time, individuals' attitudes will "tend toward the point at which all such forces are balanced" (Woelfel & Murero, 2005, p. 61).

Collective stratification theory, as shown using Galileo spatial modeling, suggests that social objects are most usefully measured comparatively as continuous, multidimensional variables. The relational pattern of all concepts observed shows how respondents, as a group,

<sup>&</sup>lt;sup>7</sup> "Knowledge structure" does not have a precise agreed meaning at this time; "social cognitive space" is meant as a representational knowledge structure in this paper ("DEFINITION: Knowledge structure," 2012) and knowledge structures will be regarded herein as a cognitive structures.

<sup>&</sup>lt;sup>8</sup> "Object" is the term preferred by Mead in Symbolic Interactionism and was used most frequently in early Galileo work.

<sup>&</sup>lt;sup>9</sup> Traditionally this measurement has been done at the individual level using pair comparison questions in surveys administered via face to face, telephone, or internet communication.

view them (Cancian, 1975, p. 53; Vishwanath & Chen, 2006) and it is this pattern that defines the concepts, allowing central tendencies of cultural belief systems to be investigated (Woelfel & Barnett, 1982) and multiple patterns (or the same pattern over time) to be compared <sup>10</sup>.

Magnitude estimations generated are situated as coordinates in non-Euclidian space by using the Young-Householder and Torgerson procedures for obtaining a double-centered scalar products matrix from a matrix of dissimilarities (Torgerson, 1952; Torgerson, 1958; Young & Householder, 1938). A method that finds the principle axes of the centroid scalar products using a procedure first established by Karl Jacobi in 1849, implemented in a mathematical algorithm by Johannes Van de Geer in 1971, and incorporated into the Galileo Fortran program by Kim Blaine Serota and Richard A. Holmes in 1975 is then used to calculate the eigenvalues and eigenvectors for this coordinate space (Barnett, Serota, & Taylor, 1976; "Galileo Website," 2011; Van de Geer, 1971; Woelfel & Evans, 2009; Woelfel, Newton, Kincaid, & Holmes, 1979; Woelfel, et al., 1975, August).

Similar concepts are close to one another in this space and concepts that are dissimilar are distant from one another. These distance relationships describe and define the concepts (Woelfel & Fink, 1980) and the concepts are therefore not independent from one another. The self-concept may also be located close to, or distant from, other concepts and behavioral concepts closest to the self-concept are those performed most frequently—while those seldom or never performed are more distant from the self-concept (Woelfel & Fink, 1980, pp. 163-164). More

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<sup>&</sup>lt;sup>10</sup> This idea of similar and dissimilar features defining concept connections is somewhat analogous to Geoffrey Hinton's discussion of image recognition features as forming energy "landscapes" that include valleys and ravines (Hinton, 2007, 19:24-20:10)

recently it has also been found that media close to the self-concept are utilized more often than media further from the self-concept (Cheong, et al., 2010).<sup>11</sup>

It should be noted, however, that although particular points are plotted, the location of objects is best thought of as a field with indefinite range, rather than as a discrete point. Where a particular measured point is located within such a field at any given time is dependent upon the degree of uncertainty, as expressed by the measurement of standard error (Woelfel & Pruzek, 1983). That is, the center of the fields where points reside in a particular Galileo space is located within a tolerance (permitted measurement variation) as estimated by a hypersphere with a radius of one standard error around the mean coordinates for the values of the point's location.

Accordingly, it should also be noted that although the first three dimensions of a Galileo space can be plotted visually, more complete and meaningful analysis must rely on mathematical computations based on all dimensions of the spatial coordinates.

In Wisan's 1972 dissertation, Galileo space (called therein a "social manifold" so as to model terminology after physical science<sup>12</sup>), was constructed and investigated as "...continuous, linear, unbounded, metric, isotropic, and homogenous." The present study will, however, reconsider whether it has inherent anisotropic or isotropic characteristics for the concept set under investigation (academic disciplines). Continuous is assumed.

<sup>&</sup>lt;sup>11</sup> This research, as well as unpublished replications and partial replications, appears to display a power law.

<sup>&</sup>lt;sup>12</sup>This terminology was more recently used by Geoffrey Samuel (1990) but does not appear to have been adopted by present day neuroanthropology. It did, however, resurface in 2009 when discussed at some length in a biblical sociology book (Mol, 2009) that was then reviewed by a religious studies journal in 2010 (Joyce, 2010). Presently much of the 2009 book is available online as a Google book; the section mentioning Samuel's work begins on p249 and includes his definitions of both social manifold and modal states. It is of interest that his definition uses the image of a flowing river as an analogy for social "currents" and notes the social manifold is derived, but differs, from both individuals and societies.

#### Method

Eight social science disciplines<sup>13</sup> (anthropology, communication, economics, geography, information & lib science, political science, psychology, sociology) were considered using citations from journals ranked highest by impact factor<sup>14</sup> according to *Journal Citation Reports*® (JCR)<sup>15</sup> and downloaded from the *Web of Science*® database<sup>16</sup>. For each year 2005-2009, citations in the highest impact factor journal for each of the eight disciplines were downloaded and inspected for citations to any of the top five impact factor journals for all eight disciplines. A second dataset of citations from 1979-1983 was also created. In that dataset, citations from the highest impact factor journal for each of the eight disciplines in 1981<sup>17</sup> were downloaded<sup>18</sup> for

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<sup>&</sup>lt;sup>13</sup> Which disciplines are regarded as a social science is not always agreed upon. The disciplines considered in this project were chosen by aggregating a number of different sources listing social science disciplines and then choosing the six disciplines that were mentioned most frequently plus two disciplines of interest to the researcher (Appendix A). Listiac, a non-hierarchical clustering program (Appendix B), was used to confirm results.

<sup>&</sup>lt;sup>14</sup> Impact factor was chosen, although other rankings are available, as it is regarded by *JCR* publisher Thomson Reuters as a "gross approximation of the prestige of journals" (Garfield, 2006, p. 14; The Institute for Scientific Information (ISI), 1994). See Appendix C for more information on *Journal Citation Reports*®.

<sup>&</sup>lt;sup>15</sup> Appendix D shows a screenshot of the 2009 *JCR* database interface.

<sup>&</sup>lt;sup>16</sup> See Appendix E for more information on *Web of Science*®

<sup>&</sup>lt;sup>17</sup> University at Buffalo has online access for *JCR* 2002 and after; prior to that year information is available for some years in print form or on CDs. A scanned example of one of the print pages used to locate the highest impact journals for 1981 is in Appendix F. Since impact factor sorted by discipline was not available, all impact factor rankings were examined and compared to the 1981 *JCR* subject reference provided (see Appendix G). Dr. Brenda Battleson, a professor from the UB library science dept., was also consulted as it was at times unclear which journals may have been regarded as relating to library science during that timespan. An Ulrich's listing she provided (Appendix H) showing dates of publication for library and information science journals was used thereafter when inspecting the 1981 *JCR* impact factor report.

<sup>&</sup>lt;sup>18</sup> Web of Science® has online access for articles from 1965 and after.

all five years and citations to the top five 1981 impact factor journals for were counted 19 each year.

Journal choice procedures using Journal Citation Reports (JCR)

Lists of journals appearing in the *JCR* database for eight disciplines (anthropology, communication, economics, geography, information & lib science, political science, psychology, sociology) were downloaded; for psychology all subject categories available were chosen so as to include all possible journals. <sup>20</sup> These lists were then combined and that master list was sorted; Appendix I shows the first page of the combined sort document. Forty-three of the 1082 journals located were associated with at least two disciplines and two of those 43 journals were associated with three disciplines: DISCOURSE SOC [Discourse & Society] was associated with communication, psychology, and sociology; GLOBAL NETW [Global Networks—A Journal of Transnational Affairs] was associated with anthropology, geography, and sociology.

<sup>&</sup>lt;sup>19</sup> Garfield notes when discussing impact factor that 1, 7, and 15 year rankings for journals within subject disciplines do not differ significantly (2006); he also indicates that although exceptions to these generalities are possible, possible exceptions do not represent average behavior. Accordingly it was decided to use the same journals in each discipline 1979-1983, based on their 1981 impact factor.

<sup>&</sup>lt;sup>20</sup> All *JCR* psychology headings (psychology; psychology, applied; psychology, biological; psychology, clinical; psychology, developmental; psychology, educational; psychology, mathematical; psychology, multidisciplinary; psychology, psychoanalysis; psychology, social) were selected prior to impact factor sort in 2005, 2007, and 2009. In 2006 a single subject heading entitled "psychology" was available; it, however, only found 4 journals. A single subject heading psychology also appeared in 2008 but only returned one journal. In light of this, all psychology headings including this "general", albeit limited, heading were selected in 2006 and 2008.

	multidisciplinary Journals	Total journals	Percentage of total discipline journals that are multidisciplinary
Anthropology	8	61	13.1
Communication	12	45	26.7
Economics	18	209	8.6
Geography	5	51	9.8
Info & Lib Science	4	61	6.6
Political Science	15	99	15.2
Psychology	10	457	2.2
Sociology	16	99	16.2
Totals	88	1082	8.1

Table 1: 2008 Journals listed in JCR by discipline

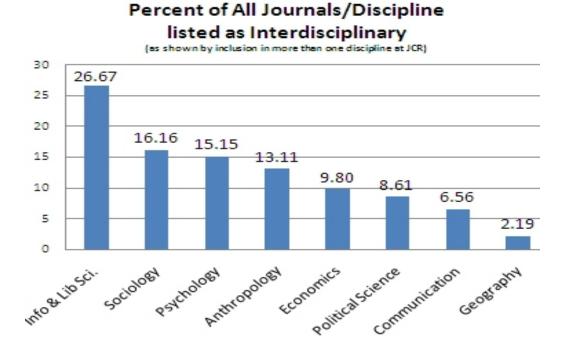


Figure 1: 2008 Journals listed in JCR by discipline

Five journals for each of the eight disciplines were then chosen for further investigation by ranking the top five 2008 journals by impact factor on the *JCR* report for each discipline (Appendix J).<sup>21</sup> All 2008 citations available from the top impact journals (one journal/discipline)

<sup>&</sup>lt;sup>21</sup> History was originally investigated as a social science but after inspection of the 2008 citation data it was deemed more closely aligned with humanities in many cases. Anthropology was often, although not always, more closely aligned with scientific disciplines but was retained.

were then downloaded from the *ISI Web of Science* database<sup>22</sup> using the *Social Sciences Citation Index*. This content was then inspected and each time a journal ranked as a top five journal by impact factor for that year for any of the eight disciplines was found, it was counted.

Based on these initial findings it appeared the anthropology journal with the highest 2008 impact factor (*American Journal of Physical Anthropology*) might be somewhat atypical as it featured substantially more articles than the journals in any of the other chosen disciplines--yet largely cited only other anthropology journals. After consultation with a colleague whose background was in anthropology, 2008 citations from a journal felt to be potentially more representative of that discipline (*Cultural Anthropology*) were also examined. The citation pattern in that journal was more in line with patterns found in other disciplines; that is, sparse connections were found but not to the point of virtual isolation. In light of that discovery, a table was created listing all top five journals in each discipline using any ranking method on *JCR* and a two mode binomial network<sup>23</sup> (# of times journal was in the top five by citation ranking type) using UCINET was created for each (Appendices L1 to L8).<sup>24</sup>

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<sup>&</sup>lt;sup>22</sup> Although the *Web of Knowledge<sup>SM</sup>* database accesses the same article set, citations used by each article are available as an option to download through the *Web of Science*® database (see Appendix K).

<sup>&</sup>lt;sup>23</sup> To create the binomial network it is important that if there was no connection a value of zero is entered into the cell. Steps in order: 1 start UCINET; 2 file, open, choose excel file, save, close spreadsheet editor (be sure to click to add zero to blank cells); 3 click on visualize network with netdraw (icon at far right); 4 click on open-ucinetwork-2mode network.

<sup>&</sup>lt;sup>24</sup> It was noted after this work was completed that the ranking Cited Half-Life had been incompletely considered as only the top 5 journals alphabetically were inspected—but Cited Half-Life rankings of equal value often extended beyond the top 5 journals in an alphabetical listing. In light of that it is now recommended that this ranking be disregarded in Appendices L1-L8. Were the proposed aggregate ranking method done again it is suggested that either Cited Half-Life not be included or that the Cited Half-Life ranking of all journals in any other top 5 ranking be inspected and counted if that rank is equivalent to the highest Cited Half-life ranking possible for the year inspected (even if that means there may be more than five aggregated entries with a Cited-Half life maximum ranking).

Although there were some discrepancies, most notably in political science (see Appendix L-6), most rankings found in this manner were determined not to differ substantially from the *JCR* impact factor ranking; that is, almost all journals in the top 5 ranking by impact factor were also among the top journals listed when aggregated by all *JCR* ranking methods. Since the aim of the present study is to compare citations between fields, not to compare journals within fields, impact factor was used for the remainder of the project. It is, however, proposed that the aggregate ranking system demonstrated (rather than journals ranked highest by impact factor alone) be utilized in future studies, especially when further investigation within particular disciplines is desired.

Journal citation download procedures from Web of Science

After *JCR* was used to locate the top five journals in the chosen disciplines each year by impact factor ranking, the *Web of Science*® database<sup>25</sup> was used to download all citations from the top impact factor journal in each discipline.<sup>26</sup> Since *JCR* lists journals by abbreviated journal name but *Web of Science* requires unabbreviated journal names entered to search, it was necessary to locate unabbreviated journal names for all journals under investigation using http://www.efm.leeds.ac.uk/~mark/ISIabbr/A\_abrvjt.html,

http://images.isiknowledge.com/WOK46/help/WOS/J\_abrvjt.html, or

http://library.caltech.edu/reference/abbreviations/ to match abbreviations with titles.

Searches for the journal contents were done in the *Web of Science*® database as follows: publication name=[insert journal name] AND Year Published=[insert desired year], timespan all Years, Databases=SCI-EXPANDED, SSCI, A&HCI [the default database settings]. If searches

<sup>&</sup>lt;sup>25</sup> Web of knowledge also accesses the same journal set but does not allow one to download the citations used in each article (see Appendix K).

<sup>&</sup>lt;sup>26</sup> See Appendices M & N for a screenshots illustrating the 2008 download procedures in detail.

were done using only the publication name and restricted the timespan by year, rather than searching by year published, that sometimes also found data from the final issue of the previous year (usually December or November); this was first noticed during test data collection for the 2008 citations. It was also noted that (for example) searching for 2008 plus restricting the timespan to 2008 returned the same results as searching for 2008 and not restricting the timespan; therefore, "Timespan all years" (the default setting) was used in all future searches.

It should be noted that only 500 records may be downloaded at a time from the *Web of Science*® database. When more than 500 records needed to be downloaded, for example in a journal like *American Journal of Physical Anthropology*, they were downloaded as multiple groups and then reassembled. Such reassembly was easier in the Excel file than in the initially downloaded text files as the Excel spreadsheet allowed one to double check the total number of records downloaded against the row numbers, thereby making it clear none had been lost or were duplicated. When downloading from *Web of Science*® both "fill record" and "plus cited references" were checked. Records were initially downloaded as text files and then imported into Excel spreadsheet documents. In the initial 2008 test dataset this was done using Excel 2003 on a Samsung NC10 netbook or Excel 2004 on a Mac<sup>27</sup> by opening a blank excel document,

<sup>&</sup>lt;sup>27</sup> This project was carried out using a Macintosh computer running OS X v10.5 then v10.6 and six PC computers (Samsung NC10 netbook with Windows XP, a Gateway SX2801 with Windows 7 Ultimate, an IBM Thinkpad with Windows XP, a Dell Latitude e5400 with Windows VISTA, a Samsung laptop running Windows 7 Home Premium, and an HP Compaq LE1711 running Windows XP 5.1 service pack 3). The 2008 test data was processed with Microsoft office Excel and Word 2003 (Samsung netbook and IBM) and Word 2004 (Mac), UCINET 6 for Windows for network visualization (Samsung netbook), Endnote X for references (all computers), Listiac to inspect the list of potential social science disciplines (Samsung netbook), and Galileo V56 for 3d plots and reports (HP, IBM, and Samsung netbook). In later work Microsoft office Excel and Word (2007 and 2010 on all PCs; 2008 and 2011 on the Mac), UCINET 6 for Windows (Samsung netbook only), Grab (windows v1.6 and Mac, v1.5), Endnote X3 and then X4 (all computers), Galileo V56 (Samsung netbook, IBM, Dell, Gateway virtual

choosing the data menu, and importing the text files as external data.

Counting Citations in 2008 test dataset

In the 2008 test dataset counting was done by opening the eight<sup>28</sup> text files containing citations from each discipline's highest impact journal, importing them into Excel (using semicolon as a delimiter), and sequentially searching them for the names of the top 5 impact factor journals in each of the eight disciplines<sup>29</sup>. A find/replace command finding each journal name and replacing it with the same journal name but formatted in a different color was used and the total number of replacements for each journal was noted in the Excel counting worksheet (Appendix O). <sup>30</sup> The journal citations in each discipline were then totalled to create an asymmetric matrix showing when a discipline was cited by, as well as when they cited, another discipline.

machine, and Mac w/parallels 6), Fireworks in Macromedia Studio MX, then Adobe CS4, Fireworks 10 and Photoshop 11, and CS5 (Samsungs and Gateway), and Adobe Acrobat Pro 9, then 10 (Samsungs & Gateway) and 10 (Mac) were used. The Excel work was largely done on the Mac (except fall 2011 when only the Samsung PCs were used) because it allowed more than one Excel document window to open at the same time and the larger monitor facilitated easier image captures; work with Word, however, was most often done on the PCs (especially the Gateway in the USA and Samsungs fall 2011) because they scrolled more quickly and inserting pages, changing page orientation, and updating the TOC was more easily done using the same type of computer consistently. Moving from Mac to pc using Word also at times changed small things (for example linebreak spacing in Appendix Q) even when using compatibility mode.

28 Ten files including history and cultural anthropology; this data was later not used.

<sup>&</sup>lt;sup>29</sup> A listing of the highest five impact factor 2008 journals ranked by discipline is in Appendix R. Note that in 2008 there were only 29 searches done for each of the 8 highest impact journals, rather than 40, as SOCIAL NETWORKS was one of the top 5 highest journals in both anthropology and sociology.

<sup>&</sup>lt;sup>30</sup> Another method explored was creating Visual Basic Code (VBA) using the Macro Recorder, rather than cut/pasting a journal template, to get the counts in multiple files. Since the macro recorder was no longer available in Excel 2008 and only one of the three computers regularly used during data collection could still run Microsoft Excel 2003, however, this proved unsatisfactory.

Counting citations in 2005-2009 and 1979-1983 datasets

The counting method was entirely revised for the non-test data. This new method was initially evaluated by recounting the 2008 data and comparing those new counts to the test dataset counts. There were a few differences that, upon investigation, were all inaccuracies in the test dataset counts. Some problems had already been discovered and the initial count method had already been revised (for example, any column containing the journal's name was deleted so as not to inflate the self-citation counts for example; that was no longer necessary in the non-test data, however, as only the contents of column Z, header CR, were now searched) but more irregularities were discovered when checking at this time. For example J COMM (the abbreviation for *International Journal of Communication*) is contained within I J COMM (the abbreviation for *International Journal of Communication*). The new counting sheet was modified accordingly to take into account journal abbreviations contained within other abbreviations as they were discovered (and previously run data was rerun each time). For a final listing of all journals excluded from the count of other journals with similar abbreviated names, please refer to the example count worksheets (for Library and Information Science, 2006) in Appendix P.

The highest impact factor journals for each year 2005-2009 were located, as described earlier, by sorting a *JCR* report containing all journals in a particular discipline. Citations in these journals were then counted by pasting the counting sheet (using the "paste special" command and checking "formula" box) into each of the eight excel files, one for each discipline, for each

<sup>&</sup>lt;sup>31</sup> It should be noted that when a main journal was found less often than other journals including the title of the main journal, that generated a negative number. Although absolute values were used at first, that proved problematic for subsequent formulas using the cell value. This problem was solved by using the following formula in Excel: =MAX(0,E181-G188)

year in rows 173-231.<sup>32</sup> The citations were located in column Z so the particular count formula for each journal was (for example): =SUMPRODUCT( (LEN(Z1:Z170) -

LEN(SUBSTITUTE(Z1:Z170, "ECONOMETRICA", ""))) / LEN("ECONOMETRICA")) This formula finds the total count of text in quotes from cells specified and writes that output value into the formula cell. A listing of all journals investigated 2005-2009 for each discipline is available in Appendix Q.

The same download and counting methods were used for the 1979-1983 dataset although the journal choice method was modified. As discussed in the journal choice section earlier, for this dataset a print version of *JCR* was consulted and the journals ranked highest by impact factor in 1981 were used for all five years. Appendix R shows details on the 1979-1983 journals.

After counting the citations in each discipline they were then totalled in the same way as the 2008 test data to create an asymmetric matrix showing when a discipline was cited, as well as when they cited, another discipline. Unlike the 2008 data which was manually re-entered when transferring between the Excel spreadsheet where it was counted to the original total count spreadsheet, however, the 2005-2009 data and 1979-1983 count sheets were arranged so as to allow a cut/paste directly from column D of the discipline count sheets into the master count total worksheet for each year (thereby allowing the totals generated on count sheets to be checked against master count sheet to ensure no data was lost). All additional matrices were then created in the same workbook with the master count sheets and tied to the original data in an effort to minimize error; when values were transferred between worksheets using cut/paste, rather than

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<sup>&</sup>lt;sup>32</sup> There were also two additional count templates created to accommodate journals that had more than 173 items (each item was a data row). The formulas are the same but the row range was increased from Z1-Z170 to Z1-whatever was necessary. These templates were then pasted a few rows below the last row of data in the Excel file.

direct connection, the "paste special" command with "values" checked was used (else the formulas were copied). Listings of only the asymmetric matrices (raw data counts, both with and without self-citation) extracted from these workbooks for all years are in Appendices S-V; other matrices will be discussed in the results section.

Creating additional matrices from the counted asymmetric matrices

The asymmetric counting matrices for each of the ten years observed, both with and without self-citations, were used to create a number of additional matrices in Excel workbooks. Additional matrices created were: Transpose of the asymmetric count matrix, symmetric matrix 1 (upper triangle of asymmetric matrix), symmetric matrix 2 (lower triangle of asymmetric matrix), a matrix of the means of the upper/lower triangle values, a matrix of the absolute value differences of the upper/lower triangle values. Two more additional matrices based on the original asymmetric matrix (matrix A) and its transpose (matrix At) were calculated using the online matrix calculator at http://www.bluebit.gr/matrix-calculator. Settings used indicated values were delimited by tabs (cut/pasted directly from the excel worksheets to the online calculator) and results were returned with zero decimal digits (if you chose more digits it just added zeros as placeholders, for example 7.00 would be returned if you chose two digits and your result was 7); see Appendix Y for screenshots showing both settings and output.

Measures taken to guard against calculation error

With so many calculations and matrices generated, the minimization of error whenever possible was a priority. The name for each discipline's data file included the total number of results found in the Web of Science search; this was then checked against the Excel file row numbers after the text files were opened and saved there. Use of the counting sheets, placed in the same rows in each Excel data file (so the range was consistent), proved to be more accurate

than the original counting method used. The formulas were checked on each counting sheet before counts were generated for each discipline every year; they were also checked again approximately a week after counting was completed<sup>33</sup>. Counting was primarily completed in three waves: the 2008 test data, the 2005-2009 years, and the 1979-1983 years. The count sheet was reconfigured after the 2008 data check to allow citation numbers for all 25 journals (5/discipline) to be pasted directly into an excel sheet<sup>34</sup>; that excel sheet then calculated the totals and placed those calculated values into the initial asymmetric matrices.

These totals were also calculated on the count sheet (in a separate column so they were not selected), thus allowing comparison to ensure accuracy. The Excel matrix and percent workbooks were also constructed so most values were calculated two different ways; both values could then be compared to be sure they matched. Additionally, formulas that allowed linkage of cell values were utilized extensively, especially when generating the symmetric matrices.

Temporary matrices of values used later in one of the final matrix formats for the means and difference matrices were also generated. Finally, although initially all online matrix calculator results were saved, it was discovered to be just as fast to cut/paste and re-multiply the matrices (rather than check against the saved results). That was done for each discipline, every year, at least a week after initial calculations were performed; which results had already been checked

<sup>&</sup>lt;sup>33</sup> This may seem unnecessary, and perhaps would have been were the initial procedure what was used in the end. It took time to realize, however, that cut/pasting the counting template into different rows (for example) could at times change the range.

<sup>&</sup>lt;sup>34</sup> This was necessary because, as mentioned in footnote 26, one journal appeared in the top 5 ranking for two different disciplines and the initial count template test was prepared only counting it in only one discipline (since the value would be the same). The template was subsequently modified to count this journal twice (once in each discipline) however, so the same template could be used all years.

was kept track of by not completing the text to column<sup>35</sup> and formatting steps until after results were verified.

It is possible that despite the safeguards employed error may have crept into the results; for example perhaps a mistake was made at first and then the same exact calculation error was made again two weeks later. Based on comparison of the original 2008 test data (including matrices) with the final 2008 dataset, however, it is felt that although it is not impossible such a thing may have happened, it is unlikely.

Getting the Excel matrices to display in word and subsequent .pdf

The Excel matrix files were saved as .pdfs; these .pdfs were then viewed and *Grab* (version 1.5) was used on the Mac to capture an image of each page. This image was then inserted into the word document (which later became the dissertation .pdf). The percent tables, ratio tables, and charts were also originally calculated in Excel and inserted into the word document in this manner.<sup>36</sup>

#### Generating TIN/TOUT matrices

The citation count asymmetric matrices were changed into binomial matrices and the presence or absence of links between disciplines was investigated as follows:

- $\leftrightarrow$  = home concept links both to and from another discipline (IN and OUT)
- $\leftarrow$  = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

UTlink = total unique links, any direction, not including home concept (total possible=7)

<sup>&</sup>lt;sup>35</sup> See Appendix Z for screenshots of text to columns procedure.

<sup>&</sup>lt;sup>36</sup> It is possible to use the Grab program to save portions of the Excel files, rather than the .pdfs created from Excel, but the image quality is usually not as good. This was done, however, for a few of the charts.

Tout = total outlinks--home concept cites another (OUT)

Tin = total inlinks--home concept cited by another (IN)

Tlink = tin+tout (total links)

TlinkMaxOUT = tout-tin

TlinkMaxIN = tin-tout

The maximum formula for Excel calculations was used with TlinkMaxOUT and TlinkMaxIN so negative calculation results were reported as zero (see Appendix AA for Excel sheet with formulas and footnote 28).

Generating the UCINET graphs

The UCINET graphs we created by copying and pasting each asymmetric matrix into the UCINET spreadsheet editor to create .##D and .##H files. The .##H files were then opened within UCINET in Netdraw (choosing "open UCINET network dataset and using default settings) and saved as .jpgs. These images were edited with Adobe Fireworks to add the year and "asymmetric matrix" and then inserted into the dissertation MSword document.

Using Galileo to generate coordinates & descriptive statistics for the matrices

An initial runstream file was created using INTERGAL (see appendix AF); subsequent runstream files were then created by modifying the initial runstream using Notepad++. The Excel matrix files for each year were then opened and the symmetric matrices were cut/pasted to the end of the runstream files. After cut/pasting the spacing was then manually modified so columns lined up in the way the Galileo v5.6 program requires. Using a temporary text file (created by saving the excel files as .prn files) to modify the pasted values was also briefly tried; although that worked, it still required further spacing modification so that method was discontinued in favor of directly pasting and modifying spacing within the runstream files.

The runstreams were then used to create coordinate and print files (containing eigenvalues and variance percentages for each dimension as well as information on distances each term moved between sets) using Galileo v5.6. Runstream files were created to rotate together the following symmetric matrices for 2005-2009: upper triangle of original asymmetric matrix, lower triangle of original asymmetric matrix, matrix of means between upper/lower triangle values, matrix of differences between upper/lower triangle values.

#### Results

The citation count matrices were first inspected using UCINET. In UCINET, the asymmetric matrices for all ten years were graphed using NetDraw. Arrowheads were shown by tie strength (minimum=0, maximum=50) and label defaults were used with placement set after the node symbols. Initially matrices both with and without self citations were graphed; when it was discovered, however, that UCINET graphs for both were the same this was discontinued (although the initial duplicate graphs were maintained and used as a check). Upon further investigation it was noted that UCINET could graph self reflexive connections but only as arrows from/to the same node that did not convey how many self connections there were (no weight). Therefore these graphs were made without showing self connections.

It should also be noted that the arrows shown on the UCINET graphs may at times appear to show an opposite relation to the arrows shown on the Cite(OUT)|Cited(IN) link results. On the UCINET graphs an arrow facing a discipline indicates it is cited by the discipline the arrow is coming from. This is the same as in the Cite(OUT)|Cited(IN) link results. Also, an arrow pointing towards the home concept indicates the home concept is cited by the second discipline (like on a UCINET graph) and an arrow pointing away from the home concept indicates the home concept cites the discipline it is pointing towards. In this way the Cite(OUT)|Cited(IN)

results attempt to clearly capture the fact that a single point (node on UCINET graph) has both in/out relationships to the other nodes related to it. Both relationships are then considered separately, rather than using a single arrow as in the UCINET graphs<sup>37</sup>; it is as if two lines were shown on the UCINET graphs connecting each dyad. Thus both the in and out relationships for particular nodes from the point of view of each node are considered. This makes is easier to tell which disciplines are being cited by many other disciplines—whereas in the matrix rankings alone sometimes a discipline will be placed highly because a few other disciplines cite them many times, rather than because many disciplines cite them.

"Home concept" on the Cite(OUT)|Cited(IN) results therefore refers to the discipline under consideration; that is, the discipline being examined to see how it connects to others. This is equivalent to the "target" concept in message generation in Galileo ("home" being the concept under consideration towards which the "start" concept would be moved just as the source/target relationship in Galileo message generation). Another way to think of it would be to equate the "home concept" to "ego" in social networking; that is, all other concepts are being considered from the point of view of the "home concept".

The matrices for 2005-2009 were also inspected using the Galileo program to rotate and plot coordinates for both the upper and lower triangle symmetric matrices as well as the matrices formed from the differences between the upper and lower triangles and the means between the upper and lower triangles<sup>38</sup>. The relationships between the disciplines in these plots was not

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<sup>&</sup>lt;sup>37</sup> UCINET can display weighted edge information as double headed arrows with two numbers per single line; see Appendix AE for an example using the 2008 test data. The researcher felt, however, that this graph was a confusing visualization. It is nonetheless included as an example as others may think differently and wish to use this visualization method.

<sup>&</sup>lt;sup>38</sup> Plots for the upper triangle, lower triangle, or each year separately are available from the author by request.

entirely clear but did suggest that the disciplines plotted in a similar manner from year to year,

not randomly. If communication was located in the lower left quadrant of the plot in 2005, it was

also located in the lower left quadrant in 2009, etc. Communication and political science appear

to be outliers in 2005 and 2007. It is felt this is due to that fact that Public Opinion Quarterly

was one of the top 5 journals by impact factor for both disciplines those years so both cited the

same journal heavily--thus strengthening the connection between them, especially as compared

to their connections to others. This is especially noticeable in the plot without self-citations.

The numbers preceding the disciplinary abbreviation in the following plots indicate the

year (for example 2005 is 5, 2006 is 6, etc.) and the disciplinary abbreviations are as follows:

Anthropology = ANTH

Communication = COMM

Economics = ECON

Geography = GEOG

Library and information science = INF LIB

Political Science = POL SCI

Psychology = PSYCH

Sociology = SOC

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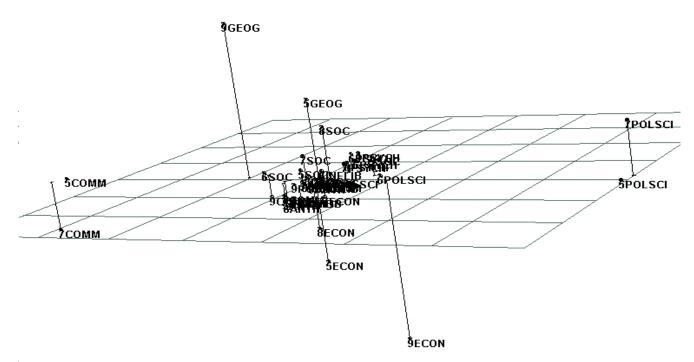


Figure 2: 2005-2009 mean citations, without self citations, plotted as coordinates using Galileo

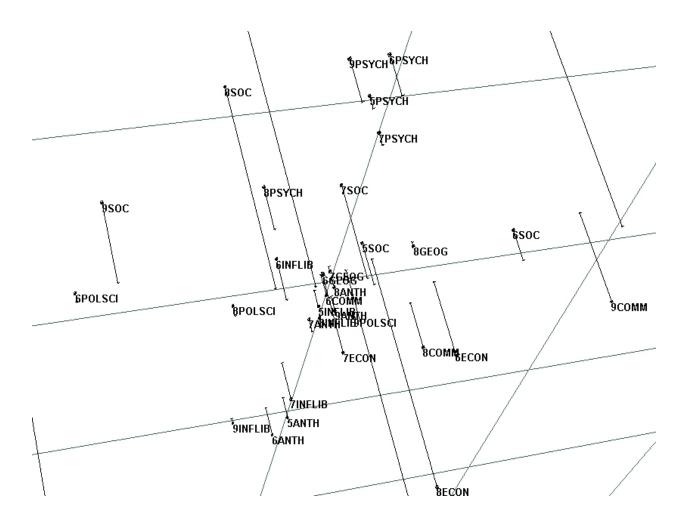


Figure 3: 2005-2009 mean citations, without self citations, plotted as coordinates using Galileo, lower center section only

Note that this plot was enlarged, cropped, and rotated so as many labels as possible might be seen and it now mirrors the image in figure 2 although it was created from the same data; that is, polisci is on the right in figure 2 but the left here and communication is on the left in figure 2 but on the right here.

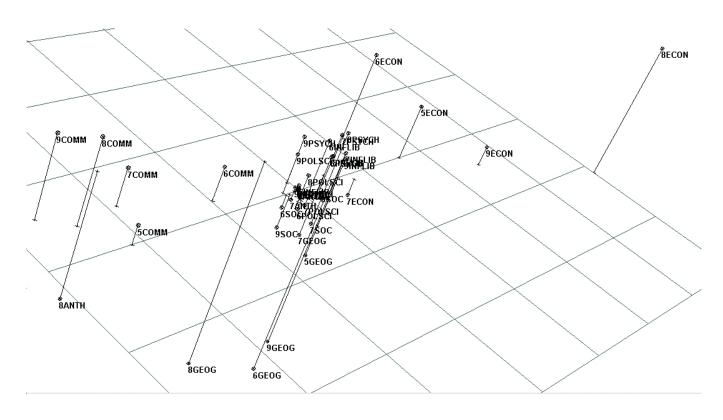


Figure 4: 2005-2009 mean citations, including self citations, plotted as coordinates using Galileo

1979	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
sociology	0	13	0	4	0	5	4	440	466
anthropology	436	0	7	1	0	0	3	3	450
economics	0	0	150	4	0	2	0	30	186
psychology	1	7	0	0	3	0	162	8	181
politicalSci	0	2	24	0	0	25	1	17	69
communication	0	34	0	0	2	0	3	7	46
info&libSci	0	0	0	0	21	0	0	0	21
geography	1	0	0	16	0	0	0	2	19
totals	438	56	181	25	26	32	173	507	1438

Table 2: 1979 Asymmetric matrix with self citation sorted most to least citations<sup>39</sup>

1979	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
politicalSci	0	2	24	0	0	0	1	17	44
economics	0	0	0	4	0	2	0	30	36
sociology	0	13	0	4	0	5	4	0	26
psychology	1	7	0	0	3	0	0	8	19
anthropology	0	0	7	1	0	0	3	3	14
communication	0	0	0	0	2	0	3	7	12
geography	1	0	0	0	0	0	0	2	3
info&libSci	0	0	0	0	0	0	0	0	0
totals	2	22	31	9	5	7	11	67	154

Table 3: 1979 Asymmetric matrix without self citation sorted most to least citations

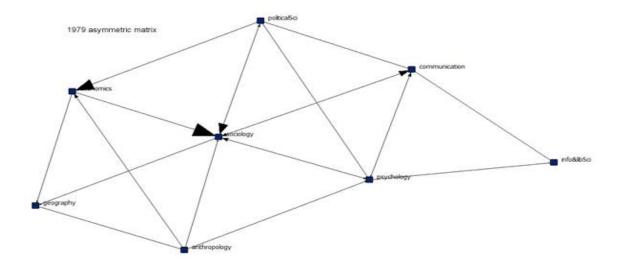


Figure 5: 1979 UCINET graph of asymmetric matrix

<sup>&</sup>lt;sup>39</sup> For original asymmetric matrices sorted alphabetically see Appendices T, U, V, and W.

1979	AN TH	СОМ	ECON	GEOG	InfoLib	PoliSc i	PSYCH	SOC	Tin (I Ntotal)
anthropology	0	0	1	1	0	0	1	1	4
communication	0	0	0	0	1	0	1	1	3
economics	0	0	0	1	0	1	0	1	3
geography	1	0	0	0	0	0	0	1	2
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	1	1	0	0	0	1	1	4
psychology	1	1	0	0	1	0	0	1	4
sociology	0	1	0	1	0	1	1	0	4
Tout (OUTtotal)	2	3	2	3	2	2	4	6	24
Tlink (tin+tout)	6	6	5	5	2	6	8	10	24
TlinkMaxOUT (tout-tin)	0	0	0	1	2	0	0	2	
TlinkMaxIN (tin-tout)	2	0	1	0	0	2	0	0	

Table 4: 1979 Cites(OUT) and cited(IN) asymmetric binomial link matrix without self citation  $^{\rm 40}$ 

 $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)

 $\leftarrow$  = home concept is cited by another discipline (IN)

 $\rightarrow$  = home concept cites another discipline (OUT)

UTlink TWO:	Communication	UTlink FIVE:
Info & Library Sci	1 Com⇔psych	Psychology
1 InfLib→com	2 Com⇔soc	1 Psych↔anth
2 InfLib→psych	3 Com←infoLib	2 Psych↔com
$(0 \leftrightarrow, 0 \leftarrow, 2 \rightarrow)$	4 Com→poliSci	3 Psych↔soc
	$(2\leftrightarrow, 1\leftarrow, 1\rightarrow)$	4 Psych←infoSci
UTlink THREE:		5 Psych→PoliSci
Geography	Economics	$(3\leftrightarrow, 1\leftarrow, 1\rightarrow)$
1Geog⇔anth	1 Econ⇔polSci	
2Geog⇔soc	2 Econ←soc	UTlink SIX:
3Geog→econ	3 Econ←geog	Sociology
$(2\leftrightarrow, 0\leftarrow, 1\rightarrow)$	4 Econ→anth	1 Soc↔com
	$(1\leftrightarrow, 2\leftarrow, 1\rightarrow)$	2 Soc⇔geog
UTlink FOUR:		3 Soc↔polSci
Anthropology	Political Science	4 Soc⇔psych
1 Anth⇔geog	1 PolSci↔econ	5 Soc→anth
2 Anth⇔psych	2 PolSci↔soc	6 Soc→econ,
3 Anth←econ	3 PolSci←com	$(4\leftrightarrow, 0\leftarrow, 2\rightarrow)$
4 Anth←soc,	4 PolSci←psych	
$(2\leftrightarrow, 2\leftarrow, 0\rightarrow)$	$(2\leftrightarrow, 2\leftarrow, 0\rightarrow)$	

<sup>40</sup> An Excel binomial link matrix table showing formulas used is in Appendix AA.

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1979	done 6-2-11					py/paste int nide if "gone		ix (cells												
		anthronol	communic	economi	geograph :	nformati po	litical*	nswcholo	sociology	-	-	-		-		-			_	
URNAL TITLE	JOURNAL ABBREVIATION	antinopol	communic	econonii	geograpii	mormaci po	mercan.	psycholo	sociology										_	_
TERICAN JOURNAL OF PHYSICAL	AM J PHYS ANTHROPOL																			-
THROPOLOGY		403	0	0	0	0	0	0	0		_	_	_				_	_	-	
INUAL REVIEW OF ITHROPOLOGY	ANNU REV ANTHROPOL	1	0	0	0	0	0	1	0	1979	anthropolog	communicat	economics	geography	information 8	politicalScien	psychology	sociology	totals	1
IERICAN ANTHROPOLOGIST	AM ANTHROPOL	12	0	5	0	0	0	2	2	anthropology	436		7	1			3	3	450	1
DCIAL NETWORKS	SOC NETWORKS	0	0	0	0	0	0	0	0	communication	0	34		0	2	2 0	3		46	
RRENT ANTHROPOLOGY	CURR ANTHROPOL	20		2	1	0	0	0	1	economics	0	0	150			2	. 0		186	
thropology: AMERICAN JOURNAL	OF PHYSICAL ANTHROPOLOGY	436	0	7	1	0	0	3	3	geography	1		0	16		,	0		19	-
MMUNICATION RESEARCH	COMMUN RES	1 0	12	0	0	0	0	0	0	info&libSci politicalSci	0		24	0	21	25	0		69	+
JBLIC OPINION QUARTERLY	PUBLIC OPIN QUART	- ö	12	0	0	0	0	0	7	politicalsci	1	2	24		3	2	162		181	1
URNAL OF COMMUNICATION	J COMMUN	0	7	0	0	0	0	3	0	sociology	0	13	0	4			4		466	
JARTERLY JOURNAL OF SPEECH	QJSPEECH	0	2	0	0	0	0	0	0	totals	438	56	181	25	26	32	173	507	1438	<-row
MMUNICATION MONOGRAPHS	COMMUN MONOGR	0	1	0	0	2	0	0	0										1438	<-col
mmunication: COMMUNICATION RESE	ARCH	0	34	0	0	2	0	3	7	"cites" = colum										
URNAL OF ECONOMIC	J ECON LIT			13				0	-	"cited" = row la	beled discipl	lines are cite	d by column	labeled disc	iplines				+	-
ERATURE URNAL OF FINANCIAL	J FINANC ECON	1 .	-	13	1														_	
ONOMICS DURNAL OF POLITICAL ECONOMY	J POLIT ECON	1 8	0	23	0	0		0	0			-				-		-	+	-
I ECON REV	AM ECON REV	1 0	0	82		0	2	0	17										_	_
CONOMETRICA	ECONOMETRICA		0	30	3	0	0	0												
nomics: JOURNAL OF ECONOMIC LIT	ERATURE		0	150	- 4	0	2	0	30											
CONOMIC GEOGRAPHY	ECON GEOGR	<del>-</del>	_		_		-	-	2	-	-	-	-	-		-	-	-	+	-
OGRAPHICAL ANALYSIS	GEOG ANNAL	- 3			9	0		0	0	_	_	_							_	_
OFESSIONAL GEOGRAPHER	PROF GEOGR		0	0	1	0	0	0	0										_	_
ANSACTIONS OF THE INSTITUTE BRITISH GEOGRAPHERS	T I BRIT GEOGR				2	0	0	0	0											
NNALS OF THE ASSOCIATION OF	ANN ASSOC AM GEOGR																			
ERICAN GEOGRAPHERS  OGRAPHY  ECONOMIC GEOGRAPHY		1	0	0	16	0	0	0	2										_	
NNUAL REVIEW OF INFORMATION SENCE AND TECHNOLOGY	ANNU REV INFORM SCI					-														
IBRARY JOURNAL	LIBR J		0	0	0		0	0	0										_	_
RARY RESOURCES AND																			_	_
CHNICAL SERVICES	LIBR RESOURCE TECH SER	0	0	0	0	0	0	0	0											
BRARY QUARTERLY URNAL OF ACADEMIC	LIBR QUART		0	0	0	4	0	0	0		_									-
BRARIANSHIP	J ACAD LIB		0	0	0	5	0	0	0											
o&libSci: ANNUAL REVIEW OF IN	FORMATION SCIENCE AND TECHNOI	. 0	0	0	0	21	0	0	0										_	
ORLD POLITICS	WORLD POLIT		0	0	0	0	0	0	0										_	_
DURNAL OF POLITICAL ECONOMY	J POLIT ECON		0	23	0	0	0	0	3											
ERICAN POLITICAL SCIENCE	AM POLIT SCI REV		_						10											
VIEW ERICAN JOURNAL OF POLITICAL	AM J POLIT SCI	1 '		1			8		10										_	
JENCE URNAL OF CONFLICT	J CONFLICT RESOLUT	•	0	0	0	0	0	0	2										_	-
SOLUTION liticalSci: WORLD POLITICS	J CONFEICT RESOLUT		2	24	0	0	25	1	17											-
		_																		
	ANNU REV PSYCHOL		0	0	0	0	0	17 45	7											_
YCHOLOGICAL REVIEW GNITIVE PSYCHOLOGY	PSYCHOL REV COGNITIVE PSYCHOL	- 0				2		45 51	,											-
VANCES IN EXPERIMENTAL		-	-			-	-	91	-											_
CIAL PSYCHOLOGY	ADV EXP SOC PSYCHOL		0	0	0	0	0	2	0											
GNITION	COGNITION		0			0	0	47	0											
chology: ANNUAL REVIEW OF P	SYCHOLOGY	1	7	0	0	3	0	162	8											-
ERICAN SOCIOLOGICAL REVIEW ERICAN JOURNAL OF			7	0	3	0	2	2	267		-	_				-		-		-
CIOLOGY	AM J SOCIOL		3	0	- 1	0	2	1	125											
NUAL REVIEW OF SOCIOLOGY	ANNU REV SOCIOL		0	0	0	0	0	0	3											
CIOLOGY - THE JOURNAL OF THE ITISH SOCIOLOGICAL	SOCIOLOGY																			
SOCIATION			2	0	0	0	- 1	1	12							-			-	-
CIAL PROBLEMS	SOC PROBL		13	0	0	0	0	0	440		-					-		-		-
iology: AMERICAN SOCIOLOGIC	AL KEVIEW	0	13	0	4	0	5	4	440		-	-				-	-	-	+	$\vdash$

Table  $5: 1979 \text{ raw data citation counts}^{41}$ 

<sup>41</sup> Counts were done for all 10 years this way and are available from author upon request.

	CITES perce	ent (a	svmmetri	ic mat	riv) with	h self	cites 1	979										
	CITES perce		pology		unication			geogra	anhv	inform	ation & librar	politica	science	nsvcho	ology	sociolo	nav	
			%Column								%ColumnTo		%Colum					: :Total(cites):
	anthropology	436		0	0	7	3.8674	1	4	0	0	0	0		1.734		0.592	, oraniones)
	communication	0	0	34	60.714	Ö		0	0	2	7.6923077	0	0	3		_	1.381	
A	economics	0	0	0	0	150	82.873	4	16	0	0	2	6.25	0	0	30	5.917	
[this column=	geography	1	0.22831	0	0	0	0	16	64	0	0	0	0	0	0	2	0.394	
what goes	info&libSci	0	0	0	0	0	0	0	0	21	80.769231	0	0	0	0	0	0	
where on	politicalSci	0	0	2	3.5714	24	13.26	0	0	0	0	25	78.125	1	0.578	17	3.353	
ratio sheet]	psychology	1	0.22831	7	12.5	0	0	0	0	3	11.538462	0	0	162	93.64	8	1.578	
	sociology	0	0	13	23,214	0	0	4	16	0	0	5	15.625	4	2.312	440	86.79	
	Total	438	100	56	100	181	82.873	25	100	26	100	32	100	173	100	507	100	1438
	%totalCols		30.459		3.8943		12.587	'	1.7385		1.8080668		2.2253		12.03		35.26	100
	CITES perce	ent (w	ithout se	elfcites	)													
		anthro	pology	commu	unication	econo	omics	geogra	phy	inform	ation & librar	politica	science	psycho	logy	sociolo	gy	
		cites	%Column	cites	%Colum	cites	:%Colun	cites	%Colum	cites	%ColumnTo	cites	:%Colum	cites	:%Colu	cites	%Column	Total(cites)
	anthropology	0	0	0	0	7	22.581	1	11.111	0	0	0	0	3	27.27	3	4.478	
	communication	0	0	0	0	0	0	0	0	2	40	0	0	3	27.27	7	10.45	
В	economics	0	0	0	0	0	0	4	44.444	0	0	2	28.571	0	0	30	44.78	
	geography	1	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2.985	
	info&libSci	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	politicalSci	0	0	2	9.0909	24	77.419	0	0	0	0	0	0	1	9.091	17	25.37	
	psychology	1	50	_	31.818	0		0	0	3	60	0	0	0	0	8	11.94	
	sociology	0	0	13	59.091	0	0	4	44.444	0	0	5	71.429	4	36.36	_	0	
	Total	2	50	22	100	31	0	9	100	5	100	7	100	11	100	67	100	15
	%totalCols		1.2987		14.286		20.13		5.8442		3.2467532		4.5455		7.143		43.51	100

Table 6: 1979 Cites percent (asymmetric matrix) with and without self citation 42

<sup>42</sup> A portion of this Excel percentage sheet for 1979 showing formulas is in Appendix AB. Percents were done for all 10 years for both cites and cited citation counts; data available from author upon request.

	anthro	pology	comm	unication	econo	mics	geogra	aphy	inform	ation & libra	politica	science	psycho	logy	sociolo	gy	
	cites	%Column1	cites	%Column	cites	%Colum	cites	%Columi	cites	%ColumnTo	cites	%Columi	cites	%Colu	cites		
anthropology	436		0	0	0	0	1	5.2632	0	0	0	0	1	0.552	0	0	
communication	0	0	34	73.913	0	0	0	0	0	0	2	2.8986	7	3.867	13	2.79	
economics	7	1.55556	0	0	150	80.645	0	0	0	0	24	34.783	0	0	0	0	
geography	1	0.22222	0	0	4	2.1505	16	84.211	0	0	0	0	0	0	4	0.858	
info&libSci	0	0	2	4.3478	0	0	0	0	21	100	0	0	3	1.657	0	0	
politicalSci	0	0	0	0	2	1.0753	0	0	0	0	25	36.232	0	0	5	1.073	
psychology	3	0.66667	3	6.5217	0	0	0	0	0	0	1	1.4493	162	89.5	4	0.858	
sociology	3	0.66667	7	15.217	30	16.129	2	10.526	0	0	17	24.638	8	4.42	440	94.42	
Total	450	100	46	100	186	100	19	100	21	100	69	100	181	100	466	100	14
%totalCols		31.2935		3.1989		12.935		1.3213		1.4603616		4.7983		12.59		32.41	
CITED perc	anthro			unication	econo	mics	geogra	aphy	inform	ation & libra	politica	science	psycho	logy	sociolo	gy	
	cites	%Column1	cites	%Column	cites	%Colum	cites	%Columi	cites	%ColumnTo	cites	%Columi	cites	%Colur	cites		
anthropology	0	0	0	0	0	0	1	33.333	0	#DIV/0!	0	0	1	5.263	0	0	
communication	0	0	0	0	0	0	0	0	0	#DIV/0!	2	4.5455	7	36.84	13	50	
economics	7	50	0	0	0	0	0	0	0	#DIV/0!	24	54.545	0	0	0	0	
geography	1	7.14286	0	0	4	11.111	0	0	0	#DIV/0!	0	0	0	0	4	15.38	
info&libSci	0	0	2	16.667	0	0	0	0	0	#DIV/0!	0	0	3	15.79	0	0	
politicalSci	0	0	0	0	2	5.5556	0	0	0	#DIV/0!	0	0	0	0	5	19.23	
psychology	3	21.4286	3	25	0	0	0	0	0	#DIV/0!	1	2.2727	0	0	4	15.38	
sociology	3	21.4286	7	58.333	30	83.333	2	66.667	0	#DIV/0!	17	38.636	8	42.11	0	0	
Total	14	100	12	100	36	100	3	100	0	#DIV/0!	44	100	19	100	26	100	
%totalCols		9.09091		7,7922		23.377		1.9481		0		28.571		12.34		16.88	1

Table 7: 1979 Cited percent (asymmetric matrix transpose) with and without self citation

%s for asymmetric	matrix WITHO	UT self-citat	tions								check	
	CITES/CITED	row%ofTota	alCited								-7.79220779	<-=B45-C3
anthropology	7.792207792	9.09090	9								6.49350649	<=C45-C3
communication	-6.493506494	7.79220	8	CITE	S/CITED for	rmula: =row%	6tota	l-col%total			-3.24675324	etc.
economics	3.246753247	23.3766	2	ched	ck formula:	=col%total-ro	w%t	otal			3.89610389	3
geography	-3.896103896	1.94805	2 D								3.24675324	7
info. & library science	-3.246753247		0								-24.0259740	3
politicalScience	24.02597403	28.571	1								-5.19480519	5
psychology	5.194805195	12.337	7								26.6233766	2
sociology	-26.62337662	16.8831	2									
columns:%ofTotal	1.298701299	14.285714	3 20.12	98701		5.844155	844	3.24675324	4.5454	154545	7.14285714	43.50649
%s for asymmetric	matrix WITH s	elf-citations		В							check	
	CITES/CITED	row%ofTota	alCited								-0.83449235	<-=B59-C
anthropology	0.834492353	31.2934	6								0.69541029	<=C59-C5
communication	-0.695410292	3.19888	7	CITE	S/CITED for	rmula: =row%	6tota	l-col%total			-0.34770514	etc.
economics	0.347705143	12.9346	3	ched	ck formula:	=col%total-ro	w%t	otal			0.41724617	5
geography	-0.417246175	1.3212	8 C								0.34770514	3
info. & library science	-0.347705146	1.46036	2								-1.38914489	3
politicalScience	1.389144896	3.61445	8								-0.55632823	7
psychology	0.556328237	12.5869	9								2.85118219	9
sociology	-2.851182199	32.4061	2									
notice poli sci flips CITES/CITED:	when own cita negative#=they cite			ed by others								
CITES/CITED:	negative#=they cite positive#=they are	e others more the cited by others n	an they are cite nore than they	cite others	tion from s	oount #s\						
	negative#=they cite positive#=they are	e others more the cited by others n	an they are cite nore than they	cite others self-citat			ın to	be cited by	more	likely	to be cited	by
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CITES/CITED:	negative#=they cite positive#=they are otals/disciplin	others more the cited by others m	an they are city nore than they /ITHOUT	self-citat			ın to	be cited by				by
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Table 8: 1979 Cites divided by cited and cited divided by cites<sup>43</sup>

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<sup>&</sup>lt;sup>43</sup> This Excel sheet with formulas is in Appendix AC and AD. Ratios were done for all 10 years; data available from author upon request.

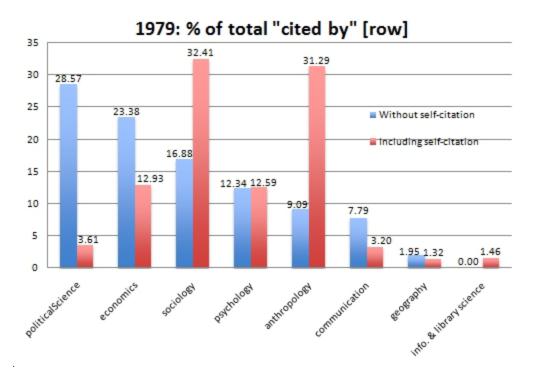


Figure 6: 1979 Total percent/discipline graph

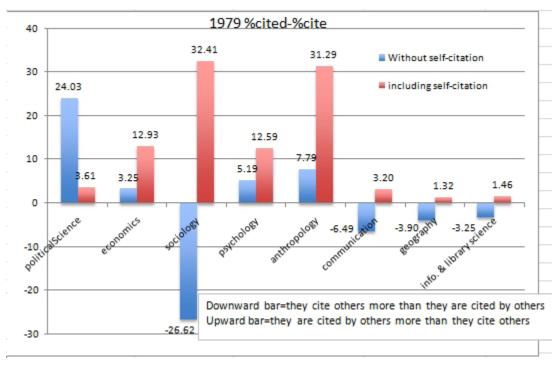


Figure 7: 1979 Cites subtracted from cited graph

1980	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
sociology	0	7	3	8	0	0	27	483	528
economics	0	0	155	15	0	1	17	24	212
psychology	0	4	1	0	3	0	134	6	148
communication	0	58	0	0	9	0	1	9	77
anthropology	57	0	0	2	0	0	0	4	63
politicalSci	0	4	18	2	0	4	8	18	54
geography	0	0	0	44	0	0	0	3	47
info&libSci	0	0	0	0	6	0	0	0	6
totals	57	73	177	71	18	5	187	547	1135

Table 9: 1980 Asymmetric matrix with self citation sorted most to least citations

1980	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
economics	0	0	0	15	0	1	17	24	57
politicalSci	0	4	18	2	0	0	8	18	50
sociology	0	7	3	8	0	0	27	0	45
communication	0	0	0	0	9	0	1	9	19
psychology	0	4	1	0	3	0	0	6	14
anthropology	0	0	0	2	0	0	0	4	6
geography	0	0	0	0	0	0	0	3	3
info&libSci	0	0	0	0	0	0	0	0	0
totals	0	15	22	27	12	1	53	64	194

Table 10: 1980 Asymmetric matrix without self citation sorted most to least citations

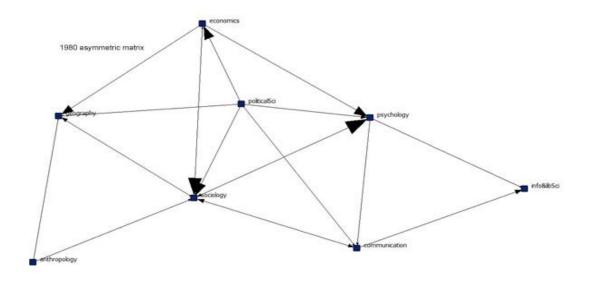


Figure 8: 1980 UCINET graph of asymmetric matrix

1980	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin(INtotal)
anthropology	0	0	0	1	0	0	0	1	2
communication	0	0	0	0	1	0	1	1	3
economics	0	0	0	1	0	1	1	1	4
geography	0	0	0	0	0	0	0	1	1
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	1	1	1	0	0	1	1	5
psychology	0	1	1	0	1	0	0	1	4
sociology	0	1	1	1	0	0	1	0	4
Tout (OUTtotal)	0	3	3	4	2	1	4	6	23
Tlink (tin+tout)	2	6	7	5	2	6	8	10	23
TlinkMaxOUT (tout-tin)	0	0	0	3	2	0	0	2	
TlinkMaxIN (tin-tout)	2	0	1	0	0	4	0	0	

 $\label{thm:condition} Table~11:~1980~Cites (OUT)~and~cited (IN)~asymmetric~binomial~link~matrix~without~self~citation$ 

- $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)
- $\leftarrow$  = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

UTlinks TWO: Info. & Library Sci 1 InfLib→com 2 InfLib→psych (0↔, 0←, 2→)	Economics 1 Econ⇔polSci 2 Econ⇔psych 3 Econ⇔soc 4 Econ←geog (3↔, 1←, 0→)	Psychology 1 Psych→com 2 Psych→econ 3 Psych→soc 4 Psych←infoSci 5 Psych→PoliSci
Anthropology	C1	$(3\leftrightarrow, 1\leftarrow, 1\rightarrow)$
1 Anth←geog	Geography	TIEN: 1 CIN
2 Anth←soc	1Geog⇔anth	UTlinks SIX:
$(0\leftrightarrow,2\leftarrow,0\rightarrow)$	2Geog⇔soc	Sociology
	3Geog→econ	1 Soc↔com
UTlinks THREE:	4Geog→polSci	2 Soc⇔geog
None	$(2\leftrightarrow, 0\leftarrow, 2\rightarrow)$	3 Soc↔polSci
None		4 Soc⇔psych
UTlinks FOUR:	UTlinks FIVE:	5 Soc→anth
Communication	Political Science	6 Soc→econ,
1 Com⇔psych	1 PolSci⇔econ	$(4\leftrightarrow, 0\leftarrow, 2\rightarrow)$
2 Com⇔soc	3 PolSci←com	, , , ,
3 Com←infoLib	2 PolSci←geog	
	4 PolSci←psych	
4 Com→poliSci	2 PolSci←soc	
$(2\leftrightarrow, 1\leftarrow, 1\rightarrow)$	$(1 \leftrightarrow, 4 \leftarrow, 0 \rightarrow)$	
	(1, 7, 1, 9, 7)	

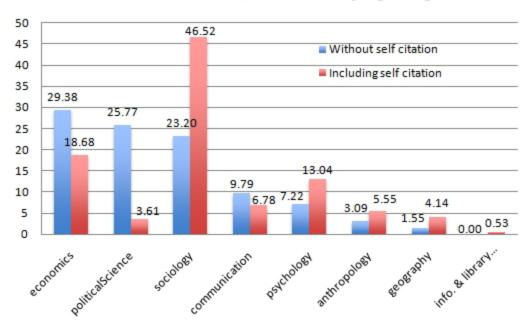


Figure 9: 1980 Total percent/discipline graph

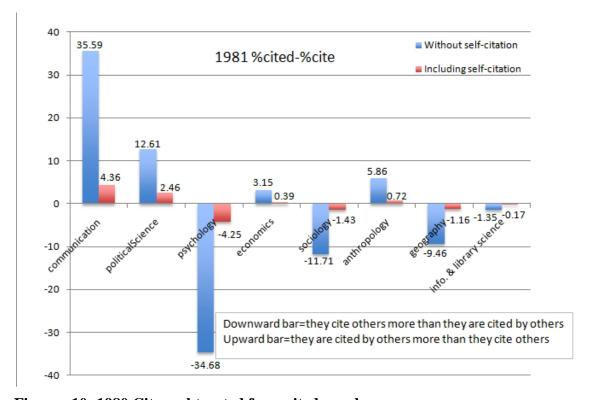


Figure 10: 1980 Cites subtracted from cited graph

1981	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	584	0	0	0	0	0	3	11	598
sociology	1	10	1	1	1	3	4	499	520
psychology	0	6	1	16	2	0	192	2	219
communication	0	70	0	0	0	0	90	11	171
economics	0	1	144	3	0	2	5	15	170
geography	0	0	0	50	0	0	0	0	50
politicalSci	0	5	17	1	0	16	2	8	49
info&libSci	0	0	0	0	35	0	0	0	35
totals	585	92	163	71	38	21	296	546	1812

Table 12: 1981 Asymmetric matrix with self citation from most to least citations

1981	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
communication	0	0	0	0	0	0	90	11	101
politicalSci	0	5	17	1	0	0	2	8	33
psychology	0	6	1	16	2	0	0	2	27
economics	0	1	0	3	0	2	5	15	26
sociology	1	10	1	1	1	3	4	0	21
anthropology	0	0	0	0	0	0	3	11	14
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
totals	1	22	19	21	3	5	104	47	222

Table 13: 1981 Asymmetric matrix without self citation sorted most to least citations

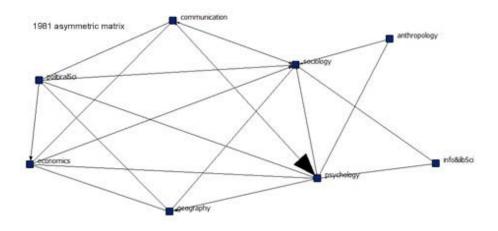


Figure 11: 1981 UCINET graph of asymmetric matrix

1981	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin (INtotal)
anthropology	0	0	0	0	0	0	1	1	2
communication	0	0	0	0	0	0	1	1	2
economics	0	1	0	1	0	1	1	1	5
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	1	1	1	0	0	1	1	5
psychology	0	1	1	1	1	0	0	1	5
sociology	1	1	1	1	1	1	1	0	7
Tout (OUTtotal)	1	4	3	4	2	2	5	5	26
Tlink (IN+OUT)	3	6	8	4	2	7	10	12	26
TlinkMaxOUT (tout-tin)	0	2	0	4	2	0	0	0	
TlinkMaxIN tin-tout)	1	0	2	0	0	3	0	2	

 $\label{thm:condition} Table~14:~1981~Cites(OUT)~and~cited(IN)~asymmetric~binomial~link~matrix~without~self~citation$ 

- $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)
- ← = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

Gaagraphy	UTlinks SEVEN:
	Psychology
<b>O</b> 1	1 Psych↔com
3Geog→psych	2Psych↔econ
4Geog→soc	3 Psych↔soc
$(0 \leftrightarrow, 0 \leftarrow, 4 \rightarrow)$	4 Psych→anth
	5 Psych→PoliSci
UTlinks FIVE:	6 Psych←geog
Economics	7 Psych←infoLib
1 Econ↔polSci	$(3\leftrightarrow, 2\leftarrow, 2\rightarrow)$
2 Econ↔psych	
3 Econ↔soc	Sociology
4 Econ←geog	1 Soc↔anth
5 Econ←com	2 Soc↔com
$(3\leftrightarrow, 2\leftarrow, 0\rightarrow)$	3 Soc⇔econ
	4 Soc⇔polSci
Political Science	5 Soc⇔psych
1 PolSci⇔econ	6 Soc←geog
2 PolSci⇔soc	7 Soc←infoLib
3 PolSci←com	$(5\leftrightarrow, 0\leftarrow, 2\rightarrow)$
4 PolSci←geog	
5 PolSci←psych	
$(2\leftrightarrow,2\leftarrow,0\rightarrow)$	
	$(0\leftrightarrow, 0\leftarrow, 4\rightarrow)$ UTlinks FIVE: Economics 1 Econ⇔polSci 2 Econ⇔psych 3 Econ⇔soc 4 Econ⇔geog 5 Econ←com $(3\leftrightarrow, 2\leftarrow, 0\rightarrow)$ Political Science 1 PolSci⇔econ 2 PolSci⇔soc 3 PolSci←com 4 PolSci←geog 5 PolSci←psych

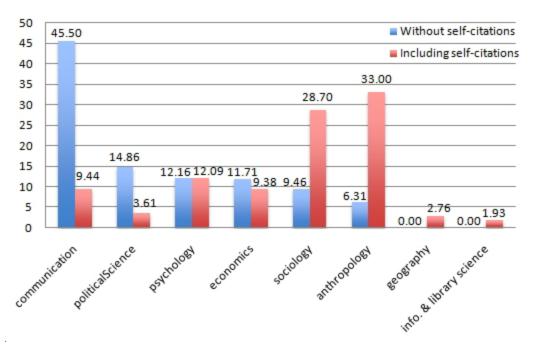


Figure 12: 1981 Total percent/discipline graph

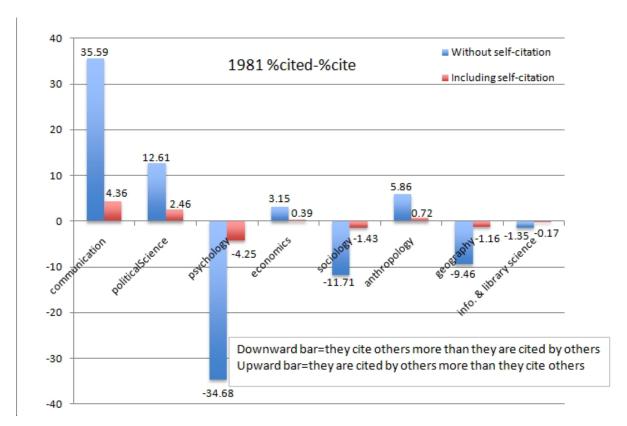


Figure 13: 1981 Cites subtracted from cited graph

1982	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	473	0	0	0	0	0	0	4	477
sociology	0	14	2	10	0	8	9	389	432
psychology	0	11	13	0	0	5	142	7	178
economics	0	0	112	2	2	4	0	19	139
communication	0	83	0	0	12	0	2	17	114
politicalSci	0	10	20	0	0	8	13	8	59
geography	0	0	0	20	0	0	1	1	22
info&libSci	0	0	0	1	10	0	0	0	11
totals	473	118	147	33	24	25	167	445	1432

Table 15: 1982 Asymmetric matrix with self citation sorted most to least citations

1982	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
politicalSci	0	10	20	0	0	0	13	8	51
sociology	0	14	2	10	0	8	9	0	43
psychology	0	11	13	0	0	5	0	7	36
communication	0	0	0	0	12	0	2	17	31
economics	0	0	0	2	2	4	0	19	27
anthropology	0	0	0	0	0	0	0	4	4
geography	0	0	0	0	0	0	1	1	2
info&libSci	0	0	0	1	0	0	0	0	1
totals	0	35	35	13	14	17	25	56	195

Table 16: 1982 Asymmetric matrix with self citation sorted most to least citations

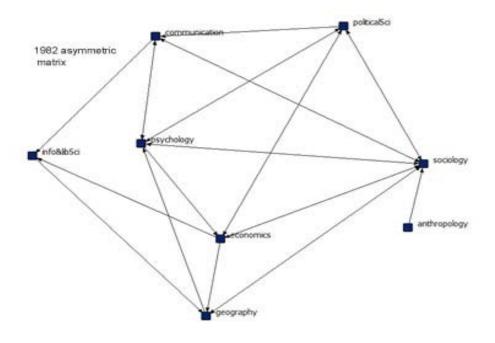


Figure 14: 1982 UCINET graph for asymmetric matrix

1982	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin(Intotals)
anthropology	0	0	0	0	0	0	0	1	1
communication	0	0	0	0	1	0	1	1	3
economics	0	0	0	1	1	1	0	1	4
geography	0	0	0	0	0	0	1	1	2
info&libSci	0	0	0	1	0	0	0	0	1
politicalSci	0	1	1	0	0	0	1	1	4
psychology	0	1	1	0	0	1	0	1	4
sociology	0	1	1	1	0	1	1	0	5
Tout(OUTtotals)	О	3	3	3	2	3	4	6	24
Tlink (tin+tout)	1	6	7	5	3	7	8	11	24
TlinkMaxOUT (tout-tin)	0	0	0	1	1	0	0	1	
TlinkMaxIN (tin-tout	1	0	1	0	0	1	0	0	

 $\label{thm:continuous} Table~17:~1982~Cites (OUT)~and~cited (IN)~asymmetric~binomial~link~matrix~without~self~citation$ 

 $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)

 $\leftarrow$  = home concept is cited by another discipline (IN)

 $\rightarrow$  = home concept cites another discipline (OUT)

Geography	Psychology
1Geog⇔soc	1 Psych↔com
2Geog←psych	2 Psych⇔poliSci
3Geog→econ	3 Psych⇔soc
4Geog→infLib	4 Psych←econ
$(1\leftrightarrow, 1\leftarrow, 2\rightarrow)$	5 Psych→geog
	$(3\leftrightarrow, 1\leftarrow, 1\rightarrow)$
Political Science	
1 PolSci⇔econ	UTlinks SIX:
4 PolSci⇔psych	Sociology
2 PolSci⇔soc	1 Soc⇔com
3 PolSci←com	2 Soc⇔econ
$(3\leftrightarrow, 1\leftarrow, 0\rightarrow)$	3 Soc⇔geog
	4 Soc⇔polSci
UTlinks FIVE:	5 Soc⇔psych
Economics	6 Soc→anth
1 Econ↔polSci	$(5\leftrightarrow, 0\leftarrow, 1\rightarrow)$
2 Econ⇔soc	
3 Econ←geog	
4 Econ←infLib	
5 Econ→psych	
$(2\leftrightarrow,2\leftarrow,1\rightarrow)$	
	1Geog → soc 2Geog ← psych 3Geog → econ 4Geog → infLib (1 ↔ , 1 ← , 2 →)  Political Science 1 PolSci ↔ econ 4 PolSci ↔ psych 2 PolSci ↔ soc 3 PolSci ← com (3 ↔ , 1 ← , 0 →)  UTlinks FIVE: Economics 1 Econ ↔ polSci 2 Econ ↔ soc 3 Econ ← geog 4 Econ ← infLib 5 Econ → psych

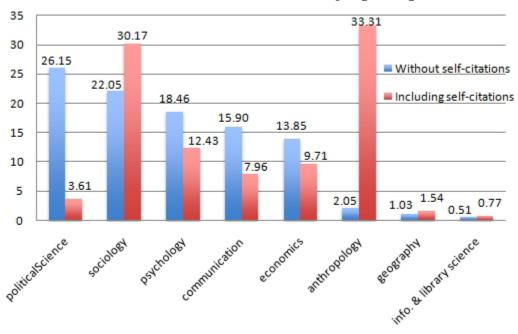


Figure 15: 1982 Total percent/discipline graph

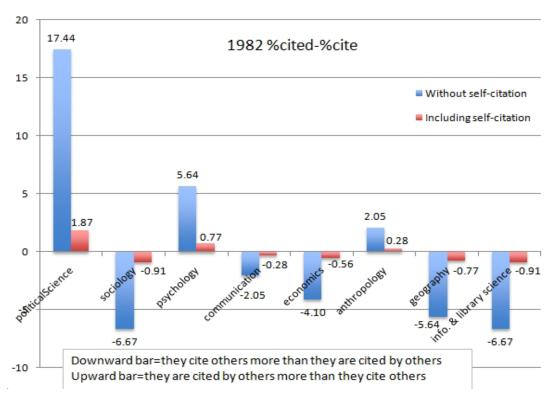


Figure 16: 1982 Cites subtracted from cited graph

1983	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	532	0	0	0	0	1	2	14	549
sociology	0	21	1	6	0	1	2	416	447
psychology	0	1	0	0	1	0	130	3	135
economics	0	0	86	12	0	2	0	28	128
communication	0	99	0	1	3	1	2	10	116
politicalSci	0	8	9	5	0	11	0	14	47
geography	0	0	0	37	0	0	0	0	37
info&libSci	0	0	0	0	4	0	0	0	4
totals	532	129	96	61	8	16	136	485	1463

Table 18: 1983 Asymmetric matrix with self citation sorted most to least citations

1983	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
economics	0	0	0	12	0	2	0	28	42
politicalSci	0	8	9	5	0	0	0	14	36
sociology	0	21	1	6	0	1	2	0	31
anthropology	0	0	0	0	0	1	2	14	17
communication	0	0	0	1	3	1	2	10	17
psychology	0	1	0	0	1	0	0	3	5
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
totals	0	30	10	24	4	5	6	69	148

Table 19: 1983 Asymmetric matrix without self citation sorted most to least citations

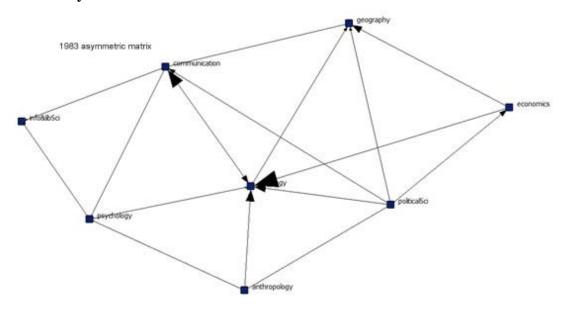


Figure 17: 1983 UCINET graph of asymmetric matrix

1983	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin(Intotals)
anthropology	0	0	0	0	0	1	1	1	3
communication	0	0	0	1	1	1	1	1	5
economics	0	0	0	1	0	1	0	1	3
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	1	1	1	0	0	0	1	4
psychology	0	1	0	0	1	0	0	1	3
sociology	0	1	1	1	0	1	1	0	5
Tout(OUTtotals)	0	3	2	4	2	4	3	5	23
Tlink (tin+tout)	3	8	5	4	2	8	6	10	23
TlinkMaxOUT (tout-tin)	0	0	0	4	2	0	0	0	
TlinkMaxIN (tin-tout)	3	2	1	0	0	0	0	0	

Table 20: 1983 Cites(OUT) and cited(IN) asymmetric binomial link matrix without self citation

- $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)  $\leftarrow$  = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

UTlink TWO: Info. & Library Sci 1 InfLib→com 2 InfLib→psych (0↔, 0←, 2→)  UTlink THREE: Anthropology	UTlink FOUR: Geography $1Geog \rightarrow com$ $2Geog \rightarrow econ$ $3Geog \rightarrow poliSci$ $4Geog \rightarrow soc$ $(0 \leftrightarrow, 0 \leftarrow, 4 \rightarrow)$	Political Science 1 PolSci $\leftrightarrow$ econ 2 PolSci $\leftrightarrow$ soc 3 PolSci $\leftrightarrow$ com 4 PolSci $\leftarrow$ geog 5 PolSci $\rightarrow$ anth $(3\leftrightarrow, 1\leftarrow, 1\rightarrow)$
Anthopology  1 Anth $\leftarrow$ poliSci  2 Anth $\leftarrow$ psych  3 Anth $\leftarrow$ soc $(0\leftrightarrow, 3\leftarrow, 0\rightarrow)$ Economics  1 Econ $\leftrightarrow$ polSci  2 Econ $\leftrightarrow$ soc  3 Econ $\leftarrow$ geog $(2\leftrightarrow, 1\leftarrow, 0\rightarrow)$	Psychology 1 Psych→com 2 Psych→soc 3 Psych→anth 4 Psych←infoSci (2↔, 1←, 1→)  UTlink FIVE: Communication 1 Com←poliSci 2 Com←psych 3 Com←soc 4 Com←geog 5 Com←infoLib (3↔, 2←, 0→)	UTlink SIX: Sociology $1 \text{ Soc} \leftrightarrow \text{com}$ $2 \text{ Soc} \leftrightarrow \text{econ}$ $3 \text{ Soc} \leftrightarrow \text{polSci}$ $4 \text{ Soc} \leftrightarrow \text{psych}$ $5 \text{ Soc} \leftarrow \text{geog}$ $6 \text{ Soc} \rightarrow \text{anth}$ $(4 \leftrightarrow, 1 \leftarrow, 1 \rightarrow)$

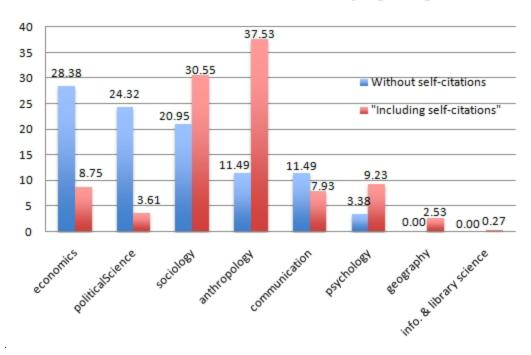


Figure 18: 1983 Total percent/discipline graph

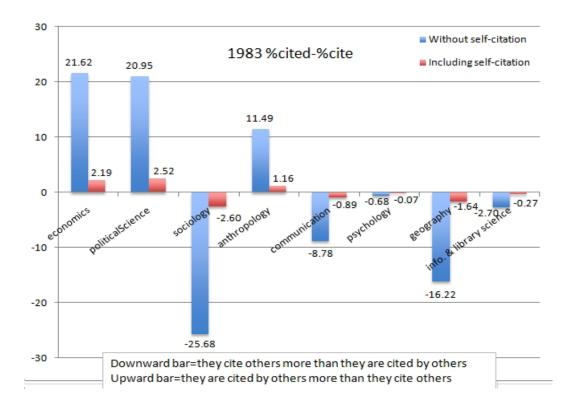


Figure 19: 1983 Cites subtracted from cited graph

2005	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	1124	0	0	0	0	0	43	1	1168
politicalSci	0	219	14	0	2	280	1	48	564
sociology	0	17	11	3	14	10	8	455	518
psychology	11	4	1	0	19	5	395	11	446
economics	0	4	129	71	6	20	15	19	264
info&libSci	0	0	0	0	229	0	0	0	229
communication	0	140	1	0	8	11	0	7	167
geography	0	0	0	61	0	0	0	0	61
totals	1135	384	156	135	278	326	462	541	3417

Table 21: 2005 Asymmetric matrix with self citation sorted most to least citations

2005	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
politicalSci	0	219	14	0	2	0	1	48	283
economics	0	4	0	71	6	20	15	19	135
sociology	0	17	11	3	14	10	8	0	63
psychology	11	4	1	0	19	5	0	11	51
anthropology	0	0	0	0	0	0	43	1	44
communication	0	0	1	0	8	11	0	7	27
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
Totals	11	244	27	74	49	46	66	75	604

Table 22: 2005 Asymmetric matrix without self citation sorted most to least citations

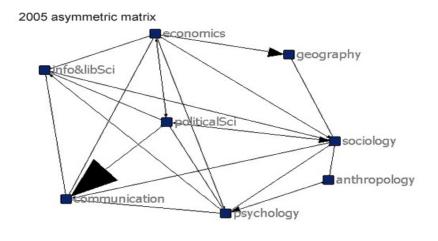


Figure 20: 2005 UCINET graph of asymmetric matrix

2005	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin(INtotal)
anthropology	0	0	0	0	0	0	1	1	2
communication	0	0	1	0	1	1	0	1	4
economics	0	1	0	1	1	1	1	1	6
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	1	1	0	1	0	1	1	5
psychology	1	1	1	0	1	1	0	1	6
sociology	0	1	1	1	1	1	1	0	6
Tout(OUTtotal)	1	4	4	2	5	4	4	5	29
Tlink (tin+tout)	3	8	10	2	5	8	8	11	29
TlinkMaxOUT (tout-tin)	0	0	0	2	5	0	0	0	
TlinkMaxIN (tin-tout)	1	0	2	0	0	1	2	1	

 $Table\ 23:\ 2005\ Cites(OUT)\ and\ cited(IN)\ asymmetric\ binomial\ link\ matrix\ without\ self\ citation$ 

- $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)
- $\leftarrow$  = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

UTlink TWO:	Info. & Library Sci	6 Econ←infLib
Anthropology	1 InfLib→com	$(4\leftrightarrow, 2\leftarrow, 0\rightarrow)$
1 Anth⇔psych	2 InfLib→econ	
2 Anth←soc,	3 InfLib→poliSci	Psychology
$(1\leftrightarrow, 1\leftarrow, 0\rightarrow)$	4 InfLib→psych	1 Psych ← anth
	5 InfLib→soc	2 Psych↔econ
Geography	$(0 \leftrightarrow, 0 \leftarrow, 5 \rightarrow)$	3 Psych⇔poliSci
1Geog→soc 2Geog→econ $(0\leftrightarrow, 0\leftarrow, 2\rightarrow)$ UTlink THREE &	Political Science 1 PolSci↔com 2 PolSci↔econ 3 PolSci↔psych	4 Psych $\leftrightarrow$ soc 5 Psych $\leftarrow$ com 6 Psych $\leftarrow$ infoLib (4 $\leftrightarrow$ , 2 $\leftarrow$ , 0 $\rightarrow$ )
FOUR: None	4 PolSci⇔soc 5PolSci←infoSci (4↔, 1←, 0→)	UTlink SEVEN: Sociology
Tlink FIVE: Communication 1 Com↔econ 2 Com↔poliSci 3 Com↔soc 4 Com←infoLib 5 Com→psych (3↔, 1←, 1→)	UTlink SIX: Economics 1 Econ↔com 2 Econ↔polSci 3 Econ↔psych 4 Econ↔soc 5 Econ←geog	1 Soc $\leftrightarrow$ com 2 Soc $\leftrightarrow$ econ 3 Soc $\leftrightarrow$ polSci 4 Soc $\leftrightarrow$ psych 5 Soc $\leftarrow$ geog 6 Soc $\leftarrow$ infLib 7 Soc $\rightarrow$ anth (4 $\leftrightarrow$ , 2 $\leftarrow$ , 1 $\rightarrow$ )

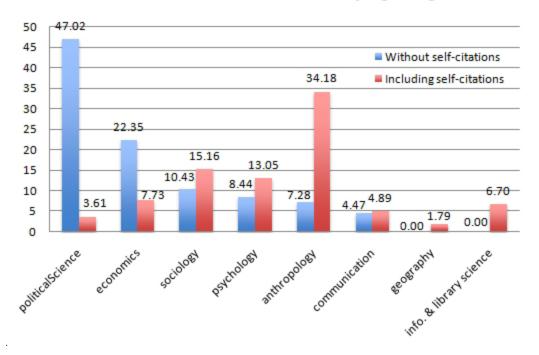


Figure 21: 2005 Total percent/discipline graph

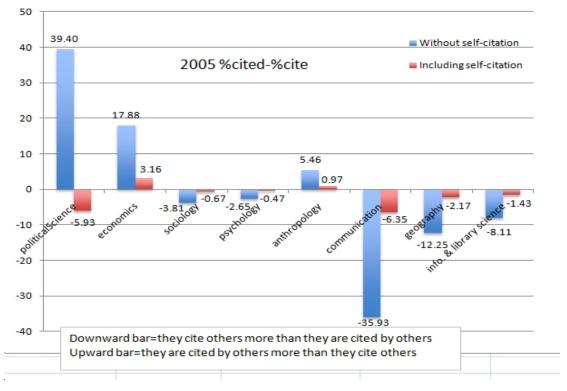


Figure 22: 2005 Cites subtracted from cited graph

2006	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	1338	0	0	0	1	0	39	2	1380
politicalSci	0	0	2	2	2	466	1	28	501
info&libSci	0	0	0	0	351	0	1	0	352
psychology	18	1	16	0	18	0	255	7	315
sociology	1	0	4	8	15	17	5	242	292
geography	0	0	1	168	0	0	1	0	170
economics	0	0	100	1	16	34	8	7	166
communication	0	6	0	0	4	6	1	11	28
totals	1357	7	123	179	407	523	311	297	3204

Table 24: 2006 Asymmetric matrix with self citation sorted most to least citations

2006	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
economics	0	0	0	1	16	34	8	7	66
psychology	18	1	16	0	18	0	0	7	60
sociology	1	0	4	8	15	17	5	0	50
anthropology	0	0	0	0	1	0	39	2	42
politicalSci	0	0	2	2	2	0	1	28	35
communication	0	0	0	0	4	6	1	11	22
geography	0	0	1	0	0	0	1	0	2
info&libSci	0	0	0	0	0	0	1	0	1
Totals	19	1	23	11	56	57	56	55	278

Table 25: 2006 Asymmetric matrix without self citation sorted most to least citations

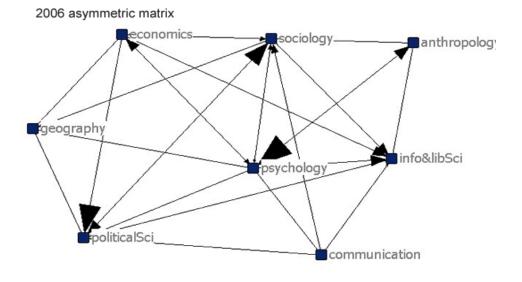


Figure 23: 2006 UCINET graph of asymmetric matrix

2006	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin(Intotals)
anthropology	0	0	0	0	1	0	1	1	3
communication	0	0	0	0	1	1	1	1	4
economics	0	0	0	1	1	1	1	1	5
geography	0	0	1	0	0	0	1	0	2
info&libSci	0	0	0	0	0	0	1	0	1
politicalSci	0	0	1	1	1	0	1	1	5
psychology	1	1	1	0	1	0	0	1	5
sociology	1	0	1	1	1	1	1	0	6
Tout(OUTtotals)	2	1	4	3	6	3	7	5	31
Tlink	5	5	9	5	7	8	12	11	31
TlinkMaxOUT	0	0	0	1	5	0	2	0	
TlinkMaxIN	1	3	1	0	0	2	0	1	

 $\begin{tabular}{ll} Table 26: 2006 Cites (OUT) and cited (IN) asymmetric binomial matrix without self citations \\ \end{tabular}$ 

- $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)
- $\leftarrow$  = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

UTlink TWO: None  UTlink THREE: Anthropology 1 Anth⇔psych 2 Anth⇔soc 3 Anth←infoLib (2↔, 1←, 0→)  UTlink FOUR: Communication 1 Com⇔psych 2 Com←infoLib 3 Com←poliSci 4 Com←soc (1↔, 3←, 0→)	UTlink FIVE: Economics 1Econ↔geog 2Econ↔poliSci 3Econ↔psych 4Econ↔soc 5Econ←infLib (4↔, 1←, 0→)  UTlink SIX: Info & Lib Sci 1 InfoLib↔psych 2 InfoLib→anth 3 InfoLib→com 4 InfoLib→econ 5 InfoLib→poliSci 6 InfoLib→soc (1↔, 0←, 5→)	UTlink SEVEN: Psychology 1Psych↔anth 2Psych↔com 3Psych↔econ 4Psych↔infoLib 6Psych↔soc 7Psych→geog 5Psych→poliSci (5↔, 0←, 2→)  Sociology 1 Soc↔anth 2 Soc↔econ 3 Soc⇔polSci 4 Soc⇔psych 5 Soc←geog 6 Soc←infoLib
Geography 1Geog↔econ 2Geog←psych 3Geog→polSci 4Geog→soc (1↔, 1←, 2→)	1 PolSci⇔econ 2 PolSci⇔soc 3 PolSci←geog 4 PolSci←infLib 5 PolSci←psych 6 PolSci→com (2↔, 3←, 1→)	$7 \operatorname{Soc} \rightarrow \operatorname{com} (4 \leftrightarrow, 2 \leftarrow, 1 \rightarrow)$

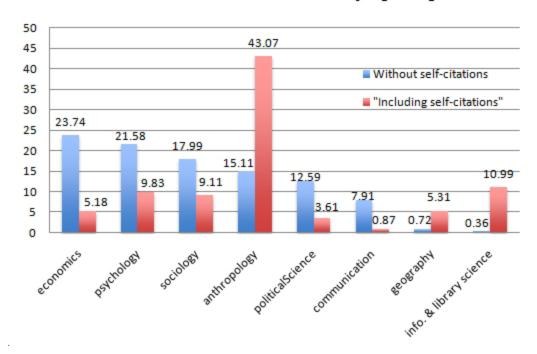


Figure 24: 2006 Total percent/discipline graph

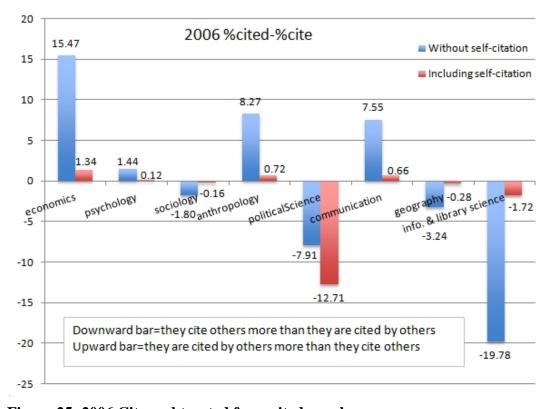


Figure 25: 2006 Cites subtracted from cited graph

2007	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
sociology	1	11	0	2	17	3	4	478	516
politicalSci	0	229	1	0	0	167	4	34	435
info&libSci	0	0	0	0	432	0	0	0	432
psychology	1	14	0	0	40	1	334	16	406
communication	0	152	0	0	10	15	1	3	181
anthropology	80	0	0	0	0	0	30	1	111
economics	0	0	31	0	11	1	14	20	77
geography	0	0	0	14	2	0	0	1	17
totals	82	406	32	16	512	187	387	553	2175

Table 27: 2007 Asymmetric matrix with self citation sorted most to least citations

2007	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
politicalSci	0	229	1	0	0	0	4	34	268
psychology	1	14	0	0	40	1	0	16	72
economics	0	0	0	0	11	1	14	20	46
sociology	1	11	0	2	17	3	4	0	38
anthropology	0	0	0	0	0	0	30	1	31
communication	0	0	0	0	10	15	1	3	29
geography	0	0	0	0	2	0	0	1	3
info&libSci	0	0	0	0	0	0	0	0	0
Totals	2	254	1	2	80	20	53	75	487

Table 28: 2007 Asymmetric matrix without self citation sorted most to least citations

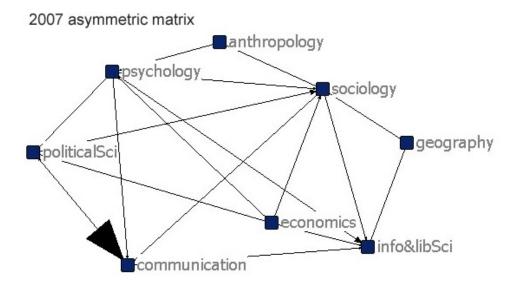


Figure 26: 2007 UCINET graph of asymmetric matrix

2007	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin (Intotals)
anthropology	0	0	0	0	0	0	1	1	2
communication	0	0	0	0	1	1	1	1	4
economics	0	0	0	0	1	1	1	1	4
geography	0	0	0	0	1	0	0	1	2
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	1	1	0	0	0	1	1	4
psychology	1	1	0	0	1	1	0	1	5
sociology	1	1	0	1	1	1	1	0	6
Tout(OUTtotals)	2	3	1	1	5	4	5	6	27
Tlink (IN+OUT)	4	7	5	3	5	8	10	12	27
TlinkMaxOUT	0	0	0	0	5	0	0	0	
TlinkMaxIN	0	1	3	1	0	0	0	0	

Table 29: 2007 Cites(OUT) and cited(IN) asymmetric binomial link matrix without self citation

- $\leftrightarrow$  = citations (links) both to and from another discipline (both IN & OUT)
- $\leftarrow$  = home concept is cited by another discipline (IN)
- $\rightarrow$  = home concept cites another discipline (OUT)

UTlink TWO: Anthropology 1 Anth↔psych 2 Anth↔soc (2↔, 0←, 0→)	Economics 1Econ⇔poliSci 5Econ←infLib 3Econ←psych 4Econ←soc	UTlink SIX: Psychology 1Psych↔anth 2Psych↔com 3Psych↔poliSci
	$(1\leftrightarrow, 3\leftarrow, 0\rightarrow)$	4Psych↔soc
Geography		5Psych←infoLib
1Geog⇔soc	Political Science	6Psych→econ
2Geog←infoLib	1 PolSci↔com	$(4\leftrightarrow, 1\leftarrow, 1\rightarrow)$
$(1\leftrightarrow, 1\leftarrow, 0\rightarrow)$	2 PolSci↔econ	
	3 PolSci↔psych	UTlink SEVEN:
UTlink THREE:	4 PolSci⇔soc	Sociology
None	$(4\leftrightarrow, 0\leftarrow, 0\rightarrow)$	1 Soc↔anth
		2 Soc↔com
UTlink FOUR:	UTlink FIVE:	3 Soc⇔geog
Communication	Info & Lib Sci	4 Soc⇔polSci
1 Com↔poliSci	1 InfoLib→com	5 Soc⇔psych
2 Com↔psych	2 InfoLib→econ	6 Soc←infoLib
3 Com⇔soc	3 InfoLib→geog	7 Soc→econ
4 Com←infoLib	4 InfoLib→psych	$(5\leftrightarrow, 1\leftarrow, 1\rightarrow)$
$(3\leftrightarrow, 1\leftarrow, 0\rightarrow)$	5 InfoLib→soc	
	$(0 \leftrightarrow, 0 \leftarrow, 5 \rightarrow)$	

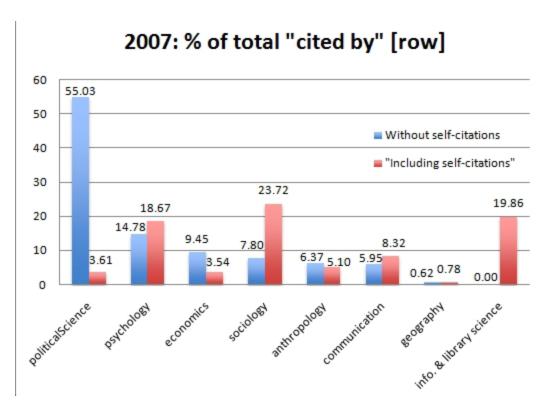


Figure 27: 2007 Total percent/discipline graph

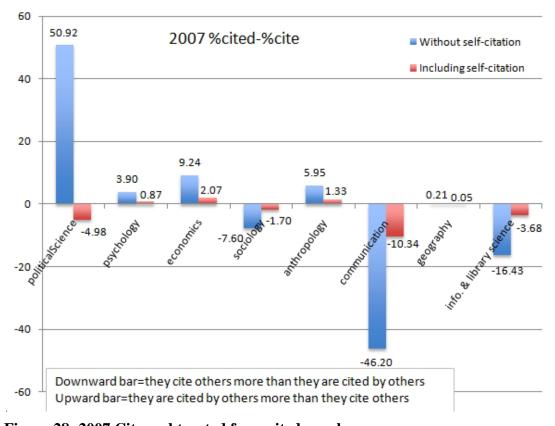


Figure 28: 2007 Cites subtracted from cited graph

2008	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	2229	1	0	1	0	0	2	9	2242
sociology	0	27	7	5	13	6	0	402	460
economics	0	11	307	1	20	15	17	41	412
psychology	4	24	5	1	18	0	240	6	298
info&libSci	0	1	0	0	236	0	3	0	240
communication	0	165	4	0	11	3	1	2	186
geography	0	0	0	158	0	0	0	2	160
politicalSci	0	11	0	22	0	113	0	4	150
totals	2233	240	323	188	298	137	263	466	4148

Table 30: 2008 Asymmetric matrix with self citation sorted most to least citations

2008	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
economics	0	11	0	1	20	15	17	41	105
psychology	4	24	5	1	18	0	0	6	58
sociology	0	27	7	5	13	6	0	0	58
politicalSci	0	11	0	22	0	0	0	4	37
communication	0	0	4	0	11	3	1	2	21
anthropology	0	1	0	1	0	0	2	9	13
info&libSci	0	1	0	0	0	0	3	0	4
geography	0	0	0	0	0	0	0	2	2
Totals	4	75	16	30	62	24	23	64	298

Table 31: 2008 Asymmetric matrix without self citation sorted most to least citations

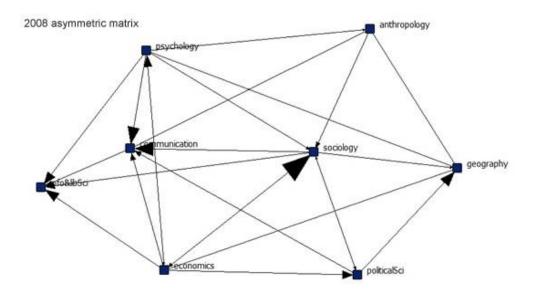


Figure 29: 2008 UCINET graph of asymmetric matrix

2008	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin (Intotals)
anthropology	0	1	0	1	0	0	1	1	4
communication	0	0	1	0	1	1	1	1	5
economics	0	1	0	1	1	1	1	1	6
geography	0	0	0	0	0	0	0	1	1
info&libSci	0	1	0	0	0	0	1	0	2
politicalSci	0	1	0	1	0	0	0	1	3
psychology	1	1	1	1	1	0	0	1	6
sociology	0	1	1	1	1	1	0	0	5
Tout(OUTtotals)	1	6	3	5	4	3	4	6	32
Tlink (IN+OUT)	5	11	9	6	6	6	10	11	32
TlinkMaxOUT	0	1	0	4	2	0	0	1	
TlinkMaxIN	3	0	3	0	0	0	2	0	

Table 32: 2008 Cites(OUT) and cited(IN) asymmetric binomial matrix without self citations

UTlink TWO &	UTlink FIVE:	Psychology
THREE: None	Geography	1 Psych↔anth
UTlink FOUR:	1 Geog⇔soc	2 Psych↔com
Anthropology	2 Geog→anth	3 Psych↔econ
1 Anth⇔psych	3 Geog→econ	4 Psych↔infoSci
2 Anth←com	4 Geog→polSci	5 Psych←geog
3 Anth←geog	5 Geog→psych	6 Psych←soc
4 Anth←soc	$(1\leftrightarrow, 0\leftarrow, 4\rightarrow)$	$(4\leftrightarrow, 2\leftarrow, 0\rightarrow)$
$(1\leftrightarrow, 3\leftarrow, 0\rightarrow)$	LITE: 1 CIN	
	UTlink SIX:	UTlink SEVEN:
Info. & Library Sci	Communication	Sociology
1 InfLib↔com	1 Com↔econ	1 Soc↔com
2 InfLib⇔psych	2 Com↔infoLib	2 Soc ← econ
3 InfLib→econ	3 Com⇔polSci	3 Soc ↔ geog
4 InfLib→soc	4 Com⇔psych	4 Soc↔polSci
$(2\leftrightarrow, 0\leftarrow, 2\rightarrow)$	5 Com⇔soc	$5 \operatorname{Soc} \rightarrow \operatorname{anth}$
Delitical Science	6 Com $\rightarrow$ anth	6 Soc→psych
Political Science	$(5\leftrightarrow,0\leftarrow,1\rightarrow)$	7 Soc←infoLib
1 PolSci↔com 2 PolSci↔soc	Economics	$(4\leftrightarrow, 1\leftarrow, 2\rightarrow)$
3 PolSci←geog	1 Econ↔com	
4 PolSci→econ	2 Econ↔psych	
$(2\leftrightarrow, 1\leftarrow, 1\rightarrow)$	3 Econ↔soc	
$(2 \leftrightarrow, 1 \leftarrow, 1 \rightarrow)$	4 Econ←polSci	
	5 Econ←geog	
	6 Econ←infLib	
	$(3\leftrightarrow, 3\leftarrow, 0\rightarrow)$	

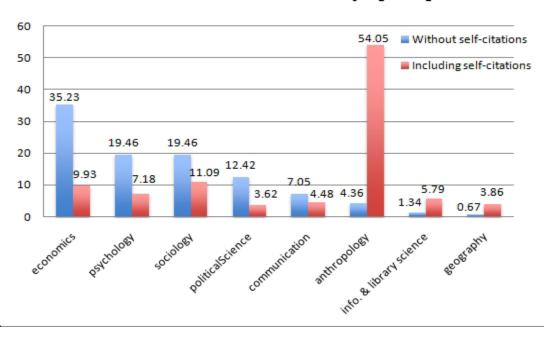


Figure 30: 2008 Total percent/discipline graph

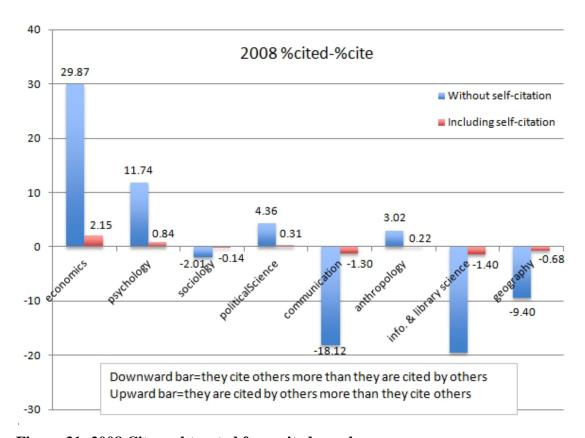


Figure 31: 2008 Cites subtracted from cited graph

2009	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
economics	0	2	222	165	18	31	9	17	464
sociology	0	40	9	17	28	4	4	307	409
info&libSci	0	42	0	0	283	0	0	2	327
psychology	19	10	10	1	59	5	188	2	294
politicalSci	0	13	4	4	2	169	30	14	236
anthropology	219	6	0	0	2	0	4	2	233
communication	0	168	0	0	3	0	17	8	196
geography	0	0	0	189	0	0	0	4	193
totals	238	281	245	376	395	209	252	356	2352

Table 33: 2009 Asymmetric matrix with self citation sorted most to least citations

2009	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
economics	0	2	0	165	18	31	9	17	242
psychology	19	10	10	1	59	5	0	2	106
sociology	0	40	9	17	28	4	4	0	102
politicalSci	0	13	4	4	2	0	30	14	67
info&libSci	0	42	0	0	0	0	0	2	44
communication	0	0	0	0	3	0	17	8	28
anthropology	0	6	0	0	2	0	4	2	14
geography	0	0	0	0	0	0	0	4	4
Totals	19	113	23	187	112	40	64	49	607

Table 34: 2009 Asymmetric matrix without self citation sorted most to least citations

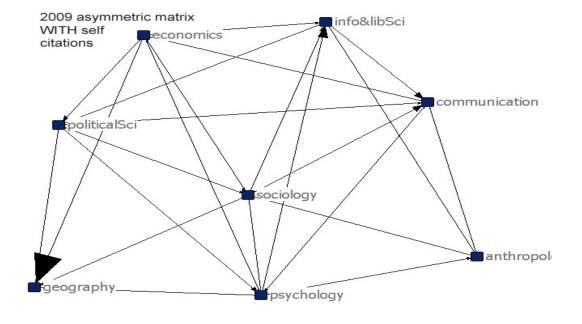


Figure 32: 2009 UCINET graph of asymmetric matrix

2009	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	Tin(Intotals)
anthropology	0	1	0	0	1	0	1	1	4
communication	0	0	0	0	1	0	1	1	3
economics	0	1	0	1	1	1	1	1	6
geography	0	0	0	0	0	0	0	1	1
info&libSci	0	1	0	0	0	0	0	1	2
politicalSci	0	1	1	1	1	0	1	1	6
psychology	1	1	1	1	1	1	0	1	7
sociology	0	1	1	1	1	1	1	0	6
Tout(OUTtotals)	1	6	3	4	6	3	5	7	35
Tlink (IN+OUT)	5	9	9	5	8	9	12	13	35
TlinkMaxOUT	0	3	0	3	4	0	0	1	
TlinkMaxIN	3	0	3	0	0	3	2	0	

Table 35: 2009 Cites(OUT) and cited(IN) asymmetric binomial matrix without self citations

UTlink TWO, THREE	Economics	UTlink SEVEN:
and FIVE: None	1 Econ⇔poliSci	Psychology
	2 Econ⇔psych	1 Psych ← anth
UTlink FOUR:	3 Econ⇔soc	2 Psych↔com
Anthropology	4 Econ←com	3 Psych↔econ
1 Anth↔psych	5 Econ←geog	4 Psych⇔polSci
2 Anth←com	6 Econ←infLib	5 Psych↔soc
3 Anth←infoLib	$(3\leftrightarrow, 3\leftarrow, 0\rightarrow)$	6 Psych←geog
4 Anth←soc		7 Psych←infoLib
$(1\leftrightarrow, 3\leftarrow, 0\rightarrow)$	Info & Lib Sci	$(5\leftrightarrow, 2\leftarrow, 0\rightarrow)$
	1 InfoLib⇔com	
Geography	2 InfoLib⇔soc	Sociology
1Geog⇔soc	3 InfoLib→anth	1 Soc↔com
2Geog→econ	4 InfoLib→econ	2 Soc↔econ
3Geog→poliSci	5 InfoLib→polSci	3 Soc⇔geog
4Geog→psych	6 InfoLib→psych	4 Soc↔infoLib
$(1\leftrightarrow,0\leftarrow,3\rightarrow)$	$(2\leftrightarrow, 0\leftarrow, 4\rightarrow)$	5 Soc⇔polSci
UTlink SIX:		6 Soc⇔psych
Communication	Political Science	7 Soc→anth
2 Com↔infoLib	1 PolSci↔econ	$(6\leftrightarrow, 0\leftarrow, 1\rightarrow)$
4 Com↔psych	2 PolSci↔psych	
5 Com⇔soc	3 PolSci⇔soc	
6 Com→anth	4 PolSci←com	
1 Com→econ	5 PolSci←geog	
3 Com→poliSci	6 PolSci←infLib	
$(3\leftrightarrow, 0\leftarrow, 3\rightarrow)$	$(3\leftrightarrow, 3\leftarrow, 0\rightarrow)$	
(3, 7, 0, 3, 7)		

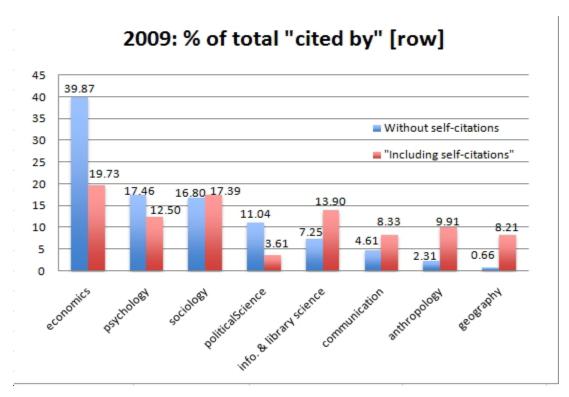


Figure 33: 2009 Total percent/discipline graph

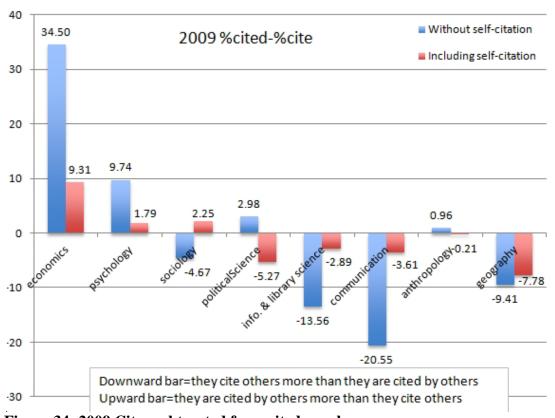


Figure 34: 2009 Cites subtracted from cited graph

	1979	1980	1981	1982	1983	2005	2006	2007	2008	2009	Average 79-83	Average 05-09	Average 10 yrs
ANTH	2	0	1	0	0	1	2	2	1	1	0.60	1.40	1.00
COM	3	3	4	3	3	4	1	3	6	6	3.20	4.00	3.69
ECON	2	3	3	3	3	4	4	1	3	3	2.80	3.00	2.98
GEOG	3	4	4	3	3	2	3	1	5	4	3.40	3.00	3.04
INF&LIBSCI	2	2	2	2	2	5	6	5	4	6	2.00	5.20	4.13
POLI SCI	2	1	2	3	3	4	3	4	3	3	2.20	3.40	3.18
PSYCH	4	4	5	4	4	4	7	5	4	5	4.20	5.00	4.69
SOC	6	6	5	6	6	5	5	6	6	7	5.80	5.80	5.84
average	3	2.875	3.25	3	3	3.625	3.875	3.375	4	4.375			
Sum (total # of links)	24	23	26	24	24	29	31	27	32	35			

Table 36: Cites Summary (Tout), all 10 years

	1979	1980	1981	1982	1983	2005	2006	2007	2008	2009	average 79-83	average 05-09	average 10 yrs
Anthropology	4	2	2	1	3	2	3	2	4	4	2.40	3.00	2.71
Communication	3	3	2	3	5	4	4	4	5	3	3.20	4.00	3.91
Economics	3	4	5	4	3	6	5	4	6	6	3.80	5.40	4.80
Geography	2	1	0	2	0	0	2	2	1	1	1.00	1.20	1.13
Info & Lib Sci	0	0	0	1	0	0	1	0	2	2	0.20	1.00	0.80
Political Sci	4	5	5	4	4	5	5	4	3	6	4.40	4.60	4.44
Psychology	4	4	5	4	3	6	5	5	6	7	4.00	5.80	5.09
Sociology	4	4	7	5	5	6	6	6	5	6	5.00	5.80	5.53
average	3	2.875	3.25	3	2.875	3.625	3.875	3.375	4	4.375			
Sum (total # of links)	24	23	26	24	23	29	31	27	32	35			

Table 37: Cited Summary (Tin), all 10 years

Mean # of links 1979-1983/year (total all possible=64, total any particular discipline=8): 24.2 (avg # of links=3.025)

Mean # of links 2005-2009/year (total possible=64, total any particular discipline=8): 30.8 (avg # of links=3.85)

Although the average # of links/discipline remained nearly the same for both five year time periods (3.025 in 1979-1983 and 3.85 in 2005-2009), the total average # of links for all disciplines increased from 24.2 to 30.8. Anthropology and Geography remained largely the same while overall links between other disciplines increased in proportion to their average # of links 1979-1983; that is, sociology and psychology had the most cross-disciplinary linkages 1979-1983 and they also had the most in 2005-2009. The discipline that developed the highest discrepancy IN/OUT linkages was library science. In the first 5 year span their IN/OUT linkage #s were similar; by 2005-2009, however, they were clearly citing others much more than others were citing them. Conversely, although the # of IN linkages for economics remained largely the same, the number of OUT linkages increased dramatically. Finally, both communication and political science increased overall in both IN and OUT linkages (although political science increased more than communication).

Geography and information/library science were cited the least in all years except 2009 (in 2009 info/libSci moved up to the 4<sup>th</sup> least cited position). In the 2005-2009 cited percentages, the most cited rankings were less variable than they had been in 1979-1983; that is, in all years except 2006 the 4 disciplines cited the most (by percentage) were economics, political science, psychology, and sociology. It should also be noted that both economics and psychology were consistently cited by others more than they cited others in the second 5 yr set; this had not been consistently true 1979-1983. Sociology was closer to even; their citing others and cited by others percentages were often nearly the same.

When mutual linkages between disciplines are considered, the pattern is even more consistent; sociology and psychology have the most mutual linkages in all years except 1983 (in 1983 sociology still had the most mutual linkages but psychology, with two mutual linkages, was

overtaken by communication and political science, each with three mutual linkages). Info/libSci did not have any mutual linkages at all until 2006, 2008 and 2009; they had a single mutual linkage with psychology in 2006 and two mutual linkages 2008-2009 (between communication and psychology in 2008, communication and sociology in 2009).

#### Discussion

Psychology and sociology were consistently cited by the most other disciplines all 10 years, economics and political science were frequently cited by most other disciplines (2005-2009 more than 1979-1983), anthropology generally cited themselves or science disciplines (not the social science disciplines investigated here), geography was sometimes cited and sometimes not, communication was sometimes cited and sometimes not (most often it was cited when the interdisciplinary journal *Public Opinion Quarterly* was in a top 5 impact factor journal), and information and library science was rarely cited (some years never)—this was ironic as both communication and information and library science frequently cited others.

Overall there were more interdisciplinary citations in all disciplines 2005-2009 as compared to 1979-1983 but the citation pattern largely remained; for example in 1979-1983 information and library science's total TIN score was 1 and in 2005-2009 it was only 5 (with two year with no interdisciplinary citations at all)—yet their total TOUT score for 1979-1983 was 10 and for 2005-2009 was 26. Psychology and Sociology, the disciplines who were cited the most 2005-2009, had a total TIN of 29 and total TOUTS of 25 and 29 respectively. So it appears that it is the TIN score, rather than the TOUT score, that has continued to relegate library and information science to the lower tier.<sup>44</sup>

<sup>&</sup>lt;sup>44</sup> In unpublished research from 1989 comparing interdisciplinary citations for journals in 1984, Barnett and Fink also indicate that information science came close to being a social isolate and

Exceptions to the 1979-1983 pattern are seen in the mid-range disciplines, especially in political science and economics. Although the TIN order of the lower four disciplines (Information and library science, geography, communication, and anthropology) did not change from the 1979-1983 period in 2005-2009 and sociology remained the discipline most cited, psychology and political science changed their TIN rank order; in 1979-1983 psychology was sixth and political science was seventh whereas in 2005-2009 psychology was seventh and political science was only fifth—and economics moved from fifth rank order in 1979-1983 to sixth in 2005-2009. So psychology was cited by others more than political science in 2005-2009 and economics was also cited much more in 2005-2009 than it had been in 1979-1983.

Total TOUT patterns also displayed similarity between the two time periods with sociology and psychology citing the most other disciplines and anthropology citing the least. Again some of the mid-ranked disciplines, however, changed from one period to the next. Information and library science changed the most; in 1979-1983 they were ranked second lowest but in 2005-2009 they were ranked fifth. Geography, although their own TOUT average percentage stayed the same between the two time periods, moved from ranking sixth (so highest next to psychology and sociology) in 1979-1983 to a tie for second/third rank from the bottom position in 2005-2009; even though their own TOUT average stayed nearly the same, the averages of communication, information and library science, and political science increased (although it should once again be noted that for two year 2005-2009 communication and political science were both citing the same shared journal, *Public Opinion Quarterly*, heavily).

the most central disciplines were sociology, general psychology, and social psychology (Barnett & Fink, 1989).

It should be noted that the TOUT and TIN measures developed almost always correspond with the up/down bar graphs unless cited/cites numbers are the same. Also, most anthropology comparisons cited/cites are rather moot as there were so few citations to compare when self citations are exclude; a very small part of small remains exceptionally small. By comparison it is something but perhaps not something notable, rather like how the percents for information and library science in years no one cited them are not meaningful—but we know obviously if no one cited them at all they were more likely to cite than be cited (no matter what the percents say).

Power was controlled for by holding journal choices constant for each field (5 journals for each discipline were investigated no matter how many were available). It is of interest that, despite that, the TIN disciplinary order ranking for 2005-2009 was so similar to the total number of interdisciplinary journals available in each discipline (refer back to Figure 1 on page 15)—even though generally none of the top 5 impact factor journals were interdisciplinary journals (with the exception of *Public Opinion Quarterly* noted earlier). Anthropology and sociology also had an interdisciplinary journal (*Social Networks*) in their top 5 impact factor journals, but by and large neither cited it heavily. This, combined with the fact that their interdisciplinary journal rank pattern does not match with their TIN order ranking, perhaps further strengthens the idea that anthropology at this point in time may be better considered not as a social science. The other difference between the interdisciplinary journal rank pattern and the TIN order ranking is that information and library science doesn't match at all—having the most interdisciplinary journals without even a moderate TIN score. It is possible, however, they are sharing journals with non-social science disciplines such as management.

Future research may therefore usefully compare journals in non-social science disciplines. It is probable that the aggregate journal ranking method proposed on page 16 may be

more useful than impact factor for this. Given the time involved to generate such a ranking, however, it is now recommended it is not necessarily useful in this line of research; continuing to use impact factor journal ranking will also allow future work to be compared to this present work—although it still seems for work within a particular disciplinary field the aggregate journal ranking would be preferable. Future research in interdisciplinary citation may also find it useful to compare journals lower in the impact factor rankings, rather than the top 5 journals, as those lower in the rankings are potentially more likely to bridge multiple disciplines (Barnett & Fink, 1989). This might further elucidate the interaction observed in this study between communication and political science (which shared the journal *Public Opinion Quarterly*). Future research might also examine whether the pattern of average citation counts, rather than actual citation counts, simply scales the rank order smaller or changes it in other ways.

From this initial study it is clear that the interdisciplinary citation patterns observed are anisotropic. This is most clearly illustrated with information and library science as an extreme example since they consistently cite almost all other disciplines but are rarely cited by others.

The fact that the original count matrix was largely asymmetric, rather than a symmetric matrix as would be expected if information was being shared evenly between the disciplines, also shows the interaction between the disciplines to be anisotropic.

These asymmetries in the information flow of citation data are regarded as indicators of gravitational gradients (making movement in some directions "easier" than others). Accordingly, it appears movement of ideas from sociology or psychology to other social science disciplines is the most likely and movement of ideas from geography, anthropology, and information and library science is the least likely. Therefore it appears sociology and psychology continue to exert more influence on other social sciences, although limited influence over each other, than

any of the other social sciences exert over them. Most of the other social sciences are historically newer as academic disciplines; nonetheless the rank order of the total interdisciplinary journals' close mirroring of the TOUT rank order suggests this interaction pattern is no longer based merely on historical happenstance.

Appendix A: Disciplines considered social science by nine sources

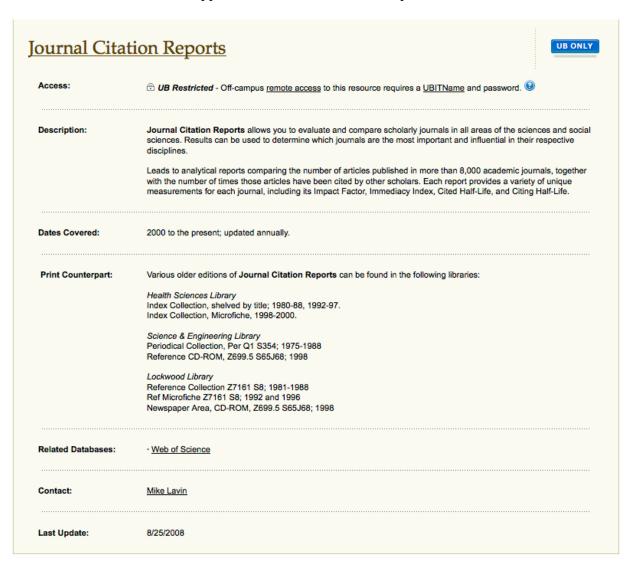
	T o t a l	Dr. Wo elf el	Washingt on State University	Wikipedia	National Science Foundation	Michigan State University	degree-finder.com	Academicinfo.net	International Encyclopedia of the Social Sciences (1968)	International Encyclopedia of the Social & Behavioral Science (2001)
Anthropology	8	J	W	Wik	nsf	MSUi	degree-finder.com		International Encyclopedia (1968)	International Encyclopedia (2001)
Economics	8	J	W	wik	nsf	MSU	degree-finder.com		International Encyclopedia (1968)	International Encyclopedia (2001)
Psychology; Clinical and Applied Psychology; Cognitive Psychology and Cognitive Science; Developmental, Social, Personality, and Motivational Psychology	8	J	W	wik	nsf	MSU	degree-finder.com	Academicinfo.net		International Encyclopedia (2001)
Sociology	7	J	W	wik	nsf	MSU		Academicinfo.net		International Encyclopedia (2001)+-
Political Science; Politics	6	J		Wik	Nsf		degree-finder.com		International Encyclopedia (1968)	International Encyclopedia (2001)
History	5	J	W			MSU	degree-finder.com	Academicinfo.net		
Criminal Justice; Criminology	4		W			MSU	degree-finder.com	Academicinfo.net		
Geography	4			wik	nsf	MSU	degree-finder.com			
Law; Legal Studies; Paralegal	4		W		nsf			Academicinfo.net	International Encyclopedia (1968)	
Archaeology	2			wik			degree-finder.com			
Communication(s)	2	J	W							
Cultural Studies and Ethnic Studies; Cultural and Global Studies	2			wik			degree-finder.com			
Library Science	2	J	W							
Public Affairs; Public Administration	2		W					Academicinfo.net		

Note: disciplines suggested as social science by only a single source have been omitted from this table.

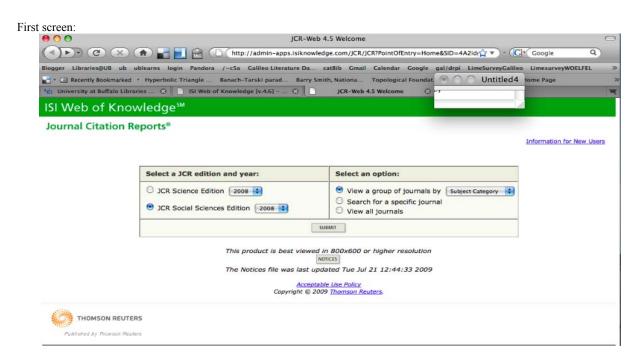
# Appendix B: Listiac

Partial list of input data:	Partial list of output data:	
COMMUNICATION	AREA STUDIES	ACTIVATION LEVEL = 0.0015
HISTORY	ARCHAEOLOGY	ACTIVATION LEVEL = 0.0015
ECONOMICS	=Separation Line=========	
	COMMUNICATION HISTORY	ACTIVATION LEVEL = 0.0017 ACTIVATION LEVEL = 0.0068
SOCIOLOGY	ECONOMICS	ACTIVATION LEVEL = 1.0000
PSYCHOLOGY	SOCIOLOGY	ACTIVATION LEVEL = 0.0117
ANTHROPOLOGY	PSYCHOLOGY	ACTIVATION LEVEL = 0.0116
POLITICAL SCIENCE	ANTHROPOLOGY POLITICAL SCIENCE	ACTIVATION LEVEL = 0.0165 ACTIVATION LEVEL = 0.0141
LIBRARY SCIENCE	LIBRARY SCIENCE	ACTIVATION LEVEL = 0.0017
-1	CLINICAL AND APPLIED PSYCHOLOG	
ANTHROPOLOGY	COGNITIVE PSYCHOLOGY AND COGNI	
	DEVELOPMENTAL, SOCIAL, PERSONA LAW	ACTIVATION LEVEL = 0.0010
ECONOMICS	PENOLOGY	ACTIVATION LEVEL = 0.0015
POLITICAL SCIENCE	POLITICS	ACTIVATION LEVEL = 0.0015
CLINICAL AND APPLIED PSYCHOLOGY	SOCIAL WORK CRIMINAL JUSTICE	ACTIVATION LEVEL = 0.0041 ACTIVATION LEVEL = 0.0017
COGNITIVE PSYCHOLOGY AND COGNITIVE SCIENCE	PUBLIC ADMINISTRATION	ACTIVATION LEVEL = 0.0017
DEVELOPMENTAL, SOCIAL, PERSONALITY, AND MOTIVATIONAL PSYCHOLOGY	PHILOSOPHY	ACTIVATION LEVEL = 0.0016
SOCIOLOGY	LINGUISTICS	ACTIVATION LEVEL = 0.0016
-1	ARCHEOLOGY DEMOGRAPHIC STUDIES	ACTIVATION LEVEL = 0.0016 ACTIVATION LEVEL = 0.0016
ANTHROPOLOGY	CRIMINOLOGY	ACTIVATION LEVEL = 0.0016
	GOVERNMENT STUDIES	ACTIVATION LEVEL = 0.0016
ECONOMICS	CULTURAL AND GLOBAL STUDIES	ACTIVATION LEVEL = 0.0016
LAW	GEOGRAPHY URBAN & REGIONAL PLANNING	ACTIVATION LEVEL = 0.0090 ACTIVATION LEVEL = 0.0015
PENOLOGY	LABOR & INDUSTRIAL RELATIONS	ACTIVATION LEVEL = 0.0015
POLITICS	INTERDISCIPLINARY STUDIES IN S	
SOCIAL WORK	GLOBAL AND AREA STUDIES	ACTIVATION LEVEL = 0.0015 ACTIVATION LEVEL = 0.0015
-1	FAMILY AND CHILD ECOLOGY GENDER AND SEXUALITY STUDIES	ACTIVATION LEVEL = 0.0015
CRIMINAL JUSTICE	CULTURAL STUDIES AND ETHNIC ST	
FORENSIC SCIENCE	AREA STUDIES	ACTIVATION LEVEL = 0.0015
	ARCHAEOLOGY =Separation Line=========	ACTIVATION LEVEL = 0.0015
HISTORY	COMMUNICATION	ACTIVATION LEVEL = 0.0016
HOMELAND SECURITY	HISTORY	ACTIVATION LEVEL = 0.0092
LAW	ECONOMICS SOCIOLOGY	ACTIVATION LEVEL = 0.0116
LEGAL STUDIES	SOCIOLOGY PSYCHOLOGY	ACTIVATION LEVEL = 0.0116 ACTIVATION LEVEL = 1.0000
PARALEGAL	ANTHROPOLOGY	ACTIVATION LEVEL = 0.0116
POLITICAL SCIENCE	POLITICAL SCIENCE	ACTIVATION LEVEL = 0.0141
PSYCHOLOGY	LIBRARY SCIENCE LAW	ACTIVATION LEVEL = 0.0016 ACTIVATION LEVEL = 0.0042
PUBLIC ADMINISTRATION	SOCIAL WORK	ACTIVATION LEVEL = 0.0016
	CRIMINAL JUSTICE	ACTIVATION LEVEL = 0.0041
PUBLIC SAFETY	FORENSIC SCIENCE	ACTIVATION LEVEL = 0.0016 ACTIVATION LEVEL = 0.0016
SOCIOLOGY	HOMELAND SECURITY LEGAL STUDIES	ACTIVATION LEVEL = 0.0016
-1	PARALEGAL	ACTIVATION LEVEL = 0.0016
HISTORY	PUBLIC ADMINISTRATION	ACTIVATION LEVEL = 0.0042
PHILOSOPHY	PUBLIC SAFETY PHILOSOPHY	ACTIVATION LEVEL = 0.0016 ACTIVATION LEVEL = 0.0016
POLITICAL SCIENCE	LINGUISTICS	ACTIVATION LEVEL = 0.0016
PSYCHOLOGY	ARCHEOLOGY	ACTIVATION LEVEL = 0.0016
ANTHROPOLOGY	DEMOGRAPHIC STUDIES CRIMINOLOGY	ACTIVATION LEVEL = 0.0016 ACTIVATION LEVEL = 0.0016
	GOVERNMENT STUDIES	ACTIVATION LEVEL = 0.0016
LINGUISTICS	CULTURAL AND GLOBAL STUDIES	ACTIVATION LEVEL = 0.0016
ARCHEOLOGY	GEOGRAPHY	ACTIVATION LEVEL = 0.0090
DEMOGRAPHIC STUDIES	URBAN & REGIONAL PLANNING	ACTIVATION LEVEL = 0.0015
CRIMINOLOGY		
<del></del>		

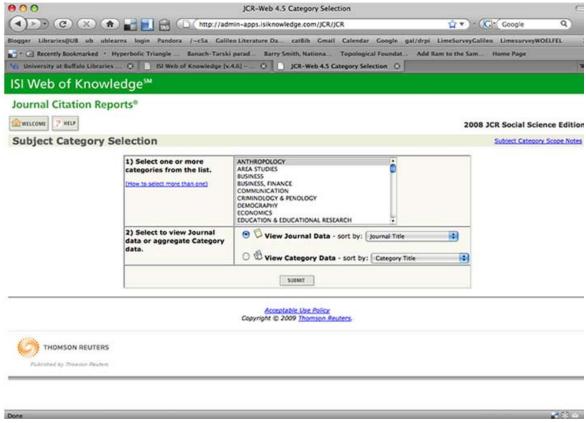
## Appendix C: Journal Citation Reports ®



Appendix D: Screenshot of JCR database interface in 2009



Second screen:



## Appendix E: Web of Science

#### Web of Science UB ONLY Access: ⊕ UB Restricted - Off-campus remote access to this resource requires a <u>UBITName</u> and password. № Description: The Web of Science is a collection of multidisciplinary databases. It includes · Arts & Humanities Citation Index Science Citation Index Social Sciences Citation Index You can search for specific articles by subject, author, and/or title in the indexes individually or at the same time. Because the information about each article includes the article's cited reference list (i.e., the bibliography), you can also search the databases for articles that cite a particular author or work. Searching for cited references often locates relevant articles that cannot be found through traditional searching techniques. Contains leads to citations with bibliographical references for articles from over 8,000 journals. Many of the references include author-prepared abstracts, as well as links to the full-text of articles if available. Dates Covered: Arts & Humanities Citation Index 1975 to the present; Updated weekly. Science Citation Index 1965 to the present; Updated weekly. Social Sciences Citation Index 1965 to the present; Updated weekly. Print Counterpart: Arts & Humanities Citation Index Library Annex CALL NUMBER: Z 5937 .A795, 1975-1998 Science Citation Index UNDERGRAD-SCI/ENGR Reference CALL NUMBER: Q1.C5, 1961, 1964-1972 IN STORAGE 1973-1991 HEALTH SCIENCES Mezzanine Index Coll, 1961-1964, 1966-1969, 1985-1998 Social Sciences Citation Index Lockwood Ref (Index Area) CALLNUMBER: Z 7161 .S8, 1956-1998 · Arts & Humanities Citation Index · Science Citation Index Related Databases: · Social Sciences Citation Index Contact: Don Hartman Last Update: 1/6/2010

Appendix F: Part of 1981 SSCI (later renamed JCR) report ranking journals by impact factor

ALL OUR ALL TITLE   CALL VICE AT 100   10   10   10   10   10   10   10					ED BY IMPACT FACTOR	<u></u>		
SCOULD SECURITY  OF STORY BROWN SECURITY  OF S	RANK		ALL YEARS 1980	N 1981 TO 1979 80+79	> <source items<br=""/> 1980 1979	SINHH IMPACT	CITATIONS SOURCE IMMEDIAGE IN 1981 TO ITEMS INDEX	¥
TOTAL PROPERTY   TOTA	114	ECON J	1087 .: 65	.53 118	47 52	99 1.192		
TOTAL PROPERTY   TOTA	116	BEHAV GENET	414 38	67232	43 46	1961 184 89 1 180		
TOTAL PROPERTY   TOTA	117	J MONETARY ECON J EXP SOC PSYCHOL	29428 992 27	74 101	3637	731 178		
TOTAL PROPERTY   TOTA	119	SOC FORCES	27843	68111		951.168	28470.596	
TOTAL PROPERTY   TOTA	121	AM BAR FOUND RES J-	31	2051	2618	441.159	50 . 240	
TOTAL PROPERTY   TOTA		DUKE LAW J		86				
TOTAL PROPERTY   TOTA	124	J AM ACAD CHILD PSY-	59238	74112				
TOTAL PROPERTY   TOTA	127	J NERV MENT DIS	217 16 2443120	134254	118105	42 1 143	2 19 0.105	
TOTAL PROPERTY   TOTA	128 129	J FINANC ANNU REV ANTHROPOL	1510 67		91 / 97		10 91 0 110	
TOTAL PROPERTY   TOTA	130	MED CARE ANIM LEARN BEHAV	1015 85	151 236	101 108	209 1.129	17 93 0.183	
TOTAL PROPERTY   TOTA	131	COMMUN RES	153	29 44	19 20	39 1.128	6 19 0.316	
TOTAL PROPERTY   TOTA	134	J MARKETING RES	1282 42	109 151	68 67		10 50 0.200	
TOTAL PROPERTY   TOTA	136	BEHAV SCI	646 20	51 :71	30 34	64 1.109	5 32 0 154	
SOUTHERN CALIF LAW R	137	INCUIDA		30 43		831 108 -		
SC SINU SCI : Manual Sci : Manu	138 140	POPUL DEV REV	503 43	64 35	2830	581 103 -		
12.5   WASH LAW REV   1.5   1.1   2.5   1.5   1.0   1.5	141	SOUTHERN CALIF LAW R		93	3847	851.094 -		
12.5   WASH LAW REV   1.5   1.1   2.5   1.5   1.0   1.5	143	INT ORGAN	25523	2548	2420	441.091 -		
12.5   WASH LAW REV   1.5   1.1   2.5   1.5   1.0   1.5	145	AM J MENT DEFIC	85	102187	8290	1721.087 -	11840 131	
12.5   WASH LAW REV   1.5   1.1   2.5   1.5   1.0   1.5	147	J HUM RESOUR	20	8080	4133	741 081 -	9 21 0.429	
12.5   WASH LAW REV   1.5   1.1   2.5   1.5   1.0   1.5	149	SOCIOLOGY	27 27	2956	3022	77 1:078		
12.5   WASH LAW REV   1.5   1.1   2.5   1.5   1.0   1.5	150	J SOC ISSUES J MARKETING	951 17 28	55 . 72	. 30 37	67 1.075	20 36 0.556	
18	152	WASH LAW REV	214 11	24 35		33 1.061	1 19 0.053	
18	154	ACTA PSYCHIAT SCAND	1738 125	174 299	186 100	286 1:045	17210.810 32 148 0.216	
SAM PHANN PERSPECT	156	LLOYDS BANK REV	70 18	921		231.043 - 26 1.038	9 14 0 643	
SAM PHANN PERSPECT	158	J CHILD PSYCHOL PSYC	62230 606 27	39 . 66	32 32	64 1:031	8390.051	
10.2   BRITJAMATH STAT PSY   260   10   20   38   20   18   30   1000   3   57   0.484	160	EGONOMICA		3136 31 57		351.029 -		
TEEE   SYST MAN CVB	161	FAM PLANN PERSPECT	58	76134	6369	1321 015 -	19670 284	
TEEE   SYST MAN CVB	162	HARVARD CIVIL RIGHTS	17312	1830	1218	301:000 -	370 143	
100 DAEDALUSAT. 180	162	SCHOOL REV	0	99	9	91:000	0.125	
100 DAEDALUSAT. 180	167	AM J POLIT SCI	33427	5380	4141	130 0.977 820.976 -	10 58 0.172	
175 INT MONET FUND S PAP	169	DAEDALUS		2074		770 961 -		
175 INT MONET FUND S PAP	170	REV ECON STUD	39675	50125	22 28	0.960 1310.954	0 11 0.000	
175 INT MONET FUND S PAP	172 173	HARVARD J LEGIS	785 67	64 131	74 64	138 0.949	9 72 0.125	
178. J FERS DEV DISORD 920 28 45 73 36 43 77 0.924 3 4.0 0.668 180 ECONOMIST 103 14 55 71 39 39 30 6 40 77 0.922 1 22 0.045 181 MA ANTHROPOL 1194 27 32 779 16 40 36 0.71 0.922 1 22 0.045 181 MA ANTHROPOL 1194 27 32 779 16 40 36 0.71 0.918 64 61 1.040 182 182 182 182 182 182 182 182 182 182	174	J ABNORM CHILD PSYCH	433 33	45 78	41 42	83 0.940	6 34 0.176	
178. J FERS DEV DISORD 920 28 45 73 36 43 77 0.924 3 4.0 0.668 180 ECONOMIST 103 14 55 71 39 39 30 6 40 77 0.922 1 22 0.045 181 MA ANTHROPOL 1194 27 32 779 16 40 36 0.71 0.922 1 22 0.045 181 MA ANTHROPOL 1194 27 32 779 16 40 36 0.71 0.918 64 61 1.040 182 182 182 182 182 182 182 182 182 182	176		837 76	123 199	1112 101	213 0.934	0260.000 17 96 0.177	
181	178	J PERS	920 28	45 73	3127 36 43	+580.931 :79 0.924	3 176	
182	180	F CONOWI 2 I		14 35	19 19	770.922		
188 J CONSUM RES	181	LIBR J	119427 413 100	5279 ·	62 85	860.919	6460.130	
188 J CONSUM RES	182 184	MULTIVAR BEHAV RES J CONFLICT RESOLUT	377 31	3856		610.918		
188 J CONSUM RES		DEMOGRAPHYECON GEOGR	53912	5264	2941	700 914	6440 136	
190 J EDUC MEAS 440 14 39 53 29 30 59 0.808 8 31 0.108 191 191 EDUC MEAS LAW REV - 269 15 28 43 21 27 48 0.809 - 2 12 0.167 193 SOC PROBLE CON - 918 37 45 82 43 49 92 0.891 4 36 0.111 194 AM BANKRUPT LAW J - 68 12 12 0.24 12 15 47 0.890 5 - 45 - 0.111 194 AM BANKRUPT LAW J - 68 12 12 0.24 12 15 47 0.890 4 27 0.148 196 SOC NETWORKS 60 9 22 31 19 16 35 0.886 0 - 15 - 0.308 196 VAMI INT LAW - 174 23 16 39 22 22 44 0.886 3 - 14 0.214 199 WAM JORTHOPSYCHIAT - 1220 2 26 40 26 56 52 0.885 4 29 0.138 200 J PSYCHOSOM RES 1 255 28 58 86 40 26 66 12 0.895 6 20 0.977 201 DWBLIC OPIN QUART - 828 29 49 78 43 46 89 0.876 6 6 62 0.097 202 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 202 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20 0.974 203 ARTIFINITELL 271 20 14 34 29 10 39 0.872 13 20	188	J CONSUM RES	63	22135	10148	1490.906	12430.279	
196 SOC NETWORKS 60 19 22 51 16 13 27 0.889 4 13 -0.308 196 VA J INT LAW	189	J INT ECON	23024	4266 -	3340	730.904	4370.108	
196 SOC NETWORKS 60 19 22 51 16 13 27 0.889 4 13 -0.308 196 VA J INT LAW	191	GEORGE WASH LAW REV		2843 -		480 896	8 21 0.381	
196 SOC NETWORKS 60 19 22 51 16 13 27 0.889 4 13 -0.308 196 VA J INT LAW	193	J PUBLIC ECON		6081 -		910.891 910.890	36 0.111	
201 PUBLIC OPIN QUART	194	AM BANKRUPT LAW J	6812 -	26 40	19 .26	45 0.889	4 27 0.148	
201 PUBLIC OPIN QUART	196 196	VA J INT LAW	17423	1639	19 16	35 0.886	0 15 0.000	
201 PUBLIC OPIN QUART	198 199	COMMUNITY MENT HLT J AM J ORTHOPSYCHIAT	294 20	26 . 46	26 26	52 0 885	4 29 0.138	
210 LINGUIST ANAL	200	J PSYCHOSOM RES	1255 28		44 54	98 0.878	5 68 0.074	
210 LINGUIST ANAL	202	ARTIF INTELL	271 20	14 34	29 10	39 0.872	13 25 0.520	
210 LINGUIST ANAL	204	PERCEPTION	466 36	88 124	69 76		3 330.143	
210 LINGUIST ANAL	205	J RES CRIME DELING	157	17 29	17 .17	680.853 34 0.853	4 3 64	
210 LINGUIST ANAL	208	COMPR PSYCHIAT	765 39	66 105	4344	870 851	28	
	209 210	INT J CLIN EXP HYP LINGUIST ANAL	31313 -	1255 -		650.846		
	211	GEOGR ANAL		4059 -	3238	700.843	7320.219	
	212	PSYCHOL WOMEN QUART	17116 -	4864 -	3937	76 0 042	6480.125	
	214	J PHONETICS	22818 -	4058 -	16 28	690 841	18 0.167	
	217	CURR ANTHROPOL	325 32 58787 -	48135 -	84	100 0 840	24 33 0.727	
	218	FOREIGN POLICY	255 115 21147 -	3885 -	92 86	178 0.831	8 79 0.101	
	220	CATHOL U LAW REV	129 23	23 46	30 26	56 0.821	9 21 0.429	
	222	POPUL STUD-LONDON	451 27	32 50	35 37	72 0.821	5 29 0.172	
226 NOTRE DAME LAWYER 210 25 44 69 43 42 85 0.812 9 28 0.321	224	J FPIDEMIOL COMMUN H	185 41	39 80	58 40		22 590.212	
	226 .	NOTRE DAME LAWYER	210 25	44 69	43 42	430.814 85 0.812	9 28 0.321	

# Appendix G: Part of 1981 SSCI (later renamed JCR) index

# SOCIAL SCIENCES CITATION INDEX®-1961

#### ANNUAL

#### **FULLY COVERED SOURCE PUBLICATIONS**

#### Arranged by Subject Category

A title may be repeated more than once when appropriate

Company								
	AND ANY MANUAL ANY	Section 25 Annual Property of the Park Section 25 Annual Park Sectio	COMMUNICATION  COMMUNICATION  AND RESIDENCE CORP TO SERVICE CO	ATT SERVICE TO ANY COMMENT OF THE PROPERTY OF	STATE OF THE STATE	THE STATE AND TH	CTOMES STATES  AND SERVICES  A	MINISTER WITH STATE OF THE STAT

Appendix H: Sample of Ulrich's Report on Library and Information Science

Title	Subjects	Publisher	Country	Start Y Language	Frequency
South African Journal of Library and Information Science	LIBRARY AND INFORT	V South African Bureau fo	South Africa	1933 Text and summaries	ir Quarte riy
American Society for Information Science and Technology, Jou	I COMPUTERS INFORM	/ John Wiley & Sons, Inc.	United Stat	1938 Text in English	Monthly
University of Chicago Studies in Library Science	LIBRARY AND INFORT	University of Chicago	United Stat	1939 Text in English	Irregular
Aslib Proceedings	LIBRARY AND INFORT	V Emerald Group Publishi	United King	1949 Text in English	Bi-monthly
Libri	LIBRARY AND INFORT	V De Gruyter Saur	Germany	1951 Text in English	Quarte riv
Nippon Toshokan Joho Gakkai-shi	LIBRARY AND INFORT	V Nippon Toshokan Joho (	Japan	1934 Text in Japanese   Su	ir Quarte riv
Mousaion	LIBRARY AND INFORT	V Un iSA Press	South Africa	1955 Text in Afrikaans   Te	
Agricultural Information Worldwide	AGRICULTURE   LIBRA	Fintemational Association	United Stat	1935 Text in English	Quarte fly
Journal of Chemical Information and Modeling	CHEMISTRY COMPUT	Name rican Chemical Soci	United Stat	1960 Text in English	Monthly
Journal of Education for Library and Information Science	EDUCATION LIBRARY	Association for Library a	United Stat	1960 Text in English	Quarte riy
Knygotyra	LIBRARY AND INFORT	V Vilniaus Universiteto Le	Lithuania	1961 Text in Lithuanian   1	Te 2 times a year
Herald of Library Science	LIBRARY AND INFORT	V Scientific Publishers	India	1962 Text in English	Quarte riy
Information Processing & Management	LIBRARY AND INFORT	v Elsevier Ltd	United King	1963 Text in German   Tex	t 6 times a year
Library and Information Science	LIBRARY AND INFORT	V Mita Society for Library	Japan	1963 Text in Japanese   Te	x Semi-annually
SRELS Journal of Information Management	COMPUTER APPLICAT	I Sarada Ranganathan En	India	1964 Text in English	B i-m onthly
Program	COMPUTER APPLICAT	l Emerald Group Publishi	United King	1966 Text in English	Quarte riy
University of Telheran, Central Library, Library Bulletin	LIBRARY AND INFORM	V University of Teheran *	Iran, Islamio	1966 Text in Persian, Mod	e Irregular
Pakistan Library & Information Science Journal	LIBRARY AND INFORM	V Library Promotion Bures	Pakis tan	1968 Text in Urdu	Quarte fly
Information Technology and Libraries	COMPUTER APPLICAT	Name rican Library Associ	United Stat	1968 Text in English	Quarte riy
Journal of Librarianship and Information Science	LIBRARY AND INFORM	V Sage Publications Ltd.	United King	1969 Text in English	Quarte fly
In termation all Information and Library Review	LIBRARY AND INFORM	v Elsevier Ltd	United King	1969 Text in English	Quarte riy
Han gug Munheon Jeongbo Haghoe ji	LIBRARY AND INFORM	V Han gug Munheon Jeon	Korea, Repu	1970 Text in Korean	Quarte fly
Jiaoyu Ziliao yu Tushuguan xue	EDUCATION LIBRARY	Tamkang University Pre	Taiwan, Res	1970 Text in Chinese   Tex	t Quarte riy
VINE	COMPUTER APPLICAT	l Emerald Group Publish i	United King	1971 Text in English	Quarte riy
Health Information Management Journal	LIBRARY AND INFORT	v Health Information Mar	Australia	1971 Text in English	3 times a year
Multimedia Information & Technology	COMPUTER APPLICAT	Chartered Institute of Li	United King	1973 Text in English	Quarte riy
Scientific and Technical Information Processing	LIBRARY AND INFORT	v Allerton Press, Inc.	United Stat	1974 Text in English	B i-m onthly
Journal of Library & Information Science	LIBRARY AND INFORT	V National Taiwan Norma	Taiwan, Res	1975 Text in Chinese   Tex	t Semi-annually Apr. &
Canadian Journal of Information and Library Science	LIBRARY AND INFORT	V University of Toronto Pr	Canada	1976 Text in French   Text	i Quarte fly
Online Information Review	COMPUTERS INTERN	li Emerald Group Publishi	United King	1977 Text in English	B i-m onthly
Lecture Notes in Control and Information Sciences	LIBRARY AND INFORT	v Springer	Germany	1978 Text in German	Irregular
Library & Information Science Research	LIBRARY AND INFORT	v Pergamon	United King	1979 Text in English	4 times a year
Behavioral & Social Sciences Librarian	LIBRARY AND INFORT	v Routledge	United Stat	1979 Text in English	Quarte riy
Dansk Biblioteksforskning	LIBRARY AND INFORT	v Danmarks Bibliotekssko	Denmark	1979 Text in Danish	3 times a year
Science & Technology Libraries	LIBRARY AND INFORT	v Routledge	United Stat	1980 Text in English	Quarte riy
In temational Journal of Information Management	COMMUNICATIONS (			1980 Text in English	6 times a year
Arab Journal of Library and Information Science	LIBRARY AND INFORM			1980 Text in Arabic   Text	
The Information Society		Taylor & Francis Inc.		1981 Text in English	5 times a year
Resource Sharing & Information Networks	LIBRARY AND INFORM			1981 Text in English	Quarte fly
Journal of Enterprise Information Management	LIBRARY AND INFORT	v Emerald Group Publishi	United King	1981 Text in English	B i-m onthly
Information Services & Use	COMPUTERS INFORM	/IOSPress	Netherland	1981 Text in English	Quarte riy
Journal of Law and Information Science	COMPUTER APPLICAT	I University of Tasmania '	Australia	1981 Text in English	Semi-annually
Information Technology and People		ll Emerald Group Publish i			Quarte fly
The Electronic Library	COMPUTER APPLICAT	ll Emerald Group Publishi	United King	1982 Text in English	B i-m onthly

Note: This report sample has been modified to fit into the text frame. The columns titleID, ISSN, serialType, format, Status, subtitle, contentType, and vatiantTitle have been hidden; results for journals that ceased printing or merged prior to 2011 or started after 1982 have also been hidden from this image.

Appendix I: Part of JCR journal report sorted by subject

discipline	Abbreviated Journal Title	ISSN	(2008) Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	(2008) Articles	Cited Half- Life	Eigenfactor Score	Article Influenc e Score
educ.,SciDiscplines	ACAD MED	1040-2446	5422	1.867	2.337	muex	Aiticles	6.8	0.02072	0.944
politicalSci	ACTA POLIT	0001-6810	157	0.667	2.557	0.059	17	4.2	0.00159	0.744
psychology	ACTA PSYCHOL	0001-6918	2777	2.155	2.652	0.611	157	>10.0	0.00601	1.026
sociology	ACTA SOCIOL	0001-6993	354	0.957	0.873	0.059	17	>10.0	0.00095	0.419
psychology	ADAPT BEHAV	1059-7123	434	1.152	1.84	0.19	21	7.5	0.00093	0.447
psychology	ADDICT BEHAV	0306-4603	5389	1.846	2.272	0.286	185	7.5	0.01737	0.753
psychology	ADOLESCENCE	0001-8449	1511	0.72	1.443	0.035	57	>10.0	0.0023	0.442
psychology	ADV CHILD DEV BEHAV	0065-2407	289	1.222	1.911	0.5	10	7.6	0.00108	1.079
psychology	ADV EXP SOC PSYCHOL	0065-2601	2550	8.308	11.161	1.6	5	>10.0	0.00484	7.043
educ.,SciDiscplines	ADV HEALTH SCI EDUC	1382-4996	327	1.254	1.545	0.2	50	4.8	0.00136	0.501
educ.,SciDiscplines	ADV PHYSIOL EDUC	1043-4046	438	1.483	1.723	0.227	44	4.5	0.00134	0.38
anthropology	AFRICA	0001-9720	496	0.636	0.547	0.167	24	>10.0	0.00079	0.306
psychology	AGGRESS VIOLENT BEH	1359-1789	809	1.618	2.254	0.051	39	5.9	0.00315	0.785
psychology	AGGRESSIVE BEHAV	0096-140X	1454	2.056	2.129	0.245	53	8.8	0.00376	0.728
psychology	AGING NEUROPSYCHOL C	1382-5585	455	1.143	1.464	0.206	34	6.9	0.00159	0.519
economics	AGR ECON-BLACKWELL	0169-5150	777	0.484	0.91	0.263	76	6.9	0.0025	0.362
sociology	AGR HUM VALUES	0889-048X	520	1.186	1.319	0.064	47	7.2	0.00172	0.485
psychology	AIDS CARE	0954-0121	2601	1.466	2.197	0.168	167	5.5	0.00967	0.692
anthropology	AM ANTHROPOL	0002-7294	2019	1.218	1.332	0.179	28	>10.0	0.00322	0.568
anthropology	AM ANTIQUITY	0002-7316	1942	1.841	2.154	0.294	34	>10.0	0.00251	0.67
psychology	AM BEHAV SCI	0002-7642	1649	0.691	0.886	0.253	99	9.1	0.00449	0.443
educ.,SciDiscplines	AM BIOL TEACH	0002-7685	256	0.308	0.346	0.033	60	8.9	0.00044	0.095
economics	AM ECON REV	0002-8282	21672	2.285	3.775	0.33	185	>10.0	0.0916	4.668
anthropology	AM ETHNOL	0094-0496	925	0.888	1.033	0.19	42	>10.0	0.00276	0.687
psychology	AM INDIAN ALASKA NAT	0893-5394	100	0.227		0	10	>10.0	0.00023	
economics	AM J AGR ECON	0002-9092	3405	0.967	1.534	0.111	108	>10.0	0.00739	0.672
psychology	AM J CLIN HYPN	0002-9157	360	0.966	1.143	0.7	20	>10.0	0.00033	0.192
psychology	AM J COMMUN PSYCHOL	0091-0562	2697	1.198	2.313	0.719	57	>10.0	0.00497	0.89
psychology	AM J DRUG ALCOHOL AB	0095-2990	1330	1.094	1.536	0.16	81	8.6		0.474
economics	AM J ECON SOCIOL	0002-9246	283	0.349	0.364	0	39	9.7		0.128
sociology	AM J ECON SOCIOL	0002-9246	283	0.349	0.364	0	39	9.7		0.142
psychology	AM J FAM THER	0192-6187	282	0.491	0.455	0.062	32	>10.0		

Appendix J-1: Top 5 impact factor journals, 2008

1 Anthropolog	y								
Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
J HUM EVOL	0047-2484	4519	3.550	4.310	1.336	137	8.6	0.00984	1.297
EVOL ANTHROPOL	1060-1538	966	3.484	3.725	1.111	18	7.6	0.00298	1.475
AM J PHYS ANTHROPOL	0002-9483	7241	2.353	2.690	0.456	147	>10.0	0.01257	0.829
SOC NETWORKS	0378-8733	1276	2.068	2.929	0.276	29	>10.0	0.00318	1.270
CURR ANTHROPOL	0011-3204	2413	2.032	2.718	0.412	51	>10.0	0.00682	1.314

Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
J COMMUN	0021-9916	1816	2.266	2.365	0.122	41	9.9	0.00514	1.059
J HEALTH COMMUN	1081-0730	955	2.057	2.431	0.087	46	4.6	0.00580	0.999
PUBLIC OPIN QUART	0033-362X	2565	1.972	2.606	0.262	42	>10.0	0.00478	1.349
J COMPUT- MEDIAT COMM	1083-6101	803	1.901		0.250	36	4.6	0.00361	
HUM COMMUN RES	0360-3989	1339	1.689	2.112	0.423	26	>10.0	0.00271	1.055

3 Economics									
Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
Q J ECON	0033-5533	11723	5.048	8.716	0.756	41	>10.0	0.05419	11.981
J ECON LIT	0022-0515	4069	4.842	8.380	0.842	19	>10.0	0.01806	8.853
J ECON PERSPECT	0895-3309	4261	3.944	5.057	0.558	43	9.4	0.02487	5.341
ECONOMETRICA	0012-9682	17091	3.865	4.943	0.255	47	>10.0	0.04526	7.238
J POLIT ECON	0022-3808	13671	3.725	5.742	0.419	31	>10.0	0.04088	8.822

4 Geography									
Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
T I BRIT GEOGR	0020-2754	1581	3.967	4.600	0.455	33	7.3	0.00589	1.832
GLOBAL ENVIRON CHANG	0959-3780	1291	3.955	4.272	0.524	63	5.1	0.00564	1.611
PROG HUM GEOG	0309-1325	1889	3.482	4.305	0.575	40	6.0	0.00749	1.586
ECON GEOGR	0013-0095	1048	2.968	3.578	0.438	16	10.0	0.00224	1.218
J ECON GEOGR	1468-2702	763	2.932	4.557	0.576	33	4.8	0.00536	1.847

Appendix J-2: 5 Information & Library Science

#### 5 Information & Library Science 2008 Total Impact S-Year Immediacy Article 2008 Eigenfactor<sup>TM</sup> **Abbreviated** Cited Influence<sup>TM</sup> ISSN **Journal Title** Factor Index Articles Half-life Score Cites Factor Score MIS QUART 0276-7783 5684 5.183 11.586 0.778 36 9.7 0.01138 3.540 J AM MED INFORM ASSN 1067-5027 2574 3.428 3.886 0.560 100 5.2 0.00891 1.069 ANNU REV INFORM SCI 0066-4200 477 2.500 2.954 0.846 13 6.5 0.00138 0.956 INFORM SYST J 0.600 0.00133 0.711 1350-1917 528 2.375 2.940 25 6.0 INFORM 0.355 0.00625 0.826 0378-7206 2919 2.358 4.079 62 6.2 MANAGE-AMSTER

Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
POLIT ANAL	1047-1987	644	4.780	3.283	0.263	19	5.0	0.00711	2.837
EUR J POLIT RES	0304-4130	1760	2.514	2.734	0.239	71	6.6	0.01038	1.638
AM J POLIT SCI	0092-5853	4416	2.397	3.363	0.322	59	>10.0	0.01976	3.084
POLIT GEOGR	0962-6298	1032	2.295	2.375	0.250	40	6.7	0.00453	1.063
EUR UNION POLIT	1465-1165	419	2.064	2.378	0.435	23	4.5	0.00303	1.232

7 Psychology	Psychology														
Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score						
ANNU REV PSYCHOL	0066-4308	6715	16.217	17.608	4.958	24	7.7	0.02280	8.568						
BEHAV BRAIN SCI	0140-525X	5274	12.818	19.355	2.667	12	9.5	0.01173	8.536						
PSYCHOL BULL	0033-2909	22965	12.568	18.037	1.026	38	>10.0	0.03458	8.253						
PSYCHOL REV	0033-295X	17810	11.765	12.563	2.396	48	>10.0	0.02648	6.787						
TRENDS COGN SCI	1364-6613	9143	10.981	13.826	1.086	70	5.3	0.05327	6.323						

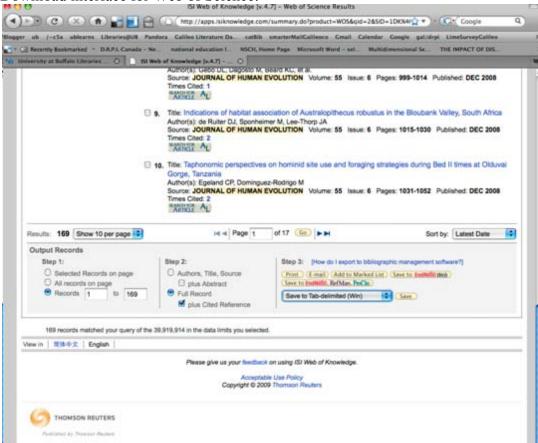
8 Sociology									
Abbreviated Journal Title	ISSN	2008 Total Cites	Impact Factor	5-Year Impact Factor		2008 Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>™</sup> Score
AM SOCIOL REV	0003-1224	9349	3.762	5.285	0.364	44	>10.0	0.01728	3.897
AM J SOCIOL	0002-9602	8629	2.808	5.046	0.444	45	>10.0	0.01476	3.804
ANNU REV SOCIOL	0360-0572	3665	2.273	4.954	0.364	22	>10.0	0.00804	3.358
SOC NETWORKS	0378-8733	1276	2.068	2.929	0.276	29	>10.0	0.00318	1.270
SOC PROBL	0037-7791	1832	2.059	2.677	0.154	26	>10.0	0.00511	1.731

Appendix K: Web of Knowledge & Web of Science download interface screenshots

Download interface for Web of Knowledge:



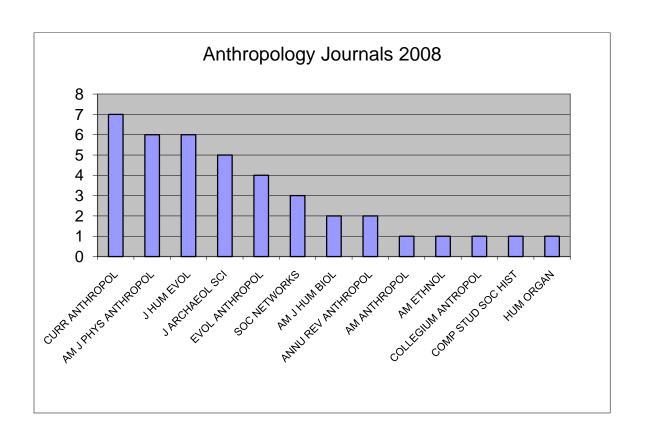
Download interface for Web of Science:



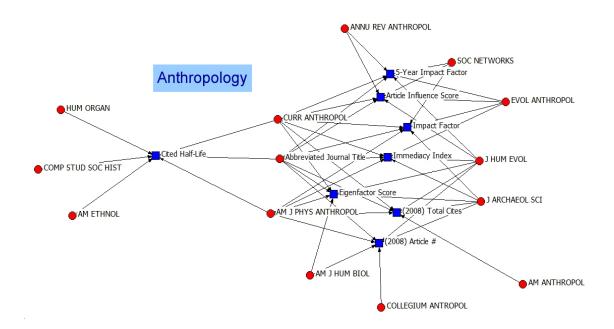
Appendix L-1a, Anthropology

Abbreviated Journal Title	total times in top 5	(2008) Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	(2008) Article #	Cited Half-Life	Eigenfac- tor Score	Article Influence Score
CURR ANTHROPOL	7	1	1	1	1		1	1	1
AM J PHYS ANTHROPOL	6	1	1		1	1	1	1	
J HUM EVOL	6	1		1	1	1		1	1
J ARCHAEOL SCI	5	1	1		1	1		1	
EVOL ANTHROPOL	4		1	1	1				1
SOC NETWORKS	3		1	1					1
AM J HUM BIOL	2					1		1	
ANNU REV ANTHROPOL	2			1					1
AM ANTHROPOL	1	1							
AM ETHNOL	1						1		
COLLEGIUM ANTROPOL	1					1			
COMP STUD SOC HIST	1						1		
HUM ORGAN	1						1		

13 journals in top 5 rankings



# Appendix L-1b



# Appendix L -2a, Communication

#### 1 COM journals sorted by total citations:

Abbreviated Journal Title PUBLIC OPIN	ISSN	(2008) Total Cites	Impact Factor	5-Year Impact Factor	Imme diacy Index	(2008) Article #	Cited Half- Life	Eigenfac- tor Score	Article Influence Score
QUART J COMMUN COMMUN RES J ADVERTISING	0033-362X 0021-9916 0093-6502 0091-3367	2565 1816 1747 1367	1.972 2.266 1.473	2.606 2.365 2.486 1.909	0.262 0.122 0.111 0.579	42 41 36 38	>10.0 9.9 >10.0 >10.0	0.00478 0.00514 0.0032 0.00191	1.349 1.059 1.046 0.526
J ADVERTISING RES	0021-8499	1360	0.612	1.257	0.067	45	>10.0	0.00166	0.393
2 COM journals sorte	d by impact fa	ictor:							
Abbreviated Journal Title J COMMUN J HEALTH	ISSN 0021-9916	(2008) Total Cites 1816	Impact Factor 2.266	5-Year Impact Factor 2.365	Imme diacy Index 0.122	(2008) Article # 41	Cited Half- Life 9.9	Eigenfactor Score	Article Influence Score 1.059
COMMUN PUBLIC OPIN	1081-0730	955	2.057	2.431	0.087	46	4.6	0.0058	0.999
QUART J COMPUT-MEDIAT	0033-362X	2565	1.972	2.606	0.262	42	>10.0	0.00478	1.349
COMM HUM COMMUN	1083-6101	803	1.901		0.25	36	4.6	0.00361	
RES	0360-3989	1339	1.689	2.112	0.423	26	>10.0	0.00271	1.055
3 COM journals sorte	d by 5 yr impa	ict factor:							
		(2008)		5-Year	Imme	(2008)	Cited Half-	Eigenfac-	Article
Abbreviated Journal Title	ISSN	Total Cites	Impact Factor	Impact Factor	diacy Index	Article #	Life	tor Score	Influence Score
Title PUBLIC OPIN QUART COMMUN RES	ISSN 0033-362X 0093-6502				•				
Title PUBLIC OPIN QUART	0033-362X	Cites 2565	Factor 1.972	2.606	Index 0.262	# 42	Life >10.0	tor Score 0.00478	Score 1.349
Title PUBLIC OPIN QUART COMMUN RES J HEALTH COMMUN J COMMUN	0033-362X 0093-6502 1081-0730 0021-9916 1050-3293	2565 1747 955 1816	1.972 1.473 2.057 2.266	2.606 2.486 2.431 2.365	0.262 0.111 0.087 0.122	# 42 36 46 41	>10.0 >10.0 >10.0 4.6 9.9	0.00478 0.0032 0.0058 0.00514	1.349 1.046 0.999 1.059
Title PUBLIC OPIN QUART COMMUN RES J HEALTH COMMUN J COMMUN COMMUN THEOR  4 COM journals sorte immediacy:  Abbreviated Journal Title J ADVERTISING J MEDIA ECON	0033-362X 0093-6502 1081-0730 0021-9916 1050-3293	2565 1747 955 1816	1.972 1.473 2.057 2.266	2.606 2.486 2.431 2.365	0.262 0.111 0.087 0.122	# 42 36 46 41	>10.0 >10.0 >10.0 4.6 9.9	0.00478 0.0032 0.0058 0.00514	1.349 1.046 0.999 1.059
Title PUBLIC OPIN QUART COMMUN RES J HEALTH COMMUN J COMMUN COMMUN THEOR  4 COM journals sorte immediacy:  Abbreviated Journal Title J ADVERTISING J MEDIA ECON HUM COMMUN RES	0033-362X 0093-6502 1081-0730 0021-9916 1050-3293 ad by	2565 1747 955 1816 521 (2008) Total Cites 1367	1.972 1.473 2.057 2.266 1.422 Impact Factor	2.606 2.486 2.431 2.365 2.146 5-Year Impact Factor 1.909	0.262 0.111 0.087 0.122 0.125 Imme diacy Index 0.579	# 42 36 46 41 24  (2008) Article # 38	Life >10.0 >10.0 10.0 4.6 9.9 6.5 Cited Half-Life >10.0	0.00478 0.0032 0.0058 0.00514 0.00216 Eigenfactor Score 0.00191	1.349 1.046 0.999 1.059 0.946 Article Influence Score 0.526
Title PUBLIC OPIN QUART COMMUN RES J HEALTH COMMUN J COMMUN COMMUN THEOR  4 COM journals sorte immediacy:  Abbreviated Journal Title J ADVERTISING J MEDIA ECON HUM COMMUN	0033-362X 0093-6502 1081-0730 0021-9916 1050-3293 ad by ISSN 0091-3367 0899-7764	2565 1747 955 1816 521 (2008) Total Cites 1367 120	1.972 1.473 2.057 2.266 1.422 Impact Factor 1 0.522	2.606 2.486 2.431 2.365 2.146 5-Year Impact Factor 1.909 0.571	Index 0.262 0.111 0.087 0.122 0.125 Imme diacy Index 0.579 0.5	# 42 36 46 41 24  (2008) Article # 38 10	Life >10.0 >10.0 10.0 4.6 9.9 6.5 Cited Half-Life >10.0 8.3	tor Score  0.00478 0.0032  0.0058 0.00514 0.00216  Eigenfactor Score 0.00191 0.00016	1.349 1.046 0.999 1.059 0.946  Article Influence Score 0.526 0.106

# Appendix L-2b, Communication

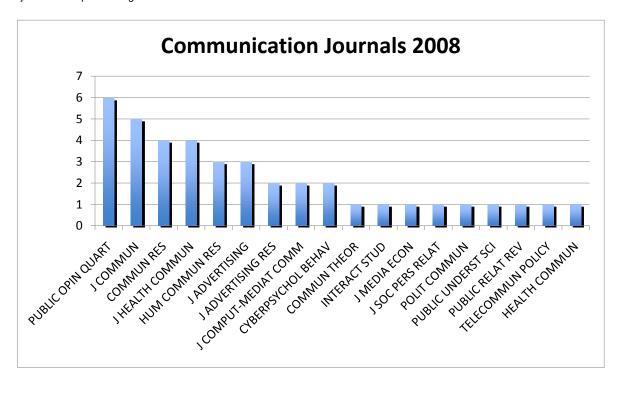
# 5 COM journals sorted by # of articles in 2008:

Abbreviated Journal Title CYBERPSYCHOL BEHAV	ISSN 1094-9313	(2008) Total Cites	Impact Factor 1.295	5-Year Impact Factor	Imme diacy Index	(2008) Article #	Cited Half- Life 4.8	Eigenfactor Score	Article Influence Score
PUBLIC RELAT REV	0363-8111	385	0.507	0.575	0.083	72	7.4	0.00036	0.058
TELECOMMUN POLICY HEALTH COMMUN J HEALTH	0308-5961 1041-0236	629 623	1.244 1.154	1.534 1.599	0.074 0.22	54 50	5.9 5.9	0.00182 0.00221	0.399 0.52
COMMUN	1081-0730	955	2.057	2.431	0.087	46	4.6	0.0058	0.999
6 COM journals sorte	ed by cited half-l	ife:							
		(2008)		5-Year	Imme	(2008)	Cited		Article
Abbreviated Journal	1001	Total	Impact	Impact	diacy	Article	Half-	Eigenfac-	Influence
Title J SOC PERS RELAT	ISSN 0265-4075	Cites 1273	Factor 1.097	Factor 1.5	Index 0.111	# 45	Life >10.0	tor Score 0.00322	Score 0.632
J ADVERTISING RES	0021-8499	1360	0.612	1.257	0.067	45	>10.0	0.00166	0.393
PUBLIC OPIN	332. 3.33			0.					
QUART	0033-362X	2565	1.972	2.606	0.262	42	>10.0	0.00478	1.349
J ADVERTISING COMMUN RES	0091-3367 0093-6502	1367 1747	1 1.473	1.909 2.486	0.579 0.111	38 36	>10.0 >10.0	0.00191 0.0032	0.526 1.046
COMMON RES	0093-0302	1/4/	1.473	2.400	0.111	30	>10.0	0.0032	1.040
7 COM journals sorte	ed by Eigenfacto	r Score:							
		(2008)		5-Year	Imme	(2008)	Cited		Article
Abbreviated Journal Title	ISSN	Total Cites	Impact Factor	Impact Factor	diacy Index	Article #	Half- Life	Eigenfac- tor Score	Influence Score
J HEALTH	10014	Oiles	i actor	i actor	IIIdex	π	LIIC	tor ocorc	Ocoic
COMMUN	1081-0730	955	2.057	2.431	0.087	46	4.6	0.0058	0.999
J COMMUN PUBLIC OPIN	0021-9916	1816	2.266	2.365	0.122	41	9.9	0.00514	1.059
QUART CYBERPSYCHOL	0033-362X	2565	1.972	2.606	0.262	42	>10.0	0.00478	1.349
BEHAV J COMPUT-MEDIAT	1094-9313	1256	1.295	2.01	0.094	139	4.8	0.00435	0.484
COMM	1083-6101	803	1.901		0.25	36	4.6	0.00361	
8 COM journals sorte Score:	ed by Article Infl	uence							
		(2008)		5-Year	Imme	(2008)	Cited		Article
Abbreviated Journal Title PUBLIC OPIN	ISSN	Total Cites	Impact Factor	Impact Factor	diacy Index	Article #	Half- Life	Eigenfac- tor Score	Influence Score
QUART	0033-362X	2565	1.972	2.606	0.262	42	>10.0	0.00478	1.349
J COMMUN HUM COMMUN	0021-9916	1816	2.266	2.365	0.122	41	9.9	0.00514	1.059
RES		4000	4 000	0.440	0.400	00	>10.0	0.00271	4.055
	0360-3989	1339	1.689	2.112	0.423	26	>10.0	0.00271	1.055
COMMUN RES POLIT COMMUN	0360-3989 0093-6502 1058-4609	1339 1747 599	1.689 1.473 1.023	2.112 2.486	0.423 0.111 0.2	36 20	>10.0	0.00271 0.0032 0.00258	1.055 1.046 1.004

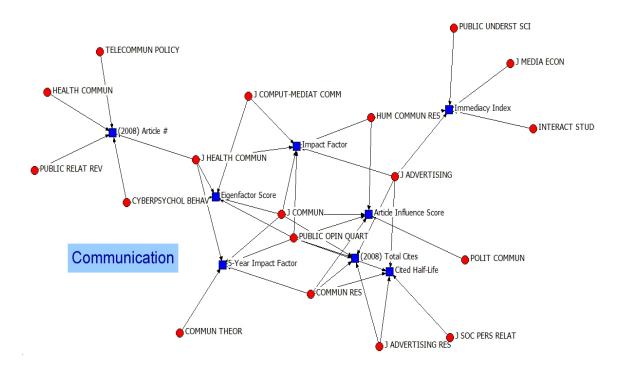
Appendix L-2b, Communication

Abbreviated Journal Title	total times in top 5	(2008) Total Cites	Impact Factor	5-Year Impact Factor	Imme diacy Index	(2008) Article #	Cited Half- Life	Eigenfac- tor Score	Article Influence Score
PUBLIC OPIN									
QUART	6	1	1	1			1	1	1
J COMMUN	5	1	1	1			-	1	1
COMMUN RES	4	1		1			1		1
J HEALTH COMMUN	4		1	1		1		1	
HUM COMMUN RES	3		1		1				1
J ADVERTISING	3	1			1		1		
J ADVERTISING RES	2	1					1		
J COMPUT-MEDIAT COMM	2		1					1	
CYBERPSYCHOL BEHAV	2					1		1	
COMMUN THEOR	1			1					
INTERACT STUD	1				1				
J MEDIA ECON	1				1				
J SOC PERS RELAT	1						1		
POLIT COMMUN	1								1
PUBLIC UNDERST SCI	1				1				
PUBLIC RELAT REV	1					1			
TELECOMMUN POLICY	1					1			
HEALTH COMMUN	1					1			
	40	5	5	5	5	5	5	5	5

18 journals in top 5 rankings



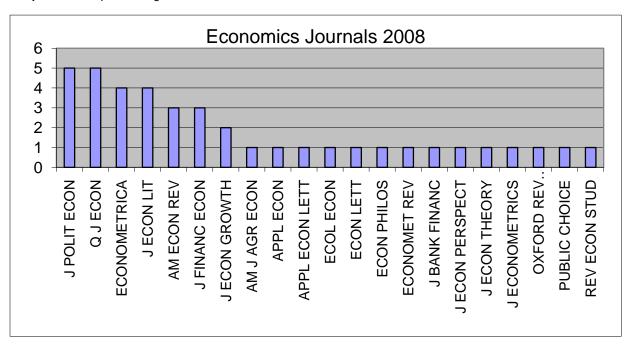
# Appendix L-2c



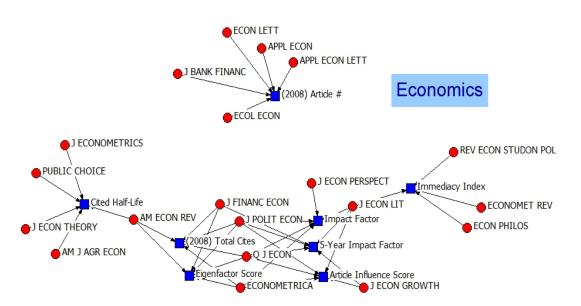
Appendix L-3a, Economics

	total times in	(2008) Total	Impact	5-Year Impact	Imme diacy	(2008) Article	Cited Half-	Eigenfac-	Article Influence
Abbreviated Journal Title	top 5	Cites	Factor	Factor	Index	#	Life	tor Score	Score
J POLIT ECON	5	1	1	1				1	1
QJECON	5	1	1	1				1	1
ECONOMETRICA	4	1	1					1	1
J ECON LIT	4		1	1	1				1
AM ECON REV	3	1					1	1	
J FINANC ECON	3	1		1				1	
J ECON GROWTH	2			1					1
AM J AGR ECON	1						1		
APPL ECON	1					1			
APPL ECON LETT	1					1			
ECOL ECON	1					1			
ECON LETT	1					1			
ECON PHILOS	1				1				
ECONOMET REV	1				1				
J BANK FINANC	1					1			
J ECON PERSPECT	1		1						
J ECON THEORY	1						1		
J ECONOMETRICS	1						1		
OXFORD REV ECON POL	1				1				
PUBLIC CHOICE	1						1		
REV ECON STUD	1				1				
	40	5	5	5	5	5	5	5	5

21 journals in top 5 rankings



# Appendix L-3b

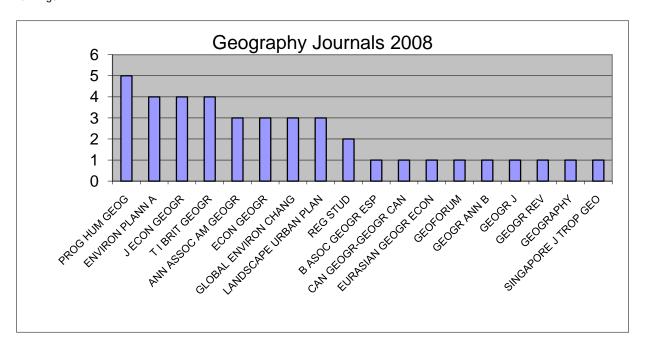


Appendix L-4a, Geography

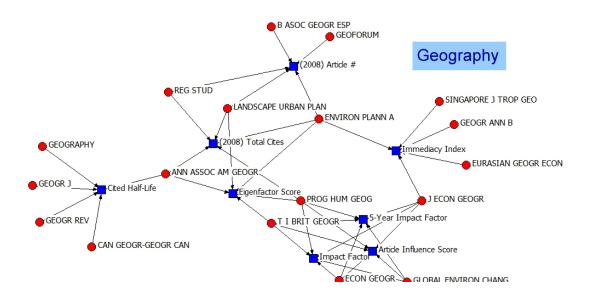
# of times journal is in top5 journal sort:

# or times journal is in topo	Joannai soit.	(2000)		5-Year		(2000)	Cited		Article
	total times	(2008) Total	Impact	Impact	Immediacy	(2008) Article	Half-	Eigenfac-	Influence
Abbreviated Journal Title	in top 5	Cites	Factor	Factor	Index	#	Life	tor Score	Score
PROG HUM GEOG	5	1	1	1				1	1
ENVIRON PLANN A	4	1			1	1		1	
J ECON GEOGR	4		1	1	1				1
T I BRIT GEOGR	4		1	1				1	1
ANN ASSOC AM GEOGR	3	1					1	1	
ECON GEOGR	3		1	1					1
GLOBAL ENVIRON CHANG	3		1	1					1
LANDSCAPE URBAN PLAN	3	1				1		1	
REG STUD	2	1				1			
B ASOC GEOGR ESP	1					1			
CAN GEOGR-GEOGR CAN	1						1		
EURASIAN GEOGR ECON	1				1				
GEOFORUM	1					1			
GEOGR ANN B	1				1				
GEOGR J	1						1		
GEOGR REV	1						1		
GEOGRAPHY	1						1		
SINGAPORE J TROP GEO	1				1				
	40	5	5	5	5	5	5	5	5

18 journals In top 5 rankings



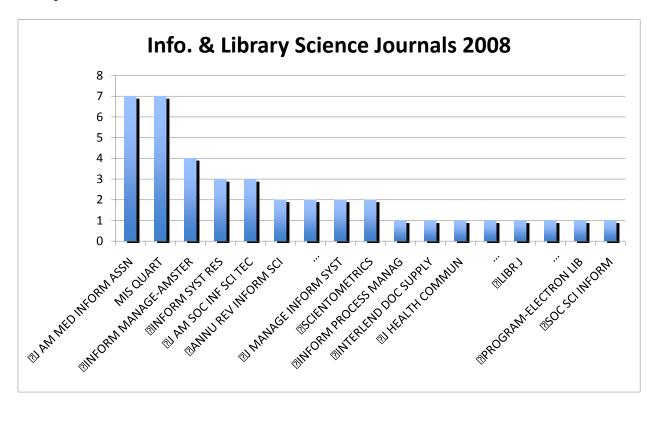
# Appendix L-4b



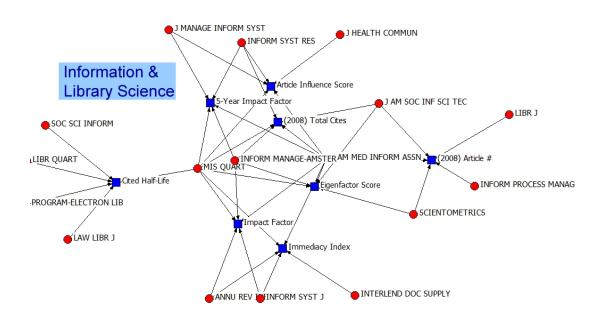
Appendix L-5a, Information & Library Science

Abbreviated Journal Title	total times in top 5	(2008) Total Cites	Impact Factor	5-Year Impact Factor	Immed iacy Index	(2008) Article #	Cited Half- Life	Eigenf actor Score	Article Influence Score
J AM MED INFORM ASSN	7	1	1	1	1	1		1	1
MIS QUART	7	1	1	1	1		1	1	1
INFORM MANAGE- AMSTER	4	1	1	1				1	
INFORM SYST RES	3	1		1					1
J AM SOC INF SCI TEC	3	1				1		1	
ANNU REV INFORM SCI	2		1		1				
INFORM SYST J	2		1		1				
J MANAGE INFORM									
SYST	2			1					1
SCIENTOMETRICS	2					1		1	
INFORM PROCESS MANAG	1					1			
INTERLEND DOC SUPPLY	1				1				
J HEALTH COMMUN	1								1
LAW LIBR J	1						1		
LIBR J	1					1			
LIBR QUART	1						1		
PROGRAM-ELECTRON LIB	1						1		
SOC SCI INFORM	1						1		
	40	5	5	5	5	5	5	5	5

17 journals in top 5 rankings



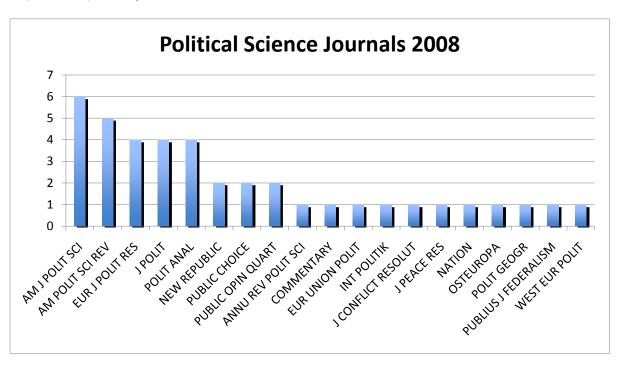
# Appendix L-5b



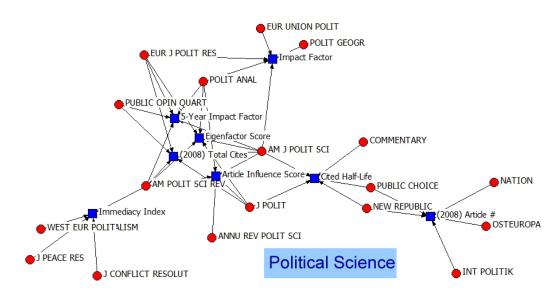
Appendix L-6a, Political Science

Abbas data di Jawa at Titla	total times in	(2008) Total Cites	Impact Factor	5-Year Impact	Immediacy Index				Article Influence Score
AM L DOLLT COL	top 5	Cites	ractor .	Factor	index	Article #	Half-Life	Score .	Score .
AM J POLIT SCI	6	1	1	1			1	1	1
AM POLIT SCI REV	5	1		1	1			1	1
EUR J POLIT RES	4	1	1	1				1	
J POLIT	4	1					1	1	1
POLIT ANAL	4		1	1				1	1
NEW REPUBLIC	2					1	1		
PUBLIC CHOICE	2					1	1		
PUBLIC OPIN QUART	2	1		1					
ANNU REV POLIT SCI	1								1
COMMENTARY	1						1		
EUR UNION POLIT	1		1						
INT POLITIK	1					1			
J CONFLICT RESOLUT	1				1				
J PEACE RES	1				1				
NATION	1					1			
OSTEUROPA	1					1			
POLIT GEOGR	1		1						
PUBLIUS J FEDERALISM	1				1				
WEST EUR POLIT	1				1				
	40	5	5	5	5	5	5	5	5

<sup>19</sup> journals in top 5 rankings



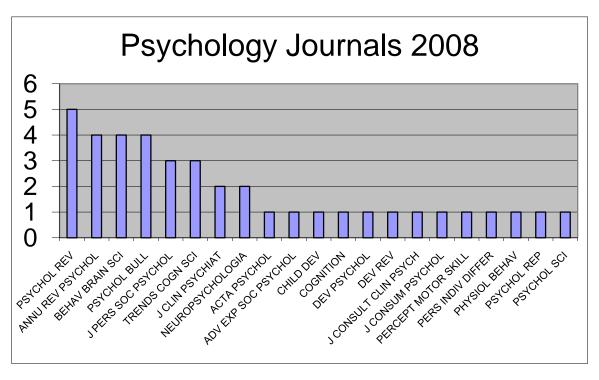
# Appendix L-6a



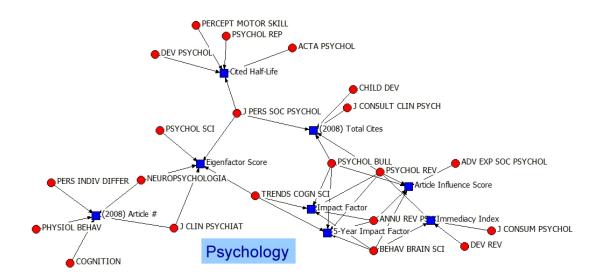
Appendix L-7a, Psychology

Abbreviated Journal Title	total times in top 5			5-Year Impact Factor	Immediacy Index		Cited Half-Life		Article Influence Score
PSYCHOL REV	5	1	1	1	1				1
ANNU REV PSYCHOL	4		1	1	1				1
BEHAV BRAIN SCI	4		1	1	1				1
PSYCHOL BULL	4	1	1	1					1
J PERS SOC PSYCHOL	3	1					1	1	
TRENDS COGN SCI	3		1	1				1	
J CLIN PSYCHIAT	2					1		1	
NEUROPSYCHOLOGIA	2					1		1	
ACTA PSYCHOL	1						1		
ADV EXP SOC PSYCHOL	1								1
CHILD DEV	1	1							
COGNITION	1					1			
DEV PSYCHOL	1						1		
DEV REV	1				1				
J CONSULT CLIN PSYCH	1	1							
J CONSUM PSYCHOL	1				1				
PERCEPT MOTOR SKILL	1						1		
PERS INDIV DIFFER	1					1			
PHYSIOL BEHAV	1					1			
PSYCHOL REP	1						1		
PSYCHOL SCI	1							1	
	40	5	5	5	5	5	5	5	5

21 journals in top 5 rankings



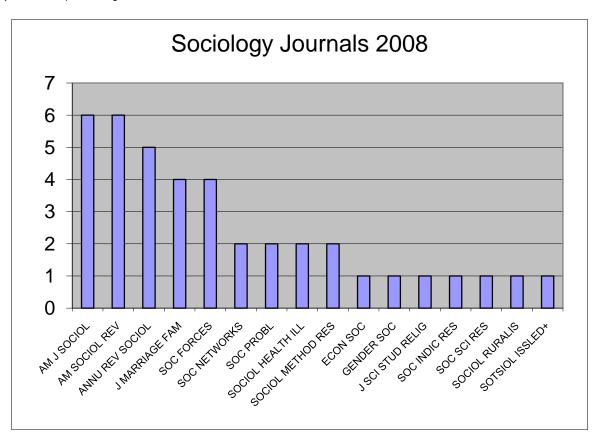
## Appendix L-7b



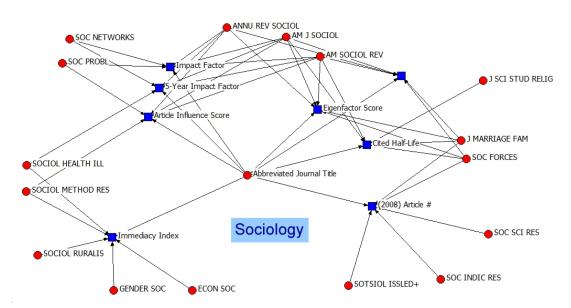
Appendix L-8a, Sociology

Abbreviated Journal Title	total times in top 5	(2008) Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	(2008) Article #		Eigenfac-tor Score	Article Influence Score
AM J SOCIOL	6	1	1	1			1	1	1
AM SOCIOL REV	6	1	1	1			1	1	1
ANNU REV SOCIOL	5	1	1	1				1	1
J MARRIAGE FAM	4	1				1	1	1	
SOC FORCES	4	1				1	1	1	
SOC NETWORKS	2		1	1					
SOC PROBL	2		1						1
SOCIOL HEALTH ILL	2			1	1				
SOCIOL METHOD RES	2				1				1
ECON SOC	1				1				
GENDER SOC	1				1				
J SCI STUD RELIG	1						1		
SOC INDIC RES	1					1			
SOC SCI RES	1					1			
SOCIOL RURALIS	1				1				
SOTSIOL ISSLED+	1					1			
	40	5	5	5	5	5	5	5	5

<sup>16</sup> journals in top 5 rankings

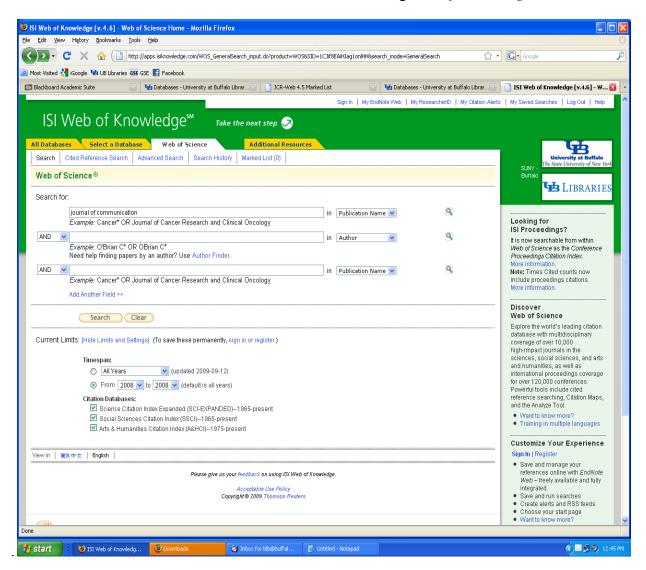


#### Appendix L-8b



Appendix M-1A

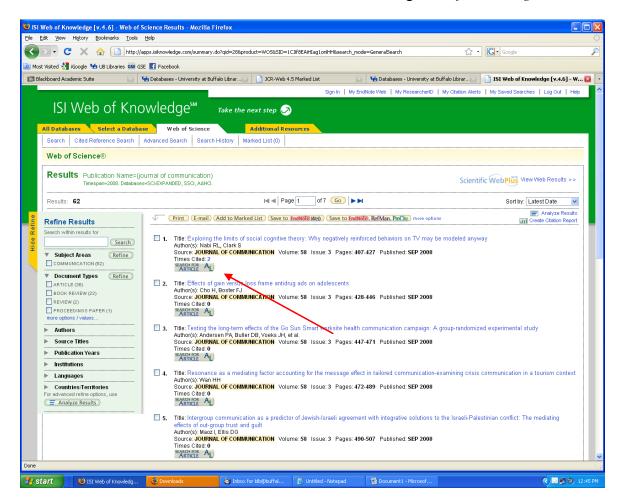
First Download Procedure: 2008 test data using Web of Knowledge®



1. Enter "Publication Name" and year. Note that at first "Timespan" was used; it was subsequentially determined, however, that entering the year in a search field as "Year Published" is preferable as at times using "timespan" selection criteria will also download items from the final journal of the previous year.

#### Appendix M-2A

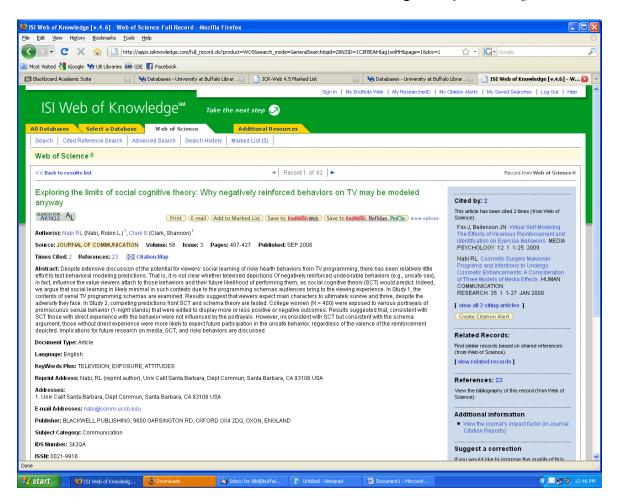
#### First Download Procedure: 2008 test data using Web of Knowledge®



2. The first article is opened.

#### Appendix M-3A

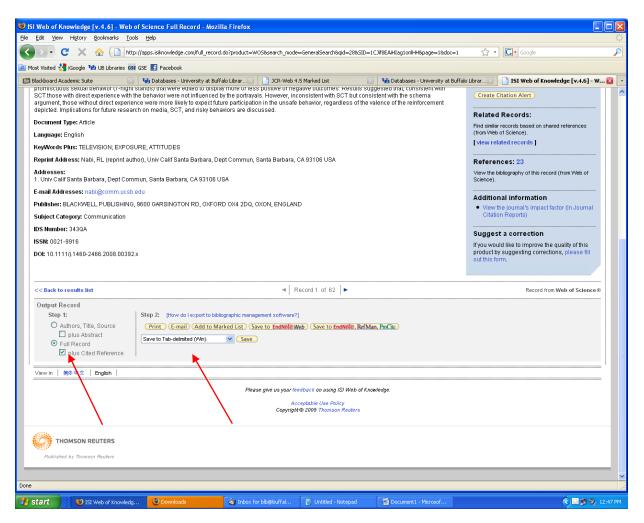
#### First Download Procedure: 2008 test data using Web of Knowledge®



3a-c were initial procedures developed for *Web of Knowledge* to download citations for each article (before it was discovered *Web of Science* allowed citation download as a choice for all items in found set).

#### Appendix M-4A

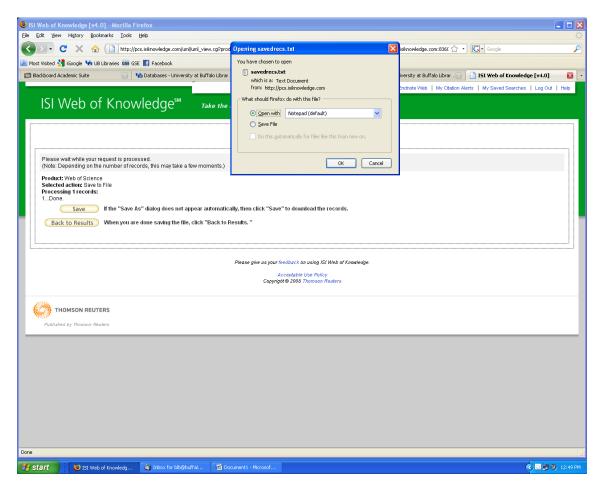
#### First Download Procedure: 2008 test data using Web of Knowledge®



3b. Download settings used to get citations for each article using *Web of Knowledge*. Appendix K shows download checkbox setting for *Web of Science* to download all items in a found set at once (this was not done initially with the 2008 test dataset).

#### Appendix M-5A

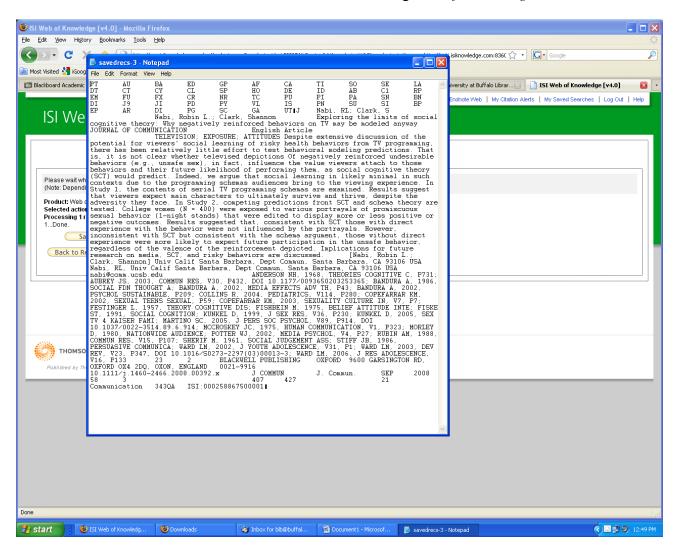
First Download Procedure: 2008 test data using Web of Knowledge®



3c Information is downloaded to a temporary file named "savedrec.txt"

#### Appendix M-6A

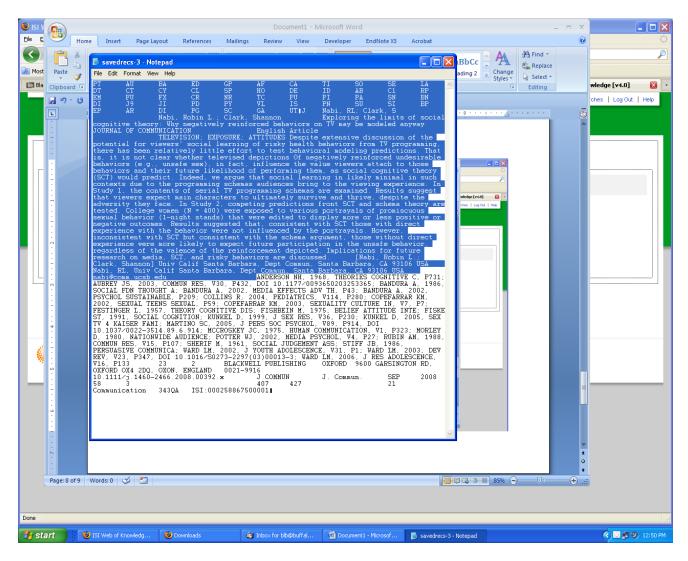
First Download Procedure: 2008 test data using Web of Knowledge®



4a-c. Show text modification prior to copying to excel spreadsheet. First, temporary file savedrees.txt is opened in notepad on pc computers (or TextEdit on macs).

Appendix M-7A

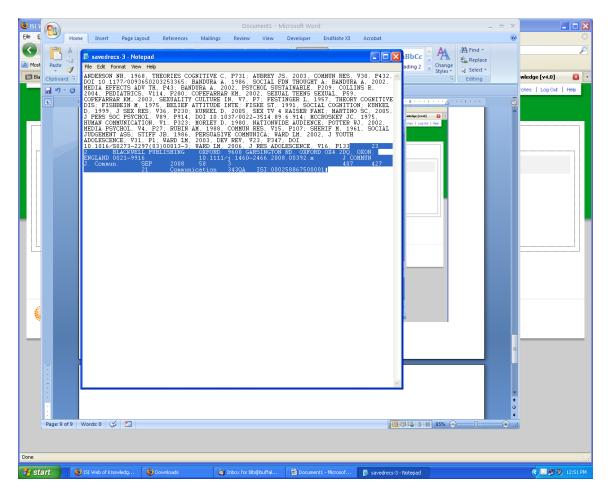
#### First Download Procedure: 2008 test data using Web of Knowledge®



4b Second, text portions of record above citations are deleted.

#### Appendix M-8A

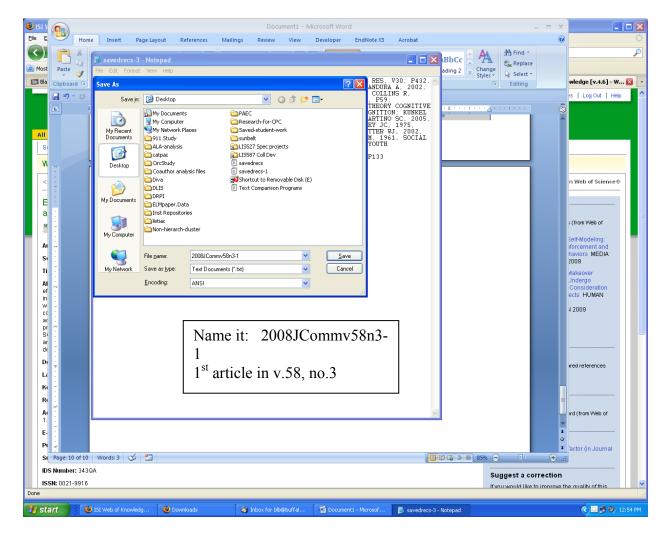
#### First Download Procedure: 2008 test data using Web of Knowledge®



4c Third, text portions of record below citations are deleted.

#### Appendix M-9A

#### First Download Procedure: 2008 test data using Web of Knowledge®



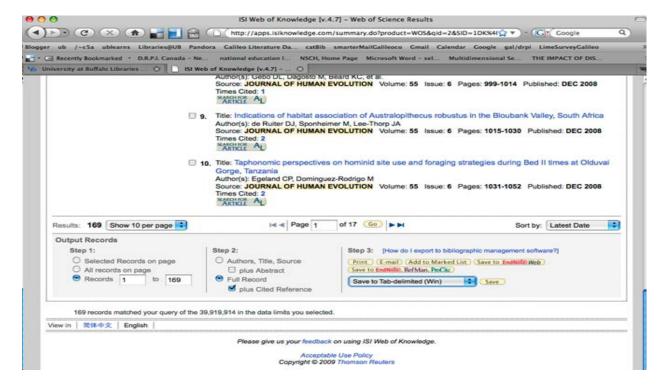
5. Temporary file is now saved as a new text file named to indicate year, journal name, and journal volume & issue.

In later project stages (i.e. non-test data), after using *Web of Science* to procure information for entire found set, the text file was opened in excel and the "text to columns" command (see Appendix Z for screen shots of this) was then used to modify format.

This consistently placed citation information in column Z (header CR from original data). The excel file was then renamed as follows: discipline abbreviation (ANTH, COM, ECON, GEOG, LIBSCI, POLSCI, PSYCH, or SOC), year found, journal name, # of total items downloaded. For example: ECON09jEconLit109.xls was the set found for Economics in 2009 from the Journal of Economic Literature and there were 109 items.

#### Appendix M-1B

#### Second Download Procedure: 2008 test data using Web of Science®



\*\*be sure to click "full record" and "plus cited references". Usually if your results don't seem like what you expect this was the problem.

To open download text file in Excel: data->getExternalData->import text file

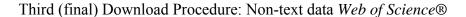
In text import wizard: choose delimited and press next, set delimiter as Tab and press next, press finish.

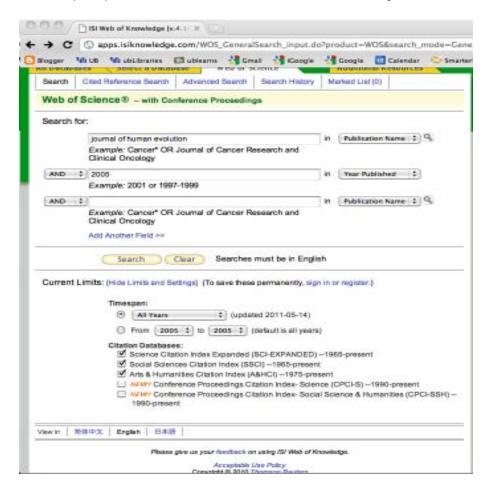
To delete non-citation bits in excel document go to column headed "CR" (column Z) and...

- 1. choose "Data"-> "text to columns"
- 2. set delimiter to semicolon
- 3. when it says "do you want to replace the contents of the destination cells?" say yes. It is ok to copy over this data because you will still have it available in the .txt file if you ever wish to see it but leaving it here will mess up your find/replacing as the journal title abbreviation often appears in later columns (ex columns AI and AJ for communication)

Note: if there are more than 71 citations then this will make your document have too many columns for .xls 2003 on a pc. Use the Mac and/or transpose (so columns are rows) or download in batches and then reassemble into single excel file.

#### Appendix N





Note that "conference proceedings" is now a choice. The same dataset will be found, however, if you leave all the default choices checked or not; accordingly all default choices were left unmodified (so "conference proceedings" was now checked)

- 1. Download full journal citation found set at once using Web of Science (as shown in Appendices K and M-1B).
- 2. On Mac, right click the .txt file created and open with Excel. Use data-> text to columns.

Since after 2008 all data was counted using an Excel count sheet, rather than find/replace command to get count and change color for top 5 journals in all 8 disciplines, the citation acquisition procedure is now done.

All citations will be in column Z (header CR) and it will not matter if the journal name also appears in other columns; the new excel count sheet will only search column Z. This allows all downloaded information to be retained and available later if desired—as well as minimizes potential for accidental error in previous text modification procedures.

Appendix O: 2008 test data citation counts

4	Α	В	C	н	K	M	0	Q	Т	W	Z	AA
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)	anthropol		EVOL ANTHROPOL	105	0	0	0	0	0	0	0	
	anthropol		AM J PHYS ANTHRO		0	0	0	0	0	1	0	
_	anthropol		CURR ANTHROPOL	128	1	0	1	0	0	0	1	
3			SOC NETWORKS	0	0	0	0	0	0	0	8	
9	anthrop	ology: JO	URNAL OF HUMA	2228	1	0	1	0	0	2	9	
0												
1	communica	57	J COMMUN - note: CA	0	102	1	0	2	1	0	0	
2	communica	ition	J HEALTH COMMUN	0	14	0	0	0	0	1	0	
3	communica	ition	PUBLIC OPIN QUART	0	24	3	0	2	1	0	2	
4	communica	ition	J COMPUT-MEDIAT C	0	0	0	0	0	0	0	0	
5	communica		HUM COMMUN RES	0	27	0	0	8	1	0	0	
6			IRNAL OF COMMU		167	4	0	12	3	1	2	
7	Commun	cation. 50	TRIAL OF COMMO		107	_				-	_	
8	economics	44	QJECON	0	2	138	0	4	2	7	14	
		41		_								
9	economics		J ECON LIT	0	2	14	0	2	1	2	8	
0	economics		J ECON PERSPECT	0	3	25	1	2	0	2	6	
1	economics		ECONOMETRICA	0	0	43	0	6	9	4	4	
2	economics		J POLIT ECON	0	4	86	0	- 6	3	2	9	
3	economic	s: QUART	RLY JOURNAL OF	0	11	306	1	20	15	17	41	
4												
5	geography	39	T I BRIT GEOGR	0	0	0	95	0	0	0	1	
6	geography	/	GLOBAL ENVIRON (	0	0	0	5	0	0	0	0	
7	geography	/	PROG HUM GEOG	0	0	0	46	0	0	0	0	
8	geography	/	ECON GEOGR	0	0	0	12	0	0	0	1	
9	geography		J ECON GEOGR	0	0	0	6	0	0	0	0	
0			SACTIONS OF TH	0	0	0	164	0	0	0	2	
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2	info&libSo	20	MIS QUART [*be su	0	0	0	0	226	0	3	0	
3	info&libSc		J AM MED INFORM	0	1	0	0	0	0	0	0	
4	info&libSc		ANNU REV INFORM	0	0	0	0	2	0	0	0	
		•		_	_	_				_	_	
5	info&libSc		INFORM SYST J	0	0	0	0	8	0	0	0	
6	info&libSc		INFORM MANAGE-A	0	0	0	0	18	0	0	0	
7_	info&lib	Sci: MIS	QUARTERLY	0	1	0	0	254	0	3	0	
8												
9	politicalSo		POLIT ANAL	0	0	0	0	0	46	0	1	
0	politicalSo	i	EUR J POLIT RES	0	2	0	0	0	1	0	0	
1	politicalSo	i	AM J POLIT SCI	0	9	0	0	0	64	0	2	
2	politicalSo	i	POLIT GEOGR	0	0	0	22	0	1	0	1	
3	politicalSo	i	EUR UNION POLIT	0	0	0	0	0	1	0	0	
4	political	Sci: POLI	TICAL ANALYSIS	0	11	0	22	0	113	0	4	
5												
6	psycholog	24	ANNU REV PSYCHO	0	5	1	0	4	0	62	0	
7	psycholog		BEHAV BRAIN SCI	3	2		0	0	0	20	0	
8	psycholog	,	PSYCHOL BULL	0	12	1	0	11	0	42	4	
9	psycholog		PSYCHOL BULL	0	5	3	1	3	0	94	2	
0			TRENDS COGN SCI	1	0	3	0	0	0	19	0	
	psycholog					_		_	_			
1	psychol	ogy: ANN	UAL REVIEW OF	4	24	8	1	18	0	237	6	
2	000101		AM COCKS: DOL	_		_	-	-	_	_	470	
3	sociology	47	AM SOCIOL REV	0	13	6	3	6	5	0	179	
4	sociology		AM J SOCIOL	0	10	1	0	5	1	0	147	
5	sociology		ANNU REV SOCIOL	0	2	0		2	0	0	61	
6	sociology		SOC PROBL	0	1	1	0	0	0	0	15	
7	sociolog	y: AMERI	CAN SOCIOLOGI	0	26	8	5	13	6	0	402	
8												
9												
0	note1: S	OC NETWO	ORKS listed in anth	ropolog	v was !	5th soci	ology in	urnal				
	note2: th	e .txt files	were searched to	verify o	count w	hen nur	mber cha	anged (	also old	files we	re	
1		to see w		, .							-	
			sci and com citatio	ne me	o oriola	ally day	unloaded	l article	n only			
2										to callt	Into	
			n missing citations								into	
			wnloads were split							ray.)		
	note5: a	I cult anth	refs in soc were in	differe	ent artic	les (so	4 refs=4	dif art	icles)			
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4			mmun # is minus 1									
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Appendix P-1

Count worksheet example for Library and Information Science 2006 (screenshot from Excel)

	P1	77	<b>†</b> (8)	$\bigcirc$ ( $fx$									
4	Α	JOURNAL OF H	В	C	D	E	F	G	Н	1	J	ΚI	LM
73	ANTH1	JOURNAL OF H EVOLUTION	UMAN	J HUM EVOL	0							Ц	
7.4	ANTH2	YEARBOOK OF ANTHROPOLOG		YEARB PHYS ANTHROPOL	0		COMMUNICA, EUR J COMMUNICAL COUNT. Citations abbreviated a						
		AMERICAN JOU	JRNAL OF	AM J PHYS ANTHROPOL			was felt to possibly be an unus						+
75	ANTH3 ANTH4	PHYSICAL ANTI SOCIAL NETWO		SOC NETWORKS	0		IN PRESS was left in count. Fin					9	$\vdash$
77	ANTH5	EVOLUTIONAR ANTHROPOLOG	Y	EVOLANTHROPOL	0		left in the count as it seemed		ely to refer to a MMUN.	an "electronic	version of I	ŀ	+
ð				total anthropology		1						ø	Þ
79 30	COM1	INTERNATIONA	L JOURNAL OF	INT J LANG COMM DIS	0		Journals counted as J COMMUN	I and the	o deleted:			Н	+
	COM2	PUBLIC OPINIO	N QUARTERLY	PUBLIC OPIN QUART	2	0	CANADIAN J COMMUNICA	and the	n deleted:			Н	+
2	сомз	JOURNAL OF H		J HEALTH COMMUN	0		INT J COMMUNICATION	0	ELECT J COM			П	Т
		HUMAN COMMI		HUM COMMUN RES						und out nope	, ELECT J COM	MI	JN
33	COM4 COM5	RESEARCH HEALTH COMM	UNICATION	HEALTH COMMUN	2		EUROPEAN J COMMUNICA EUR J COMMUNICA	0		ntirely differentios.org/www.			
35	COINS			minus j comm bits			AM J COMMUN PSYCHOL	0	mup.//www.t	totals 6/2		Tel	alli
36 37				total communication		4	EUR J COMMUN	0				H	F
		JOURNAL OF E	CONOMIC	J ECON LIT			total "bits" (subtracted in D185	) 0				Н	+
8	ECON1	QUARTERLY JO	OURNAL OF		0							Н	₽
39	ECON2	ECONOMICS	DUDUNTING N	Q J ECON	10			0				Н	
	ECON3 ECON4	SCONONE OF A	CONORIC	J ACCOUNT ECON J ECON GROWTH	1 0							4	+
12	ECON5	JOURNAL OF P	OLITICAL	J POLIT ECON	5		Aside: WESTERN J COMM is not				commun		
3	ECONS	ECUNOMY		total economics	5	16	(although J comm will work the	otner w	ay and find eve	ayuning)		$\vdash$	+
4												П	
		TRANSACTION: INSTITUTE OF E	BRITISH	T I BRIT GEOGR									
15	GEOG1	GEOGRAPHER: PROGRESS IN		BBBB 11 11 BBB 2	0	0						H	+
6	GEOG2	GEOGRAPHY GLOBAL ENVIR		PROG HUM GEOG	0		Other journals incorrectly coun	ted and t	hen deleted:			Ш	L
,		CHANGE-HUM/		GLOBAL ENVIRON CHANG									
	GEOG3	JOURNAL OF E	CONOMIC	J ECON GEOGR	0							Н	+
8	GEOG4	GEOGRAPHY ANNALS OF TH	E	S ECON GEOGR	0		counted: PSYCHOL REV (D219):					Н	+
9	GEOG5	ASSOCIATION ( GEOGRAPHER)	OF AMERICAN	ANN ASSOC AM GEOGR	0	0	deleted PERS SOC PSYCHOL REV	, 1					
0	GEUGS	GEOGRAPHER	0	minus J econ geogr from econ ge		0	deleted PERS SOC PSTCHOL REV	1				Н	+
1				total geography		0						П	F
2	LIS1	MIS QUARTERL	Y	MIS QUART	195		counted: ECON GEOGR (D198):					Н	+
Í		JOURNAL OF TI	HE AMERICAN				counted, Ecole GEOOR (D190).					П	$^{\dagger}$
4	LIS2	MEDICAL INFOR ASSOCIATION		J AM MED INFORM ASSN	0		deleted J ECON GEOGR	0					
5	LISS	INFORMATION : RESEARCH	SYSTEMS	INFORM SYST RES	116							П	Г
П	LIS3	INFORMATION A	å	INFORM MANAGE-AMSTER	7							П	T
D	LISS	JOURNAL OF M	MANAGEMENT	THE PERSON OF TH								Н	+
7	LIS4	NFORMATION	SYSTEMS	J MANAGE INFORM SYST	33	254						Н	L
8				total LIS		351						Н	+
	POLSCI1	AMERICAN POL		AM POLIT SCI REV								П	t
		AMERICAN JOU	JRNAL OF	AM J POLIT SCI	0							H	
П	POLSCI2	POLITICAL SCIE EUROPEAN JO	URNAL OF		1							H	+
2	POLSCI3	POLITICAL RES	EARCH	EUR J POLIT RES	0							Н	-
3	POLSCI4	RESOLUTION		J CONFLICT RESOLUT	1							Ш	L
4	POLSCI5	JOURNAL OF P RESEARCH	EACE	J PEACE RES	0								
5				total Political Science		2						H	İ
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	PSYCH1	SCIENCES		BEHAV BRAIN SCI	1							Н	1
	PSYCH2	PSYCHOLOGIC ANNUAL REVIE		PSYCHOL BULL	9	22						+	$\vdash$
	PSYCH3	PSYCHOLOGY		ANNU REV PSYCHOL	7							Н	1
	PSYCH4	PSYCHOLOGIC TRENDS IN CO		PSYCHOL INQ	1							+	$\vdash$
2	PSYCH5	SCIENCES		TRENDS COGN SCI minus PERS SOC PSYCHOL REV	0	10 9						H	-
3				total Psychology		18						$\vdash$	
4			W OF									П	İ
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	SOC2	AMERICAN SOC REVIEW	CIOLOGICAL	AM SOCIOL REV	6								
i		AMERICAN JOU	JRNAL OF	AM J SOCIOL									t
	SOC3	SOCIOLOGICAL SOCIOLOGICAL	L METHODS &	SOCIOL METHOD RES	4							Н	+
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1												П	
2				ALL TOTAL CITES:		407						Ш	L

Appendix P-2

#### Count worksheet example w/formulas for Library and Info Science 2006 (screenshot from Excel)

	A	l R		l P	F	F	
.73		JOURNAL OF HUMAN EVOLUTION	JHLM EVOL	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "J HUM EVOL", ""])] / LEN["J HUM EVOL"]	E	note: CANADIAN J COMMUNICA, INT J	
		YEARBOOK OF PHYSICAL ANTHROPOLOGY	YEARS PHYS ANTHROPOL			COMMUNICATION, EUROPEAN J COMMUNICA, EUR J COMMUNICA, AM J COMMUN PSYCHOL were excluded	
./4	ANTH2	AMERICAN JOURNAL OF PHYSICAL		-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "YEARB PHYS ANTHROPOL", ""]]) / LEN["YI		from count. Citations abbreviated as J COMMUNICATION	
.75	ANTHS	ANTHROPOLOGY.	AM J PHYS ANTHROPOL	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "AM J PHYS ANTHROPOL", ""))) / LEN["AM		were left in the count as this was felt to possibly be an lunusual abbreviation of J COMMUN; also J COMMUNICA	
	ANTH4	SOCIAL NETWORKS	SOC NETWORKS	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "SOC NETWORKS", ""))) / I		IN PRESS was left in count. Finally instances of ELECT J	
.77	ANTH5	EVOLUTIONARY ANTHROPOLOGY	EVOLANTHROPOL	-SUMPRODUCT( (LEN[21:Z170) - LEN[SUBSTITUTE[Z1:Z170, "EVOL ANTHROPOL", "")]) / LEN["EVOL AN			
78 79			total anthropology		-SUM(D173:D177)		
.80	COM1	INTERNATIONAL JOURNAL OF LANGUAGE &	NT JUANS COMM DIS	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "INT J LANG COMM DIS", ""]]) / LEN["INT J		Journals counted as J COMMUN and then deleted:	
81	COM2	PUBLIC OPINION QUARTERLY	PUBLIC OPIN QUART	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE(21:2170, "PUBLIC OPIN QUART", ""))) / LEN["PUBLIC			-SUMPRODUCT( (LEN[Z1
	сомз	JOURNAL OF HEALTH COMMUNICATION	J HEALTH COMMUN	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170,") HEALTH COMMUN", ""))) / LEN["] HEALT		INT J COMMUNICATION	-SUMPRODUCT( (LEN[Z1
.83		HUMAN COMMUNICATION RESEARCH	HUN COMMUNIRES	-SUMPRODUCT( (LEN[21:2170] - LEN[SUBSTITUTE[21:2170, "HUM COMMUN RES", "")]) / LEN["HUM C		EUROPEAN J COMMUNICA	-SUMPRODUCT( (LEN(Z1
.84	COMS	HEATH COMMUNICATION	HEALTH COMMUN				
85	COMS	THE RESERVE THE PERSON NAMED IN COLUMN TO SERVE THE PERSON NAMED I	menus J comm bills	-SUMPRODUCT( (LEN[21:2170] - LEN[SUBSTITUTE(21:2170,"HEALTH COMMUN", ""))) / LEN["HEALTH C		ELECT J COMMUNICATIO EUR J COMMUNICA	-SUMPRODUCT( [LEN[Z1 -SUMPRODUCT( [LEN[Z1
.86			total communication		-SUM(D180:D184)	AM J COMMUN PSYCHOL	-SUMPRODUCT( [LEN[Z1
.87		JOURNAL OF ECONOMIC LITERATURE	JECONUT			EUR J COMMUN	-SUMPRODUCT( [LEN[Z1
	ECON1	QUARTERLY JOURNAL OF ECONOMICS		-SUMPRODUCT( (LEN(21-2170) - LEN(SUBSTITUTE(21-2170, ") ECON LIT", ""))) / LEN(") ECON LIT"))		total "bits" (subtracted in D185)	-SUM(G181:G187)
.89	ECON2		Q J ECON	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "Q.J ECON", ""))) / LEN("Q			
90	ECON3 ECON4	JOURNAL OF ACCOUNTING & ECONOMICS JOURNAL OF ECONOMIC SROWTH	J ACCOUNT ECON J ECON GROWTH	-SUMPRODUCT( [LEN[21:2170] - LEN[SUBSTITUTE[21:2170, "J ACCOUNT ECON", ""])) / LEN["J ACCOUNT SON ", ""])) / LEN["J ACCOUNT SON GROWTH", ""])] / LEN["J ECON GROWTH", ""]]) / LEN["J ECON GROWTH", ""]]] / LEN["J ECON GROWTH", ""]] / LEN["J ECON GROWTH", ""]] / LEN["J ECON GROWTH", ""]] / LEN["J ECON GROWTH", ""]]] / LEN["J ECON GROWTH", ""]] / LEN["J ECON GROWTH (""]] / LEN["J ECON GROWTH (""]] / L		comm is part of commun (although J comm will work the	
.92	ECONS	JOURNAL OF POLITICAL ECONOMY	J POLIT ECON			, and a second s	
.93	CLUNS		total economics	-SUMPRODUCT( [LEN[21:2170] - LEN[SUBSTITUTE[21:2170, "J POLIT ECON", "")]) / LEN["J POLIT ECON	-SUM(D188:D192)		
94					,		
0.5		TRANSACTIONS OF THE INSTITUTE OF BRITISH GEOGRAPHERS	TIBRITGEOGR				
	GEOG1	PROGRESS IN HUMAN GEOGRAPHY	PROG HUM GEOG	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "T   BRIT GEOGR", ""]]) / LEN["T   BRIT GEO			
.96	GEOG2		PROGRAM GEOG	-SUMPRODUCT( (LEN(21-2170) - LEN(SUBSTITUTE(21-2170, "PROG HUM GEOG", ""))) / LEN("PROG HU		Other journals incorrectly counted and then deleted:	
97	GEOG3	GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS	GLOSAL ENVIRON CHANG	"SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "GLOBAL ENVIRON CHANG", ""]]) / LEN["G			
98	GEOG4	JOURNAL OF ECONOMIC GEOGRAPHY	J ECON GEOGR	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ECON GEOGR", ""))) / L		counted: PSYCHOL REV (D219):	
	0.00	ANNALS OF THE ASSOCIATION OF AMERICAN	ANN ASSOC AM GEDGR	- som no so i, decide a so i so i so i so i so i so i so i so		and the state of t	
.99	GEOG5	GEOGRAPHERS	ANN ASSOC AM GEDGR	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANN ASSOC AM GEOGR"		deleted PERS SOC PSYCHOL REV (D221)	-SUMPRODUCT( (LEN/Z1
00			monus Jeson geogr from econ geogr total geography		=MAX[0,E199-E195] =SUM(D196+D195+D1		
02			are Bulletink		-301110230-0233-02		
03	LIS1	MIS QUARTERLY	MIS QUART	-SUMPRODUCT( (LEN[21:2170] - LEN[SUBSTITUTE[21:2170, "MIS QUART", "")]) / LEN["MIS QUART"])		counted: ECON GEOGR (D198):	
		JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	J AM MED INFORMASSIN				
04	LIS2	INFORMATICS ASSOCIATION		"SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "J AM MED INFORM ASSN", ""])) / LEN["]		deleted J ECON GEOGR	-SUMPRODUCT( (LEN/Z1
05	LISS	INFORMATION SYSTEMS RESEARCH	NFORM SYST RES	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "INFORM SYST RES", "")))			
06	LIS3	INFORMATION & MANAGEMENT	NFORM MANAGE-AMSTER	-SUMPRODUCT( (LEN[21-2170) - LEN[SUBSTITUTE[21-2170, "INFORM MANAGE-AMSTER", ""))) / LEN[			
		JOURNAL OF MANAGEMENT INFORMATION	J MANAGE INFORM SYST				
07	LIS4	SYSTEMS		-SUMPRODUCT( (LEN[21:Z170) - LEN[SUBSTITUTE[Z1:Z170, "I MANAGE INFORM SYST", ""])) / LEN["J N	-SUM(D203:D207)		
09			ING US.		-3011(0203.0207)		
10	POLSCI1	AMERICAN POLITICAL SCIENCE REVIEW	AM POLIT SCI REV	"SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "AM POLIT SCI REV", ""])) / LEN["AM POLIT	1		
11	POLSC12	AMERICAN JOURNAL OF POLITICAL SCIENCE	AM J POLIT SCI	-SUMPRODUCT( (LEN[21:2170] - LEN[SUBSTITUTE[21:2170, "AM J POLIT SCI", "")]) / LEN["AM J POLIT SCI", "")])			
12	POLSCI3	EUROPEAN JOURNAL OF POLITICAL RESEARCH	EUR J POUT RES	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "EUR J POLIT RES", ""]]] / LEN["EUR J POLI			
13	POLSCI4	JOURNAL OF CONFLICT RESOLUTION	J CONFLICT RESOLUT	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "J CONFLICT RESOLUT", ""])) / LEN["J CON			
14	POLSCIS	JOURNAL OF PEACE RESEARCH	J PEACE RES	-SUMPRODUCT( [LEN[21:21:0] - LEN[SUBSTITUTE[21:21:70, "J PEACE RES", ""))) / LEN["J PEACE RES"])			
15			total Political Science	Therefore and a second state and	-SUM(0210:0214)		
16							
17	PSYCH1	BEHAVIORAL AND BRAIN SCIENCES	BEHAV BRAIN SCI	-SUMPRODUCT( (LEN(21-2170) - LEN(SUBSTITUTE(21-2170, "BEHAV BRAIN SCI", ""))) / LEN("BEHAV BR			
18	PSYCH2	PSYCHOLOGICAL BULLETIN	PSYCHOL BULL	=E222	-SUMPRODUCT( (LEN)		
19	PSYCH3	ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV PSYC-			
20	PSYCH4	PSYCHOLOGICAL NQUIRY	PSYCHOL ING	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL INQ", "			
21	PSYCH5	TRENDS IN COGNITIVE SCIENCES	TRENDS COGN SCI	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, *TRENDS COGN S			
22			HING FERS SOC PSPCHOL REV		=MAX[0,E221-G199]		
24			total Psychology		-SUM(0217:0221)		
25	SOC1	ANNUAL REVIEW OF SOCIOLOGY	ANNU REV SOCIOL	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV SOCIOL", "")))			
26		AMERICAN SOCIOLOGICAL REVIEW	AM SOCIOL REV	-SUMPRODUCT( (LEN[21:2170) - LEN[SUBSTITUTE[21:2170, "AM SOCIOL REV", ""]]) / LEN["AM SOCIOL			
27	5003	AMERICAN JOURNAL OF SOCIOLOGY	AM J SOCIOL	-SUMPRODUCT( (LEN[21:21:70] - LEN[SUBSTITUTE[21:21:70, "AM J SOCIOL", "T]]) / LEN("AM J SOCIOL",			
	5004	SOCIOLOGICAL METHODS & RESEARCH	SOCIOL METHOD RES	-SUMPRODUCT( (LEN[21:21:0] - LEN[SUBSTITUTE[21:21:10] - AM 3 SOCIOL , 1)) / LEN[ AM 3 SOCIOL ] - SUMPRODUCT( (LEN[21:21:70] - LEN[SUBSTITUTE[21:21:70] - "SOCIOL METHOD RES". ""III / LEN["SOCIOL METHOD RES". """III / LEN["SOCIOL METHOD RES". """III / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". """] / LEN["SOCIOL METHOD RES". ""] / LEN["SOCIOL METHOD RES"]			
29		SOCIOLOGIA RURALIS	SOCIOL RURALIS	-SUMPRODUCT( [LEN[21:21:70] - LEN[SUBSTITUTE[21:21:70, "SOCIOL METHOD RES", "]]] / LEN["SOCIOL RU -SUMPRODUCT( [LEN[21:21:70] - LEN[SUBSTITUTE[21:21:70, "SOCIOL RURAUS", "]]] / LEN["SOCIOL RU		l	
30			total Sociology		=SUM(D225:D229)		
31			ALL TOTAL CITES:		=SUM(E215+E230+E22		-
32							

<sup>\*</sup>To show all formulas in a worksheet at once, press control  $+ \sim$  (tilde) key; note that there is no need to shift before pressing the  $\sim$  key.

Top 5 impact factor journals for disciplines by year, 2005-2009

shading=Journals in top 5 ranking all 5 years Re: result totals reported:

- 1 ECON GEOGR totals have had J ECON GEOGR totals subtracted
- 2 J COMMUN totals have had CANADIAN J COMMUNICA, INT J COMMUNICA, EUR J COMMUNICA, AM J COMMUN PSYCHOL, AND EUR J COMMUN totals subtracted [WESTERN J COMM is not found searching for j commun even though comm is part of commun--although J comm will work the other way and find all j commun)
- 3 PSYCHOL REV totals have had PERS SOC PSYCHOL REV subtracted

#### Re: counting:

- 1 For 2005 Psychology citations range was increased [example formula: =SUMPRODUCT( (LEN(Z1:Z366)
  - LEN(SUBSTITUTE(Z1:Z366, "J HUM EVOL", ""))) / LEN("J HUM EVOL"))]
- 2 For 2005 Sociology citations range was increased [=SUMPRODUCT( (LEN(Z18:Z187) -
  - LEN(SUBSTITUTE(Z18:Z187, "EVOL ANTHROPOL", ""))) / LEN("EVOL ANTHROPOL"))]

#### Re: article # vs. record #

All possible records were downloaded from web of science. Many of these were editorial reviews (for example in Behavioral and Brain Sciences), book reviews (for example in AM J PYS ANTHROPOL), and proceedings papers (for example in American Journal of Sociology), etc.; they usually had citations though so it was felt they should be included to gain the most complete picture of possible interdisciplinary citations possible. Meeting abstracts did not include citations (for example in AM J PHYS ANTHROPOL) but were also downloaded since lack of citations did not harm results and otherwise unnecessary errors were easily introduced (Web of Science sorting by document type was not entirely reliable; this was verified in 2010 by Joseph Petrick, librarian at Alfred State University).

## 1 Anthropology 2005:

	Abbreviated Journal Title			JCR Data i)					
Rank	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	J HUM EVOL	0047-2484	2491	3.077	0.493	67	8.1		
2	EVOL ANTHROPOL	1060-1538	630	2.391	0.429	14	6.0		
3	CURR ANTHROPOL	0011-3204	1690	2.289	0.431	51	9.8		
4	AM J PHYS ANTHROPOL	0002-9483	5221	2.104	0.375	160	>10.0		
5	ANNU REV ANTHROPOL	0084-6570	944	1.644	0.086	35	>10.0		

	Anthropology,	top 5 impad	ct factor 2005
Journal name	Journal	# of	Excel count formula
	Abbrev.	records	
JOURNAL OF HUMAN	J HUM EVOL	95	=SUMPRODUCT( (LEN(Z1:Z170) -
EVOLUTION			LEN(SUBSTITUTE(Z1:Z170, "J HUM EVOL", ""))) / LEN("J HUM EVOL"))
EVOLUTIONARY	EVOL	44	=SUMPRODUCT( (LEN(Z1:Z170) -
ANTHROPOLOGY	ANTHROPOL		LEN(SUBSTITUTE(Z1:Z170, "EVOL ANTHROPOL", ""))) / LEN("EVOL ANTHROPOL"))
CURRENT	CURR	113	=SUMPRODUCT( (LEN(Z1:Z170) -
ANTHROPOLOGY	ANTHROPOL		LEN(SUBSTITUTE(Z1:Z170, "CURR ANTHROPOL", ""))) / LEN("CURR ANTHROPOL"))
AMERICAN JOURNAL OF	AM J PHYS	857	=SUMPRODUCT( (LEN(Z1:Z170) -
PHYSICAL	ANTHROPOL		LEN(SUBSTITUTE(Z1:Z170, "AM J PHYS ANTHROPOL", ""))) / LEN("AM J PHYS ANTHROPOL"))
ANTHROPOLOGY.			. ,,,
ANNUAL REVIEW OF	ANNU REV	36	=SUMPRODUCT( (LEN(Z1:Z170) -
ANTHROPOLOGY	ANTHROPOL		LEN(SUBSTITUTE(Z1:Z170, "ANNU REV ANTHROPOL", "")))

#### 2006:

	Abbreviated Journal Title		JCR Data ()							
Rank	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	J HUM EVOL	0047-2484	3003	3.267	0.759	79	8.3			
2	YEARB PHYS ANTHROPOL	0096-848X	522	2.143	0.000	4	>10.0			
3	AM J PHYS ANTHROPOL	0002-9483	6007	2.136	0.462	173	>10.0			
4	SOC NETWORKS	0378-8733	775	1.919	0.000	25	>10.0			
5	EVOL ANTHROPOL	1060-1538	648	1.875	0.467	15	6.5			

	Anthropology, top 5	impact fac	tor 2006
journal name	Journal Abbrev.	# of	Excel count formula
		records	
JOURNAL OF HUMAN	J HUM EVOL	102	=SUMPRODUCT( (LEN(Z1:Z170) -
EVOLUTION			LEN(SUBSTITUTE(Z1:Z170, "J HUM EVOL", ""))) / LEN("J HUM EVOL"))
YEARBOOK OF	YEARB PHYS	4	=SUMPRODUCT( (LEN(Z1:Z170) -
PHYSICAL	ANTHROPOL		LEN(SUBSTITUTE(Z1:Z170, "YEARB PHYS ANTHROPOL", ""))) / LEN("YEARB PHYS
ANTHROPOLOGY			ANTHROPOL"))
AMERICAN JOURNAL OF	AM J PHYS	773	=SUMPRODUCT( (LEN(Z1:Z170) -
PHYSICAL	ANTHROPOL		LEN(SUBSTITUTE(Z1:Z170, "AM J PHYS
ANTHROPOLOGY.			ANTHROPOL", ""))) / LEN("AM J PHYS ANTHROPOL"))
SOCIAL NETWORKS	SOC NETWORKS	28	=SUMPRODUCT( (LEN(Z1:Z170) -
			LEN(SUBSTITUTE(Z1:Z170, "SOC
EVOLUTION A DV	EVOLANIEUDODOL		NETWORKS", ""))) / LEN("SOC NETWORKS"))
EVOLUTIONARY	EVOL ANTHROPOL	36	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EVOL
ANTHROPOLOGY			ANTHROPOL", ""))) / LEN("EVOL
			ANTHROPOL"))

4	2007												
				JCR Data ()					Eigenfactor Metrics i				
	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor		Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score		
	1	EVOL ANTHROPOL	1060-1538	807	3.138	2.136	0.250	16	7.3	0.00437	1.278		
	2	J HUM EVOL	0047-2484	3148	2.712	3.251	1.014	71	8.5	0.01087	1.466		
	3	CURR ANTHROPOL	0011-3204	2032	2.312	2.432	0.229	48	>10.0	0.00808	1.485		
	4	AM J PHYS ANTHROPOL	0002-9483	6292	2.273	2.624	0.323	158	>10.0	0.01480	1.021		
	5	GLOBAL NETW	1470-2266	269	1.886		0.080	25	4.0	0.00213			

	Anthropology, top 5	impact factor 2	007
Journal name	Journal Abbrev.	# of records	Excel count formula
EVOLUTIONARY ANTHROPOLOGY	EVOL ANTHROPOL	42	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EVOL ANTHROPOL", ""))) / LEN("EVOL ANTHROPOL"))
JOURNAL OF HUMAN EVOLUTION	J HUM EVOL	122	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J HUM EVOL", ""))) / LEN("J HUM EVOL"))
CURRENT ANTHROPOLOGY	CURR ANTHROPOL	90	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "CURR ANTHROPOL", ""))) / LEN("CURR ANTHROPOL"))
AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY.	AM J PHYS ANTHROPOL	1064	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J PHYS ANTHROPOL", ""))) / LEN("AM J PHYS ANTHROPOL"))
GLOBAL NETWORKS-A JOURNAL OF TRANSNATIONAL AFFAIRS	GLOBAL NETW	28	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "GLOBAL NETW", ""))) / LEN("GLOBAL NETW"))

#### 2008:

	, .				11.16	vata (j)			Eigenfactor Metrics i)			
					JOIC	Jaca D			Eigenractor Metrics ()			
Rank	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score		
1	J HUM EVOL	0047-2484	4519	3.550	4.310	1.336	137	8.6	0.00983	1.297		
2	EVOL ANTHROPOL	1060-1538	966	3.484	3.725	1.111	18	7.6	0.00298	1.475		
3	AM J PHYS ANTHROPOL	0002-9483	7241	2.353	2.690	0.456	147	>10.0	0.01258	0.830		
4	SOC NETWORKS	0378-8733	1276	2.068	2.929	0.276	29	>10.0	0.00318	1.269		
5	CURR ANTHROPOL	0011-3204	2413	2.032	2.718	0.412	51	>10.0	0.00681	1.313		

Anthropology, top 5 impact factor 2008									
Journal name	Journal Abbrev.	# of records	Excel count formula						
JOURNAL OF HUMAN EVOLUTION	J HUM EVOL	169	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J HUM EVOL", ""))) / LEN("J HUM EVOL"))						
EVOLUTIONARY ANTHROPOLOGY	EVOL ANTHROPOL	37	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EVOL ANTHROPOL", ""))) / LEN("EVOL ANTHROPOL"))						
AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY.	AM J PHYS ANTHROPOL	940	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J PHYS ANTHROPOL", ""))) / LEN("AM J PHYS ANTHROPOL"))						
SOCIAL NETWORKS	SOC NETWORKS	29	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "SOC NETWORKS", ""))) / LEN("SOC NETWORKS"))						
CURRENT ANTHROPOLOGY	CURR ANTHROPOL	109	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "CURR ANTHROPOL", ""))) / LEN("CURR ANTHROPOL"))						

200											
		ISSN	JCR Data ()						Eigenfactor Metrics i		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	EVOL ANTHROPOL	1060-1538	1235	3.382	3.864	0.714	14	8.5	0.00340	2.012	
2	CULT ANTHROPOL	0886-7356	962	3.350	3.097	0.810	21	9.3	0.00293	1.365	
3	J HUM EVOL	0047-2484	5242	2.987	4.077	1.273	99	8.9	0.01486	1.664	
4	AM J PHYS ANTHROPOL	0002-9483	7924	2.756	2.903	0.665	170	>10.0	0.01473	0.978	
5	SOC NETWORKS	0378-8733	1485	2.349	3.328	0.370	27	>10.0	0.00357	1.369	

	Anthropology, top 5 impact factor 2009										
Journal name	Journal Abbrev.	# of records	Excel count formula								
EVOLUTIONARY ANTHROPOLOGY	EVOL ANTHROPOL	52	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EVOL ANTHROPOL", ""))) / LEN("EVOL ANTHROPOL"))								
CULTURAL ANTHROPOLOGY	CULT ANTHROPOL	25	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "CULT ANTHROPOL", ""))) / LEN("CULT ANTHROPOL"))								
JOURNAL OF HUMAN EVOLUTION	J HUM EVOL	119	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J HUM EVOL", ""))) / LEN("J HUM EVOL"))								
AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY	AM J PHYS ANTHROPOL	1180	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J PHYS ANTHROPOL", ""))) / LEN("AM J PHYS ANTHROPOL"))								
SOCIAL NETWORKS	SOC NETWORKS	27	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "SOC NETWORKS", ""))) / LEN("SOC NETWORKS"))								

# 2 Communication 2005:

	Abbreviated Journal Title (linked to journal information)		JCR Data i)							
Rank		ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	PUBLIC OPIN QUART	0033-362X	1700	1.509	0.324	34	>10.0			
2	COMMUN THEOR	1050-3293	220	1.472	0.182	22	6.6			
3	RES LANG SOC INTERAC	0835-1813	245	1.357	0.500	14	7.4			
4	POLIT COMMUN	1058-4609	347	1.261	0.074	27	5.7			
5	COMMUN RES	0093-6502	990	1.255	0.214	28	>10.0			

	Communication, top	5 impact fact	or 2005
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
PUBLIC OPINION	PUBLIC OPIN	67	=SUMPRODUCT( (LEN(Z1:Z170) -
QUARTERLY	QUART		LEN(SUBSTITUTE(Z1:Z170, "PUBLIC OPIN
COMMUNICATION THEORY	001414111711700	0.5	QUART", ""))) / LEN("PUBLIC OPIN QUART"))
COMMUNICATION THEORY	COMMUN THEOR	25	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "COMMUN
			THEOR", ""))) / LEN("COMMUN THEOR"))
RESEARCH ON LANGUAGE	RES LANG SOC	15	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "RES LANG SOC
AND SOCIAL INTERACTION	INTERAC		INTERAC", ""))) / LEN("RES LANG SOC
			INTERAC"))
POLITICAL	POLIT COMMUN	57	=SUMPRODUCT( (LEN(Z1:Z170) -
COMMUNICATION			LEN(SUBSTITUTE(Z1:Z170, "POLIT
00101000	001444115		COMMUN", ""))) / LEN("POLIT COMMUN"))
COMMUNICATION	COMMUN RES	29	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "COMMUN RES",
RESEARCH			""))) / LEN("COMMUN RES"))

200	,										
		Abbreviated Journal Title		JCR Data (i)							
Ra	ınk	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
	1	INT J LANG COMM DIS	1368-2822	340	1.612	0.135	37	5.2			
	2	PUBLIC OPIN QUART	0033-362X	1970	1.550	0.212	33	>10.0			
:	3	J HEALTH COMMUN	1081-0730	550	1.387	0.161	62	4.4			
	4	HUM COMMUN RES	0360-3989	923	1.372	0.143	21	>10.0			
	5	HEALTH COMMUN	1041-0236	414	1.169	0.208	53	6.6			

Communication, top 5 impact factor 2006										
Journal name	Journal Abbrev.	# of	Excel count formula							
		records								
INTERNATIONAL JOURNAL OF	INT J LANG COMM	55	=SUMPRODUCT( (LEN(Z1:Z170) -							
LANGUAGE &	DIS		LEN(SUBSTITUTE(Z1:Z170, "INT J LANG							
COMMUNICATION DISORDERS			COMM DIS", ""))) / LEN("INT J LANG COMM							
DUDU IO ODINIJONI	5115116 65111		DIS"))							
PUBLIC OPINION	PUBLIC OPIN	52	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PUBLIC OPIN							
QUARTERLY	QUART		QUART". ""))) / LEN("PUBLIC OPIN QUART"))							
JOURNAL OF HEALTH	J HEALTH COMMUN	88	=SUMPRODUCT( (LEN(Z1:Z170) -							
	J HEALTH COMMON	00	LEN(SUBSTITUTE(Z1:Z170,"J HEALTH							
COMMUNICATION			COMMUN", ""))) / LEN("J HEALTH COMMUN"))							
HUMAN COMMUNICATION	HUM COMMUN RES	21	=SUMPRODUCT( (LEN(Z1:Z170) -							
RESEARCH			LEN(SUBSTITUTE(Z1:Z170, "HÚM COMMUN							
RESEARCH			RES", ""))) / LEN("HUM COMMUN RES"))							
HEALTH COMMUNICATION	HEALTH COMMUN	62	=SUMPRODUCT( (LEN(Z1:Z170) -							
			LEN(SUBSTITUTE(Z1:Z170,"HEALTH							
			COMMUN", ""))) / LEN("HEALTH COMMUN"))							

#### 2007:

	Abbreviated Journal Title (linked to journal information)		JCR Data i)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank		ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	PUBLIC OPIN QUART	0033-362X	2189	2.030	2.349	0.658	38	>10.0	0.00498	1.467	
2	J HEALTH COMMUN	1081-0730	709	1.836	2.021	0.136	44	4.0	0.00433	0.773	
3	AUGMENT ALTERN COMM	0743-4618	557	1.591		0.889	27	9.0	0.00058		
4	COMMUN MONOGR	0363-7751	651	1.512	1.491	0.121	33	>10.0	0.00154	0.613	
5	COMMUN RES	0093-6502	1305	1.481	2.191	0.103	29	>10.0	0.00329	1.041	

	Communication, top 5 impact factor 2007									
Journal name	Journal Abbrev.	# of records	Excel count formula							
PUBLIC OPINION QUARTERLY	PUBLIC OPIN QUART	53	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PUBLIC OPIN QUART", ""))) / LEN("PUBLIC OPIN QUART"))							
JOURNAL OF HEALTH COMMUNICATION	J HEALTH COMMUN	64	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,"J HEALTH COMMUN", ""))) / LEN("J HEALTH COMMUN"))							
AUGMENTATIVE AND ALTERNATIVE COMMUNICATION	AUGMENT ALTERN COMM	32	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AUGMENT ALTERN COMM", ""))) / LEN("AUGMENT ALTERN COMM"))							
COMMUNICATION MONOGRAPHS	COMMUN MONOGR	35	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "COMMUN MONOGR", ""))) / LEN("COMMUN MONOGR"))							
COMMUNICATION RESEARCH	COMMUN RES	29	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "COMMUN RES", ""))) / LEN("COMMUN RES"))							

	Abbreviated Journal Title (linked to journal information)		JCR Data (j)						Eigenfactor <sup>TM</sup> Metrics i		
Rank		ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	J COMMUN	0021-9916	1816	2.266	2.365	0.122	41	9.9	0.00514	1.059	
2	J HEALTH COMMUN	1081-0730	955	2.057	2.431	0.087	46	4.6	0.00579	0.998	
3	PUBLIC OPIN QUART	0033-362X	2565	1.972	2.606	0.262	42	>10.0	0.00482	1.360	
4	J COMPUT-MEDIAT COMM	1083-6101	803	1.901		0.250	36	4.6	0.00360		
5	HUM COMMUN RES	0360-3989	1339	1.689	2.112	0.423	26	>10.0	0.00271	1.054	

	Communication,	top 5 impact f	actor 2008
Journal name	Journal Abbrev.	# of records	
JOURNAL OF COMMUNICATION	J COMMUN	57	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J COMMUN", ""))) /
COMMUNICATION			LEN("J COMMUN"))
JOURNAL OF HEALTH	J HEALTH	64	=SUMPRODUCT( (LEN(Z1:Z170) -
COMMUNICATION	COMMUN		LEN(SUBSTITUTE(Z1:Z170, "J HEALTH COMMUN", ""))) / LEN("J HEALTH COMMUN"))
PUBLIC OPINION	PUBLIC OPIN	62	=SUMPRODUCT( (LEN(Z1:Z170) -
QUARTERLY	QUART		LEN(SUBSTITUTE(Z1:Z170, "PUBLIC OPIN QUART", ""))) / LEN("PUBLIC OPIN QUART"))
			QUART , ))) / EEN( TOBELO OF IN QUART ))
JOURNAL OF COMPUTER-	J COMPUT-	38	=SUMPRODUCT( (LEN(Z1:Z170) -
MEDIATED COMMUNICATION	MEDIAT COMM		LEN(SUBSTITUTE(Z1:Z170, "J COMPUT-MEDIAT COMM", "")
HUMAN COMMUNICATION	HUM COMMUN	26	=SUMPRODUCT( (LEN(Z1:Z170) -
RESEARCH	RES		LEN(SUBSTITUTE(Z1:Z170,"HUM COMMUN RES", ""))) / LEN("HUM COMMUN RES"))
			/// LEIN HOW COMMON RES /)

#### 2009:

	Abbreviated Journal Title (linked to journal information)		JCK Data (j)						Eigenfactor'" Metrics j	
Rank		ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
1	J COMPUT-MEDIAT COMM	1083-6101	1279	3.639		0.017	60	4.6	0.00457	
2	J COMMUN	0021-9916	2188	2.415	2.765	0.189	37	>10.0	0.00557	1.230
3	HUM COMMUN RES	0360-3989	1466	2.200	2.482	0.207	29	>10.0	0.00266	1.120
4	PUBLIC UNDERST SCI	0963-6625	670	1.981	2.124	0.104	48	8.1	0.00254	1.004
5	CYBERPSYCHOL BEHAV	1094-9313	1940	1.591	2.472	0.150	100	5.2	0.00565	0.576

	Communication, top	5 impact f	actor 2009
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
JOURNAL OF COMPUTER- MEDIATED COMMUNICATION	J COMPUT- MEDIAT COMM	60	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J COMPUT-MEDIAT COMM", ""))) / LEN("J COMPUT-MEDIAT COMM"))
JOURNAL OF COMMUNICATION	J COMMUN	69	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J COMMUN", ""))) / LEN("J COMMUN"))
HUMAN COMMUNICATION RESEARCH	HUM COMMUN RES	29	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,"HUM COMMUN RES", ""))) / LEN("HUM COMMUN RES"))
PUBLIC UNDERSTANDING OF SCIENCE	PUBLIC UNDERST SCI	54	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PUBLIC UNDERST SCI", ""))) / LEN("PUBLIC UNDERST SCI"))
CYBERPSYCHOLOGY & BEHAVIOR	CYBERPSYCHOL BEHAV	286	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,"CYBERPSYCHOL BEHAV", ""))) / LEN("CYBERPSYCHOL BEHAV"))

# 3 Economics 2005:

	Abbreviated Journal Title		JCR Data i)						
Rank	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	Q J ECON	0033-5533	6947	4.775	0.500	40	>10.0		
2	J ECON LIT	0022-0515	2649	4.054	0.529	17	8.6		
3	J ECON GEOGR	1468-2702	270	3.222	0.370	27	2.8		
4	J HEALTH ECON	0167-6296	1909	2.708	0.316	57	6.8		
5	J ECON PERSPECT	0895-3309	2713	2.634	0.385	39	8.4		

	Economics, top 5 impact factor 2005										
Journal name	Journal Abbrev.	# of	Excel count formula								
		records									
QUARTERLY JOURNAL OF	QJECON	40	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", "")))								
ECONOMICS			/ LEN("Q J ECON"))								
JOURNAL OF ECONOMIC	J ECON LIT	120	=SUMPRODUCT( (LEN(Z1:Z170) -								
LITERATURE			LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", ""))) / LEN("Q J ECON"))								
JOURNAL OF ECONOMIC	J ECON GEOGR	34	=SUMPRODUCT( (LEN(Z1:Z170) -								
GEOGRAPHY			LEN(SUBSTITUTE(Z1:Z170, "J ECON								
JOURNAL OF HEALTH	J HEALTH ECON	63	GEOGR", ""))) / LEN("J ECON GEOGR")) =SUMPRODUCT( (LEN(Z1:Z170) -								
ECONOMICS	J HEALTH ECON	03	LEN(SUBSTITUTE(Z1:Z170, "J HEALTH								
ECONOMICS			ECON", ""))) / LEN("J HEALTH ECON"))								
JOURNAL OF ECONOMIC	J ECON	59	=SUMPRODUCT( (LEN(Z1:Z170) -								
PERSPECTIVES	PERSPECT		LEN(SUBSTITUTE(Z1:Z170, "J ECON								
			PERSPECT", ""))) / LEN("J ECON PERSPECT"))								
		1	I LINOI LOT ]]								

#### 2006:

Rank	Abbreviated Journal Title		JCR Data i)						
	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	J ECON LIT	0022-0515	2845	4.667	0.650	20	9.1		
2	Q J ECON	0033-5533	7962	3.938	0.750	40	>10.0		
3	J ACCOUNT ECON	0165-4101	1788	3.360	0.485	33	9.1		
4	J ECON GROWTH	1381-4338	579	3.240	0.000	12	6.6		
5	J POLIT ECON	0022-3808	10150	3.194	0.405	37	>10.0		

	Econom	ics, top 5 i	mpact factor 2006
Journal name	Journal	# of	Excel count formula
	Abbrev.	records	
JOURNAL OF ECONOMIC	J ECON	92	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
LITERATURE	LIT		"J ECON LIT", ""))) / LEN("J ECON LIT"))
QUARTERLY JOURNAL	QJECON	40	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
OF ECONOMICS			"Q J ECON", ""))) / LEN("Q J ECON"))
JOURNAL OF	J	34	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
ACCOUNTING &	ACCOUNT		"J ACCOUNT ECON", ""))) / LEN("J ACCOUNT ECON"))
ECONOMICS	ECON		
JOURNAL OF ECONOMIC	J ECON	12	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
GROWTH	GROWTH		"J ECON GROWTH", ""))) / LEN("J ECON GROWTH"))
JOURNAL OF POLITICAL	J POLIT	38	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
ECONOMY	ECON		"J POLIT ECON", ""))) / LEN("J POLIT ECON"))

	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data i)					Eigenfactor <sup>TM</sup> Metrics i)		
Rank			Total Cites	Impact Factor	5-Year Impact Factor		Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
1	J POLIT ECON	0022-3808	10878	4.190	4.800	0.889	27	>10.0	0.04803	9.181
2	J ECON LIT	0022-0515	3201	3.973	7.161	0.667	18	9.8	0.01805	8.347
3	Q J ECON	0033-5533	8713	3.688	7.135	0.773	44	>10.0	0.05227	11.241
4	J ACCOUNT ECON	0165-4101	1784	3.034	3.417	0.412	34	9.0	0.02529	7.824
5	J FINANC ECON	0304-405X	6980	2.988	4.084	0.573	103	>10.0	0.04276	5.123

Economics, top 5 impact factor 2007									
Journal name	Journal Abbrev.	# of	Excel count formula						
		records							
JOURNAL OF POLITICAL ECONOMY	J POLIT ECON	35	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J POLIT ECON", ""))) / LEN("J POLIT ECON"))						
JOURNAL OF ECONOMIC LITERATURE	ONOMIC J ECON LIT		=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ECON LIT", ""))) / LEN("J ECON LIT"))						
QUARTERLY JOURNAL OF ECONOMICS	Q J ECON	44	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", ""))) / LEN("Q J ECON"))						
JOURNAL OF ACCOUNTING & ECONOMICS	J ACCOUNT ECON	34	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ACCOUNT ECON", ""))) / LEN("J ACCOUNT ECON"))						
JOURNAL OF FINANCIAL ECONOMICS	J FINANC ECON	105	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J FINANC ECON", ""))) / LEN("J FINANC ECON"))						

#### 2008:

_	-000	•									
		Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data i)					Eigenfactor <sup>TM</sup> Metrics i)		
	Rank			Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
	1	Q J ECON	0033-5533	11723	5.048	8.716	0.756	41	>10.0	0.05416	11.978
	2	J ECON LIT	0022-0515	4069	4.842	8.380	0.842	19	>10.0	0.01805	8.852
	3	J ECON PERSPECT	0895-3309	4261	3.944	5.057	0.558	43	9.4	0.02485	5.340
	4	ECONOMETRICA	0012-9682	17091	3.865	4.943	0.255	47	>10.0	0.04527	7.243
	5	J POLIT ECON	0022-3808	13671	3.725	5.742	0.419	31	>10.0	0.04086	8.821

	Economics, top 5 impact factor 2008									
Journal name	Journal Abbrev.	# of	Excel count formula							
		records								
QUARTERLY JOURNAL OF ECONOMICS	QJECON	41	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", ""))) / LEN("Q J ECON"))							
JOURNAL OF ECONOMIC LITERATURE	J ECON LIT	88	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", ""))) / LEN("Q J ECON"))							
JOURNAL OF ECONOMIC PERSPECTIVES	J ECON PERSPECT	52	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ECON PERSPECT", ""))) / LEN("J ECON PERSPECT"))							
ECONOMETRICA	ECONOMETRICA	49	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ECONOMETRICA", ""))) / LEN("ECONOMETRICA"))							
JOURNAL OF POLITICAL ECONOMY	J POLIT ECON	32	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J POLIT ECON", ""))) / LEN("J POLIT ECON"))							

	Abbreviated Journal Title (linked to journal information)		JCR Data (i)					Eigenfactor <sup>TM</sup> Metrics i)		
Rank		ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
1	J ECON LIT	0022-0515	5018	6.919	8.922	1.000	18	>10.0	0.01568	8.354
2	Q J ECON	0033-5533	13985	5.647	8.171	0.953	43	>10.0	0.05051	11.811
3	J FINANC ECON	0304-405X	12058	4.020	5.675	0.376	93	>10.0	0.06032	6.572
4	ECONOMETRICA	0012-9682	20643	4.000	5.321	0.246	61	>10.0	0.04312	7.712
5	J ECON GEOGR	1468-2702	1146	3.937	4.705	0.543	35	5.2	0.00515	1.691

	Economics, top 5 impact factor 2009										
Journal name	Journal Abbrev.	# of	Excel count formula								
		records									
JOURNAL OF ECONOMIC	J ECON LIT	109	=SUMPRODUCT( (LEN(Z1:Z170) -								
LITERATURE			LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", ""))) / LEN("Q J ECON"))								
QUARTERLY JOURNAL OF	QJECON	44	=SUMPRODUCT( (LEN(Z1:Z170) -								
ECONOMICS			LEN(SUBSTITUTE(Z1:Z170, "Q J ECON", ""))) / LEN("Q J ECON"))								
JOURNAL OF FINANCIAL	J FINANC ECON	94	=SUMPRODUCT( (LEN(Z1:Z170) -								
ECONOMICS			LEN(SUBSTITUTE(Z1:Z170, "J FINANC ECON", ""))) / LEN("J FINANC ECON"))								
ECONOMETRICA	ECONOMETRICA	63	=SUMPRODUCT( (LEN(Z1:Z170) -								
LOGIVONIETICION	2001OMETHOX	00	LEN(SUBSTITUTE(Z1:Z170,								
			"ECONOMETRICA", ""))) /								
101151111 05 5001101110			LEN("ECONOMETRICA"))								
JOURNAL OF ECONOMIC	J ECON GEOGR	47	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ECON								
GEOGRAPHY			GEOGR", ""))) / LEN("J ECON GEOGR"))								

#### 4 Geography

#### 2005:

2003.									
	Abbreviated Journal Title (linked to journal information)		JCR Data (i)						
Rank		ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	J ECON GEOGR	1468-2702	270	3.222	0.370	27	2.8		
2	PROG HUM GEOG	0309-1325	1069	2.616	0.286	42	5.0		
3	T I BRIT GEOGR	0020-2754	986	2.218	0.400	30	8.7		
4	GLOBAL ENVIRON CHANG	0959-3780	615	1.952	0.862	29	4.8		
5	ECON GEOGR	0013-0095	661	1.757	0.200	15	9.1		

5 <u>ECON GEOGR</u>	0013-0095	991	1./5/	0.200	15	9.1
	Geography, top 5	impact fac	tor 2005			
Journal name	Journal Abbrev.	# of		Excel count for	mula	
		records				
JOURNAL OF ECONOMIC	J ECON GEOGR	34		DUCT( (LEN(Z1:Z17	,	
GEOGRAPHY			× .	TITUTE(Z1:Z170, "J J ECON GEOGR"))	ECON GEO	GR",
PROGRESS IN HUMAN	PROG HUM	126	///	DUCT( (LEN(Z1:Z17)	0) -	
GEOGRAPHY	GEOG	120		TITUTE(Z1:Z170, "G	,	IRON
GEOGRAPHI	GEOG			))) / LEN("GLOBAL I	ENVIRON	
			CHANG"))			
TRANSACTIONS OF THE	T I BRIT GEOGR	43		DUCT( (LEN(Z1:Z17)   ITUTE(Z1:Z170, "T		OD"
INSTITUTE OF BRITISH				T I BRIT GEOGR"))	I BRII GEO	JK,
GEOGRAPHERS			///	T T DIGIT OLOGIC //		
GLOBAL ENVIRONMENTAL	GLOBAL	37		DUCT( (LEN(Z1:Z17		
CHANGE-HUMAN AND	ENVIRON			TITUTE <mark>(Z1:Z170</mark> , "G ))) / LEN("GLOBAL		IRON
POLICY DIMENSIONS	CHANG		CHANG"))	))) / LEIN( GLOBAL I	INVIRON	
ECONOMIC GEOGRAPHY	ECON GEOGR	34		DUCT( (LEN(Z1:Z17		
				TITUTE(Z1:Z170, "E	CON GEOGF	₹",
			""))) / LEN("I	ECON GEOGR"))		

2000.									
	Abbreviated Journal Title	ISSN	JCR Data (j)						
Rank	(linked to journal information)		Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	T I BRIT GEOGR	0020-2754	1154	3.500	0.133	30	7.9		
2	PROG HUM GEOG	0309-1325	1410	3.440	0.333	42	5.6		
3	GLOBAL ENVIRON CHANG	0959-3780	779	2.600	1.200	30	5.3		
4	J ECON GEOGR	1468-2702	403	2.519	0.591	22	3.4		
5	ANN ASSOC AM GEOGR	0004-5608	1872	2.141	0.275	40	9.4		

Ge	eography, top 5 impa	act factor 200	6
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
TRANSACTIONS OF THE	TIBRIT	38	=SUMPRODUCT( (LEN(Z1:Z170) -
INSTITUTE OF BRITISH	GEOGR		LEN(SUBSTITUTE(Z1:Z170, "T I BRIT GEOGR", ""))) / LEN("T I BRIT GEOGR"))
GEOGRAPHERS			GLOGIC, JJJ/ LEN( 11BICH GLOGIC))
PROGRESS IN HUMAN	PROG HUM	124	=SUMPRODUCT( (LEN(Z1:Z170) -
GEOGRAPHY	GEOG		LEN(SUBSTITUTE(Z1:Z170, "PROG HUM GEOG", ""))) / LEN("PROG HUM GEOG"))
GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS	GLOBAL ENVIRON CHANG	38	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "GLOBAL ENVIRON CHANG", ""))) / LEN("GLOBAL ENVIRON CHANG")
JOURNAL OF ECONOMIC	J ECON	41	=SUMPRODUCT( (LEN(Z1:Z170) -
GEOGRAPHY	GEOGR		LEN(SUBSTITUTE(Z1:Z170, "J ECON GEOGR", ""))) / LEN("J ECON GEOGR"))
ANNALS OF THE ASSOCIATION	ANN ASSOC	93	=SUMPRODUCT( (LEN(Z1:Z170) -
OF AMERICAN GEOGRAPHERS	AM GEOGR		LEN(SUBSTITUTE(Z1:Z170, "ANN ASSOC AM GEOGR", ""))) / LEN("ANN
			ASSOC AM GEOGR"))

#### 2007:

	Abbreviated Journal Title (linked to journal information)				JCR I	Data 🕦			Eigenfactor <sup>TM</sup> Metrics i)		
Rank		ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	T I BRIT GEOGR	0020-2754	1402	4.067	4.336	0.433	30	6.9	0.00561	1.763	
2	GLOBAL ENVIRON CHANG	0959-3780	998	3.915	3.727	0.649	37	5.3	0.00547	1.645	
3	PROG HUM GEOG	0309-1325	1638	3.762	4.052	0.372	43	5.6	0.00735	1.483	
4	ANN ASSOC AM GEOGR	0004-5608	2008	2.962	3.333	0.561	41	8.8	0.00677	1.386	
5	J ECON GEOGR	1468-2702	571	2.679	4.050	0.933	30	4.0	0.00478	1.728	

	Geography, top	5 impact fa	actor 2007
Journal name	Journal	# of	Excel count formula
	Abbrev.	records	
TRANSACTIONS OF THE INSTITUTE OF BRITISH GEOGRAPHERS	T I BRIT GEOGR	42	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "T I BRIT GEOGR", ""))) / LEN("T I BRIT GEOGR"))
GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS	GLOBAL ENVIRON CHANG	42	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "GLOBAL ENVIRON CHANG", ""))) / LEN("GLOBAL ENVIRON CHANG"))
PROGRESS IN HUMAN GEOGRAPHY	PROG HUM GEOG	114	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PROG HUM GEOG", ""))) /LEN("PROG HUM GEOG"))
ANNALS OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS	ANN ASSOC AM GEOGR	85	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANN ASSOC AM GEOGR", ""))) / LEN("ANN ASSOC AM GEOGR"))
JOURNAL OF ECONOMIC GEOGRAPHY	J ECON GEOGR	40	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ECON GEOGR", ""))) / LEN("J ECON GEOGR"))

			JCR Data ()						Eigenfactor <sup>TM</sup> Metrics ()		
Rank	Rank (linked to journal information) ISSN	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	T I BRIT GEOGR	0020-2754	1581	3.967	4.600	0.455	33	7.3	0.00588	1.830	
2	GLOBAL ENVIRON CHANG	0959-3780	1291	3.955	4.272	0.524	63	5.1	0.00564	1.611	
3	PROG HUM GEOG	0309-1325	1889	3.482	4.305	0.575	40	6.0	0.00749	1.586	
4	ECON GEOGR	0013-0095	1048	2.968	3.578	0.438	16	10.0	0.00224	1.217	
5	J ECON GEOGR	1468-2702	763	2.932	4.557	0.576	33	4.8	0.00538	1.854	

	Geography, top 5	impact factor	2008
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
TRANSACTIONS OF THE	T I BRIT GEOGR	39	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "T I BRIT
INSTITUTE OF BRITISH			GEOGR", ""))) / LEN("T I BRIT GEOGR"))
GEOGRAPHERS			. "
GLOBAL ENVIRONMENTAL	GLOBAL	73	=SUMPRODUCT( (LEN(Z1:Z170) -
CHANGE-HUMAN AND	ENVIRON		LEN(SUBSTITUTE(Z1:Z170, "GLOBAL ENVIRON CHANG", ""))) / LEN("GLOBAL
POLICY DIMENSIONS	CHANG		ENVIRON CHANG"))
PROGRESS IN HUMAN	PROG HUM	109	=SUMPRODUCT( (LEN(Z1:Z170) -
GEOGRAPHY	GEOG		LEN(SUBSTITUTE(Z1:Z170, "PROG HUM
5001101110 05000 151111	5001105005	4.4	GEOG", ""))) / LEN("PROG HUM GEOG"))
ECONOMIC GEOGRAPHY	ECON GEOGR	44	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ECON GEOGR",
			""))) / LEN("ECON GEOGR"))
JOURNAL OF ECONOMIC	J ECON GEOGR	47	=SUMPRODUCT( (LEN(Z1:Z170) -
GEOGRAPHY			LEN(SUBSTITUTE(Z1:Z170, "J ECON
323313111			GEOGR", ""))) / LEN("J ECON GEOGR"))

#### 2009:

	Abbreviated Journal Title		JCR Data i)						Eigenfactor <sup>TM</sup> Metrics j		
Rank (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor		Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score		
1	J ECON GEOGR	1468-2702	1146	3.937	4.705	0.543	35	5.2	0.00515	1.691	
2	PROG HUM GEOG	0309-1325	2402	3.590	5.158	0.468	47	6.6	0.00812	1.863	
3	ECON GEOGR	0013-0095	1311	3.452	3.075	1.200	20	>10.0	0.00166	0.993	
4	T I BRIT GEOGR	0020-2754	1876	3.413	4.768	0.647	34	7.9	0.00545	1.729	
5	GLOBAL ENVIRON CHANG	0959-3780	1832	3.340	5.487	0.787	47	5.1	0.00853	2.098	

Geo	graphy, top 5	impact fa	ctor 2009
Journal name	Journal Abbrev.	# of records	Excel count formula
JOURNAL OF ECONOMIC GEOGRAPHY	J ECON GEOGR	47	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J ECON GEOGR", ""))) / LEN("J ECON GEOGR"))
PROGRESS IN HUMAN GEOGRAPHY	PROG HUM GEOG	117	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PROG HUM GEOG", ""))) / LEN("PROG HUM GEOG"))
ECONOMIC GEOGRAPHY	ECON GEOGR	47	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ECON GEOGR", ""))) / LEN("ECON GEOGR"))
TRANSACTIONS OF THE INSTITUTE OF BRITISH GEOGRAPHERS	T I BRIT GEOGR	35	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "T I BRIT GEOGR", ""))) / LEN("T I BRIT GEOGR"))
GLOBAL ENVIRONMENTAL CHANGE- HUMAN AND POLICY DIMENSIONS	GLOBAL ENVIRON CHANG	52	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "GLOBAL ENVIRON CHANG", ""))) / LEN("GLOBAL ENVIRON CHANG"))

# 5 Information Science & Library Science (Subj heading used by JCR) 2005:

2005.									
	Abbreviated Journal Title	ISSN	JCR Data i)						
Rank	(linked to journal information)		Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	MIS QUART	0276-7783	2395	4.978	0.643	28	>10.0		
2	J AM MED INFORM ASSN	1067-5027	2040	4.339	0.710	69	4.7		
3	ANNU REV INFORM SCI	0066-4200	298	2.652	0.643	14	6.3		
4	INFORM SYST RES	1047-7047	949	2.054	0.048	21	6.2		
5	<u>SCIENTOMETRICS</u>	0138-9130	1406	1.738	0.241	112	6.1		

Information	on Science & Library Sci	ience, top 5	impact factor 2005
Journal name	Journal Abbrev.	# of records	Excel count formula
MIS QUARTERLY	MIS QUART	34	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "MIS QUART", ""))) / LEN("MIS QUART"))
JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	J AM MED INFORM ASSN	85	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J AM MED INFORM ASSN", ""))) / LEN("J AM MED
ANNUAL REVIEW OF INFORMATION SCIENCE AND TECHNOLOGY	ANNU REV INFORM SCI	15	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV INFORM SCI", ""))) / LEN("ANNU REV INFORM SCI"))
INFORMATION SYSTEMS RESEARCH	INFORM SYST RES	31	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "INFORM SYST RES", ""))) / LEN("INFORM SYST RES"))
SCIENTOMETRICS	SCIENTOMETRICS	114	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "SCIENTOMETRICS", ""))) / LEN("SCIENTOMETRICS"))

#### 2006:

	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data ()						
Rank			Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life		
1	MIS QUART	0276-7783	3186	4.731	0.610	41	9.5		
2	J AM MED INFORM ASSN	1067-5027	2143	3.979	0.587	80	4.7		
3	INFORM SYST RES	1047-7047	1508	2.537	0.304	23	6.6		
4	INFORM MANAGE-AMSTER	0378-7206	1466	2.119	0.215	79	5.4		
5	J MANAGE INFORM SYST	0742-1222	1523	1.818	0.195	41	6.9		

Information	Science & Library Science	e, top 5 in	npact factor 2006
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
MIS QUARTERLY	MIS QUART	46	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "MIS QUART", ""))) / LEN("MIS QUART"))
JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	J AM MED INFORM ASSN	91	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J AM MED INFORM ASSN", ""))) / LEN("J AM MED
INFORMATION SYSTEMS RESEARCH	INFORM SYST RES	24	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "INFORM SYST RES", ""))) / LEN("INFORM SYST RES"))
INFORMATION & MANAGEMENT	INFORM MANAGE- AMSTER	81	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "INFORM MANAGE-AMSTER", ""))) / LEN("INFORM MANAGE-AMSTER"))
JOURNAL OF MANAGEMENT INFORMATION SYSTEMS	J MANAGE INFORM SYST	48	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J MANAGE INFORM SYST", ""))) / LEN("J MANAGE INFORM SYST"))

2007					JCR I	Data i)			Eigenfactor Metrics i		
Rank	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	MIS QUART	0276-7783	4329	5.826	9.257	0.533	30	9.4	0.01128	3.567	
2	J AM MED INFORM ASSN	1067-5027	2394	3.094	3.489	0.699	93	5.2	0.00948	1.096	
3	INFORM SYST RES	1047-7047	2146	2.682	6.579	0.130	23	8.3	0.00766	3.079	
4	ANNU REV INFORM SCI	0066-4200	378	1.963	2.810	0.533	15	6.1	0.00137	0.934	
5	J MANAGE INFORM SYST	0742-1222	1861	1.867	3.229	0.175	40	7.7	0.00571	1.307	

Information	n Science & Librar	y Science, top	o 5 impact factor 2007
Journal name	Journal Abbrev.	# of records	Excel count formula
MIS QUARTERLY	MIS QUART	35	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "MIS QUART", ""))) / LEN("MIS QUART"))
JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	J AM MED INFORM ASSN	112	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J AM MED INFORM ASSN", ""))) / LEN("J AM MED INFORM ASSN"))
INFORMATION SYSTEMS RESEARCH	INFORM SYST RES	25	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "INFORM SYST RES", ""))) / LEN("INFORM SYST RES"))
ANNUAL REVIEW OF INFORMATION SCIENCE AND TECHNOLOGY	ANNU REV INFORM SCI	16	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV INFORM SCI", ""))) / LEN("ANNU REV INFORM SCI"))
JOURNAL OF MANAGEMENT INFORMATION SYSTEMS	J MANAGE INFORM SYST	47	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J MANAGE INFORM SYST", ""))) / LEN("J MANAGE INFORM SYST"))

#### 2008:

		ISSN			JCR I	Data 🕦			Eigenfactor <sup>TM</sup> Metrics i)		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	MIS QUART	0276-7783	5684	5.183	11.586	0.778	36	9.7	0.01138	3.541	
2	J AM MED INFORM ASSN	1067-5027	2574	3.428	3.886	0.560	100	5.2	0.00890	1.068	
3	J INFORMETR	1751-1577	89	2.531	2.563	0.206	34		0.00040	0.563	
4	ANNU REV INFORM SCI	0066-4200	477	2.500	2.954	0.846	13	6.5	0.00138	0.956	
5	INFORM SYST J	1350-1917	528	2.375	2.940	0.600	25	6.0	0.00132	0.711	

Information Science & Library Science, top 5 impact factor 2008									
Journal name	Journal Abbrev.	# of records	Excel count formula						
MIS QUARTERLY	IIS QUARTERLY MIS QUART 39		=SUMPRODUCT( (LEN(Z1:Z170) -						
			LEN(SUBSTITUTE(Z1:Z170, "MIS QUART", ""))) /						
			LEN("MIS QUART"))						
JOURNAL OF THE AMERICAN	J AM MED	112	=SUMPRODUCT( (LEN(Z1:Z170) -						
MEDICAL INFORMATICS INFORM ASSN			LEN(SUBSTITUTE(Z1:Z170, "J AM MED INFORM						
ASSOCIATION	INI OKW ASSIN		ASSN", ""))) / LEN("J AM MED INFORM ASSN"))						
JOURNAL OF	J INFORMETR	34	=SUMPRODUCT( (LEN(Z1:Z170) -						
INFORMETRICS	· · · · · · · · · · · · · · · · · · ·	04	LEN(SUBSTITUTE(Z1:Z170, "J INFORMETR", ""))) /						
IN ORMETRICS			LEN("J INFORMETR"))						
ANNUAL REVIEW OF	ANNU REV	14	=SUMPRODUCT( (LEN(Z1:Z170) -						
INFORMATION SCIENCE AND	INFORM SCI	• •	LEN(SUBSTITUTE(Z1:Z170, "ANNU REV INFORM						
TECHNOLOGY	IIVI OKW SCI		SCI", ""))) / LEN("ANNU REV INFORM SCI"))						
INFORMATION	INFORM SYST J	28	=SUMPRODUCT( (LEN(Z1:Z170) -						
SYSTEMS RESEARCH	1141 51411 5161 5	==	LEN(SUBSTITUTÈ(Z1:Z170, "INFORM SYST J", ""))) /						
STOTEWIS RESEARCH			LEN("INFORM SYST J"))						

2007	Abbreviated Journal Title				JCR I	Data (j			Eigenfactor Metrics i		
	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	MIS QUART	0276-7783	6186	4.485	9.208	0.579	38	>10.0	0.00962	2.899	
2	J AM MED INFORM ASSN	1067-5027	4183	3.974	5.199	0.705	105	5.7	0.01366	1.585	
3	J COMPUT-MEDIAT COMM	1083-6101	1279	3.639		0.017	60	4.6	0.00457		
4	<u>J INFORMETR</u>	1751-1577	253	3.379	3.379	0.909	33	2.1	0.00149	1.079	
5	ANNU REV INFORM SCI	0066-4200	563	2.929	3.030	1.200	10	6.9	0.00147	1.053	

Information	Science & Library S	Science, top	5 impact factor 2009			
Journal name	Journal Abbrev.	# of records	Excel count formula			
MIS QUARTERLY	MIS QUART	47	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "MIS QUART", ""))) / LEN("MIS QUART"))			
JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION	S INFORM ASSN		=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J AM MED INFORM ASSN", ""))) / LEN("J AM MED INFORM ASSN"))			
JOURNAL OF COMPUTER- MEDIATED COMMUNICATION	J COMPUT- MEDIAT COMM	60	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J COMPUT-MEDIAT COMM", ""))) / LEN("J COMPUT-MEDIAT COMM"))			
JOURNAL OF INFORMETRICS	J INFORMETR	36	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J INFORMETR", ""))) / LEN("J INFORMETR"))			
ANNUAL REVIEW OF INFORMATION SCIENCE AND TECHNOLOGY	ANNU REV INFORM SCI	11	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV INFORM SCI", ""))) / LEN("ANNU REV INFORM SCI"))			

#### 6 Political Science

#### 2005:

	Abbreviated Journal Title		JCR Data (i)							
Rank	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	AM POLIT SCI REV	0003-0554	4628	3.233	0.409	44	>10.0			
2	AM J POLIT SCI	0092-5853	3123	1.845	0.217	60	9.5			
3	EUR J POLIT RES	0304-4130	928	1.783	0.174	69	6.5			
4	J THEOR POLIT	0951-6298	291	1.686	0.250	20	6.4			
5	PUBLIC OPIN QUART	0033-362X	1700	1.509	0.324	34	>10.0			

	Political Science, top 5 impact factor 2005										
Journal name	Journal Abbrev.	# of records	Excel count formula								
AMERICAN POLITICAL SCIENCE REVIEW	AM POLIT SCI REV	45	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM POLIT SCI REV", ""))) / LEN("AM POLIT SCI REV"))								
AMERICAN JOURNAL OF POLITICAL SCIENCE	AM J POLIT SCI	60	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J POLIT SCI", ""))) / LEN("AM J POLIT SCI"))								
EUROPEAN JOURNAL OF POLITICAL RESEARCH	EUR J POLIT RES	72	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EUR J POLIT RES", ""))) / LEN("EUR J POLIT RES"))								
JOURNAL OF THEORETICAL POLITICS	J THEOR POLIT	21	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J THEOR POLIT", ""))) / LEN("J THEOR POLIT"								
PUBLIC OPINION QUARTERLY	PUBLIC OPIN QUART	67	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PUBLIC OPIN QUART", ""))) / LEN("PUBLIC OPIN QUART"))								

	Abbreviated Journal Title (linked to journal information)		JCR Data i)							
Rank		ISSN	Total Cites Impact Factor		Immediacy Index	Articles	Cited Half-life			
1	AM POLIT SCI REV	0003-0554	5327	3.023	0.368	57	>10.0			
2	AM J POLIT SCI	0092-5853	3535	2.167	0.438	64	>10.0			
3	EUR J POLIT RES	0304-4130	1108	1.916	0.326	43	7.1			
4	J CONFLICT RESOLUT	0022-0027	1518	1.810	0.488	41	>10.0			
5	J PEACE RES	0022-3433	730	1.658	0.351	37	7.0			

	Political Science, top 5 impact factor 2006										
Journal name	Journal Abbrev.	# of records	Excel count formula								
AMERICAN POLITICAL SCIENCE REVIEW	AM POLIT SCI REV	80	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM POLIT SCI REV", ""))) / LEN("AM POLIT SCI REV"))								
AMERICAN JOURNAL OF POLITICAL SCIENCE	AM J POLIT SCI	64	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J POLIT SCI", ""))) / LEN("AM J POLIT SCI"))								
EUROPEAN JOURNAL OF POLITICAL RESEARCH	EUR J POLIT RES	44	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EUR J POLIT RES", ""))) / LEN("EUR J POLIT RES"))								
JOURNAL OF CONFLICT RESOLUTION	J CONFLICT RESOLUT	44	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J CONFLICT RESOLUT", ""))) / LEN("J CONFLICT RESOLUT"))								
JOURNAL OF PEACE RESEARCH	J PEACE RES	185	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J PEACE RES", ""))) / LEN("J PEACE RES"))								

#### 2007:

		ISSN			JCR I	Data 🗓			Eigenfactor <sup>TM</sup> Metrics i)		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	POLIT ANAL	1047-1987	453	2.535		0.545	22	5.2	0.00571		
2	AM POLIT SCI REV	0003-0554	5323	2.317	3.919	0.269	52	>10.0	0.01861	3.590	
3	AM J POLIT SCI	0092-5853	3628	2.032	2.901	0.306	62	>10.0	0.01792	2.714	
4	PUBLIC OPIN QUART	0033-362X	2189	2.030	2.349	0.658	38	>10.0	0.00498	1.467	
5	J CONFLICT RESOLUT	0022-0027	1509	1.975	2.157	0.081	37	>10.0	0.00873	1.965	

	Political Science, top 5 impact factor 2007										
Journal name	Journal Abbrev.	# of records	Excel count formula								
POLITICAL ANALYSIS	POLIT ANAL	26	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "POLIT ANAL", ""))) / LEN("POLIT ANAL"))								
AMERICAN POLITICAL SCIENCE REVIEW	AM POLIT SCI REV	56	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM POLIT SCI REV", ""))) / LEN("AM POLIT SCI REV"))								
AMERICAN JOURNAL OF POLITICAL SCIENCE	AM J POLIT SCI	62	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J POLIT SCI", ""))) / LEN("AM J POLIT SCI"))								
PUBLIC OPINION QUARTERLY	PUBLIC OPIN QUART	53	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PUBLIC OPIN QUART", ""))) / LEN("PUBLIC OPIN QUART"))								
JOURNAL OF CONFLICT RESOLUTION	J CONFLICT RESOLUT	39	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "J CONFLICT RESOLUT", ""))) / LEN("J CONFLICT RESOLUT"))								

		ISSN	JCR Data i)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	POLIT ANAL	1047-1987	644	4.780	3.283	0.263	19	5.0	0.00709	2.831	
2	EUR J POLIT RES	0304-4130	1760	2.514	2.734	0.239	71	6.6	0.01037	1.637	
3	AM J POLIT SCI	0092-5853	4416	2.397	3.363	0.322	59	>10.0	0.01972	3.079	
4	POLIT GEOGR	0962-6298	1032	2.295	2.375	0.250	40	6.7	0.00453	1.064	
5	EUR UNION POLIT	1465-1165	419	2.064	2.378	0.435	23	4.5	0.00303	1.231	

	Political Science,	top 5 impact f	actor 2008
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
POLITICAL ANALYSIS	POLIT ANAL	29	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "POLIT ANAL", ""))) / LEN("POLIT ANAL"))
EUROPEAN JOURNAL OF POLITICAL RESEARCH	EUR J POLIT RES	72	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EUR J POLIT RES", ""))) / LEN("EUR J POLIT RES"))
AMERICAN JOURNAL OF POLITICAL SCIENCE	AM J POLIT SCI	59	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J POLIT SCI", ""))) / LEN("AM J POLIT SCI"))
POLITICAL GEOGRAPHY	POLIT GEOGR	75	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "POLIT GEOGR", ""))) / LEN("POLIT GEOGR"))
EUROPEAN UNION POLITICS	EUR UNION POLIT	23	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "EUR UNION POLIT", ""))) / LEN("EUR UNION POLIT"))

#### 2009:

		ISSN	JCR Data (j)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	POLIT ANAL	1047-1987	757	3.756	4.083	0.200	25	4.7	0.00817	3.625	
2	AM POLIT SCI REV	0003-0554	7507	3.207	4.194	0.243	37	>10.0	0.01723	3.560	
3	ANNU REV POLIT SCI	1094-2939	760	2.619	3.206	0.346	26	6.9	0.00506	2.380	
4	AM J POLIT SCI	0092-5853	5239	2.554	3.793	0.233	60	>10.0	0.01944	3.117	
5	J PEACE RES	0022-3433	1529	2.468	2.677	0.465	43	8.2	0.00575	1.458	

	Political Science	, top 5 impact	tactor 2009
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
POLITICAL ANALYSIS	POLIT ANAL	25	=SUMPRODUCT( (LEN(Z1:Z170) -
			LEN(SUBSTITUTE(Z1:Z170, "POLIT ANAL", ""))) /
			LEN("POLIT ANAL"))
AMERICAN POLITICAL	AM POLIT SCI	38	=SUMPRODUCT( (LEN(Z1:Z170) -
SCIENCE REVIEW	REV		LEN(SUBSTITUTE(Z1:Z170, "AM POLIT SCI REV",
GOIEITGE REVIEW	112		""))) / LEN("AM POLIT SCI REV"))
ANNUAL REVIEW OF	ANNU REV	27	=SUMPRODUCT( (LEN(Z1:Z170) -
POLITICAL SCIENCE	POLIT SCI		LEN(SUBSTITUTE(Z1:Z170, "ANNU REV POLIT
1 OZITIO/ NZ GOIZINOZ	1 0211 001		SCI", ""))) / LEN("ANNU REV POLIT SCI"))
AMERICAN JOURNAL OF	AM J POLIT SCI	60	=SUMPRODUCT( (LEN(Z1:Z170) -
POLITICAL SCIENCE			LEN(SUBSTITUTE(Z1:Z170, "AM J POLIT SCI",
1 GEITIOAE GOIEINGE			""))) / LEN("AM J POLIT SCI"))
JOURNAL OF PEACE	J PEACE RES	158	=SUMPRODUCT( (LEN(Z1:Z170) -
RESEARCH			LEN(SUBSTITUTE(Z1:Z170, "J PEACE RES", "")))
INLOCATION			/ LEN("J PEACE RÈS"))

# 7 Psychology 2005:

	Abbreviated Journal Title		JCR Data i)							
Rank	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	BEHAV BRAIN SCI	0140-525X	4029	9.885	1.857	14	8.7			
2	ANNU REV PSYCHOL	0066-4308	4014	9.784	2.261	23	7.1			
3	PSYCHOL BULL	0033-2909	16506	9.746	1.892	37	>10.0			
4	TRENDS COGN SCI	1364-6613	4597	9.155	1.250	92	4.8			
5	PSYCHOL REV	0033-295X	13423	7.986	2.229	35	>10.0			

	Psychology, top 5 impact factor 2005									
Journal name	Journal Abbrev.	# of records	Excel count formula							
BEHAVIORAL AND BRAIN SCIENCES	BEHAV BRAIN SCI	365	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "BEHAV BRAIN SCI", ""))) / LEN("BEHAV BRAIN SCI"))							
ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	24	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV PSYCHOL", ""))) /LEN("ANNU REV PSYCHOL"))							
PSYCHOLOGICAL BULLETIN	PSYCHOL BULL	52	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL BULL", ""))) / LEN("PSYCHOL BULL"))							
TRENDS IN COGNITIVE SCIENCES	TRENDS COGN SCI	140	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "TRENDS COGN SCI", ""))) / LEN("TRENDS COGN SCI"))							
PSYCHOLOGICAL REVIEW	PSYCHOL REV	58	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL REV", ""))) / LEN("PSYCHOL REV"))							

#### 2006:

	Abbreviated Journal Title		JCR Data i)							
Rank	(linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	BEHAV BRAIN SCI	0140-525X	4425	14.964	1.100	10	8.2			
2	PSYCHOL BULL	0033-2909	18429	12.725	1.919	37	>10.0			
3	ANNU REV PSYCHOL	0066-4308	4804	11.706	4.091	22	6.8			
4	PSYCHOL INQ	1047-840X	1026	9.688	0.600	5	6.8			
5	TRENDS COGN SCI	1364-6613	5965	9.374	1.566	83	4.6			

	Psychology, top 5 impact factor 2006									
Journal name	Journal Abbrev.	# of records	Excel count formula							
BEHAVIORAL AND BRAIN SCIENCES	BEHAV BRAIN SCI	284	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "BEHAV BRAIN SCI", ""))) / LEN("BEHAV BRAIN SCI"))							
PSYCHOLOGICAL BULLETIN	PSYCHOL BULL	44	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL BULL", ""))) / LEN("PSYCHOL BULL"))							
ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	23	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV PSYCHOL", ""))) / LEN("ANNU REV PSYCHOL"))							
PSYCHOLOGICAL INQUIRY	PSYCHOL INQ	42	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL INQ", ""))) / LEN("PSYCHOL INQ"))							
TRENDS IN COGNITIVE SCIENCES	TRENDS COGN SCI	118	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "TRENDS COGN SCI", ""))) / LEN("TRENDS COGN SCI"))							

2007	001.										
		ISSN	JCR Data i)						Eigenfactor <sup>TM</sup> Metrics i		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	BEHAV BRAIN SCI	0140-525X	4721	17.462	16.391	3.500	2	9.0	0.01089	7.317	
2	ANNU REV PSYCHOL	0066-4308	5425	13.400	17.263	3.583	24	7.2	0.02499	9.107	
3	PSYCHOL BULL	0033-2909	19678	10.905	15.230	1.841	44	>10.0	0.03357	7.890	
4	TRENDS COGN SCI	1364-6613	7525	9.389	12.421	1.513	76	4.9	0.05120	6.067	
5	PSYCHOL REV	0033-295X	15541	7.803	10.607	2.351	37	>10.0	0.02362	5.872	

	Psychology, top 5	impact factor	2007			
Journal name	Journal Abbrev.	# of	Excel count formula			
		records				
BEHAVIORAL AND BRAIN SCIENCES	BEHAV BRAIN SCI	254	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "BEHAV BRAIN SCI", ""))) / LEN("BEHAV BRAIN SCI"))			
ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	24	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV PSYCHOL", ""))) / LEN("ANNU REV PSYCHOL")			
PSYCHOLOGICAL BULLETIN	PSYCHOL BULL	50	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL BULL", ""))) / LEN("PSYCHOL BULL"))			
TRENDS IN COGNITIVE SCIENCES			=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "TRENDS COGN SCI", ""))) / LEN("TRENDS COGN SCI"))			
PSYCHOLOGICAL REVIEW	PSYCHOL REV	58	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL REV", ""))) / LEN("PSYCHOL REV"))			

#### 2008:

		ISSN	JCR Data i)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank	Abbreviated Journal Title (linked to journal information)		Total Cites	Impact Factor	5-Year Impact Factor		Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	ANNU REV PSYCHOL	0066-4308	6715	16.217	17.608	4.958	24	7.7	0.02277	8.560	
2	BEHAV BRAIN SCI	0140-525X	5274	12.818	19.355	2.667	12	9.5	0.01173	8.533	
3	PSYCHOL BULL	0033-2909	22965	12.568	18.037	1.026	38	>10.0	0.03453	8.244	
4	PSYCHOL REV	0033-295X	17810	11.765	12.563	2.396	48	>10.0	0.02646	6.783	
5	TRENDS COGN SCI	1364-6613	9143	10.981	13.826	1.086	70	5.3	0.05323	6.320	

Psychology, top 5 impact factor 2008							
Journal name	Journal Abbrev.	# of	Excel count formula				
		records					
ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	24	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV PSYCHOL", ""))) / LEN("ANNU REV PSYCHOL"))				
BEHAVIORAL AND BRAIN SCIENCES	BEHAV BRAIN SCI	296	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "BEHAV BRAIN SCI", ""))) / LEN("BEHAV BRAIN SCI"))				
PSYCHOLOGICAL BULLETIN	PSYCHOL BULL	43	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL BULL", ""))) / LEN("PSYCHOL BULL"))				
PSYCHOLOGICAL REVIEW	PSYCHOL REV	71	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL REV", ""))) / LEN("PSYCHOL REV"))				
TRENDS IN COGNITIVE SCIENCES	TRENDS COGN SCI	96	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "TRENDS COGN SCI", ""))) / LEN("TRENDS COGN SCI"))				

				JCR Data ①				Eigenfactor <sup>TM</sup> Metrics ()			
Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score
	1	ANNU REV PSYCHOL	0066-4308	8192	22.750	21.025	4.321	28	8.2	0.02575	10.200
	2	BEHAV BRAIN SCI	0140-525X	6290	19.045	23.548	3.000	9	>10.0	0.01207	9.334
	3	PSYCHOL BULL	0033-2909	26149	12.854	19.160	2.024	42	>10.0	0.03312	8.445
	4	TRENDS COGN SCI	1364-6613	11626	11.664	15.591	2.134	67	5.8	0.05759	7.189
	5	ANNU REV CLIN PSYCHO	1548-5943	837	9.613	11.250	1.200	20	3.8	0.00717	4.773

Psychology, top 5 impact factor 2009							
Journal name	Journal Abbrev.	# of records	Excel count formula				
ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	29	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV PSYCHOL", ""))) / LEN("ANNU REV PSYCHOL"))				
BEHAVIORAL AND BRAIN SCIENCES	BEHAV BRAIN SCI	254	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "BEHAV BRAIN SCI", ""))) / LEN("BEHAV BRAIN SCI"))				
PSYCHOLOGICAL BULLETIN	PSYCHOL BULL	54	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "PSYCHOL BULL", ""))) / LEN("PSYCHOL BULL"))				
TRENDS IN COGNITIVE SCIENCES	TRENDS COGN SCI	95	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "TRENDS COGN SCI", ""))) / LEN("TRENDS COGN SCI"))				
ANNUAL REVIEW OF CLINICAL PSYCHOLOGY	ANNU REV CLIN PSYCHO	21	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV CLIN PSYCHO", ""))) / LEN("ANNU REV CLIN PSYCHO"))				

# Appendix Q-19

# 8 Sociology 2005:

			JCR Data (i)							
Rank	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	AM J SOCIOL	0002-9602	6189	3.262	0.683	41	>10.0			
2	AM SOCIOL REV	0003-1224	7210	2.933	0.439	41	>10.0			
3	ANNU REV SOCIOL	0360-0572	2232	2.521	0.062	16	8.3			
4	SOCIOL HEALTH ILL	0141-9889	1132	2.169	0.171	41	7.7			
5	SOC PROBL	0037-7791	1414	1.796	0.143	28	>10.0			

Sociology, top 5 impact factor 2005									
Journal name	Journal Abbrev.	# of	Excel count formula						
		records							
AMERICAN JOURNAL OF	AM J SOCIOL	186	=SUMPRODUCT( (LEN(Z1:Z170) -						
SOCIOLOGY			LEN(SUBSTITUTE(Z1:Z170, "AM J SOCIOL", "")))						
000102001			/ LEN("AM J SOCIOL"))						
AMERICAN	AM SOCIOL REV	46	=SUMPRODUCT( (LEN(Z1:Z170) -						
SOCIOLOGICAL REVIEW			LEN(SUBSTITUTE(Z1:Z170, "AM SOCIOL REV",						
OGGIGEOGIGIE REVIEW			""))) / LEN("AM SOCIOL REV"))						
ANNUAL REVIEW OF	ANNU REV	17	=SUMPRODUCT( (LEN(Z1:Z170) -						
SOCIOLOGY	SOCIOL		LEN(SUBSTITUTE(Z1:Z170, "ANNU REV						
000102001	000.02		SOCIOL", ""))) / LEN("ANNU REV SOCIOL"))						
SOCIOLOGY OF HEALTH &	SOCIOL HEALTH	85	=SUMPRODUCT( (LEN(Z1:Z170) -						
ILLNESS	ILL		LEN(SUBSTITUTE(Z1:Z170, "SOCIOL HEALTH						
122,1200			ILL", ""))) / LEN("SOCIOL HEALTH ILL"))						
SOCIAL PROBLEMS	SOC PROBL	33	=SUMPRODUCT( (LEN(Z1:Z170) -						
			LEN(SUBSTITUTE(Z1:Z170, "SOC PROBL", ""))) /						
			LEN("SOC PROBL"))						

## 2006:

	Abbreviated Journal Title	ISSN	JCR Data (i)							
Rank	(linked to journal information)		Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life			
1	ANNU REV SOCIOL	0360-0572	2687	3.275	0.368	19	9.1			
2	AM SOCIOL REV	0003-1224	7927	3.205	0.571	42	>10.0			
3	AM J SOCIOL	0002-9602	6730	2.581	0.361	36	>10.0			
4	SOCIOL METHOD RES	0049-1241	808	2.355	0.111	18	>10.0			
5	SOCIOL RURALIS	0038-0199	577	2.093	0.056	18	6.3			

	Socio	ology, top 5	impact factor 2006
Journal name	Journal	# of	Excel count formula
	Abbrev.	records	
ANNUAL REVIEW OF	ANNU REV	19	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
SOCIOLOGY	SOCIOL		"ANNU REV SOCIOL", ""))) / LEN("ANNU REV SOCIOL"))
AMERICAN	AM SOCIOL	49	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
SOCIOLOGICAL	REV		"AM SOCIOL REV", ""))) / LEN("AM SOCIOL REV"))
REVIEW			
AMERICAN	AM J	197	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
JOURNAL OF	SOCIOL		"AM J SOCIOL", ""))) / LEN("AM J SOCIOL"))
SOCIOLOGY			
SOCIOLOGICAL	SOCIOL	20	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
METHODS &	METHOD		"SOCIOL METHOD RES", ""))) / LEN("SOCIOL METHOD RES"))
RESEARCH	RES		
SOCIOLOGIA	SOCIOL	19	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170,
RURALIS	RURALIS		"SOCIOL RURALIS", ""))) / LEN("SOCIOL RURALIS"))

# Appendix Q-20

## 2007:

	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data i)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank			Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	AM J SOCIOL	0002-9602	7264	3.338	5.113	0.514	37	>10.0	0.01564	4.004	
2	AM SOCIOL REV	0003-1224	8092	3.277	4.541	0.619	42	>10.0	0.01598	3.508	
3	BRIT J SOCIOL	0007-1315	957	2.449	2.052	0.222	27	9.1	0.00386	1.238	
4	ANNU REV SOCIOL	0360-0572	2984	2.400	5.718	0.200	25	9.6	0.00976	4.077	
5	GLOBAL NETW	1470-2266	269	1.886		0.080	25	4.0	0.00213		

	Sociology, top 5	impact factor	2007
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
AMERICAN JOURNAL OF SOCIOLOGY	AM J SOCIOL	180	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J SOCIOL", ""))) / LEN("AM J SOCIOL"))
AMERICAN SOCIOLOGICAL REVIEW	AM SOCIOL REV	49	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM SOCIOL REV", ""))) / LEN("AM SOCIOL REV"))
BRITISH JOURNAL OF SOCIOLOGY	BRIT J SOCIOL	109	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "BRIT J SOCIOL", ""))) / LEN("BRIT J SOCIOL"))
ANNUAL REVIEW OF SOCIOLOGY	ANNU REV SOCIOL	25	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV SOCIOL", ""))) / LEN("ANNU REV SOCIOL"))
GLOBAL NETWORKS-A JOURNAL OF TRANSNATIONAL AFFAIRS	GLOBAL NETW	28	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "GLOBAL NETW", ""))) / LEN("GLOBAL NETW"))

## 2008:

2000	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data i)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank			<b>Total Cites</b>	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	AM SOCIOL REV	0003-1224	9349	3.762	5.285	0.364	44	>10.0	0.01732	3.906	
2	AM J SOCIOL	0002-9602	8629	2.808	5.046	0.444	45	>10.0	0.01481	3.819	
3	ANNU REV SOCIOL	0360-0572	3665	2.273	4.954	0.364	22	>10.0	0.00806	3.368	
4	SOCIOL METHODOL	0081-1750	1226	2.087	2.691	0.000	15	>10.0	0.00257	2.107	
5	SOC NETWORKS	0378-8733	1276	2.068	2.929	0.276	29	>10.0	0.00318	1.269	

	Sociology, top 5 im	pact facto	r 2008
Journal name	Journal Abbrev.	# of	Excel count formula
		records	
AMERICAN	AM SOCIOL REV	47	=SUMPRODUCT( (LEN(Z1:Z170) -
SOCIOLOGICAL REVIEW			LEN(SUBSTITUTE(Z1:Z170, "AM SOCIOL REV", ""))) / LEN("AM SOCIOL REV"))
AMERICAN JOURNAL OF	AM J SOCIOL	192	=SUMPRODUCT( (LEN(Z1:Z170) -
SOCIOLOGY			LEN(SUBSTITUTE(Z1:Z170, "AM J SOCIOL", ""))) / LEN("AM J SOCIOL"))
ANNUAL REVIEW OF	ANNU REV SOCIOL	22	=SUMPRODUCT( (LEN(Z1:Z170) -
SOCIOLOGY			LEN(SUBSTITUTE(Z1:Z170, "ANNU REV SOCIOL", ""))) / LEN("ANNU REV SOCIOL"))
SOCIOLOGICAL	SOCIOL	15	=SUMPRODUCT( (LEN(Z1:Z170) -
METHODOLOGY	METHODOL	13	LEN(SUBSTITUTE(Z1:Z170, "SOCIOL
METHODOLOGY	METHODOL		METHODOL", ""))) / LEN("SOCIOL
			METHODOL"))
SOCIAL NETWORKS	SOC NETWORKS	29	=SUMPRODUCT( (LEN(Z1:Z170) -
			LEN(SUBSTITUTE(Z1:Z170, "SOC NETWORK", "))) / LEN("SOC NETWORK"))
			))) / LEIN( SOC INETWORK ))

# Appendix Q-21

## 2009:

	Abbreviated Journal Title (linked to journal information)	ISSN	JCR Data (i)						Eigenfactor <sup>TM</sup> Metrics i)		
Rank			Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>TM</sup> Score	Article Influence <sup>TM</sup> Score	
1	ANNU REV SOCIOL	0360-0572	4803	3.702	5.953	0.333	27	>10.0	0.00837	3.787	
2	AM J SOCIOL	0002-9602	11196	3.476	5.411	0.444	36	>10.0	0.01428	3.564	
3	AM SOCIOL REV	0003-1224	11813	3.221	5.578	0.500	44	>10.0	0.01732	4.030	
4	SOC NETWORKS	0378-8733	1485	2.349	3.328	0.370	27	>10.0	0.00357	1.369	
5	SOCIOL HEALTH ILL	0141-9889	1904	2.041	2.598	0.106	66	8.6	0.00439	0.855	

	Sociology, top 5 impact factor 2009									
Journal name	Journal Abbrev.	# of records	Excel count formula							
ANNUAL REVIEW OF SOCIOLOGY	ANNU REV SOCIOL	27	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV SOCIOL", ""))) / LEN("ANNU REV SOCIOL"))							
AMERICAN JOURNAL OF SOCIOLOGY	AM J SOCIOL	243	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "AM J SOCIOL", ""))) / LEN("AM J SOCIOL"))							
AMERICAN SOCIOLOGICAL REVIEW	AM SOCIOL REV	48	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "ANNU REV SOCIOL", ""))) / LEN("ANNU REV SOCIOL"))							
SOCIAL NETWORKS	SOC NETWORKS	27	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "SOC NETWORKS", ""))) / LEN("SOC NETWORKS"))							
SOCIOLOGY OF HEALTH & ILLNESS	SOCIOL HEALTH	107	=SUMPRODUCT( (LEN(Z1:Z170) - LEN(SUBSTITUTE(Z1:Z170, "SOCIOL HEALTH ILL", ""))) / LEN("SOCIOL HEALTH ILL"))							

# Appendix R-1 Top 5 impact factor journals for disciplines by year 1979-1983

Note: The same high impact factor journals from 1981 Journal Citation Report Index were used for 1979, 1980, 1981, 1982, and 1983 searches on Web of Science database.

Journal is also in top 5 ranking 2005-2009

#### 1 Anthropology

Anthropology, 1981	# of records in Web of Science database						
Journal name	Journal Abbrev.	1981 ImpFac	1979	1980	1981	1982	1983
AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY	AM J PHYS ANTHROPOL	1.384	432	466	452	428	510
ANNUAL REVIEW OF ANTHROPOLOGY	ANNU REV ANTHROPOL	1.136	23	22	15	13	18
AMERICAN ANTHROPOLOGIST	AM ANTHROPOL	.919	428	458	330	388	304
*SOCIAL NETWORKS	SOC NETWORKS	.886	17	19	16	25	24
CURRENT ANTHROPOLOGY	CURR ANTHROPOL	.839	162	186	141	150	145

<sup>\*</sup>Social Networks was in top 5 of JCR impact factor score sort 2006, 2008, & 2009 for anthropology and 2008 for sociology

#### 2 Communication

Communication, 1981	# of records in Web of Science						
	database						
Journal name	Journal Abbrev.	1981 ImpFac	1979	1980	1981	1982	1983
COMMUNICATION RESEARCH	COMMUN RES	1.128	26	24	25	33	33
*PUBLIC OPINION QUARTERLY	PUBLIC OPIN QUART	.876	76	66	60	71	55
JOURNAL OF COMMUNICATION	J COMMUN	.464	185	176	170	151	182
QUARTERLY JOURNAL OF	Q J SPEECH	.455	88	113	114	100	103
SPEECH							
COMMUNICATION MONOGRAPHS	COMMUN MONOGR	.438	26	22	19	20	25

<sup>\*</sup>Public Opinion Quarterly was in top 5 of JCR impact factor score sort 2005-2008 for communication and 2005, 2007 for political science

Appendix R-2

#### 3 Economics

Economics, 1981 high	Economics, 1981 high impact factor journals						
Journal name	1979	1980	1981	1982	1983		
JOURNAL OF ECONOMIC	197	213	198	176	171		
LITERATURE							
JOURNAL OF FINANCIAL ECONOMICS	J FINANC ECON	2.821	14	14	21	21	43
*JOURNAL OF POLITICAL ECONOMY	*JOURNAL OF POLITICAL ECONOMY J POLIT ECON 1.903						78
AMERICAN ECONOMIC REVIEW	186	210	195	194	197		
**ECONOMETRICA	1.461	111	128	96	93	102	

<sup>\*</sup>Journal of Political Economy was in top 5 of JCR impact factor score sort 2006—2008

### 4 Geography

Geography, 1981 high	Geography, 1981 high impact factor journals						# of records in Web of Science database					
	Journal name Journal Abbrev. 1981 ImpFac											
Journal name	1979	1980	1981	1982	1983							
*ECONOMIC GEOGRAPHY	35	38	44	64	57							
GEOGRAPHICAL ANALYSIS	50	50	36	38	40							
PROFESSIONAL GEOGRAPHER	PROF GEOGR	.817	157	162	162	177	248					
TRANSACTIONS OF THE INSTITUTE	T I BRIT GEOGR	.622	39	47	35	41	39					
OF BRITISH GEOGRAPHERS												
**ANNALS OF THE ASSOCIATION OF	.542	106	88	98	92	82						
AMERICAN GEOGRAPHERS												

<sup>\*</sup>Note: Journal of Economic Geography is a different journal that began publication in 2001 that is now often cited by both economics and geography. Economic Geography was in the top 5 of JCR impact factor score sort 2005, 2008, & 2009 for geography; Journal of Economic Geography was in the top 5 of JCR impact factor sort 2005, 2007, 2009 for geography and 2005 & 2009 for economics.

<sup>\*\*</sup>Econometrica was in top 5 of JCR impact factor score sort 2008 & 2009.

<sup>\*\*</sup>Annals of the Association of American Geographers was in top 5 of JCR impact factor score sort 2006-2007

Appendix R-3

### 5 Information Science & Library Science (Subj heading used by JCR)

Information Science & Library Science	Information Science & Library Science, 1981 high impact factor journals						# of records in Web of Science database					
Journal name	1979	1980	1981	1982	1983							
*ANNUAL REVIEW OF INFORMATION						10	10					
SCIENCE AND TECHNOLOGY												
**LIBRARY JOURNAL	LIBR J	.918	301	309	296	324	697					
LIBRARY RESOURCES & TECHNICAL	LIBR RESOURCE	.793	42	34	30	32	35					
SERVICES	TECH SER											
LIBRARY QUARTERLY	.710	127	99	114	109	95						
JOURNAL OF ACADEMIC	J ACAD LIB	.641	79	87	104	104	122					
LIBRARIANSHIP												

#### 6 Political Science

Political Science, 1981 hi	Political Science, 1981 high impact factor journals						# of records in Web of Science					
				C	database	)						
Journal name	1981 ImpFac	1979	1980	1981	1982	1983						
WORLD POLITICS	· ·											
*JOURNAL OF POLITICAL ECONOMY	107	105	90	90	78							
AMERICAN POLITICAL SCIENCE	AM POLIT SCI REV	1.773	550	511	504	457	536					
REVIEW												
AMERICAN JOURNAL OF POLITICAL	AM J POLIT SCI	.976	42	43	42	43	41					
SCIENCE												
JOURNAL OF CONFLICT	.915	38	42	30	33	49						
RESOLUTION												

<sup>\*</sup>note: in 1981 also in top 5 JCR impact factor score for economics; not 05-09 in top 5 JCR impact factor score sort for Political Science but was in top 5 for economics 2006, 2007, & 2008.

<sup>\*</sup>was in top 5 of JCR impact factor score sort 2005 and 2007-2009
\*\*note: J LIBR is a different journal; JCR impact factor score for J LIBR in 1981 was .333

Appendix R-4

#### 7 Psychology

Psychology, 1981 high	Psychology, 1981 high impact factor journals						# of records in Web of Science database					
	1979	1980	1981	1982								
Journal name	Journal name Journal Abbrev. 1981 ImpFac						1983					
ANNUAL REVIEW OF PSYCHOLOGY	ANNU REV PSYCHOL	5.079	19	19	18	20	19					
*PSYCHOLOGICAL REVIEW	PSYCHOL REV	4.895	32	30	29	29	25					
COGNITIVE PSYCHOLOGY	COGNITIVE	4.775	21	19	20	19	17					
	PSYCHOL											
**ADVANCES IN EXPERIMENTAL	8	6	7	6	5							
SOCIAL PSYCHOLOGY	PSYCHOL											
COGNITION	24	15	61	34	38							

<sup>\*</sup>Note: was in top 5 impact factor sort 2005 & 2007-2008.

http://www.sciencedirect.com/science?\_ob=PublicationURL&\_tockey=%23TOC%2321321%231979%23999879999%23685388%23FLP%23&\_cd i=21321& pubType=BS& auth=y& acct=C000037419& version=1& urlVersion=0& userid=681891&md5=9f38e1deed1ea47c9b91b22ee4f3f012 The 1982 and 1983 totals were the same there so the 1979-1981 discovered were counted and added to table above.

#### 8 Sociology

Sociology, 1981 high i	Sociology, 1981 high impact factor journals  Journal name  Journal Abbrev. 1981 ImpFac						# of records in from Web of Science database				
Journal name	1979	1980	1981	1982	1983						
AMERICAN SOCIOLOGICAL REVIEW	84	88	96	86	80						
AMERICAN JOURNAL OF SOCIOLOGY	237	240	222	213	224						
ANNUAL REVIEW OF SOCIOLOGY	ANNU REV SOCIOL	1.563	16	16	15	13	26				
SOCIOLOGY – THE JOURNAL OF THE BRITISH SOCIOLOGICAL ASSOCIATION	1.077	93	101	78	103	61					
SOCIAL PROBLEMS	.891	49	47	47	46	46					

Note that top impact factor journals in sociology 1981 are still top impact factor journals 2005-2009.

<sup>\*\*</sup>Complete results for this journal could not be located using web of science June 11 or June 12, 2011; 1982 & 1983 results were found but not 1979-1981. Therefore totals for this journal are from

 $\label{eq:spendix} Appendix \ S-1$  Asymmetric citation matrices without self-citations 1979-1983

1979	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	7	1	0	0	3	3	14
communication	0	0	0	0	2	0	3	7	12
economics	0	0	0	4	0	2	0	30	36
geography	1	0	0	0	0	0	0	2	3
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	2	24	0	0	0	1	17	44
psychology	1	7	0	0	3	0	0	8	19
sociology	0	13	0	4	0	5	4	0	26
totals	2	22	31	9	5	7	11	67	154

1980	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	2	0	0	0	4	6
communication	0	0	0	0	9	0	1	9	19
economics	0	0	0	15	0	1	17	24	57
geography	0	0	0	0	0	0	0	3	3
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	4	18	2	0	0	8	18	50
psychology	0	4	1	0	3	0	0	6	14
sociology	0	7	3	8	0	0	27	0	45
totals	0	15	22	27	12	1	53	64	194

1981	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	0	0	0	3	11	14
communication	0	0	0	0	0	0	90	11	101
economics	0	1	0	3	0	2	5	15	26
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	5	17	1	0	0	2	8	33
psychology	0	6	1	16	2	0	0	2	27
sociology	1	10	1	1	1	3	4	0	21
totals	1	22	19	21	3	5	104	47	222

 $\label{eq:spendix} Appendix \ S-2$  Asymmetric citation matrices without self-citations 1979-1983

1982	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	0	0	0	0	4	4
communication	0	0	0	0	12	0	2	17	31
economics	0	0	0	2	2	4	0	19	27
geography	0	0	0	0	0	0	1	1	2
info&libSci	0	0	0	1	0	0	0	0	1
politicalSci	0	10	20	0	0	0	13	8	51
psychology	0	11	13	0	0	5	0	7	36
sociology	0	14	2	10	0	8	9	0	43
totals	0	35	35	13	14	17	25	56	195

1983	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	0	0	1	2	14	17
communication	0	0	0	1	3	1	2	10	17
economics	0	0	0	12	0	2	0	28	42
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	8	9	5	0	0	0	14	36
psychology	0	1	0	0	1	0	0	3	5
sociology	0	21	1	6	0	1	2	0	31
totals	0	30	10	24	4	5	6	69	148

"cites" = column labeled disciplines cite row labeled disciplines (for example communication cites psychology 1 times in 1983)

"cited" = row labeled disciplines are cited by column labeled disciplines (for example communication is cited by psychology 2 times in 1983)

 $\label{eq:appendix} Appendix \ T-1$  Asymmetric citation matrices with self-citation 1979-1983

1979	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	436	0	7	1	0	0	3	3	450
communication	0	34	0	0	2	0	3	7	46
economics	0	0	150	4	0	2	0	30	186
geography	1	0	0	16	0	0	0	2	19
info&libSci	0	0	0	0	21	0	0	0	21
politicalSci	0	2	24	0	0	25	1	17	69
psychology	1	7	0	0	3	0	162	8	181
sociology	0	13	0	4	0	5	4	440	466
totals	438	56	181	25	26	32	173	507	1438

1980	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	57	0	0	2	0	0	0	4	63
communication	0	58	0	0	9	0	1	9	77
economics	0	0	155	15	0	1	17	24	212
geography	0	0	0	44	0	0	0	3	47
info&libSci	0	0	0	0	6	0	0	0	6
politicalSci	0	4	18	2	0	4	8	18	54
psychology	0	4	1	0	3	0	134	6	148
sociology	0	7	3	8	0	0	27	483	528
totals	57	73	177	71	18	5	187	547	1135

1981	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	584	0	0	0	0	0	3	11	598
communication	0	70	0	0	0	0	90	11	171
economics	0	1	144	3	0	2	5	15	170
geography	0	0	0	50	0	0	0	0	50
info&libSci	0	0	0	0	35	0	0	0	35
politicalSci	0	5	17	1	0	16	2	8	49
psychology	0	6	1	16	2	0	192	2	219
sociology	1	10	1	1	1	3	4	499	520
totals	585	92	163	71	38	21	296	546	1812

 $\label{eq:appendix} Appendix \ T-2$  Asymmetric citation matrices with self-citation 1979-1983

1982	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	473	0	0	0	0	0	0	4	477
communication	0	83	0	0	12	0	2	17	114
economics	0	0	112	2	2	4	0	19	139
geography	0	0	0	20	0	0	1	1	22
info&libSci	0	0	0	1	10	0	0	0	11
politicalSci	0	10	20	0	0	8	13	8	59
psychology	0	11	13	0	0	5	142	7	178
sociology	0	14	2	10	0	8	9	389	432
totals	473	118	147	33	24	25	167	445	1432

1983	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	532	0	0	0	0	1	2	14	549
communication	0	99	0	1	3	1	2	10	116
economics	0	0	86	12	0	2	0	28	128
geography	0	0	0	37	0	0	0	0	37
info&libSci	0	0	0	0	4	0	0	0	4
politicalSci	0	8	9	5	0	11	0	14	47
psychology	0	1	0	0	1	0	130	3	135
sociology	0	21	1	6	0	1	2	416	447
totals	532	129	96	61	8	16	136	485	1463

"cites" = column labeled disciplines cite row labeled disciplines (for example communication cites psychology 1 times in 1983)

<sup>&</sup>quot;cited" = row labeled disciplines are cited by column labeled disciplines (for example communication is cited by psychology 2 times in 1983)

 $\label{eq:local_equation} Appendix~U-1$  Asymmetric citation matrices without self-citation 2005-2009

2005	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	0	0	0	43	1	44
communication	0	0	1	0	8	11	0	7	27
economics	0	4	0	71	6	20	15	19	135
geography	0	0	0	0	0	0	0	0	0
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	219	14	0	2	0	1	48	284
psychology	11	4	1	0	19	5	0	11	51
sociology	0	17	11	3	14	10	8	0	63
Totals	11	244	27	74	49	46	67	86	604

2006	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	0	1	0	39	2	42
communication	0	0	0	0	4	6	1	11	22
economics	0	0	0	1	16	34	8	7	66
geography	0	0	1	0	0	0	1	0	2
info&libSci	0	0	0	0	0	0	1	0	1
politicalSci	0	0	2	2	2	0	1	28	35
psychology	18	1	16	0	18	0	0	7	60
sociology	1	0	4	8	15	17	5	0	50
Totals	19	1	23	11	56	57	56	55	278

2007	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	0	0	0	0	0	30	1	31
communication	0	0	0	0	10	15	1	3	29
economics	0	0	0	0	11	1	14	20	46
geography	0	0	0	0	2	0	0	1	3
info&libSci	0	0	0	0	0	0	0	0	0
politicalSci	0	229	1	0	0	0	4	34	268
psychology	1	14	0	0	40	1	0	16	72
sociology	1	11	0	2	17	3	4	0	38
Totals	2	254	1	2	80	20	53	75	487

 $\label{eq:local_equation} Appendix~U-2$  Asymmetric citation matrices without self-citation 2005-2009

2008	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	1	0	1	0	0	2	9	13
communication	0	0	4	0	11	3	1	2	21
economics	0	11	0	1	20	15	17	41	105
geography	0	0	0	0	0	0	0	2	2
info&libSci	0	1	0	0	0	0	3	0	4
politicalSci	0	11	0	22	0	0	0	4	37
psychology	4	24	5	1	18	0	0	6	58
sociology	0	27	7	5	13	6	0	0	58
Totals	4	75	16	30	62	24	23	64	298
									298

2009	ANTH	COM	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	0	6	0	0	2	0	4	2	14
communication	0	0	0	0	3	0	17	8	28
economics	0	2	0	165	18	31	9	17	242
geography	0	0	0	0	0	0	0	4	4
info&libSci	0	42	0	0	0	0	0	2	44
politicalSci	0	13	4	4	2	0	30	14	67
psychology	19	10	10	1	59	5	0	2	106
sociology	0	40	9	17	28	4	4	0	102
Totals	19	113	23	187	112	40	64	49	607

"cites" = column labeled disciplines cite row labeled disciplines (for example anthropology cites psychology 19 times in 2009)

"cited" = row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology 4 times in 2009)

Appendix V-1
Asymmetric Matrices with self-citations 2005-2009

2005	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	1124	0	0	0	0	0	43	1	1168
communication	0	140	1	0	8	11	0	7	167
economics	0	4	129	71	6	20	15	19	264
geography	0	0	0	61	0	0	0	0	61
info&libSci	0	0	0	0	229	0	0	0	229
politicalSci	0	219	14	0	2	280	1	48	564
psychology	11	4	1	0	19	5	395	11	446
sociology	0	17	11	3	14	10	8	455	518
totals	1135	384	156	135	278	326	462	541	3417

2006	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	1338	0	0	0	1	0	39	2	1380
communication	0	6	0	0	4	6	1	11	28
economics	0	0	100	1	16	34	8	7	166
geography	0	0	1	168	0	0	1	0	170
info&libSci	0	0	0	0	351	0	1	0	352
politicalSci	0	0	2	2	2	466	1	28	501
psychology	18	1	16	0	18	0	255	7	315
sociology	1	0	4	8	15	17	5	242	292
totals	1357	7	123	179	407	523	311	297	3204

2007	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	80	0	0	0	0	0	30	1	111
communication	0	152	0	0	10	15	1	3	181
economics	0	0	31	0	11	1	14	20	77
geography	0	0	0	14	2	0	0	1	17
info&libSci	0	0	0	0	432	0	0	0	432
politicalSci	0	229	1	0	0	167	4	34	435
psychology	1	14	0	0	40	1	334	16	406
sociology	1	11	0	2	17	3	4	478	516
totals	82	406	32	16	512	187	387	553	2175

Appendix V-2
Asymmetric Matrices with self-citations 2005-2009

2008	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	2229	1	0	1	0	0	2	9	2242
communication	0	165	4	0	11	3	1	2	186
economics	0	11	307	1	20	15	17	41	412
geography	0	0	0	158	0	0	0	2	160
info&libSci	0	1	0	0	236	0	3	0	240
politicalSci	0	11	0	22	0	113	0	4	150
psychology	4	24	5	1	18	0	240	6	298
sociology	0	27	7	5	13	6	0	402	460
totals	2233	240	323	188	298	137	263	466	4148

2009	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYCH	SOC	totals
anthropology	219	6	0	0	2	0	4	2	233
communication	0	168	0	0	3	0	17	8	196
economics	0	2	222	165	18	31	9	17	464
geography	0	0	0	189	0	0	0	4	193
info&libSci	0	42	0	0	283	0	0	2	327
politicalSci	0	13	4	4	2	169	30	14	236
psychology	19	10	10	1	59	5	188	2	294
sociology	0	40	9	17	28	4	4	307	409
totals	238	281	245	376	395	209	252	356	2352

"cites" = column labeled disciplines cite row labeled disciplines (for example anthropology cites psychology 19 times in 2009)

"cited" = row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology 4 times in 2009)

# Appendix W-1a

	ELF CITATIONS		2005					1.1.1.1.1.1.1		
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				_		_		sociology	row total	6ofTotalCite
anthropolo	0	0	0	0	0	0	43	1	44	7.28476
communic	0	0	1	0	8	11	0	7	27	4.470199
economics	0	4	0	71	6	20	15	19	135	22.3509
geography	0	0	0	0	0	0	0	0	0	(
info&libSci	0	0	0	0	0	0	0	0	0	(
politicalSci	0	219	14	0	2	0	1	48	284	47.01987
psychology	11	4	1	0	19	5	0	11	51	8.443709
sociology	0	17	11	3	14	10	8	0	63	10.43046
column tota	11	244	27	74	49	46	67	86	604	100
col:%ofTota	1.8211921	40.4	4.4702	12.3	8.113	7.616	11.093	14.23841	604	100
remember: /	A matrix column	s=cites, n	ows=cited							
	mn labeled discipli			iplines (1	for example	anthropol	logy cites ps	ychology four ti	imes)	
"cited" = row	labeled disciplines	are cited b	y column lab	eled disci	plines (for	example a	nthropology	is cited by psyc	thology twice)	
transpose of	asymmetric ma				1.6.	- Her				
anth-sector	anthropology	communi	economics			_			row totals	6ofTotalCited
anthropolog	0	0	0	0	0	0	11	0	11	1.821192
communicat economics	0	0	0	0	0	219 14	4	17	244 27	40.3973
	0	0	71	0	0	0	0	11	74	12.2516
geography info. & librar	0	8	6	0	0	2	19	14	49	8.11258
politicalScie	0	11	20	0	0	0	5	10	46	7.61589
psychology	43	0	15	0	0	1	0	8	67	11.0927
		,								
sociology	1	7	19	0	0	48	11	0	86	
	1 44		19 135	0	0	48 284	11 51	0 63	86 604	14.23841
sociology column tota col:%ofTota	1 44 7.2847682	7 27 4.47	19 135 22.351	0	0	48 284 47.02	11 51 8.4437	63 10.43046	86 604 604	14.23841 100 100
column tota col:%ofTota	44	27 4.47	135 22.351	0	0	284 47.02	51	63	604	14.23841
column tota col:%ofTota	7.2847682	27 4.47	135 22.351	0	0	284 47.02	51	63	604	14.2384
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column tota col:%ofTota remember: /	44 7.2847682 At matrix (trans 4atrix1 (lower tr anthropology	4.47 pose matri iangle of a communi	135 22.351 ix) is colum asymmetric economics	0 0 ns=cited matrix) geogra	0 0 d, rows=c informati	284 47.02 ites	8.4437 psycholog	63 10.43046 sociology	604 604 row totals	14.23841
column tota col:%ofTota remember: / Symmetric N anthropolog	44 7.2847682 At matrix (trans Hatrix1 (lower tr anthropology 0	4,47 pose matri	135 22.351 ix) is colum asymmetric economics 0	0 0 ns=cited matrix) geogra 0	0 0 d, rows=c informati	284 47.02 ites political	51 8.4437 psycholog	63 10.43046 sociology	604 604 row totals	14.23841
column tota col:%ofTota remember: Symmetric M anthropolog communicat	44 7.2847682 At matrix (trans Hatrix1 (lower tr anthropology 0 0	27 4.47 pose matri iangle of a communi 0	135 22.351 ix) is colum esymmetric economics 0	0 0 ns=cited matrix) geogra 0 0	0 0 d, rows=c	284 47.02 ites political 0 219	51 8.4437 psycholog 11 4	63 10.43046 sociology 0 17	604 604 row totals 11 244	14.23841
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0	27 4.47 pose matri iangle of a communi 0 0	135 22.351 ix) is column asymmetric economics 0 4	matrix) geogra 0	0 0 0 d, rows=c	284 47.02 ites political 0 219 14	51 8.4437 psycholog 11 4	63 10.43046 sociology 0 17 11	604 604 row totals 11 244 30	14.2384
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0	27 4.47 pose matri iangle of a communi 0 0 4	135 22.351 ix) is colum asymmetric economics 0 4 0	matrix) geogra 0 0 0 0 0 0 0 0	0 0 d, rows=c	284 47.02 ites political 0 219 14	51 8.4437 psycholog 11 4 1	63 10.43046 sociology 0 17 11	604 604 row totals 11 244 30	14.2384
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography info&libScl	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0	27 4.47 pose matri iangle of a communi 0 0 4	135 22.351 ix) is column asymmetric economics 0 4 0	matrix) geogra 0 0 0 0 0 0 0 0	0 0 d, rows=c	284 47.02 ites political 0 219 14 0	51 8.4437 psycholog 11 4 1 0	63 10.43046 sociology 0 17 11 3	row totals 11 244 30 3 35	14.2384
column tota col:%ofTota remember: // Symmetric Manthropolog communicate economics geography info&libSci politicalSci	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0 0	27 4.47 pose matri iangle of a communi 0 0 4 0 219	135 22.351 ix) is colum asymmetric economics 0 4 0	matrix) geogra 0 0 0 0 0 0 0 0	0 0 d, rows=c	284 47.02 ites political 0 219 14 0 2	51 8.4437 psychologg 11 4 1 0 19 5	63 10.43046 sociology 0 17 11 3 14	row totals 11 244 30 3 35 250	14.2384
column tota col:%ofTota remember: Symmetric M anthropolog communicat economics geography info&libSci politicalSci psychology	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0	27 4.47 pose matri iangle of a communi 0 0 4 0 219 4	135 22.351 ix) is colum asymmetric economics 0 4 0 0 14	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0	0 0 d, rows=c informati 0 0 0 0	284 47.02 ites political 0 219 14 0 2 0 5	51 8.4437 psycholog 11 4 1 0 19 5	63 10.43046 sociology 0 17 11 3	row totals 11 244 30 3 35 250 48	14.2384
column tota col: %ofTota remember: A symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 11	27 4.47 pose matri iangle of a communi 0 0 4 0 219 4	135 22.351 ix) is colum asymmetric economics 0 4 0 0 14 1	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 3	0 0, rows=c informati 0 0 0 0 2 19	284 47.02 ites political 0 219 14 0 2 5	51 8.4437 psycholog 11 4 1 0 19 5 0	53 10.43046 sociology 0 17 11 3 14 10 8	row totals 11 244 30 3 5 250 48	14.2384
column tota col: %ofTota remember: /  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0 0	27 4.47 pose matri iangle of a communi 0 0 4 0 219 4	135 22.351 ix) is colum asymmetric economics 0 4 0 0 14	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0	0 0 d, rows=c informati 0 0 0 0	284 47.02 ites political 0 219 14 0 2 0 5	51 8.4437 psycholog 11 4 1 0 19 5	63 10.43046 sociology 0 17 11 3 14	row totals 11 244 30 3 55 250 48 63	14.2384
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography info&libSci politicalSci psychology	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 11	27 4.47 pose matri iangle of a communi 0 0 4 0 219 4	135 22.351 ix) is colum asymmetric economics 0 4 0 0 14 1	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 3	0 0, rows=c informati 0 0 0 0 2 19	284 47.02 ites political 0 219 14 0 2 5	51 8.4437 psycholog 11 4 1 0 19 5 0	53 10.43046 sociology 0 17 11 3 14 10 8	row totals 11 244 30 3 5 250 48	14.2384
column tota col:%ofTota remember: // Symmetric Manthropolog communicate economics geography info&libSci politicalSci politicalSci psychology sociology column tota	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0 11 0 11	27 4.47 pose matri iangle of a communi 0 0 4 0 219 4 17	135 22.351 ix) is colum asymmetric economics 0 4 0 0 14 1 11	matrix) geogra 0 0 0 0 0 0 0 3 3	0 0, rows=c informati 0 0 0 0 2 19 14	284 47.02 ites political 0 219 14 0 2 5	51 8.4437 psycholog 11 4 1 0 19 5 0	53 10.43046 sociology 0 17 11 3 14 10 8	row totals 11 244 30 3 55 250 48 63	14.2384
column tota col:%ofTota remember: // Symmetric Manthropolog communicate economics geography info&libScl politicalScl psychology sociology column tota	44 7.2847682 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 11 0 11 4atrix 2 (upper tr	27 4,47 pose matri iangle of a communio 0 4 0 219 4 17 244	135 22.351 ix) is colum asymmetric economics 0 4 0 0 14 1 11	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 d, rows=c informati 0 0 0 0 2 19 14 35	284 47.02 ites political 0 219 14 0 2 0 5 10 250	psycholog 11 4 1 0 19 5 0 8 48	53 10.43046 sociology 0 17 11 3 14 10 8 0	row totals 11 244 30 3 55 250 48 63	14.2384 10
column tota col: %ofTota remember: // Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota Symmetric N	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0 11 0 11	27 4,47 pose matri iangle of a communio 0 4 0 219 4 17 244	135 22.351 ix) is column symmetric economics 0 4 0 0 14 1 11 30	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 d, rows=c informati 0 0 0 0 2 19 14 35	284 47.02 ites political 0 219 14 0 2 0 5 10 250	psycholog 11 4 1 0 19 5 0 8 48	53 10.43046 sociology 0 17 11 3 14 10 8 0	row totals 11 244 30 3 35 250 48 63 684	14.2384 10
column tota col: %ofTota remember: // Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota  Symmetric N anthropolog	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology	27 4,47 pose matri iangle of a communication of a c	135 22.351 ix) is column symmetric economics 0 4 0 0 14 1 11 30 asymmetric economics	matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites political 0 219 14 0 2 0 5 10 250	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48	63 10.43046 sociology 0 17 11 3 14 10 8 0	row totals 11 244 30 35 250 48 63 684 row totals	14.2384 10
column tota col: %ofTota remember: // Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0	27 4,47 pose matri iangle of a communication of the	135 22.351 ix) is column symmetric economics 0 4 0 0 14 1 11 30 asymmetric economics	matrix) geogra 0 0 0 0 0 0 0 0 0 0 3 3 c matrix geogra 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites  political 0 219 14 0 2 0 5 10 250  political 0 11	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48	53 10.43046 sociology 0 17 11 3 14 10 8 0 63	row totals 11 244 30 3 35 250 48 63 684 684 row totals	14.2384 10
column tota col:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology column tota  Symmetric N anthropolog communicat economics	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	27 4,47 pose matri iangle of a communi 0 0 4 0 219 4 17 244 criangle of communi 0 0	135 22.351 ix) is column symmetric economics 0 4 0 0 14 1 11 30 asymmetric economics 0 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	matrix) geogra 0 0 0 0 0 0 0 0 0 0 3 3 c matrix geogra 0 0 71	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites political 0 219 14 0 2 0 5 10 250 political 0 11 250	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48 psycholog 43 0	63 10.43046  sociology 0 17 11 3 14 10 8 0 63  sociology 7 19	row totals 11 244 30 3 35 250 48 63 684 684 row totals 44 27	14.2384 10
column tota col: %ofTota remember: // Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	27 4,47 pose matri liangle of a communi 0 0 4 0 219 4 17 244 criangle of communi 0 0 1	135 22.351 ix) is column symmetric economics 0 4 0 0 14 1 11 30 asymmetric economics	matrix) geogra 0 0 0 0 0 0 0 0 0 0 3 3 c matrix geogra 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites  political 0 219 14 0 2 0 5 10 250  political 0 11	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48 psycholog 43 0	53 10.43046 sociology 0 17 11 3 14 10 8 0 63	row totals 11 244 30 3 35 250 48 63 684 684 row totals 44 27 132	14.2384 10
column tota col: %ofTota remember: // Symmetric N anthropolog communicat economics geography info&iibSci psychology column tota  Symmetric N anthropolog communicat economics geography info&iibSci psychology column tota	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	27 4,47 pose matri iangle of a communi 0 0 4 0 219 4 17 244 criangle of communi 0 0 0 8	135 22.351 ix) is column asymmetric economics 0 4 0 0 14 11 30 asymmetric economics 0 71 6	0 0 ns=cites matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites  political 0 219 14 0 2 0 5 10 250  political 0 11 20 0	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48 psycholog 43 0	63 10.43046 sociology 0 17 11 3 14 10 8 0 63 sociology 7 19 0	row totals 11 244 30 3 35 250 48 63 684 684 row totals 44 27	14.2384 10
column tota col:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&iibScl politicalScl psychology column tota  Symmetric N anthropolog communicat economics geography	44 7.2847682 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	27 4,47 pose matri liangle of a communi 0 0 4 0 219 4 17 244 criangle of communi 0 0 1	135 22.351 ix) is colum symmetric economics 0 4 0 0 14 11 30 asymmetric economics 1 0 71	0 0 0 ns=cites matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites  political 0 219 14 0 2 0 5 10 250  political 0 111 20 0 0	psycholog 11 4 1 0 19 5 0 8 48  psycholog 43 0 15 0 0	63 10.43046 sociology 0 17 11 3 14 10 8 0 63 sociology 1 7 19 0 0	row totals 11 244 30 3 35 250 48 63 684 684 row totals 44 27 132 71	14.2384 10
column tota col:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology column tota  Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology column tota	44 7.2847682 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0 43	27 4,47 pose matri iangle of a communi 0 0 4 0 219 4 17 244 criangle of communi 0 0 0 1 0 8 11 0	135 22.351 ix) is colum symmetric economics 0 4 0 0 14 11 30 asymmetric economics 1 0 71 6 20 15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites  political 0 219 14 0 2 0 5 10 250  political 0 11 20 0 0 1	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48 psycholog 43 0 15 0 0	63 10.43046  sociology  0 17 11 3 14 10 8 0 63  sociology  1 7 19 0 48 11	row totals 11 244 30 3 35 250 48 63 684 684 row totals 44 27 132 71 14 80 70	14.2384 10
column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology column tota  Symmetric Nanthropolog communicate economics geography info&libSci politicalSci politicalSci politicalSci politicalSci politicalSci politicalSci politicalSci politicalSci politicalSci	44 7.2847682 At matrix (trans fatrix1 (lower tr anthropology 0 0 0 0 11 0 11 4atrix 2 (upper tr anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	27 4,47 pose matri iangle of a communi 0 0 4 0 219 4 17 244  criangle of communi 0 0 8 11	135 22.351 ix) is column asymmetric economics 0 4 0 0 14 11 30 asymmetric economics 0 71 6	0 0 0 ns=cited matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	284 47.02 ites  political 0 219 14 0 2 0 5 10 250  political 0 11 20 0 0 0	51 8.4437 psycholog 11 4 1 0 19 5 0 8 48 psycholog 43 0 15 0 0	63 10.43046  sociology 0 17 11 3 14 10 8 0 63  sociology 1 7 19 0 48	row totals 11 244 30 3 35 250 48 63 684 684 70w totals 44 27 132 71 14 80	14.2384 10

## Appendix W-1b

2005 without self citations means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	27	0.5	27.5
communicat	0	0	2.5	0	4	115	2	12	135.5
economics	0	2.5	0	35.5	3	17	8	15	81
geography	0	0	35.5	0	0	0	0	1.5	37
info. & librar	0	4	3	0	0	1	9.5	7	24.5
politicalScier	0	115	17	0	1	0	3	29	165
psychology	27	2	8	0	9.5	3	0	9.5	59
sociology	0.5	12	15	1.5	7	29	9.5	0	74.5
column total	27.5	135.5	81	37	24.5	165	59	74.5	841

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	32	1	33
communicat	0	0	3	0	8	208	4	10	233
economics	0	3	0	71	6	6	14	8	108
geography	0	0	71	0	0	0	0	3	74
info. & librar	0	8	6	0	0	2	19	14	49
politicalScier	0	208	6	0	2	0	4	38	258
psychology	32	4	14	0	19	4	0	3	76
sociology	1	10	8	3	14	38	3	0	77
column total	33	233	108	74	49	258	76	77	908

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	1850	7	664	0	0	91	11	344	2967
communicat	7	235	401	0	0	366	285	233	1527
economics	664	401	6079	0	0	1815	439	685	10083
geography	0	0	0	0	0	0	0	0	0
info. & librar	0	0	0	0	0	0	0	0	0
politicalScier	91	366	1815	0	0	50466	1456	3913	58107
psychology	11	285	439	0	0	1456	645	395	3231
sociology	344	233	685	0	0	3913	395	779	6349
column total	2967	1527	10083	0	0	58107	3231	6349	82264

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	43	1	44
communicat	0	0	1	0	8	11	0	7	27
economics	0	4	0	71	6	20	15	19	135
geography	0	0	0	0	0	0	0	0	0
info. & librar	0	0	0	0	0	0	0	0	0
politicalScier	0	219	14	0	2	0	1	48	284
psychology	11	4	1	0	19	5	0	11	51
sociology	0	17	11	3	14	10	8	0	63
column total	11	244	27	74	49	46	67	86	604

# Appendix W-1c

	CITATIONS									
Note: colum	n labels are disc	iplines wh	ose 2005 to	p impa	t journals	were ex	amined; ro	w labels (at le	eft) represen	t
citations/dis	cipline of top 5 i	mpact fac	tor journals	in top j	ournal by	discipline				
asymmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	political	psycholo	sociology	row total	6ofTotalCited
anthropolo		0	0	0	0	0	43	1	1168	34.18203
communic	0	140	1	0	8	11	0	7	167	4.887328
economics	0	4	129	71	6	20	15	19	264	7.726076
geography	0	0	0	61	0	0	0	0	61	1.785192
info&libSci	0	0	0	0	229	0	0	0	229	6.701785
politicalSci	0	219	14	0	2	280	1	48	564	16.50571
psychology	11	4	1	0	19	5	395	11	446	13.05239
sociology	0	17	11	3	14	10	8	455	518	15.1595
column tota	1135	384	156	135	278	326	462	541	3417	100
col:%ofTota	33.216272	11.24	4.5654	3.95	8.136	9.541	13.521	15.8326	3417	100
	A matrix column									
	mn labeled discipli									
cited = row	labeled disciplines	are cited b	y column lab	erea disci	plines (for	example ar	nthropology	is cited by psyc	nology twice)	
transpose of	f asymmetric ma	trix citatio	on data							
_ a. spose of	anthropology		economics	geogra	info. & lit	politicals	psycholog	sociology	row totals	6ofTotalCited
anthropolog	1124	0	0	0	0	0	11	0	1135	33.21627
communicat	0	140	4	0	0	219	4	17	384	11.23793
economics	0	1	129	0	0	14	1	11	156	4.565408
geography	0	0	71	61	0	0	0	3	135	3.950834
info. & librar	0	8	6	0	229	2	19	14	278	8.135792
politicalScie	0	11	20	0	0	280	5	10	326	9.540533
psychology	43	0	15		0	1	395	8	462	
										13.52063
sociology	1	7	19	0	0	48	11	455	541	15.8326
sociology column tota	1 1168	7 167	19 264	0 61	0 229	48 564	11 446	455 518	541 3417	15.8326 100
sociology column tota col:%ofTota	1 1168 34.182031	7 167 4.887	19 264 7.7261	0 61 1.79	0 229 6.702	48 564 16.51	11	455	541	15.8326 100
sociology column tota col:%ofTota	1 1168	7 167 4.887	19 264 7.7261	0 61 1.79	0 229 6.702	48 564 16.51	11 446	455 518	541 3417	15.8326 100
sociology column tota col:%ofTota	1 1168 34.182031	7 167 4.887	19 264 7.7261	0 61 1.79	0 229 6.702	48 564 16.51	11 446	455 518	541 3417	15.8326 100
sociology column tota col:%ofTota remember:	1 1168 34.182031 At matrix (trans Matrix1 (lower tr	7 167 4.887 pose matri	264 7.7261 ix) is colum	0 61 1.79 ns=cited matrix)	0 229 6.702 d, rows=c	48 564 16.51 ites	11 446 13.052	455 518 15.1595	541 3417 3417	15.8326 100
sociology column tota col: %ofTota remember: //	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology	7 167 4.887 pose matr iangle of a	264 7.7261 ix) is colum asymmetric economics	0 61 1.79 ns=cited matrix) geogra	0 229 6.702 d, rows=c	48 564 16.51 ites	11 446 13.052 psycholog	455 518 15.1595 sociology	541 3417 3417 row totals	15.8326 100
sociology column tota col:%ofTota remember: Symmetric N anthropolog	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124	7 167 4.887 pose matri iangle of a communi	19 264 7.7261 ix) is colum esymmetric economics	0 61 1.79 ns=cited matrix) geogra 0	0 229 6.702 d, rows=c	48 564 16.51 ites	11 446 13.052 psycholog	455 518 15.1595 sociology	541 3417 3417 row totals 1135	15.8326 100
sociology column tota col:%ofTota remember: Symmetric N anthropolog communicat	1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124	7 167 4.887 pose matri iangle of a communi 0 140	19 264 7.7261 ix) is colum esymmetric economics 0	0 61 1.79 ns=cited matrix) geogra 0 0	0 229 6.702 d, rows=0 informati	48 564 16.51 ites political 0 219	11 446 13.052 psycholog	455 518 15.1595 sociology	541 3417 3417 row totals 1135 384	15.8326 100
sociology column tota col:%ofTota remember: Symmetric N anthropolog communicat economics	1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129	0 61 1.79 ns=cited matrix) geogra 0 0	0 229 6.702 d, rows=c informati 0 0	48 564 16.51 ites political 0 219 14	11 446 13.052 psycholog 11 4	455 518 15.1595 sociology 0 17 11	541 3417 3417 row totals 1135 384 159	15.8326 100
sociology column tota col: %ofTota remember: // Symmetric N anthropolog communicat economics geography	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129	0 61 1.79 ns=cited matrix) geogra 0 0 0	0 229 6.702 d, rows=c informati 0 0	48 564 16.51 ites political 0 219 14	11 446 13.052 psycholog 11 4 1	455 518 15.1595 sociology 0 17 11	541 3417 3417 row totals 1135 384 159 64	15.8326 100
sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libSci	1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0	0 61 1.79 ns=cited matrix) geogra 0 0 0 61	0 229 6.702 d, rows=c informati 0 0 0	48 564 16.51 ites political 0 219 14 0	11 446 13.052 psycholog 11 4 1	455 518 15.1595 sociology 0 17 11 3	541 3417 3417 7 3417 7 3417 7 341 1135 384 159 64 264	15.8326 100
sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libSci politicalSci	1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 0 219	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0 0	0 61 1.79 ns=cited matrix) geogra 0 0 0 61	0 229 6.702 d, rows=c informati 0 0 0 229 2	48 564 16.51 ites political 0 219 14 0 2 280	11 446 13.052 psycholog 11 4 1 0 19 5	455 518 15.1595 sociology 0 17 11 3 14	541 3417 3417 7 3417 7 3417 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	15.8326 100
sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology	1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 0 219 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0 0 14	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0	0 229 6.702 d, rows=c informati 0 0 0 229 2	48 564 16.51 ites political 0 219 14 0 2 280 5	11 446 13.052 psycholog 11 4 1 0 19 5 395	455 518 15.1595 sociology 0 17 11 3 14 10 8	541 3417 3417 3417 row totals 1135 384 159 64 264 530 443	15.8326 100
sociology column tota col: %ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 0 219 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0 0 14 1	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0 0	0 229 6.702 d, rows=c informati 0 0 0 229 2 19	48 564 16.51 ites political 0 219 14 0 2 280 5 10	psycholog 11 446 13.052 psycholog 11 4 1 0 19 5 395	455 518 15.1595 sociology 0 17 11 3 14 10 8 455	541 3417 3417 3417 row totals 1135 384 159 64 264 530 443 518	15.8326 100
sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 0 219 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0 0 14	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0	0 229 6.702 d, rows=c informati 0 0 0 229 2	48 564 16.51 ites political 0 219 14 0 2 280 5	11 446 13.052 psycholog 11 4 1 0 19 5 395	455 518 15.1595 sociology 0 17 11 3 14 10 8	541 3417 3417 3417 row totals 1135 384 159 64 264 530 443 518	15.8326 100
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sociology column tota col: %ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 0 219 4	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0 0 14 1	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0 0	0 229 6.702 d, rows=c informati 0 0 0 229 2 19	48 564 16.51 ites political 0 219 14 0 2 280 5 10	psycholog 11 446 13.052 psycholog 11 4 1 0 19 5 395	455 518 15.1595 sociology 0 17 11 3 14 10 8 455	541 3417 3417 3417 row totals 1135 384 159 64 264 530 443 518	15.8326 100
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sociology column tota col: %ofTota remember: /  Symmetric N anthropolog communicat economics geography info&iibSci politicalSci psychology sociology column tota	1 1168 34.182031 At matrix (trans Matrix1 (lower tr anthropology 1124 0 0 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 0 219 4 17 384	19 264 7.7261 ix) is colum asymmetric economics 0 4 129 0 0 14 11	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0 0 3 64	0 229 6.702 d, rows=c informati 0 0 0 229 2 19 14 264	48 564 16.51 ites political 0 219 14 0 2 280 5 10	11 446 13.052 psycholog 11 4 1 0 19 5 395 8 443	455 518 15.1595 sociology 0 17 11 3 14 10 8 455 518	541 3417 3417 3417 row totals 1135 384 159 64 264 530 443 518	15.8326 100
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sociology column tota col:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&ilbSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat economics	1168 34.182031 At matrix (trans  Matrix1 (lower tr anthropology 1124 0 0 0 11 11 0 1135  Matrix 2 (upper tanthropology 1124 0 0	7 167 4.887 pose matri iangle of a communi 0 140 4 17 384 triangle of communi 0 140	19 264 7.7261 ix) is colum  ssymmetric economics 0 4 129 0 14 1 11 159 asymmetric economics 1 159	0 61 1.79 ns=cited on the cited	0 229 6.702 d, rows=c of open control of the contro	48 564 16.51 ites political 0 219 14 0 2 280 5 10 530 political 0	11 446 13.052 psycholog 11 4 1 0 19 5 395 8 443 psycholog 43	455 518 15.1595 sociology 0 17 11 3 14 10 8 455 518	541 3417 3417 3417  row totals 1135 384 159 64 264 530 443 518 3497 3497  row totals 1168 167	15.8326 100
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sociology column tota col: %ofTota remember: /  Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota  Symmetric N anthropolog communicat economics geography info&libScl	1168 34.182031 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 111 0 1135  Matrix 2 (upper tr anthropology 1124 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 167 4.887 pose matri iangle of a communication of the communication of	19 264 7.7261 ix) is column asymmetric economics 0 4 129 0 0 14 11 159 asymmetric economics 0 129 71 6	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0 0 64 c matrix geogra 0 0 0 71 61 0 0	0 229 6.702 d, rows=c of the control	48	11 446 13.052 psycholog 11 4 1 0 19 5 395 8 443 psycholog 43 0 15 0	455 518 15.1595 sociology 0 17 11 3 14 10 8 455 518 sociology 1 7	541  3417  3417  3417  3417  row totals  1135  384  159  64  264  530  443  518  3497  3497  row totals  1168  167  261  132  243	15.8326
sociology column tota col: %ofTota remember: /  Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota  Symmetric N anthropolog communicat economics geography info&libScl politicalScl politicalScl politicalScl politicalScl	1168 34.182031 At matrix (trans  Matrix1 (lower tr anthropology 1124 0 0 1135  Matrix 2 (upper tr anthropology 1124 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 167 4.887 pose matriangle of a communication of communi	19 264 7.7261 ix) is column symmetric economics 0 4 129 0 14 11 159 asymmetric economics 0 129 3 asymmetric economics 0 1 29 71 6	0 61 1.79 ns=cited matrix) geogra 0 0 0 61 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 229 6.702 d, rows=c odd, row	48 564 16.51 ites political 0 219 14 0 2 280 5 10 530 political 0 0 11 20 0 280	111 446 13.052 psycholog 111 4 1 0 19 5 395 8 443 psycholog 43 0 15 0	455 518 15.1595 sociology 0 17 11 3 14 10 8 455 518 sociology 1 7 19 0 48	541  3417  3417  3417  3417  row totals  1135  384  159  64  530  443  518  3497  3497  row totals  1168  167  261  132  243  360	15.8326 100
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## AppendixW-1d

2005 WITH self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

anti	hropology	communi	economics	geogra	info. & lil	politicalSo	psycholog	sociology	row totals
anthropolog	1124		0	0	0	0	27		1151.5
communicat	0	140	2.5	0	4	115	2	12	275.5
economics	0	2.5	129	35.5	3	17	8	15	210
geography	0	0	35.5	61	0	0	0	1.5	98
info. & librar	0	4	3	0	229	1	9.5	7	253.5
politicalScier	0	115	17	0	1	280	3	29	445
psychology	27	2	8	0	9.5	3	395	9.5	454
sociology	0.5	12	15	1.5	7	29	9.5	455	529.5
column total	1151.5	275.5	210	98	253.5	445	454	529.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

ant	hropology	communi	economics	geogra	info. & lib	politicalSo	psycholog	sociology	row totals
anthropology	1124	0	0	0	0	0	32	1	1157
communicat	0	140	3	0	8	208	4	10	373
economics	0	3	129	71	6	6	14	8	237
geography	0	0	71	61	0	0	0	3	135
info. & librar	0	8	6	0	229	2	19	14	278
politicalScier	0	208	6	0	2	280	4	38	538
psychology	32	4	14	0	19	4	395	3	471
sociology	1	10	8	3	14	38	3	455	532
column total	1157	373	237	135	278	538	471	532	3721

Matrix product A\*At (post mulitiplied)

ant	hropology	communi	economics	geogra	info. & lib	politicalSc	psycholog	sociology	row totals
anthropology	1265226	7	664	0	0	91	29360	799	1296147
communicat	7	19835	1090	0	1832	34106	845	5798	63513
economics	664	1090	22720	4331	1374	9221	6493	10749	56642
geography	0	0	4331	3721	0	0	0	183	8235
info. & librar	0	1832	1374	0	52441	458	4351	3206	63662
politicalScien	91	34106	9221	0	458	128866	3251	28553	204546
psychology	29360	845	6493	0	4351	3251	156670	8560	209530
sociology	799	5798	10749	183	3206	28553	8560	207804	265652
column total	1296147	63513	56642	8235	63662	204546	209530	265652	2167927

Matrix product At\*A (pre multiplied)

FIGURA PROGG	ce we with	C marcyn							
ant	hropology	communi	economics	geogra	info. & lib	politicalSc	psycholog	sociology	row totals
anthropology	1263497	44	11	0	209	55	52677	1245	1317738
communicat	44	67882	3913	335	1896	63130	1995	19347	158542
economics	11	3913	16960	9192	983	6626	2432	8146	48263
geography	0	335	9192	8771	468	1450	1089	2714	24019
info. & librar	209	1896	983	468	53102	1003	7709	6845	72215
politicalScier	55	63130	6626	1450	1003	79046	2635	18502	172447
psychology	52677	1995	2432	1089	7709	2635	158164	8361	235062
sociology	1245	19347	8146	2714	6845	18502	8361	209861	275021
column total	1317738	158542	48263	24019	72215	172447	235062	275021	2303307

# Appendix W-2a

Note: colum citations/dis	ELF CITATIONS	4								
		elellene wh	nen 2006 h	a lmaa	et incennie		aminada ca	us labale (at le	eft) rossocor	
Citations/uis								w labels (at it	ert) represer	ic .
	scipilite of top 5	impact rac	tor journals	in top ]	ournar by	uiscipiiiie	•			
asymmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	politica	psycholo	sociology	row total	6ofTotalCited
anthropolo	0	0	0	0	1	0	39	2	42	15.10791
communic	. 0	0	0	0	4	6	1	11	22	7.913669
economics	0	0	0	1	16	34	8	7	66	23.74101
geograph	0	0	1	0	0	0	1	0	2	0.719424
info&libSci		0	0	0	0	0	1	0	1	0.359712
		0	2	2	2	0	1	28	35	12.58993
politicalSci		_		0		_				
psychology		1	16	_	18	0	0	7	60	21.58273
sociology	1	0	4	8	15	17	5	0	50	17.98561
column tota		1	23	11	56	57	56	55	278	100
col:%ofTota	6.8345324	0.36	8.2734	3.96	20.14	20.5	20.144	19.78417	278	100
remember:	A matrix column	ns=cites, n	ows=cited							
"cites" = colu	mn labeled discipli	ines cite rov	v labeled disc	iplines (	for example	anthropol	ogy cites ps	ychology four ti	imes)	
"cited" = row	labeled disciplines	are cited b	y column lab	eled disci	plines (for	example ar	nthropology	is cited by psyc	hology twice)	
transpose of	f asymmetric ma		on data							
	anthropology	communi	economics	geogra	info. & lit	political9	psycholog	sociology	row totals	6ofTotalCited
anthropolog		0	0	0	0	0	18	1	19	6.834532
communicat		0	0	0	0	0	1	0	1	0.359712
economics	0	0	0	1	0	2	16	4	23	8.273381
geography	0	0	1	0	0	2	0	8	11	3.956835
info. & librar		4	16	0	0	2	18	15	56	20.14388
politicalScie		6	34	0	0	0	0	17	57	20.5036
psychology	39	1	8	1	1	1	0	5	56	20.14388
sociology	2	11	7	0	0	28	7	0	55	19.78417
column tota		22	66	2	1	35	60	50	278	100
col:%ofTota	15.107914	7.914	23.741	0.72	0.36	12.59	21.583	17.98561	278	100
remember:	At matrix (trans	pose matr	ix) is colum	ns=cite	d, rows=c	ites				
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	anthropology				i-ft	Halool		and de an		
anthropolog	0	_		geogra	informati	-	psycholog		row totals	
an as seven land		0	0	geogra 0	0	0	18	1	19	
communicat		0	0	geogra 0 0	0	0	18 1	1 0	19 1	
economics	0	0 0	0	geogra 0 0	0 0	0 0 2	18 1 16	1 0 4	19 1 23	
economics geography	0	0 0 0	0 0 0	9eogra 0 0 1	0 0 0	0 0 2 2	18 1 16 0	1 0 4 8	19 1 23 11	
economics geography info&libSci	0 0	0 0	0 0 0 1	9eogra 0 0 1 0	0 0 0	0 0 2 2 2	18 1 16 0 18	1 0 4 8 15	19 1 23 11 35	
economics geography	0 0 0	0 0 0	0 0 0	9eogra 0 0 1 0 0	0 0 0 0	0 0 2 2 2 0	18 1 16 0 18	1 0 4 8 15	19 1 23 11 35 23	
economics geography info&libSci	0 0	0 0	0 0 0 1	9eogra 0 0 1 0	0 0 0	0 0 2 2 2	18 1 16 0 18	1 0 4 8 15	19 1 23 11 35	
economics geography info&libSci politicalSci psychology	0 0 0	0 0 0	0 0 0 1 0 2	9eogra 0 0 1 0 0	0 0 0 0	0 0 2 2 2 0	18 1 16 0 18	1 0 4 8 15	19 1 23 11 35 23	
economics geography info&libScl politicalScl psychology sociology	0 0 0 0 18	0 0 0 0 0 0	0 0 1 0 2 16 4	9eogra 0 0 1 0 2 0 8	0 0 0 0 2 18	0 0 2 2 2 2 0 0	18 1 16 0 18 0 0 5	1 0 4 8 15 17 5	19 1 23 11 35 23 58	
economics geography info&libSci politicalSci psychology	0 0 0 0 18	0 0 0 0 0 0	0 0 0 1 0 2 16	9eogra 0 0 1 0 2 0	0 0 0 0 0 2 18	0 0 2 2 2 2 0	18 1 16 0 18 0	1 0 4 8 15 17 5	19 1 23 11 35 23 58 50	
economics geography info&libScl politicalScl psychology sociology	0 0 0 0 18	0 0 0 0 0 0	0 0 1 0 2 16 4	9eogra 0 0 1 0 2 0 8	0 0 0 0 2 18	0 0 2 2 2 2 0 0	18 1 16 0 18 0 0 5	1 0 4 8 15 17 5	19 1 23 11 35 23 58	
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economics geography info&ilbSci politicalSci psychology sociology column tota  Symmetric i anthropolog	0 0 0 0 18 19 19 Matrix 2 (upper anthropology 0	0 0 0 0 0 1 0 1 triangle of	0 0 0 1 0 2 16 4 23 asymmetric economics	geogra  0  0  1  0  2  0  8  11  matrix geogra 0	0 0 0 0 2 18 15 35	0 0 2 2 2 2 0 0 17 23	18 1 16 0 18 0 0 5 5 58	1 0 4 8 15 17 5 0 50	19 1 23 11 35 23 58 50 220 220 row totals	
economics geography info&ilbSci politicalSci psychology sociology column tota Symmetric I	0 0 0 18 1 19 Matrix 2 (upper anthropology	0 0 0 0 0 1 1 triangle of	0 0 0 1 0 2 16 4 23 asymmetric	geogra 0 0 1 0 0 2 0 8 11	0 0 0 0 2 18 15 35	0 0 2 2 2 2 0 0 17 23	18 1 16 0 18 0 0 5 5 58	1 0 4 8 15 17 5 0 50	19 1 23 11 35 23 58 50 220 220 row totals	
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economics geography info&ilbSci politicalSci psychology sociology column tota  Symmetric i anthropolog communicat economics	0 0 0 0 18 19 Matrix 2 (upper anthropology 0 0 0 0 0	0 0 0 0 0 1 0 1 triangle of communi	0 0 0 1 0 2 16 4 23 asymmetric economics 0	geogra	0 0 0 0 2 18 15 35 informati	0 0 2 2 2 0 0 17 23 political 0 6	18 1 16 0 18 0 0 5 5 58 psycholog 39 1 8	1 0 4 8 15 17 5 0 50 sociology	19 1 23 11 35 23 58 50 220 220 row totals 42 22 66 2	
economics geography info&ilbSci politicalSci psychology sociology column tota  Symmetric i anthropolog communicat economics geography info&ilbSci	0 0 0 18 1 1 19 Matrix 2 (upper santhropology 0 0 0	0 0 0 0 0 1 0 1 triangle of communi 0 0	0 0 0 1 0 2 16 4 23 asymmetric economics 0 0 0	geogra 0 0 1 0 0 2 0 8 11 c matrix geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2 18 15 35 informati 4 16 0	0 0 2 2 2 0 0 17 23 political 0 6 34	18 1 16 0 18 0 0 5 58 psycholog 39 1 8 1	1 0 4 8 15 17 5 0 50 sociology 2 11 7	19 1 23 11 35 23 58 50 220 220 row totals 42 22 66 2 22	
economics geography info&ilbSci politicalSci psychology sociology column tota  Symmetric i anthropolog communicat economics geography info&ilbSci politicalSci	0 0 0 18 1 1 19 Matrix 2 (upper anthropology 0 0 0 0	0 0 0 0 0 1 0 1 triangle of communi 0 0 0	0 0 0 1 0 2 16 4 23 asymmetric economics 0 0 0 1 16 34	geogra 0 0 1 0 0 2 0 8 11 c matrix geogra 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2 18 15 35 informati 4 16 0 0	0 0 2 2 2 0 0 17 23 political 0 6 34 0	18 1 16 0 18 0 0 5 58 psycholog 39 1 8 1 1	1 0 4 8 15 17 5 0 50 sociology 2 11 7 0 0	19 11 23 11 35 23 58 50 220 220 row totals 42 22 66 2 22 69	
economics geography info&iibSci politicalSci psychology sociology column tota  Symmetric i anthropolog communicat economics geography info&iibSci politicalSci psychology	0 0 0 18 1 1 19 Matrix 2 (upper santhropology 0 0 0 0 1 0 39	0 0 0 0 0 1 0 1 triangle of communi 0 0 4 6	0 0 0 1 0 2 16 4 23 asymmetric economics 0 0 1 16 34 8	geogra 0 0 1 0 0 2 0 8 11 cmatrix geogra 0 0 1 0 1 1 0 1 0 1 0 1 0 1	0 0 0 0 2 18 15 35 informati 1 4 16 0 0	0 0 2 2 2 0 0 17 23 political 0 6 34 0 0	18 1 16 0 18 0 0 5 58 psycholog 39 1 8 1 1	1 0 4 8 15 17 5 0 50 sociology 2 11 7 0 0 28	19 1 23 11 35 23 58 50 220 220 row totals 42 22 66 2 22 69 58	
economics geography info&libScl politicalScl psychology sociology column tota  Symmetric I anthropolog communicat economics geography info&libScl politicalScl psychology sociology	0 0 0 18 1 1 19 Matrix 2 (upper anthropology 0 0 0 0 1 0 39	0 0 0 0 0 0 1 0 1 triangle of communi 0 0 0 4 6	0 0 0 1 0 2 16 4 23 asymmetric economics 0 0 0 1 16 34 8	geogra 0 0 1 0 0 2 0 8 11 c matrix geogra 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2 18 15 35 informati 4 16 0 0	0 0 2 2 2 0 0 17 23 political 0 6 34 0 0 0	18 1 16 0 18 0 0 5 58 psycholog 39 1 8 1 1 1	1 0 4 8 15 17 5 0 50 sociology 2 11 7 0 0 28	19 11 23 11 35 23 58 50 220 220 row totals 42 22 66 2 22 69 58	
economics geography info&iibSci politicalSci psychology sociology column tota  Symmetric i anthropolog communicat economics geography info&iibSci politicalSci psychology	0 0 0 18 1 1 19 Matrix 2 (upper anthropology 0 0 0 0 1 0 39	0 0 0 0 0 0 1 0 1 triangle of communi 0 0 0 4 6	0 0 0 1 0 2 16 4 23 asymmetric economics 0 0 1 16 34 8	geogra 0 0 1 0 0 2 0 8 11 cmatrix geogra 0 0 1 0 1 1 0 1 0 1 0 1 0 1	0 0 0 0 2 18 15 35 informati 1 4 16 0 0	0 0 2 2 2 0 0 17 23 political 0 6 34 0 0	18 1 16 0 18 0 0 5 58 psycholog 39 1 8 1 1	1 0 4 8 15 17 5 0 50 sociology 2 11 7 0 0 28	19 1 23 11 35 23 58 50 220 220 row totals 42 22 66 2 22 69 58	

## Appendix W-2b

#### 2006 WITHOUT self citations

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	0.5	0	28.5	1.5	30.5
communicat	0	0	0	0	2	3	1	5.5	11.5
economics	0	0	0	1	8	18	12	5.5	44.5
geography	0	0	1	0	0	1	0.5	4	6.5
info. & librar	0.5	2	8	0	0	1	9.5	7.5	28.5
politicalScier	0	3	18	1	1	0	0.5	22.5	46
psychology	28.5	1	12	0.5	9.5	0.5	0	6	58
sociology	1.5	5.5	5.5	4	7.5	22.5	6	0	52.5
column total	30.5	11.5	44.5	6.5	28.5	46	58	52.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	1	0	21	1	23
communicat	0	0	0	0	4	6	0	11	21
economics	0	0	0	0	16	32	8	3	59
geography	0	0	0	0	0	2	1	8	11
info. & librar	1	4	16	0	0	2	17	15	55
politicalScier	0	6	32	2	2	0	1	11	54
psychology	21	0	8	1	17	1	0	2	50
sociology	1	11	3	8	15	11	2	0	51
column total	23	21	59	11	55	54	50	51	324

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	1526	65	342	39	39	97	32	210	2350
communicat	65	174	353	1	1	317	149	167	1227
economics	342	353	1526	8	8	238	337	866	3678
geography	39	1	8	2	1	3	16	9	79
info. & librar	39		8	1	1	1	0	5	56
politicalScier	97		238	3	1	797	264	59	1776
psychology	32	149	337	16	0	264	954	352	2104
sociology	210	167	866	9	5	59	352	620	2288
column total	2350	1227	3678	79	56	1776	2104	2288	13558 13558

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	325	18	292	8	339	17	5	126	1130
communicat	18	1	16	0	18	0	0	7	60
economics	292	16	277	36	352	68	23	168	1232
geography	8	0	36	69	140	170	50	63	536
info. & librar	339	18	352	140	826	823	248	340	3086
politicalScien	17	0	68	170	823	1481	363	304	3226
psychology	5	0	23	50	248	363	1614	173	2476
sociology	126	7	168	63	340	304	173	1007	2188
column total	1130	60	1232	536	3086	3226	2476	2188	13934

# Appendix W-2c

	in labels are disc			-	-			w labels (at l	eft) represer	it
itations/dis	cipline of top 5	impact fac	tor journals	in top j	ournal by	discipline	-			
symmetric	matrix citation									
	anthropology	commun	economic	geogra	informa	politica	psycholo		row total	6ofTotalCited
inthropolo	1338	0	0	0	1	0	39	2	1380	43.07116
communic	. 0	6	0	0	4	6	1	11	28	0.873908
economics	0	0	100	1	16	34	8	7	166	5.181024
geograph	0	0	1	168	0	0	1	0	170	5.305868
nfo&libSci	0	0	0	0	351	0	1	0	352	10.98627
ooliticalSci	0	0	2	2	2	466	1	28	501	15.6367
psycholog	18	1	16	0	18	0	255	7	315	9.83146
sociology	1	0	4	8	15	17	5	242	292	9.113608
column tota	1357	7	123	179	407	523	311	297	3204	100
col:%ofTota		0.218	3.839	5.59	12.7	16.32	9.7066	9.269663	3204	100
	A matrix column									
	mn labeled disciplines									
cited" = row	labeled disciplines	are cited b	y column lab	elea disci	plines (for	example ar	nthropology	is cited by psyc	thology twice)	
ranspose o	f asymmetric ma	trix citatio	n data							
напорозе о	anthropology		economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals	6ofTotalCited
anthropolog		0	0	0	0	0	18	1	1357	42.35331
communicat	0	6	0	0	0	0	1	0	7	0.218477
economics	0	0	100	1	0	2	16	4	123	3.838951
geography	0	0	1	168	0	2	0	8	179	5.586767
nfo. & libra	1	4	16	0	351	2	18	15	407	12.70287
oliticalScie	0	6	34	0	0	466	0	17	523	16.32339
	39	1	8	1	1	1	255	5	311	9.706617
sychology		1 11	8 7	1	1 0		255 7	5 242	311 297	
psychology sociology	39 2					1				9.706617 9.269663 100
psychology sociology column tota	39 2 1380	11	7	0	0	1 28	7	242	297	9.269663
psychology sociology column tota col:%ofTota	39 2 1380	11 28 0.874	7 166 5.181	0 170 5.31	352 10.99	28 501 15.64	7 315	242 292	297 3204	9.269663 100
psychology sociology column tota col:%ofTota	39 2 1380 43.071161	11 28 0.874	7 166 5.181	0 170 5.31	352 10.99	28 501 15.64	7 315	242 292	297 3204	9.269663 100
psychology sociology column tota col:%ofTota remember:	39 2 1380 43.071161 At matrix (trans	11 28 0.874 pose matri	7 166 5.181 ix) is colum	0 170 5.31 ns=cited	352 10.99	28 501 15.64	7 315	242 292	297 3204	9.269663 100
psychology sociology column tota col:%ofTota remember:	39 2 1380 43.071161 At matrix (trans Matrix1 (lower tr	28 0.874 pose matri	7 166 5.181 ix) is colum	0 170 5.31 ns=cited matrix)	352 10.99 d, rows=c	28 501 15.64 Ites	7 315 9.8315	242 292 9.113608	297 3204 3204	9.269663 100
psychology sociology column tota col:%ofTota remember:	39 2 1380 43.071161 At matrix (trans Matrix1 (lower transfered)	28 0.874 pose matri riangle of a	7 166 5.181 ix) is colum asymmetric economics	0 170 5.31 ns=cited matrix) geogra	0 352 10.99 d, rows=c	28 501 15.64 ites	7 315 9.8315	242 292 9.113608 sociology	297 3204 3204 row totals	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans anthropology 1338	28 0.874 pose matri riangle of a communi	7 166 5.181 ix) is colum asymmetric economics 0	0 170 5.31 ns=cited matrix) geogra 0	0 352 10.99 d, rows=c informati	1 28 501 15.64 ites	7 315 9.8315 psycholog	242 292 9.113608 sociology	297 3204 3204 row totals 1357	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I anthropolog communicat	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0	28 0.874 pose matri iangle of a communi	7 166 5.181 ix) is colum esymmetric economics 0	0 170 5.31 ns=cited matrix) geogra 0	0 352 10.99 d, rows=c informati	1 28 501 15.64 ites	7 315 9.8315 psycholog 18	242 292 9.113608 sociology	297 3204 3204 row totals 1357 7	9.269663 100
psychology sociology column tota col:%ofTota remember: Symmetric l anthropolog communicat economics	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower transhropology 1338 0 0	11 28 0.874 pose matri iangle of a communi 0 6	7 166 5.181 ix) is colum asymmetric economics 0 0	0 170 5.31 ns=cited matrix) geogra 0 0	0 352 10.99 d, rows=c informati 0 0	1 28 501 15.64 ites	7 315 9.8315 psycholog 18 1	242 292 9.113608 sociology	297 3204 3204 row totals 1357 7 123	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric l anthropolog communicat economics geography	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans anthropology 1338 0 0	11 28 0.874 pose matri riangle of a communi 0 6 0	7 166 5.181 ix) is colum asymmetric economics 0 0 100	0 170 5.31 ns=cited matrix) geogra 0 0 1	0 352 10.99 d, rows=c informati 0 0	28 501 15.64 ttes	7 315 9.8315 psychologg 18 1 16	242 292 9.113608 sociology 1 0 4	297 3204 3204 row totals 1357 7 123	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I anthropolog communicate economics geography info&libSci	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0	11 28 0.874 pose matri tiangle of a communi 0 6 0	7 166 5.181 ix) is column asymmetric economics 0 0 100 1	0 170 5.31 ns=cited matrix) geogra 0 0 1 168	0 352 10.99 d, rows=c informati 0 0 0	1 28 501 15.64 ttes political 0 0 2 2 2 2 2	7 315 9.8315 psychologe 18 1 16 0	242 292 9.113608 sociology 1 0 4 8	297 3204 3204 70w totals 1357 7 123 179 386	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I enthropolog communicate economics geography info&libSci politicalSci	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans) 1338 0 0 0 0 0 0	11 28 0.874 pose matri	7 166 5.181 ix) is colum asymmetric economics 0 0 100 1	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0	0 352 10.99 d, rows=c informati 0 0 0 0 351 2	1 28 501 15.64 ttes political 0 0 2 2 2 466	7 315 9.8315 psycholog 18 1 16 0 18	242 292 9.113608 sociology 1 0 4 8 15	297 3204 3204 3204 row totals 1357 7 123 179 386 489	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I enthropolog communicate economics geography info&libSci politicalSci	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0	11 28 0.874 pose matri iangle of a communi 0 6 0 0	7 166 5.181 ix) is column asymmetric economics 0 0 100 1	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2	0 352 10.99 d, rows=c informati 0 0 0 0 351 2	1 28 501 15.64 ttes political 0 0 2 2 2 2 2	7 315 9.8315 psychologe 18 1 16 0	242 292 9.113608 sociology 1 0 4 8 15 17	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313	9.269663 100
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psychology sociology column tota col: %offota remember: Symmetric l anthropolog communicat economics geography info&libSci politicalSci psychology sociology	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 18	11 28 0.874 pose matri iangle of a communi 0 6 0 0	7 166 5.181 ix) is colum asymmetric economics 0 100 1 1 0 2 16	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0	0 352 10.99 d, rows=c informati 0 0 0 0 351 2	1 28 501 15.64 tes political 0 0 2 2 2 4666 0 0	7 315 9.8315 psycholog 18 1 16 0 18 0 255	242 292 9.113608 sociology 1 0 4 8 15 17 5	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313	9.269663 100
ssychology sociology column tota col: %ofTota remember: symmetric l anthropolog communicat geography nfo&libSci politicalSci psychology sociology	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower transhropology 1338 0 0 0 18	11 28 0.874 pose matri riangle of a communi 0 6 0 0 0	7 166 5.181 ix) is colum asymmetric economics 0 100 1 0 2	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2	0 352 10.99 d, rows=c informati 0 0 0 351 2 18	1 28 501 15.64 ttes political 2 2 2 466 0 17	7 315 9.8315 psychologe 18 1 16 0 18 0 255	242 292 9.113608 sociology 1 0 4 8 15 17	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146	9.269663 100
psychology sociology column tota col: %offota remember: Symmetric l anthropolog communicat economics geography info&libSci politicalSci psychology sociology	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 18	11 28 0.874 pose matri riangle of a communi 0 6 0 0 0	7 166 5.181 ix) is colum asymmetric economics 0 100 1 1 0 2 16	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0	0 352 10.99 d, rows=c informati 0 0 0 351 2 18	1 28 501 15.64 ttes political 2 2 2 466 0 17	7 315 9.8315 psycholog 18 1 16 0 18 0 255	242 292 9.113608 sociology 1 0 4 8 15 17 5	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I anthropolog communicate economics geography info&libSci politicalSci psychology sociology column tota	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 138 1357	11 28 0.874 pose matri riangle of a communi 0 6 0 0 0 0	7 166 5.181 ix) is colum asymmetric economics 0 100 1 2 16 4	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0 8	0 352 10.99 d, rows=c informati 0 0 0 351 2 18	1 28 501 15.64 ttes political 2 2 2 466 0 17	7 315 9.8315 psycholog 18 1 16 0 18 0 255	242 292 9.113608 sociology 1 0 4 8 15 17 5	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146	9.269663 100
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psychology sociology column tota col: %ofTota remember: Symmetric I anthropolog communicate economics geography nfo&libSci politicalSci psychology sociology column tota	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans) 1338 0 0 0 18 11 1357  Matrix 2 (upper anthropology	11 28 0.874 pose matri riangle of a communi 0 6 0 0 1 0 7 triangle of	7 166 5.181 ix) is colum ssymmetric economics 0 100 1 0 2 16 4 123 asymmetric economics	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0 8 179	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 tes political 2 2 466 0 17 489	7 315 9.8315 9.8315 18 11 16 0 18 0 255 5 313	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146	9.269663
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psychology sociology sociology sociology solumn tota sol: %ofTota remember:  Symmetric lanthropolog communicate economics geography info&libSci psychology sociology s	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans) 1338 0 0 0 18 11 1357  Matrix 2 (upper anthropology 1338 0 0	11 28 0.874 pose matri riangle of a communi 0 0 0 0 1 0 riangle of communi 0 6 6 0 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	7 166 5.181 ix) is colum symmetric economics 0 100 1 0 2 16 4 123 asymmetrics conomics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0 8 179 c matrix geogra 0 0	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 tes political 0 0 2 2 466 0 17 489 political 0 0 6	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 row totals 1380 28	9.269663
psychology sociology sociology sociology solumn tota sol: %ofTota remember:  Symmetric lanthropolog communicate economics geography info&libSci psychology sociology s	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans) 1338 0 0 0 18 11 1357  Matrix 2 (upper anthropology 1338 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 28 0.874 pose matri	7 166 5.181 ix) is colum ssymmetric economics 0 100 2 16 4 123 asymmetric economics 0 0 100 100	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0 8 179 : matrix geogra 0 0 1	0 352 10.99 d, rows=c informati 0 0 0 0 351 2 18 15 386	1 28 501 15.64 tes political 0 0 2 2 466 0 17 489 political 0 6 34	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11	297 3204 3204 3204  row totals 1357 7 123 179 386 489 313 292 3146 3146  row totals 1380 28 166	9.269663 100
psychology sociology sociology solumn tota sol: %ofTota remember:  Symmetric lanthropolog communicate sociology soci	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans) 1338 0 0 0 18 1 1357  Matrix 2 (upper anthropology 1338 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	11 28 0.874 pose matri	7 166 5.181 ix) is colum asymmetric economics 0 100 1 0 2 16 4 123 asymmetrics 0 0 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 170 5.31 ns=cited matrix) geogra 0 0 1 168 0 2 0 8 179 : matrix geogra 0 0 1.0 8 1.79 : matrix geogra 0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 tes political 0 0 2 2 466 0 17 489 political 0 6 34 0 0	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8 1	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 row totals 1380 28 166 170	9.269663
psychology sociology sociology solumn tota sol: %offota remember:  Symmetric lanthropolog communicate sociology soci	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 18 1 1357  Matrix 2 (upper anthropology 1338 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11 28 0.874 pose matri liangle of a communi 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 166 5.181 ix) is column symmetric economics 0 100 1 1 0 2 16 4 123 asymmetric economics 0 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 170 5.31 ns=cited matrix) geogra 0 0 168 179 cmatrix geogra 0 0 1 168 179 cmatrix geogra 0 0 0 1 168 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 ttes political 0 0 0 2 2 466 0 17 489 political 0 6 34 0 0 0	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8 1 1 1	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11 7	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 row totals 1380 28 166 170 373	9.269663
psychology sociology sociology solumn tota sol: %offota remember:  Symmetric I sommunicate sociology socio	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 18 1 1357  Matrix 2 (upper anthropology 1338 0 0 0 1 1 0 0 1 0 0 1 0 0 0 1 0 0 0 0	11 28 0.874 pose matri	7 166 5.181 ix) is column symmetric economics 0 100 1 1 0 2 16 4 123 asymmetric economics 0 100 1 16 34	0 170 5.31 ns=cited matrix) geogra 0 0 168 179 c matrix geogra 0 0 1 168 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 ttes political : 0 0 2 2 466 0 17 489 political : 0 0 6 34 0 0 466	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8 1 1 1 1	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11 7	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 row totals 1380 28 166 170 373 535	9.269663
psychology sociology sociology solumn tota sol: %ofTota remember:  Symmetric   sonthropolog sommunicate sociology so	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower trans) 1338 0 0 0 18 11 1357  Matrix 2 (upper anthropology 1338 0 0 0 1338 0 0 0 1338 0 0 0 0 1339	11 28 0.874 pose matri	7 166 5.181 ix) is column symmetric economics 0 100 1 1 0 2 16 4 123 asymmetric economics 0 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 170 5.31 ns=cited on a second of the secon	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 ttes political 0 0 0 2 2 466 0 0 17 489 political 0 6 34 0 0 466 1	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8 1 1 1 255	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11 7	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 row totals 1380 28 166 170 373 535 313	9.269663
psychology sociology sociology solumn tota sol: %offota remember:  Symmetric I sommunicate conomics geography info&libScl soliticalScl sociology sociology sociology sociology sociology info&libScl soliticalScl sol	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 18 1 1357  Matrix 2 (upper anthropology 1338 0 0 0 3 39 2	11 28 0.874 pose matri	7 166 5.181 ix) is column symmetric economics 0 100 1 1 0 2 16 4 123 asymmetric economics 0 100 1 16 34 8 7	0 170 5.31 ns=cited matrix) geogra 0 0 168 179 cmatrix geogra 0 0 1 168 0 0 168 0 0 0 1 1 168 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 ttes political 0 0 0 2 2 2 466 0 17 489 political 0 6 34 0 0 466 1 28	7 315 9.8315  9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8 1 1 1 255 7	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11 7 0 0 28 7	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 70w totals 1380 28 166 170 373 535 313	9.269663 100
psychology sociology column tota col: %ofTota remember: Symmetric I anthropolog communicate economics geography info&libSci politicalSci psychology sociology column tota	39 2 1380 43.071161 At matrix (trans  Matrix1 (lower tr anthropology 1338 0 0 0 18 1 1357  Matrix 2 (upper anthropology 1338 0 0 0 3 39 2	11 28 0.874 pose matri	7 166 5.181 ix) is column symmetric economics 0 100 1 1 0 2 16 4 123 asymmetric economics 0 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 170 5.31 ns=cited on a second of the secon	0 352 10.99 d, rows=c informati 0 0 0 351 2 18 15 386	1 28 501 15.64 ttes political 0 0 0 2 2 466 0 0 17 489 political 0 6 34 0 0 466 1	7 315 9.8315  psycholog 18 1 16 0 18 0 255 5 313  psycholog 39 1 8 1 1 1 255	242 292 9.113608 sociology 1 0 4 8 15 17 5 242 292 sociology 2 11 7	297 3204 3204 3204 row totals 1357 7 123 179 386 489 313 292 3146 3146 row totals 1380 28 166 170 373 535 313	9.269663 100

## Appendix W-2d

2006 WITH self citations means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	1338		0	0	0.5		28.5	1.5	1368.5
communicat	0	6	0	0	2	3	1	5.5	17.5
economics	0	0	100	1	8	18	12	5.5	144.5
geography	0	0	1	168	0	1	0.5	4	174.5
info. & librar	0.5	2	8	0	351	1	9.5	7.5	379.5
politicalScier	0	3	18	1	1	466	0.5	22.5	512
psychology	28.5	1	12	0.5	9.5	0.5	255	6	313
sociology	1.5	5.5	5.5	4	7.5	22.5	6	242	294.5
column total	1368.5	17.5	144.5	174.5	379.5	512	313	294.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	1338	0	0	0	1	0	21	1	1361
communicat	0	6	0	0	4	6	0	11	27
economics	0	0	100	0	16	32	8	3	159
geography	0	0	0	168	0	2	1	8	179
info. & librar	1	4	16	0	351	2	17	15	406
politicalScier	0	6	32	2	2	466	1	11	520
psychology	21	0	8	1	17	1	255	2	305
sociology	1	11	3	8	15	11	2	242	293
column total	1361	27	159	179	406	520	305	293	3250

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	108212	55	597	4	432	224	14436	2467	126427
communicat	41	1076	284	19	1728	2754	760	5414	12076
economics	247	699	3562	53	6912	6048	3458	3754	24733
geography	30	1	45	2352	0	5	334	340	3107
info. & librar	30	3511	3875	702	151632	4	14374	5971	180099
politicalScien	58	7095	1124	60	864	78780	1328	14824	104133
psychology	9097	608	4404	43	7776	1503	86034	4701	114166
sociology	472	1136	5216	384	6480	11091	6160	116019	146958
column total	118187	14181	19107	3617	175824	100409	126884	153490	711699

Matrix product At\*A (pre multiplied)

Macrix produ	nacrix product ACA (pre mulciplied)									
	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals	
anthropolog	107059	1	20	8	113	17	3380	409	111007	
communicat	263	926	726	546	1483	107813	4006	10844	126607	
economics	0	0	3102	33	498	1520	249	245	5647	
geography	2	0	22	2368	30	34	24	484	2964	
info. & librar	737	100	1810	483	152823	723	10817	4581	172074	
politicalScien	21	91	462	359	473	77997	460	5581	85444	
psychology	46156	340	6768	54	6338	2414	86477	3587	152134	
sociology	2104	34	4237	4080	7859	24668	6707	116915	166604	
column total	156342	1492	17147	7931	169617	215186	112120	142646	822481	

822481

Appendix W-3a

				_App	endix	W-3a				
WITHOUT SE	ELF CITATIONS									
Note: colum	n labels are disc	iplines wh	ose 2007 to	op impa	ct journals	were ex	amined; ro	w labels (at l	eft) represer	it
	cipline of top 5				-				ordy represent	
		_	,				-			1
asymmetric	matrix citation				1-6		no colo e la			C - CC - L - LCC 1
	anthropology							sociology	row total	6ofTotalCited
anthropolo	0	0	0	0	0	0	30	1	31	6.365503
communic	0	0	0	0	10	15	1	3	29	5.954825
economics	0	0	0	0	11	1	14	20	46	9.445585
geography	0	0	0	0	2	0	0	1	3	0.616016
info&libSci	0	0	0	0	0	0	0	0	0	0
politicalSci	0	229	1	0	0	0	4	34	268	55.0308
psychology	1	14	0	0	40	1	0	16	72	14.78439
sociology	1	11	0	2	17	3	4	0	38	7.802875
column tota	2	254	1	2	80	20	53	75	487	100
col:%ofTota	0.4106776	52.16	0.2053	0.41	16.43	4.107	10.883	15.40041	487	100
0011 7001 1000	0.7100770	52.10	0.2033	0.71	10.40	4.207	10.003	15,40041	407	100
		14								
	A matrix column			lellere di	f					
	mn labeled discipli									
"cited" = row	labeled disciplines	are cited b	y column lab	elea disci	plines (for	example a	nthropology	is cited by psyc	thology (wice)	
transpace of	asymmetric ma	triv citatio	n data							
transpose of	anthropology	communi		geogra	info & III	noliticalS	psycholog	sociology	row totals	6ofTotalCited
anthropolog	antinopology 0	0	0	geogra 0	0	A	paycholog 1	Suciology 1	2	0.410678
communicat	0	0	0	0	0	229	14	11	254	52.15606
economics	0	0	0	0	0	1	0	0	1	0.205339
geography	0	0	0	0	0	ô	0	2	2	0.410678
info. & librar	0	10	11	2	0	0	40	17	80	16.4271
politicalScier	0	15	1	0	0	0	1	3	20	4.106776
psychology	30	1	14	0	0	4	0	4	53	10.88296
sociology	1	3	20	1	0	34	16	0	75	15.40041
column tota	31	29	46	3	0	268	72	38	487	100
col:%ofTota	6.3655031	5.955	9.4456	0.62	0	55.03	14.784	7.802875	487	100
remember:	At matrix (trans	pose matr	ix) is colum	ns=cite	d. rows=c	tes				
	The street of the street of		,, 10 0010111		.,					
Symmetric N	4atrix1 (lower tr	riangle of a	symmetric	matrix)						
	anthropology	communi	economics	geogra	informati	political	psycholog	sociology	row totals	
anthropolog	0	0	0	0	0	0	1	1	2	
communicat	0	0	0	0	0	229	14	11	254	
economics	0	0	0	0	0	1	0	0	1	
geography	0	0	0	0	0	0	0	2	2	
info&libSci	0	0	0	0	0	0	40	17	57	
politicalSci	0	229	1	0	0	0	1	3	234	
psychology	1	14	0	0	40	1	0	4	60	1
sociology	1	11	0	2	17	3	4	0	38	1
							-			
column tota	2	254	1	2	57	234	60	38	648	
									648	
Symmetric N	4atrix 2 (upper									
	anthropology						psycholog		row totals	
anthropolog	0	0	0	0	0	0	30	1	31	
communicat	0	0	0	0	10	15	1	3	29	
economics	0	0	0	0	11	1	14	20	46	
geography	0	0	0	0	2	0	0	1	3	1
info&libSci	0	10	11	2	0	0	0	- O	23	1
politicalSci	0	15	1	0	0	0	4	34	54	1
psychology	30	1	14	0	0	4	0	16	65	1
sociology	1	3	20	1	0	34	16	0	75	1
column tota		29	45	3	23	54 54		75		-
Column Cotto	31	29	70	3	2.3	34	03	/3		
									326	

## Appendix W-3b

# 2007 WITHOUT self citations means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	15.5	1	16.5
communicat	0	0	0	0	5	122	7.5	7	141.5
economics	0	0	0	0	5.5	1	7	10	23.5
geography	0	0	0	0	1	0	0	1.5	2.5
info. & librar	0	5	5.5	1	0	0	20	8.5	40
politicalScier	0	122	1	0	0	0	2.5	18.5	144
psychology	15.5	7.5	7	0	20	2.5	0	10	62.5
sociology	1	7	10	1.5	8.5	18.5	10	0	56.5
column total	16.5	141.5	23.5	2.5	40	144	- 62.5	56.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & li	politicals	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	29	0	29
communicat	0	0	0	0	10	214	13	8	245
economics	0	0	0	0	11	0	14	20	45
geography	0	0	0	0	2	0	0	1	3
info. & librar	0	10	11	2	0	0	40	17	80
politicalScier	0	214	0	0	0	0	3	31	248
psychology	29	13	14	0	40	3	0	12	111
sociology	0	8	20	1	17	31	12	0	89
column total	29	245	45	3	80	248	111	89	850

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	901	33	440	1	0	154	16	120	1665
communicat	33	335	199	23	0	106	463	219	1378
economics	440	199	718	42	0	736	761	246	3142
geography	1	23	42	5	0	34	96	34	235
info. & librar	0	0	0	0	0	0	0	0	0
politicalScien	154	106	736	34	0	53614	3750	2535	60929
psychology	16	463	761	96	0	3750	2054	838	7978
sociology	120	219	246	34	0	2535	838	440	4432
column total	1665	1378	3142	235	0	60929	7978	4432	79759

Matrix product At\*A (pre multiplied)

· ·	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	2	25	0	2	57	4	4	16	110
communicat	25	52758	229	22	747	47	960	8010	62798
economics	0	229	1	0	0	0	4	34	268
geography	2	22	0	4	34	6	8	0	76
info. & librar	57	747	0	34	2114	252	232	892	4328
politicalScier	4	47	0	6	252	236	41	81	667
psychology	4	960	4	8	232	41	1129	449	2827
sociology	16	8010	34	0	892	81	449	1823	11305
column total	110	62798	268	76	4328	667	2827	11305	82379

# Appendix W-3c

Mater column	CITATIONS	1.00						1.1.1.1.1.1.1		
	in labels are disc	-			-			w labels (at le	eft) repres	ent
	cipline of top 5		tor journals	in top j	ournal by	discipline				
asymmetric	matrix citation						and the state of the			
	anthropology			geogra					_	6ofTotalCited
anthropolo		0	0	0	0	0	30	1	111	5.103448
communic	0	152	0	0	10	15	1	3	181	8.321839
economics		0	31	0	11	1	14	20	77	3.54023
geography	0	0	0	14	2	0	0	1	17	0.781609
info&libSci	0	0	0	0	432	0	0	0	432	19.86207
politicalSci	0	229	1	0	0	167	4	34	435	20
psychology	1	14	0	0	40	1	334	16	406	18.66667
sociology	1	11	0	2	17	3	4	478	516	23.72414
column tota	82	406	32	16	512	187	387	553	2175	100
col:%ofTota	3.7701149	18.67	1.4713	0.74	23.54	8.598	17.793	25.42529	2175	100
"cites" = colu "cited" = row	A matrix column mn labeled discipli labeled disciplines	nes cite rov are cited b	v labeled disc y column lab							e)
transpose of	f asymmetric ma			200000	info 0 III	nolitical(	neveheles	enciale es	row total	LaffatalCita
anthronolog	anthropology		economics			_				6ofTotalCited
anthropolog communicat		152	0	0	0	229	14	11	82 406	3.77011 18.6666
economics	0	0	31	0	0	1	0	0	32	1.471264
geography	0	0	0	14	0	Ô	0	2	16	0.73563
info. & librar	0	10	11	2	432	0	40	17	512	23.5402
politicalScie	0	15	1	0	0	167	1	3	187	8.59770
psychology	30	1	14	0	0	4	334	4	387	17.793
sociology	1	3	20	1	0	34	16	478	553	25.42529
column tota	111	181	77	17	432	435	406	516	2175	100
col:%ofTota		8.322	3.5402	0.78	19.86	20	18.667	23.72414	2175	100
remember:	At matrix (trans	pose matr	ix) is colum	ns=cite	d, rows=c	tes				
Summetric I	Matrix1 (lower to	riangle of	evmmetric	matrix						
Symmetric	anthropology	communi	_		informati	political	psycholog	sociology	row total	e
anthropolog		0	0	0	0	0	psycholog 1	1	82	
communicat	0	152	0	0	0	229	14	11	406	
economics	0	0	31	0	0	1	0	0	32	
	0	0	0	14	0	0	0	2	16	
geography										
info&libSci	0	229	0	0	432	167	40	17	489 401	
politicalSci	_	14	1 0	0	40	167	334	3	394	
psychology	1		0	U	40		334	4	394	
	1									
sociology		11	0	2	17	3	4	478	516	
sociology column tota	-	406	32	2 16	400		4 394	478 516	2336	
	-	40.0			400	3				
	-	40.0			400	3			2336	
column tota	-	406 triangle of	32 asymmetri	16 c matrix	489	401			2336	
column tota Symmetric I	82 Matrix 2 (upper anthropology	406 triangle of	asymmetric economics	16 c matrix	489	401	394 psycholog	516	2336 2336 row total	s
Symmetric I	Matrix 2 (upper anthropology 80	406 triangle of communi	asymmetric economics 0	16 c matrix geogra	489 ) Informati	3 401 political 0	394	516 sociology	2336 2336 row total	s
Symmetric I	Matrix 2 (upper anthropology 80	406 triangle of communi	asymmetric economics	16 c matrix geogra	489 ) informati	401 political	394 psycholog	516 sociology	2336 2336 row total	S
column tota	Matrix 2 (upper anthropology 80	406 triangle of communi	asymmetric economics 0	16 c matrix geogra	489 ) Informati	3 401 political 0	394 psycholog 30	516 sociology	2336 2336 row total	S
Symmetric I anthropolog communicat	Matrix 2 (upper anthropology 80	triangle of communi	asymmetric economics	matrix geogra	489 ) informati 0	3 401 political 0 15	394 psycholog 30	516 sociology	2336 2336 row total 111 181	S
Symmetric I anthropolog communicat economics	Matrix 2 (upper anthropology 80 0	triangle of communi	asymmetric economics 0 0	matrix geogra 0	489 ) informati 0 10	3 401 political 0 15	394 psycholog 30 1 14	516 sociology 1 3 20	2336 2336 row total 111 181 77	5
Symmetric ! anthropolog communicat economics geography info&libScl	Matrix 2 (upper anthropology 80 0 0	triangle of communi	asymmetric economics 0 0 31	matrix geogra 0 0	489 ) informati 0 10 11	3 401 political 0 15	394 psycholog 30 1 14 0	516 sociology 1 3 20 1	2336 2336 row total 111 181 77 17 455 221	5
Symmetric ! anthropolog communicat economics geography info&libScl politicalSci	Matrix 2 (upper anthropology 80 0	triangle of communi 0 152 0 0 10	asymmetric economics 0 0 31 0 11	matrix geogra 0 0 14 2	489 informati 0 10 11 2 432	3 401 political 0 15 1	394 psycholog 30 1 14 0	516 sociology 1 3 20 1 0	2336 2336 row total 111 181 77 17 455	5
Symmetric I anthropolog communicat economics geography info&libScl politicalSci psychology	Matrix 2 (upper anthropology 80 0 0	406 triangle of communi 0 152 0 0	asymmetric economics 0 0 31 0 11 1	16 c matrix geogra 0 0 0 14 2 0	489 ) informati 0 10 11 2 432 0	3 401 political 0 15 1 0 0	394 psycholog 30 1 14 0 0	516 sociology  1 3 20 1 0 34	2336 2336 row total 111 181 77 17 455 221	5
Symmetric I anthropolog communicat economics geography	Matrix 2 (upper anthropology 80 0 0 0 0 0 30 30 1	406 triangle of communi 0 152 0 10 15 15	asymmetric economics 0 0 31 0 11 14	16 c matrix geogra 0 0 0 14 2 0 0	489 informati 0 10 11 2 432 0	3 401 political 0 15 1 0 0 167 4	394 psycholog 30 1 14 0 4 334	516 sociology  1 3 20 1 0 34 16	2336 2336 row total 111 181 77 17 455 221 399	5

## Appendix W-3d

# 2007 WITH self citations means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lit	politicals	psycholog	sociology	row totals
anthropolog	80	0	0	0	0	0	15.5	1	96.5
communicat	0	152	0	0	5	122	7.5	7	293.5
economics	0	0	31	0	5.5	1	7	10	54.5
geography	0	0	0	14	1	0	0	1.5	16.5
info. & librar	0	5	5.5	1	432	0	20	8.5	472
politicalScier	0	122	1	0	0	167	2.5	18.5	311
psychology	15.5	7.5	7	0	20	2.5	334	10	396.5
sociology	1	7	10	1.5	8.5	18.5	10	478	534.5
column total	96.5	293.5	54.5	16.5	472	311	396.5	534.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lil	politicals	psycholog	sociology	row totals
anthropolog	80	0	0	0	0	0	29	0	109
communicat	0	152	0	0	10	214	13	8	397
economics	0	0	31	0	11	0	14	20	76
geography	0	0	0	14	2	0	0	1	17
info. & librar	0	10	11	2	432	0	40	17	512
politicalScier	0	214	0	0	0	167	3	31	415
psychology	29	13	14	0	40	3	334	12	445
sociology	0	8	20	1	17	31	12	478	567
column total	109	397	76	17	512	415	445	567	2538
		-		-	-		-	-	2538

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	7301	33	440	1	0	154	10116	678	18723
communicat	33	23439	199	23	4320	37419	2925	3325	71683
economics	440	199	1679	42	4752	934	5437	9806	23289
geography	1	23	42	201	864			540	1801
info. & librar	0	4320	4752	864	186624	0	17280	7344	221184
politicalScier	154	37419	934	34	0	81503	5253	19288	144585
psychology	10116	2925	5437	96	17280	5253	113610	9822	164539
sociology	678	3325	9806	540	7344	19288	9822	228924	279727
column total	18723	71683	23289	1801	221184	144585	164539	279727	925531 925531

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	6402	25	0	2	57	4	2738	574	9802
communicat	25	75862	229	22	2267	40570	5788	13724	138487
economics	0	229	962	0	341	198	438	654	2822
geography	2	22	0	200	62	6	8	970	1270
info. & librar	57	2267	341	62	188738	252	13592	9018	214327
politicalScier	4	40570	198	6	252	28125	1043	7193	77391
psychology	2738	5788	438	8	13592	1043	112685	7705	143997
sociology	574	13724	654	970	9018	7193	7705	230307	270145
column total	9802	138487	2822	1270	214327	77391	143997	270145	858241

858241

# Appendix W-4a

WITHOUT SELF	CITATIONS									
Note: column la	hels are disc	inlines wh	nen 2008 tr	on impact	inurnals	were e	vamined:	row label	c (at left) ren	recent
citations/discipl		-			-			TOW IGDE	s (acten) rep	resenc
				top 30		-				
asymmetric ma	nthropology			geograp	informat	politica	nevehole	cacialaav	row total	%ofTotalCited
anthropology	0	1	0	geograp 1	0	0	psycholo 2	Suciology 9	13	4.3624161
communication	0	Ô	4	Ô	11	3	1	2	21	7.0469799
economics	0	11	0	1	20	15	17	41	105	35.234899
geography	0	0	0	- O	0	0	0	2	2	0.6711409
info&libSci	0	1	0	0	0	0	3	0	4	1.3422819
politicalSci	0	11	0	22	0	0	0	4	37	12.416107
psychology	4	24	5	1	18	0	0	6	58	19.463087
sociology	0	27	7	5	13	6	0	0	58	19.463087
column totals	4	75	16	30	62	24	23	64	298	100
col:%ofTotal	1.34228	25.17	5.3691	10.07	20.81	8.05	7.718	21.477	298	
									100	
remember: A m	atrix column	s=cites, r	ows=cited						200	
"cites" = column				iplines (fo	r example	anthrop	ology cites	psychology	four times)	
"cited" = row labe	eled disciplines	are cited b	y column lab	eled discip	lines (for	example	anthropolo	gy is cited	by psychology	twice)
transpose of as										
	nthropology								row totals	%ofTotalCited
anthropology	0	0	0	0	0	0	4	0	4	1.3422819
communication	1	0	11	0	1	11	24	27	75	25.167785
economics	0	4	0	0	0	0	5	7	16	5.3691275
geography	1	0	1	0	0	22	1	5	30	10.067114
info. & library s	0	11	20	0	0	0	18	13	62 24	20.805369 8.0536913
politicalScience	2	3	15 17	0	3	0	0	0	23	7.7181208
psychology										-
sociology	9	2	41	2	0	4	6	0	64	21.47651
column totals	13	21	105	2	4	37	58	58	298	100
col:%ofTotalCite	4.36242	7.047	35.235	0.671	1.342	12.4	19.46	19.463	100	
									298	
remember: At r	natrix (trans	pose matr	ix) is colum	ins=cited	, rows=c	ites				
Symmetric Matr	rix1 (lower tr	iangle of	2008/2011	asymmet	ric matri:	x)				
	nthropology		economics				psycholo	sociology	row totals	
anthropology	0	0	0	0	0	0	4	0	4	
communication	0	0	11	0	1	11	24	27	74	
economics	0	11	0	0	0	0	5	7	23	
geography	0	0	0	0	0	22	1	5	28	
info&libSci	0	1	0	0	0	0	18	13	32	
politicalSci	0	11	0	22	0	0	0	6	39	
psychology	4	24	5	1	18	0	0	0	52	
sociology	0	27	7	5	13	6	0	0	58	
column totals	4	74	23	28	32	39	52	58	310	
John III (O(GIS	-	/4	2.3	20	32	39	32	30	310	
									310	
Symmetric Matr	rix 2 (upper t	riangle of	2008/2011	asymme	tric matr	ix)				
	nthropology						psycholo	sociology	row totals	
anthropology	0	1	0	1	0	0	2	9	13	
communication	1	0	4	- O	11	3	1	2	22	
economics	0	4	0	1	20	15	17	41	98	
geography	1	0	1	0	0	0	0	2	4	
info&libSci	ô	11	20	0	0	0	3	0	34	
politicalSci	0	3	15	0	0	0	0	4	22	
psychology	2	1	17	0	3	0	0	6	29	
	9	2		2	0		6	0	64	
sociology			41			4				
column totals	13	22	98	4	34	22	29	64	286	
									286	

## Appendix W-4b

#### 2008 WITHOUT self sitations

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric) - 2008/2011

	anthropology	communi	economics	geograp	info. & li	politica	psycholo	sociology	row totals
anthropology	0	0.5	0	0.5	0	0	3	4.5	8.5
communication	0.5	0	7.5	0	6	7	12.5	14.5	48
economics	0	7.5	0	0.5	10	7.5	11	24	60.5
geography	0.5	0	0.5	0	0	11	0.5	3.5	16
info. & library s	0	6	10	0	0	0	10.5	6.5	33
politicalScience	0	7	7.5	11	0	0	0	5	30.5
psychology	3	12.5	11	0.5	10.5	0	0	3	40.5
sociology	4.5	14.5	24	3.5	6.5	5	3	0	61
column totals	8.5	48	60.5	16	33	30.5	40.5	61	298

absolute value differences upper/lower triangles from assymetric matrix values (matrix is symmetric)2008/2011

	anthropology	communi	economics	geograp	info. & li	politica	psycholo	sociology	row totals
anthropology	0	1	0	1	0	0	2	9	13
communication	1	0	7	0	10	8	23	25	74
economics	0	7	0	1	20	15	12	34	89
geography	1	0	1	0	0	22	1	3	28
info. & library s	0	10	20	0	0	0	15	13	58
politicalScience	0	8	15	22	0	0	0	2	47
psychology	2	23	12	1	15	0	0	6	59
sociology	9	25	34	3	13	2	6	0	92
column totals	13	74	89	28	58	47	59	92	460
	•		•	•	•				460

2008 Matrix product A\*At (post mulitiplied) / 2011

2000 Fibrilly producers he (pose manaphron) / 2022										
	anthropology	communi	economics	geograp	info. & li	politica	psycholo	sociology	row totals	
anthropology	87	20	415	18	7	69	79	32	727	
communication	20	151	364	4	3	8	230	189	969	
economics	415	364	2717	82	62	307	871	652	5470	
geography	18	4	82	4	0	8	12	0	128	
info. & library s	7	3	62	0	10	11	24	27	144	
politicalScience	69	8	307	8	11	621	310	407	1741	
psychology	79	230	871	12	24	310	978	922	3426	
sociology	32	189	652	0	27	407	922	1008	3237	
column totals	727	969	5470	128	144	1741	3426	3237	15842	

2008 Matrix product At\*A (pre multiplied) / 2011

2008 Matrix product At-A (pre multiplied) / 2011											
ě	enthropology	communi	economics	qeograp	info. & li	politica	psycholo	sociology	row totals		
anthropology	16	96	20	4	72	0	0	24	232		
communication	96	1549	309	413	1003	327	192	648	4537		
economics	20	309	90	40	225	54	4	38	780		
geography	4	413	40	512	103	45	19	144	1280		
info. & library se	72	1003	225	103	1014	411	351	950	4129		
politicalScience	0	327	54	45	411	270	258	621	1986		
psychology	0	192	4	19	351	258	303	717	1844		
sociology	24	648	38	144	950	621	717	1822	4964		
column totals	232	4537	780	1280	4129	1986	1844	4964	19752 19752		

# Appendix W-4c

	CITATIONS		*checked 7	-1-11						
Note: column	n labels are disc	inlines wh	ose 2008 to	n imna	t journa	ls were e	xamined: r	ow labels (at	left) represe	ent
	cipline of top 5				-		_	on labels (ac	rerey represe	
symmetric i	matrix 2008 cita									
	anthropology	communi	economics	geogra	informa	politicalS	psycholog	sociology	row total	6ofTotalCite
enthropolog	2229	1	0	1	0	0	2	9	2242	54.05014
communicat	0	165	4	0	11	3	1	2	186	4.484089
economics	0	11	307	1	20	15	17	41	412	9.93249
geography	0	0	0	158	0	0	0	2	160	3.85728
nfo&libSci	0	1	0	0	236	0	3	0	240	5.78592
oliticalSci	0	11	0	22	0	113	0	4	150	3.61620
psychology	4	24	5	1	18	0	240	6	298	7.18418
sociology	0	27	7	5	13	6	0	402	460	11.0896
column tota	2233	240	323	188	298	137	263	466	4148	100
col:%ofTota	53.833173	5.786	7.7869	4.53	7.18	3.303	6.3404	11.23433	4148	100
amambar: /	A matrix column	e-citee e	nue = citod							
	nn labeled discipli			inlines //	or evamo	le anthron	alany citas r	sevelations for it	times)	
cited = row i	labeled disciplines	are cited b	y column labe	sied disci	plines (10	example	anthropolog	y is cited by ps	ychology (wice	1)
ransnose of	asymmetric ma	triv 2008	citation dat	a (2011)	١					
aranspose of	anthropology	communi		_		politicalS	psycholog	sociology	row totals	6ofTotalCite
enthropolog	2229	0	0	0	0	0	psycholog 4	0	2233	53.8331
communicat	1	165	11	0	1	11	24	27	240	5.78592
economics	0	4	307	0	Ô	0	5	7	323	7.78688
		0		158	0	22				
eography	1		1		_		1	5	188	4.53230
nfo. & librar	0	11	20	0	236	0	18	13	298	7.18418
politicalScier	0	3	15	0	0	113	0	6	137	3.30279
sychology	2	1	17	0	3	0	240	0	263	6.34040
				-			-	100		44 00 40
sociology	9	2	41	2	0	4	6	402	466	11.2343
	9 2242	2 186	41 412	160	240	4 150	6 298	402 460	466 4148	
column tota										11.23433 100 100
sociology column tota col:%ofTota	2242	186	412	160	240	150	298	460	4148	100
column tota col:%ofTota	2242	186 4.484	412 9.9325	160 3.86	240 5.79	150 3.616	298	460	4148	10
column tota col:%ofTota	2242 54.050145	186 4.484	412 9.9325	160 3.86	240 5.79	150 3.616	298	460	4148	100
column tota col:%ofTota	2242 54.050145	186 4.484	412 9.9325	160 3.86	240 5.79	150 3.616	298	460	4148	100
column tota col:%ofTota remember: A	2242 54.050145 At matrix (trans Matrix1 (lower tr	186 4.484 pose matri	412 9.9325 ix) is colum	160 3.86 ns=cited	240 5.79 d, rows=	150 3.616 cites	298	460	4148	100
column tota col:%ofTota remember: A	2242 54.050145 At matrix (trans	186 4.484 pose matri	412 9.9325 ix) is colum	160 3.86 ns=cited	240 5.79 d, rows=	150 3.616 cites	298	460 11.08968	4148	100
column tota col:%ofTota remember: A	2242 54.050145 At matrix (trans Matrix1 (lower tr	186 4.484 pose matri	412 9.9325 ix) is colum	160 3.86 ns=cited asymme geogra 0	240 5.79 d, rows=	150 3.616 cites	298 7.1842	460 11.08968	4148 4148	100
column tota col: %ofTota remember: A Symmetric N enthropolog	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology	186 4.484 pose matri iangle of 2 communi	9.9325 ix) is colum 2008/2011 a	160 3.86 ns=cited asymme geogra 0 0	240 5.79 d, rows= tric mate informa	150 3.616 cites rix)	298 7.1842 psycholog	460 11.08968 sociology	4148 4148 row totals	100
column tota col:%ofTota remember: A	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 2229	186 4.484 pose matri iangle of 2 communi	9.9325 ix) is colum 2008/2011 : economics	160 3.86 ns=cited asymme geogra 0	240 5.79 d, rows= tric mate informa 0	150 3.616 cites	298 7.1842 psycholog	460 11.08968 sociology	4148 4148 row totals 2233	10
column tota col:%ofTota remember: A Symmetric M anthropolog communicat economics	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 2229 0	186 4.484 pose matri iangle of 2 communi 0 165	412 9.9325 ix) is colum 2008/2011 : economics 0	160 3.86 ns=cited asymme geogra 0 0	240 5.79 d, rows= tric mate informa 0	150 3.616 cites rix) political	298 7.1842 psycholog 4 24	460 11.08968 sociology 0 27	4148 4148 row totals 2233 239	10
column tota col:%ofTota remember: A Symmetric M anthropolog communicat economics geography	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 2229 0 0	186 4.484 pose matri iangle of 2 communi 0 165 11	412 9.9325 ix) is colum 2008/2011 a economics 0 11 307	160 3.86 ns=cited asymme geogra 0 0	240 5.79 d, rows= tric math informa 0 1	150 3.616 cites rix) political 0 11	298 7.1842 psycholog 4 24 5	460 11.08968 sociology 0 27 7	4148 4148 row totals 2233 239 330 186	10
column tota col:%ofTota remember: A Symmetric M anthropolog communicat economics geography info&libSci	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 2229 0 0	186 4.484 pose matri iangle of 2 communi 0 165 11	412 9.9325 ix) is colum 2008/2011 : economics 0 111 307 0	160 3.86 ns=cited ssymme geogra 0 0 0 158	240 5.79 d, rows= tric matter informa 0 1 0 0 236	150 3.616 cites rix) political 0 111 0 22	298 7.1842 psycholog 4 24 5 1	460 11.08968 sociology 0 27 7 5	row totals 2233 239 330 186 268	10
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography info&libSci politicalSci	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 0 0 0	186 4.484 pose matri iangle of 2 communi 0 165 11 0	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0	160 3.86 ns=cited ssymme geogra 0 0 0 158 0 22	240 5.79 d, rows= tric mati informa 0 1 0 0 236 0	150 3.616 cites rix) political 0 111 0 22 0	298 7.1842 psycholog 4 24 5 1 18	460 11.08968 sociology 0 27 7 5 13 6	row totals 2233 239 330 186 268 152	10
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography info&libSci politicalSci psychology	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 4	186 4.484 pose matri iangle of 2 communi 0 165 11 0 1 11 24	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5	160 3.86 ns=cited symme geogra 0 0 0 158 0 22	240 5.79 d, rows= tric matter information   0 1 0 0 236 0 18	150 3.616 cites rix) political 0 11 0 22 0 113 0	298 7.1842 psycholog 4 24 5 1 18 0 240	460 11.08968 sociology 0 27 7 5 13 6	row totals 2233 239 330 186 268 152 292	10
column tota col:%ofTota remember: A Symmetric N anthropolog communicat	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 0 0 0	186 4.484 pose matri iangle of 2 communi 0 165 11 0	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0	160 3.86 ns=cited ssymme geogra 0 0 0 158 0 22	240 5.79 d, rows= tric mati informa 0 1 0 0 236 0	150 3.616 cites rix) political 0 111 0 22 0	298 7.1842 psycholog 4 24 5 1 18	460 11.08968 sociology 0 27 7 5 13 6	row totals 2233 239 330 186 268 152	10
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography info&libSci politicalSci psychology	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 4	186 4.484 pose matri iangle of 2 communi 0 165 11 0 1 11 24	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5	160 3.86 ns=cited symme geogra 0 0 0 158 0 22	240 5.79 d, rows= tric matter information   0 1 0 0 236 0 18	150 3.616 cites rix) political 0 11 0 22 0 113 0	298 7.1842 psycholog 4 24 5 1 18 0 240	460 11.08968 sociology 0 27 7 5 13 6	row totals 2233 239 330 186 268 152 292	10
solumn tota col: %of Tota remember: A symmetric N enthropolog communicat economics geography nfo&libScl coliticalScl psychology sociology	2242 54.050145 At matrix (trans fatrix1 (lower tr anthropology 2229 0 0 0 0 4	186 4.484 pose matri iangle of 2 communi 0 165 11 0 1 11 24 27	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5	160 3.86 ns=cited ssymme geogra 0 0 0 158 0 22 1	240 5.79 d, rows= tric matric	150 3.616 cites rix) political: 0 111 0 22 0 113 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0	460 11.08968 sociology 0 27 7 5 13 6 0	row totals 2233 239 330 186 268 152 292 460	10
solumn tota col: %of Tota remember: A symmetric N enthropolog communicat economics geography nfo&libScl coliticalScl psychology sociology	2242 54.050145 At matrix (trans fatrix1 (lower tr anthropology 2229 0 0 0 0 4	186 4.484 pose matri iangle of 2 communi 0 165 11 0 1 11 24 27	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5	160 3.86 ns=cited ssymme geogra 0 0 0 158 0 22 1	240 5.79 d, rows= tric matric	150 3.616 cites rix) political: 0 111 0 22 0 113 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0	460 11.08968 sociology 0 27 7 5 13 6 0	row totals 2233 239 330 186 268 152 292 460 4160	10
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography nfo&libSci coliticalSci psychology sociology column tota	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 4 0 2233	186 4.484 pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5 7	160 3.86 ns=cited symme geogra 0 0 0 158 0 22 1 5	240 5.79 d, rows= dric matteric  150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152	298 7.1842  psycholog 4 24 5 1 18 0 240 0	460 11.08968 sociology 0 27 7 5 13 6 0	row totals 2233 239 330 186 268 152 292 460 4160	10	
column tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography nfo&libSci coliticalSci psychology sociology column tota	2242 54.050145 At matrix (trans Matrix1 (lower tr anthropology 0 0 0 4 0 2233 Matrix 2 (upper tr	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 5 7 330	160 3.86 ns=cited ssymme geogra 0 0 0 158 0 22 1 5 186	240 5.79 d, rows= tric matrix	150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292	460 11.08968 sociology 0 27 7 5 13 6 0 402 460	row totals 2233 239 330 186 268 152 292 460 4160	10
solumn tota col: %ofTota remember: A symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N symmetric N	2242 54.050145  At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology	186 4.484  pose matri communi 0 165 11 0 1 11 24 27 239	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5 7 330	160 3.86 ns=cited ssymme geogra 0 0 0 158 0 22 1 5 186	240 5.79 d, rows= tric matrinforma 0 1 0 0 236 0 18 13 268 etric ma	150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152  trix) political	298 7.1842 psycholog 4 24 5 1 18 0 240 0 292 psycholog	460 11.08968 sociology 0 27 7 5 13 6 0 402 460	row totals 233 239 330 186 268 152 292 460 4160 row totals	10
column tota col: %ofTota remember: A symmetric N anthropolog communicat acconomics geography info&libScl politicalScl psychology sociology column tota Symmetric N anthropolog	2242 54.050145  At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology anthropology 2229	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239  criangle of communi 1	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5 7 330 2008/2011 economics	160 3.86 ns=cited geogra 0 0 0 0 158 0 22 1 5 186 asymme	240 5.79 d, rows= dric matric	150 3.616 cites rix) political 0 11 0 22 0 113 0 6 152 trix) political 0 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 292	460 11.08968 sociology 0 27 7 5 13 6 0 402 460	row totals 2233 239 330 186 268 152 292 460 4160 4160 row totals 2242	10
column tota col: %ofTota remember: A Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology column tota Symmetric N anthropolog communicat conomics geography info&libScl psychology column tota	2242 54.050145  At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology anthropology 2229	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239  criangle of communi 1 165	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5 7 330 2008/2011 economics 0 4	160 3.86  ns=cited asymme geogra 0 0 158 0 22 1 5 186 asymm geogra 0 0	240 5.79 d, rows= dric matric	150 3.616 cites  rix) political 0 113 0 6 152  trix) political 0 3	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9	row totals 2233 239 330 186 268 152 292 460 4160 4160 row totals 2242 187	10
solumn tota col: %ofTota remember: A Symmetric M anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota	2242 54.050145  At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology 2229 1 0 0	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239  criangle of communi 1 165 4	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 0 5 7 330 2008/2011 economics	160 3.86  ns=cited asymme geogra 0 0 158 0 22 1 5 186 asymm geogra 1 0	240 5.79 d, rows= dric matric	150 3.616 cites  rix) political 0 113 0 6 152  trix) political 0 3 15	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41	row totals 233 239 330 186 268 152 292 460 4160 4160 row totals 2242 187 405	10
solumn tota col: %ofTota remember: A symmetric N symmetric Symmetric N symmetric Symmetric N symmetric Symmetric N symmetric Symmetric	2242 54.050145  At matrix (trans  Matrix1 (lower tr anthropology 2229 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology 2229 1 0 1	186 4.484  pose matri iangle of 2 communi 0 165 11 24 27 239  criangle of communi 1 165 4	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 5 7 330 2008/2011 economics 0 4 307	160 3.86 ns=cited geogra 0 0 0 158 0 22 1 5 186 asymme geogra 1 0 158	240 5.79 d, rows= dric matric	150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152  trix) political 0 3 15 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17 0	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41 2	row totals 233 239 330 186 268 152 292 460 4160 4160 row totals 2242 187 405 162	10
solumn tota col: %ofTota remember: A Symmetric N sonthropolog communicat economics geography nfo&libScl ooliticalScl osychology column tota Symmetric N sorthropolog communicat economics sociology column tota	2242 54.050145  At matrix (trans  fatrix1 (lower tr anthropology 2229 0 0 0 4 0 2233  fatrix 2 (upper s anthropology 2229 1 0 0 1 0 0	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239  criangle of communi 1 165 4	412 9.9325 ix) is colum 2008/2011 : economics 0 0 0 0 5 7 330 2008/2011 economics 0 4 307	160 3.86  ns=cited asymme geogra 0 0 158 0 22 1 5 186 asymm geogra 1 0	240 5.79 d, rows= dric matric	150 3.616 cites  rix) political 0 113 0 6 152  trix) political 0 3 15	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41	row totals 233 330 186 268 152 292 460 4160 4160 row totals 2242 187 405 162 270	10
solumn tota col: %ofTota remember: A symmetric N symmetric Symmetric N symmetric Symmetric N symmetric Symmetric N symmetric Symmetric	2242 54.050145  At matrix (trans  Matrix1 (lower tr anthropology 2229 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology 2229 1 0 1	186 4.484  pose matri iangle of 2 communi 0 165 11 24 27 239  criangle of communi 1 165 4	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 5 7 330 2008/2011 economics 0 4 307	160 3.86 ns=cited geogra 0 0 0 158 0 22 1 5 186 asymme geogra 1 0 158	240 5.79 d, rows= dric matric	150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152  trix) political 0 3 15 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17 0	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41 2	row totals 233 239 330 186 268 152 292 460 4160 4160 row totals 2242 187 405 162	10
solumn tota column tota column tota column tota column tota remember: A symmetric N continuous conomics  2242 54.050145  At matrix (trans  fatrix1 (lower tr anthropology 2229 0 0 0 4 0 2233  fatrix 2 (upper s anthropology 2229 1 0 0 1 0 0	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239  rriangle of communi 1 165 4 0 11	412 9.9325 ix) is colum 2008/2011 : economics 0 111 307 0 0 5 7 330 2008/2011 economics 0 4 307 1	160 3.86  ns=cited asymme geogra 0 0 158 0 22 1 5 186 asymm geogra 1 0 158 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	240 5.79 d, rows= d,	150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152  trix) political 0 3 15 0 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17 0 3	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41 2 0	row totals 233 330 186 268 152 292 460 4160 4160 row totals 2242 187 405 162 270	10	
solumn tota column tota column tota column tota column tota remember: A symmetric N continuous conomics geography nfo&libScl coliticalScl column tota conomics conomi	2242 54.050145  At matrix (trans  fatrix1 (lower tr anthropology 2229 0 0 0 2233  fatrix 2 (upper s anthropology 2229 1 0 0 1 0 2	186 4.484  pose matri iangle of 2 communi 0 165 11 0 1 11 24 27 239  rriangle of communi 1 165 4 0 11 3 1	412 9.9325 ix) is colum 2008/2011 : economics 0 11 307 0 0 5 7 330 2008/2011 economics 0 4 307 1 20 15	160 3.86  ns=cited asymme geogra 0 0 158 0 222 1 5 186  asymm geogra 1 0 158 0 0 0 0 0	240 5.79 d, rows= d,	150 3.616 cites  rix) political 0 11 0 22 0 113 0 6 152  trix) political 0 0 13 0 0 113 0 0 0 0 0 0 0 0 0 0 0 0	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17 0 3 0 240	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41 2 0 46	row totals 233 330 186 268 152 292 460 4160 4160 row totals 2242 187 405 162 270 135 269	10
solumn tota column tota column tota column tota column tota remember: A symmetric N continuous conomics  2242 54.050145  At matrix (trans  fatrix1 (lower tr anthropology 2229 0 0 0 4 0 2233  Matrix 2 (upper tr anthropology 2229 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	186 4.484  pose matri iangle of 2 communi 0 165 11 11 24 27 239  rriangle of communi 1 165 4 0 11 3	412 9.9325  ix) is colum  2008/2011 : economics 0 111 307 0 0 5 7 330  2008/2011 economics 0 4 307 1 10 15	160 3.86  ns=cited asymme geogra 0 0 0 158 0 22 1 5 186  asymm geogra 1 0 158 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	240 5.79 d, rows= d,	150 3.616 cites  rix) political 0 111 0 222 0 113 0 6 152  trix) political 0 3 15 0 0 113	298 7.1842  psycholog 4 24 5 1 18 0 240 0 292  psycholog 2 1 17 0 3 0	460 11.08968 sociology 0 27 7 5 13 6 0 402 460 sociology 9 2 41 2 0 4	row totals 2339 3330 186 268 152 292 460 4160 4160 row totals 2242 187 405 162 270 135	10	

## Appendix W-4d

# 2008 WITH self citation means of upper/lower triangles from assymetric matrix values (this matrix is symmetric) - 2008/2011

	anthropology	communi	ceconomics	geogra	info. &	politicalS	psycholog	sociology	row totals
anthropolog	2228	0.5	0	0.5	0	0	3	4.5	2236.5
communicat	0.5	165	7.5	0	6	7	12.5	14.5	213
economics	0	7.5	306	0.5	10	7.5	11	24	366.5
geography	0.5	0	0.5	158	0	11	0.5	3.5	174
info. & librar	0	6	10	0	254	0	10.5	6.5	287
politicalScien	0	7	7.5	11	0	113	0	5	143.5
psychology	3	12.5	11	0.5	10.5	0	240	3	280.5
sociology	4.5	14.5	24	3.5	6.5	5	3	402	463
column total	2236.5	213	366.5	174	287	143.5	280.5	463	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric) - 2008/2011

	anthropology	communi	economics	geogra	info. &	politicalS	psycholog	sociology	row totals
anthropolog	2228	1	0	1	0	0	2	9	2241
communicat	1	165	7	0	10	8	23	25	239
economics	0	7	306	1	20	15	12	34	395
geography	1	0	1	158	0	22	1	3	186
info. & librar	0	10	20	0	254	0	15	13	312
politicalScien	0	8	15	22	0	113	0	2	160
psychology	2	23	12	1	15	0	240	6	296
sociology	9	25	34	3	13	2	6	402	494
column total	2241	239	395	186	312	160	296	494	4323

2008 Matrix product A\*At (post mulitiplied) / 2011

	anthropology	communi	economics	geogra	info. & l	politicalS	psycholog	sociology	row totals
anthropolog	4968528	185	415	176	7	69	9475	3650	4982505
communicat	185	27376	3407	4	2764	2162	4430	5448	45776
economics	415	3407	96966	240	4782	2002	6486	19283	133581
geography	176	4	240	24968	0	3484	170	1594	30636
info. & librar	7	2764	4782	0	55706	11	4992	3095	71357
politicalScier	69	2162	2002	3484	11	13390	310	2693	24121
psychology	9475	4430	6486	170	4992	310	58578	3334	87775
sociology	3650	5448	19283	1594	3095	2693	3334	162612	201709
column total	4982505	45776	133581	30636	71357	24121	87775	201709	5577460 5577460

2008 Matrix product At\*A (pre multiplied) / 2011

2000 Matrix	product At-A ()	re mulupi	(ed) / 2011						
	anthropology	communi	economics	geogra	info. & I	politicalS	psycholog	sociology	row totals
anthropolog	4968457	2325	20	2233	72	0	5418	20085	4998610
communicat	2325	28774	4346	413	3054	2065	6117	11832	58926
economics	20	4346	94339	347	6365	4659	6423	15439	131938
geography	2233	413	347	25476	103	2531	259	2470	33832
info. & librar	72	3054	6365	103	56710	411	5379	6176	78270
politicalScien	0	2065	4659	2531	411	13039	258	3485	26448
psychology	5418	6117	6423	259	5379	258	57903	2157	83914
sociology	20085	11832	15439	2470	6176	3485	2157	163426	225070
column total	4998610	58926	131938	33832	78270	26448	83914	225070	5637008 5637008

# Appendix W-5a

WITHOUT SELF	CITATIONS									
Note: column la	bels are disc	iplines wh	nose 2009 t	top impac	t journal:	s were e	examined	; row label	ls (at left) rep	present
citations/discipl	ine of top 5 i	mpact fac	tor journals	in top jo	urnal by	disciplin	ie.			
asymmetric ma	trix citation of	lata								
	nthropology	commun	economics	geograp	informat	politica	psycholo	sociology	row total	%ofTotalCited
anthropology	0	6	0	0	2	0	4	2	14	2.306425
communication	0	0	0	0	3	0	17	8	28	4.6128501
economics	0	2	0	165	18	31	9	17	242	39.868204
geography	0	0	0	0	0	0	0	4	4	0.6589786
info&libSci	0	42	0	0	0	0	0	2	44	7.2487644
politicalSci	0	13	4	4	2	0	30	14	67	11.037891
psychology	19	10	10	1	59	5	0	2	106	17.462932
sociology	0	40	9	17	28	4	4	0	102	16.803954
column totals	19	113	23	187	112	40	64	49	607	100
col:%ofTotal	3.13015	18.62	3.7891	30.81	18.45	6.59	10.54	8.0725	607	100
COIL 7001 IOCAI	3.13013	10.02	3.7091	30.01	10.43	0.59	10.54	0.0723	007	100
remember: A m					L .					
"cites" = column										
"cited" = row labe	eled disciplines	are cited b	y column lab	eled discip	lines (for	example	anthropolo	gy is cited	by psychology	twice)
branconnes of an	um matric	tels eltest	on data							
transpose of as					info 0.5	nelities	nevel of	encialan	row totals	0/ official City of
	nthropology	commun	economics		info. & I			sociology	row totals	%ofTotalCited
anthropology	0	0	0 2	0	0	12	19	0	19	3.1301483
communication	6			0	42	13	10	40	113	18.616145
economics	0	0	0	0	0	4	10		23	3.7891269
geography	0	0	165	0	0	4	1	17	187	30.807249
info. & library s	2	3	18	0	0	2	59 5	28	112	18.4514
politicalScience	0	17	31 9	0	0	30	0	4	40 64	6.5897858
psychology	4				_			4		10.543657
sociology	2	8	17	4	2	14	2	0	49	8.0724876
column totals	14	28	242	4	44	67	106	102	607	100
col:%ofTotalCite					7.249	11	17.46	16.804	607	100
remember: At r	natrix (trans	pose matr	ix) is colum	ins=cited	, rows=c	ites				
Commetrie Mate	iv1 (lawar te	angle of		matrix\						
Symmetric Matr			_	_	informat	nolitica	nevehole	cociology	row totale	
	nthropology	commun						sociology	row totals	
anthropology	0	0	0	0	0	0	19	0	19	
communication	0	0	2	0	42	13	10	40	107	
economics	0	2	0	0	0	4	10	9	25	
geography	0	0	0	0	0	4	1	17	22	
info&libSci	0	42	0	0	0	2	59	28	131	
politicalSci	0	13	4	4	2	0	5	4	32	
psychology	19	10	10	1	59	5	0	4	108	
sociology	0	40	9	17	28	4	4	0	102	
	19	107	25	22	121	32	108	102		
column totals	19	107	23	- 22	131	32	100	102	546	
									546	
		I								
Symmetric Matr						tio i				
	nthropology	commun			informat			sociology	row totals	
anthropology	0	6	0	0	2	0	4	2	14	
communication	6	0	0	0	3	0	17	8	34	
economics	0	0	0	165	18	31	9	17	240	
geography	0	0	165	0	0	0	0	4	169	1
info&libSci	2	3	18	0	0	0	0	2	25	1
politicalSci	0	0	31	0	0	0	30	14	75	1
psychology	4	17	9	0	0	30	0	2	62	1
	2	8	17		2		2	0	49	1
column totals	14	34	240	169	25	14 75	62	49	49 668	
Column Cottais		34	270	109	2.3	73	02	79		
									668	

## Appendix W-5b

#### 2009 WITHOUT self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	commun	economics	geograp	info. & I	politica	psycholo	sociology	row totals
anthropology	0	3	0	0	1	0	11.5	1	16.5
communication	3	0	1	0	22.5	6.5	13.5	24	70.5
economics	0	1	0	82.5	9	17.5	9.5	13	132.5
geography	0	0	82.5	0	0	2	0.5	10.5	95.5
info. & library s	1	22.5	9	0	0	1	29.5	15	78
politicalScience	0	6.5	17.5	2	1	0	17.5	9	53.5
psychology	11.5	13.5	9.5	0.5	29.5	17.5	0	3	85
sociology	1	24	13	10.5	15	9	3	0	75.5
column totals	16.5	70.5	132.5	95.5	78	53.5	85	75.5	973

	anthropology	commun	economics	geograp	info. & l	politica	psycholo	sociology	row totals
anthropology	0	6	0	0	2	0	15	2	25
communication	6	0	2	0	39	13	7	32	99
economics	0	2	0	165	18	27	1	8	221
geography	0	0	165	0	0	4	1	13	183
info. & library s	2	39	18	0	0	2	59	26	146
politicalScience	0	13	27	4	2	0	25	10	81
psychology	15	7	1	1	59	25	0	2	110
sociology	2	32	8	13	26	10	2	0	93
column totals	25	99	221	183	146	81	110	93	958
	5/ //							7	958

Matrix product A\*At (post mulitiplied)

	anthropology	commun	economics	geograp	info. & li	politica	psycholo	sociology	row totals
anthropology	60	90	118	8	256	230	182	312	1256
communication	90	362	343	32	16	628	193	152	1816
economics	118	343	28884	68	118	1230	1436	3549	
geography	8		68	16	8	56	8	0	196
info. & library s	256	16	118	8	1768	574	424	1680	4844
politicalScience	230	628	1230	56	574	1301	320	800	5139
psychology	182		1436	8	424	320	4072	2179	8814
sociology	312	152	3549	0	1680	800	2179	2786	11458
column totals	1256	1816	35746	196	4844	5139	8814	11458	69269 69269

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geograp	info. & li	politica	psycholo	sociology	row totals
anthropology	361	190	190	19	1121	95	0	38	2014
communication	190	3673	512	1072	1784	272	592	332	8427
economics	190	512	197	179	850	86	156	76	2246
geography	19	1072	179	27531	3513	5188	1673	2863	42038
info. & library s	1121	1784	850	3513	4606	965	393	480	13712
politicalScience	95	272	86	5188	965	1002	295	537	8440
psychology	0	592	156	1673	393	295	1302	717	5128
sociology	38	332	76	2863	480	537	717	577	5620
column totals	2014	8427	2246	42038	13712	8440	5128	5620	87625 87625

168

# Appendix W-5c

anthropolog 219 6 0 0 2 0 4 7 2 233 9,9646 communicat 0 168 0 0 0 3 0 17 8 196 8,3333 seconomics 0 168 0 0 0 3 0 17 8 196 8,3333 seconomics 0 2 2222 165 18 31 9 17 464 19,7278 egography 0 0 0 0 189 0 0 0 0 4 193 8,26578 floshibs 0 13 4 4 2 169 30 14 236 10,0340 special politicistics 0 13 4 4 2 169 30 14 236 10,0340 special politicistics 0 13 4 4 2 169 30 14 236 10,0340 special politicistics 0 13 4 4 2 2 169 30 14 236 10,0340 special politicistics 0 1 3 4 4 4 2 169 30 14 236 10,0340 special politicistics 0 1 10 1 5 59 5 188 2 294 12. sociology 0 4 0 9 17 28 4 4 4 307 499 17,3894 column tota 238 281 245 376 395 209 252 356 2352 110 collision for 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WITH SELEC	PITATIONS									
saymmetric matrix citation data anthropology communi economics geogra informati politicals psycholog sociology anthropology 219 6 0 0 0 2 0 0 4 2 2 233 9.96646 communicat 0 168 0 0 0 3 0 17 8 1996 (1992) properties of the proper											
anthropology communication data anthropology communication data anthropology communication of the communication of						-			w labels (at l	eft) represe	nt
anthropology   Communicat   Geogra   Informati   political    Expected   Sociology   Tow total   Political    Formatical   Political	citations/disc	cipline or top 5	impact rac	tor journals	in top ]	ournal by	aiscipiine	•			
anthropolog 219 6 0 0 0 2 0 4 2 233 9.90646 procommunication	asymmetric										
Demmunicat			communi	economics	geogra	informati		psycholog			6ofTotalCited
Seconomics   0   2   222   165   18   31   9   17   464   19.7278	anthropolog				_						9.906463
peography	communicat				_						8.333333
InfoSitioSci	economics										19.72789
DeliticalSci   0   13   4   4   2   169   30   14   236   10.0340	geography					_					
Description   Description	info&libSci				_					_	13.90306
Sociology	politicalSci									_	
Column tota	psychology										12.5
remember: A matrix columns=cites, rows=cited cites*— column labeled disciplines cite row labeled disciplines (for example anthropology cites psychology four times) cited*— row labeled disciplines (for example anthropology cites psychology four times) cited*— row labeled disciplines (for example anthropology cites psychology four times) cited*— row labeled disciplines (for example anthropology cites psychology four times) cited*— row labeled disciplines (for example anthropology cites psychology four times) cited by psychology twice) cited*— row labeled disciplines (for example anthropology cites psychology twice) cited*— row labeled disciplines (for example anthropology cites psychology four times) cited by psychology twice) cited*— row labeled disciplines (for example anthropology cites psychology twice) cited by psychology twice) cited by psychology communicated for labeled disciplines (for example anthropology cites psychology twice) cited by psychology communicated for labeled disciplines (for example anthropology is cited by psychology twice) cited by psychology communicated for labeled disciplines (for example anthropology is cited by psychology twice) cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology cites psychology is cited by psychology for cited disciplines (for example anthropology communicated cited disciplines (for example anthropology cites psychology cited by psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites psychology cites	sociology			9					307	_	17.38946
remember: A matrix columns=cites, rows=cited cicles" = column labeled disciplines of example anthropology cites psychology four times)  cited" = row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice)  transpose of asymmetric matrix citation data  anthropology   219	column tota	238	281	245	376	395	209	252	356	2352	100
Cicles** oclumn labeled disciplines cite row labeled disciplines (for example anthropology cites psychology four times) citede** row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice) citede** row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice) citede** row labeled disciplines (for example anthropology is cited by psychology twice) citeded anthropology communicate anthropology communicate (for example anthropology is cited by psychology twice) citeded (for example anthropology) communicate (for example anthropology is cited by psychology communicate (for example anthropology) communicate (for example communicate (for example anthropology) communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communic	col:%ofTota	10.119048	11.95	10.417	16	16.79	8.886	10.714	15.13605	2352	100
Cicles** oclumn labeled disciplines cite row labeled disciplines (for example anthropology cites psychology four times) citede** row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice) citede** row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice) citede** row labeled disciplines (for example anthropology is cited by psychology twice) citeded anthropology communicate anthropology communicate (for example anthropology is cited by psychology twice) citeded (for example anthropology) communicate (for example anthropology is cited by psychology communicate (for example anthropology) communicate (for example communicate (for example anthropology) communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communic											
Cicles** oclumn labeled disciplines cite row labeled disciplines (for example anthropology cites psychology four times) citede** row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice) citede** row labeled disciplines are cited by column labeled disciplines (for example anthropology is cited by psychology twice) citede** row labeled disciplines (for example anthropology is cited by psychology twice) citeded anthropology communicate anthropology communicate (for example anthropology is cited by psychology twice) citeded (for example anthropology) communicate (for example anthropology is cited by psychology communicate (for example anthropology) communicate (for example communicate (for example anthropology) communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communicate (for example communic	remember: A	A matrix column	s=cites, n	ows=cited							
transpose of asymmetric matrix citation data anthropology   commun  economics  geogra info. & list politicals  psycholog sociology   row totals  soffotalCite anthropolog    219   0   0   0   0   0   19   0   238   10.1190   communicat   6   168   2   0   42   13   10   40   281   11.9472   economics    0   0   222   0   0   4   10   19   245   10.4166   economics    0   0   165   189   0   4   1   17   376   15.9863   endo. & librat   2   3   18   0   283   2   59   28   395   16.7942   eliticalSide   0   0   31   0   0   169   5   4   209   8.88605   endo. & librat   2   8   17   4   2   14   2   307   356   15.1360   eliticalSide   0   3   19.728   8.21   13.9   10.03   12.5   17.38946   2352   10.0166   eliticalSide   0   0   3   19.728   8.21   13.9   10.03   12.5   17.38946   2352   10.0166   eliticalSide   0   0   0   0   0   0   0   19   0   238   eliticalSide   0   0   0   0   0   0   0   0   0					iplines (I	for example	anthropol	ogy cites ps	ychology four ti	imes)	
transpose of asymmetric matrix citation data anthropology   commun  economics  geogra info. & list politicals  psycholog sociology   row totals  soffotalCite anthropolog    219   0   0   0   0   0   19   0   238   10.1190   communicat   6   168   2   0   42   13   10   40   281   11.9472   economics    0   0   222   0   0   4   10   19   245   10.4166   economics    0   0   165   189   0   4   1   17   376   15.9863   endo. & librat   2   3   18   0   283   2   59   28   395   16.7942   eliticalSide   0   0   31   0   0   169   5   4   209   8.88605   endo. & librat   2   8   17   4   2   14   2   307   356   15.1360   eliticalSide   0   3   19.728   8.21   13.9   10.03   12.5   17.38946   2352   10.0166   eliticalSide   0   0   3   19.728   8.21   13.9   10.03   12.5   17.38946   2352   10.0166   eliticalSide   0   0   0   0   0   0   0   19   0   238   eliticalSide   0   0   0   0   0   0   0   0   0											
anthropology   communi    economics   geogra   info. 8, list   political   psycholog   sociology   row totals   sofTotalCite   sociology   communicat   6   168   2   0   42   13   10   40   281   11.1972   economics   0   0   222   0   0   4   10   9   245   10.4166   geography   0   0   165   189   0   4   11   17   376   15.9863   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   18   0   283   2   59   28   395   16.7942   info. 8, librar   2   3   3   4   2   3   4   2   3   3   4   2   3   3   3   4   4   2   3   3   3   4   4   2   3   3   3   4   4   2   3   3   3   4   4   2   3   3   3   4   4   2   3   3   3   4   4   2   3   3   3   4   4   2   3   3   3   3   3   3   3   3   3											
anthropolog 219 0 0 0 0 0 0 19 19 0 238 10.1190 communicat 6 168 2 0 42 13 10 40 281 11.19472 connomics 0 0 0 222 0 0 4 110 9 245 11.19472 connomics 0 0 0 222 0 0 4 110 9 245 11.19472 connomics 0 0 0 222 0 0 4 11 17 376 15.9863 geography 0 0 165 189 0 4 1 1 17 376 15.9863 geography 0 0 0 165 189 0 4 1 1 17 376 15.9863 politicalScie 0 0 31 0 0 169 5 4 209 8.88605 psychology 4 17 9 0 0 30 188 4 252 10.7142 politicalScie 0 0 31 0 0 169 5 4 209 8.88605 psychology 2 8 17 4 2 14 2 307 356 15.1360 coliumn tota 233 196 464 193 327 236 294 409 2352 100 coliumn tota 233 196 464 193 327 236 294 409 2352 100 coliumn tota 233 196 464 193 327 236 294 409 2352 100 remember: At matrix (transpose matrix) is columns=cited, rows=cites  Symmetric Matrix1 (lower triangle of asymmetric matrix) anthropology communil economics geogra informati political psycholog sociology row totals anthropology anthropology communil economics geogra informati political psycholog sociology row totals anthropology anthropology communil economics geogra informati political psycholog sociology row totals anthropology and 1 1 17 211 and 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	transpose of	asymmetric ma									
11,9472   12,000		anthropology	communi	economics	geogra	info. & lit	political9	psycholog	sociology	row totals	6ofTotalCited
10.4166   10.4	anthropolog	219	0	0	0	0	0	19	0	238	10.11905
geography	communicat	6	168	2	0	42	13	10	40	281	11.94728
Info. & librar	economics	0	0	222	0	0	4	10	9	245	10.41667
Political Scie	geography	0	0	165	189	0	4	1	17	376	15.98639
psychology	info. & librar		3	18	0	283		59	28	395	16.79422
15.1360   15.1	politicalScier	0	0	31	0	0	169	5	4	209	8.886054
Symmetric Matrix1 (lower triangle of asymmetric matrix)   anthropology   0   0   0   0   0   0   0   0   0	psychology	4	17	9	0	0	30	188	4	252	10.71429
Symmetric Matrix (transpose matrix)   Symmetric Matrix (transpose matrix)   Symmetric Matrix (transpose matrix)   Symmetric Matrix (transpose matrix)   Symmetric Matrix (transpose matrix)   Symmetric Matrix (tower triangle of asymmetric matrix)	sociology	2	8	17	4	2	14	2	307	356	15.13605
Symmetric Matrix1 (Iower triangle of asymmetric matrix)	column tota	233	196	464	193	327	236	294	409	2352	100
Symmetric Matrix1 (lower triangle of asymmetric matrix)   anthropology   communi  economics   geogra   informati   political   psycholog   sociology   row totals   sommunicat   0   168   2   0   42   13   10   40   275   seconomics   0   2   222   0   0   4   10   9   247   geography   0   0   0   189   0   4   1   17   211   mfo&libSci   0   42   0   0   283   2   59   28   414   psychology   19   10   10   1   59   5   188   4   296   sociology   19   10   10   1   59   5   188   4   296   sociology   238   275   247   211   414   201   296   409   2291   229	col:%ofTota	9.9064626	8.333	19.728	8.21	13.9	10.03	12.5	17.38946	2352	100
anthropology   communic   economics   geogra   informati   political   psycholog   sociology   row totals   sociology   row totals   sociology   row totals   sociology   row totals   row	remember: A	At matrix (trans	pose matr	ix) is colum	ns=cite	d, rows=c	ites				
anthropology   communic   economics   geogra   informati   political   psycholog   sociology   row totals   sociology   row totals   sociology   row totals   sociology   row totals   row											
anthropology   communic   economics   geogra   informati   political   psycholog   sociology   row totals   sociology   row totals   sociology   row totals   sociology   row totals   row											
Symmetric Matrix 2 (upper triangle of asymmetric matrix)	Symmetric M				_		- Halas				
Communicat   Com							_				
geography					_	_					
geography 0 0 0 189 0 4 1 17 211 Info&litSci 0 42 0 0 283 2 59 28 414 politicalSci 0 13 4 4 2 169 5 4 201 psychology 19 10 10 1 1 59 5 188 4 296 sociology 0 40 9 17 28 4 4 307 409 column tota 238 275 247 211 414 201 296 409 2291  Symmetric Matrix 2 (upper triangle of asymmetric matrix)											
Info&libSci   0	economics				_	0	4	10	9	247	-
politicalSci	geography	0	0	0	189	0	4	1	17	211	
Systematric Matrix 2 (upper triangle of asymmetric matrix)	info&libSci	0	42	0	0	283	2	59	28	414	
Symmetric Matrix 2 (upper triangle of asymmetric matrix)	politicalSci	0	13	4	4	2	169	5	4	201	
Symmetric Matrix 2 (upper triangle of asymmetric matrix)	psychology	19	10	10	1	59	5	188	4	296	
Symmetric Matrix 2 (upper triangle of asymmetric matrix)	sociology	0	40	9	17	28	4	4	307	409	
Symmetric Matrix 2 (upper triangle of asymmetric matrix)											
Symmetric Matrix 2 (upper triangle of asymmetric matrix)	column tota	238	2/5	247	211	414	201	296	409		
anthropology communi economics geogra informati political psycholog sociology row totals anthropolog 219 6 0 0 2 0 4 2 233 communicat 6 168 0 0 3 3 0 17 8 202 economics 0 0 222 165 18 31 9 17 462 geography 0 0 165 189 0 0 0 4 358 info&libSci 2 3 18 0 283 0 0 2 2 308 politicalSci 0 0 31 0 0 169 30 14 244 psychology 4 17 9 0 0 30 188 2 250 sociology 2 8 17 4 2 14 2 307 356 column tota 233 202 462 358 308 244 250 356 2413										2291	
anthropology communi economics geogra informati political psycholog sociology row totals anthropolog 219 6 0 0 2 0 4 2 233 communicat 6 168 0 0 3 3 0 17 8 202 economics 0 0 222 165 18 31 9 17 462 geography 0 0 165 189 0 0 0 4 358 info&libSci 2 3 18 0 283 0 0 2 2 308 politicalSci 0 0 31 0 0 169 30 14 244 psychology 4 17 9 0 0 30 188 2 250 sociology 2 8 17 4 2 14 2 307 356 column tota 233 202 462 358 308 244 250 356 2413											
anthropolog 219 6 0 0 2 0 4 2 233 communicat 6 168 0 0 3 3 0 17 8 202 communicat 6 168 0 0 0 3 0 17 8 202 conomics 0 0 222 165 18 31 9 17 462 geography 0 0 165 189 0 0 0 4 358 info&libSci 2 3 18 0 283 0 0 2 2 308 politicalSci 0 0 31 0 0 169 30 14 244 psychology 4 17 9 0 0 30 188 2 250 sociology 2 8 17 4 2 14 2 307 356 column tota 233 202 462 358 308 244 250 356 2413	Symmetric M										
communicat         6         168         0         0         3         0         17         8         202           economics         0         0         222         165         18         31         9         17         462           geography         0         0         165         189         0         0         0         4         358           info&libSci         2         3         18         0         283         0         0         2         308           politicalSci         0         0         31         0         0         169         30         14         244           psychology         4         17         9         0         0         30         188         2         250           sociology         2         8         17         4         2         14         2         307         356           column tota         233         202         462         358         308         244         250         356         2413						informati		psycholog			
economics         0         0         222         165         18         31         9         17         462           geography         0         0         165         189         0         0         0         4         358           info&libSci         2         3         18         0         283         0         0         2         308           politicalSci         0         0         31         0         0         169         30         14         244           psychology         4         17         9         0         0         30         188         2         250           sociology         2         8         17         4         2         14         2         307         356           column tota         233         202         462         358         308         244         250         356         2413	anthropolog				_						
geography         0         0         165         189         0         0         0         4         358           info&libSci         2         3         18         0         283         0         0         2         308           politicalSci         0         0         31         0         0         169         30         14         244           psychology         4         17         9         0         0         30         188         2         250           sociology         2         8         17         4         2         14         2         307         356           column tota         233         202         452         358         308         244         250         356         2413	communicat	6	168	0	0	3	0	17	8	202	
geography         0         0         165         189         0         0         0         4         358           info&libSci         2         3         18         0         283         0         0         2         308           politicalSci         0         0         31         0         0         169         30         14         244           psychology         4         17         9         0         0         30         188         2         250           sociology         2         8         17         4         2         14         2         307         356           column tota         233         202         452         358         308         244         250         356         2413	economics	0	0	222	165	18	31	9	17	462	
Info&libScI         2         3         18         0         283         0         0         2         308           politicalScI         0         0         31         0         0         169         30         14         244           psychology         4         17         9         0         0         30         188         2         250           sociology         2         8         17         4         2         14         2         307         356           column total         233         202         462         358         308         244         250         356         2413			0					0	4		1
politicalScl 0 0 31 0 0 169 30 14 244 psychology 4 17 9 0 0 30 188 2 250 sociology 2 8 17 4 2 14 2 307 356 column tota 233 202 462 358 308 244 250 356 2413	info&libSci										1
psychology 4 17 9 0 0 30 188 2 250 sociology 2 8 17 4 2 14 2 307 356 column tota 233 202 462 358 308 244 250 356 2413											1
sociology 2 8 17 4 2 14 2 307 356 column tota 233 202 462 358 308 244 250 356 2413					_						1
column tota 233 202 462 358 308 244 250 356 2413	-										1
2413	COMMINI COCK	233	202	402	330	300	244	230	330		
										2413	

## Appendix W-5d

#### 2009 WITH self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropology	219	3	0	0	1	0	11.5	1	235.5
communicat	3	168	1	0	22.5	6.5	13.5	24	238.5
economics	0	1	222	82.5	9	17.5	9.5	13	354.5
geography	0	0	82.5	189	0	2	0.5	10.5	284.5
info. & librar	1	22.5	9	0	283	1	29.5	15	361
politicalScier	0	6.5	17.5	2	1	169	17.5	9	222.5
psychology	11.5	13.5	9.5	0.5	29.5	17.5	188	3	273
sociology	1	24	13	10.5	15	9	3	307	382.5
column total	235.5	238.5	354.5	284.5	361	222.5	273	382.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	219	6	0	0	2	0	15	2	244
communicat	6	168	2	0	39	13	7	32	267
economics	0	2	222	165	18	27	1	8	443
geography	0	0	165	189	0	4	1	13	372
info. & librar	2	39	18	0	283	2	59	26	429
politicalScier	0	13	27	4	2	169	25	10	250
psychology	15	7	1	1	59	25	188	2	298
sociology	2	32	8	13	26	10	2	307	400
column total	244	267	443	372	429	250	298	400	2703

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	48021	1098	118	8	822	230	5095	926	56318
communicat	1098	28586	679	32	7921	2812	5069	9328	55525
economics	118	679	78168	31253	5212	7357	5348	10766	138901
geography	8	32	31253	35737	8	812	197	4441	72488
info. & librar	822	7921	5212	8	81857	1140	17121	10218	124299
politicalScier	230	2812	7357	812	1140	29862	6805	5774	54792
psychology	5095	5069	5348	197	17121	6805	39416	3545	82596
sociology	926	9328	10766	4441	10218	5774	3545	97035	142033
column total	56318	55525	138901	72488	124299	54792	82596	142033	726952 726952

Matrix product At\*A (pre multiplied)

Plaurix produ									
	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	48322	1504	190	19	1559	95	4448	476	56613
communicat	1504	31897	956	1072	14174	2469	5328	13956	71356
economics	190	956	49481	36809	4846	7644	4034	6613	110573
geography	19	1072	36809	63252	3513	5864	1861	8838	121228
info. & librar	1559	14174	4846	3513	84695	1303	11485	9642	131217
politicalScier	95	2469	7644	5864	1303	29563	6305	4131	57374
psychology	4448	5328	4034	1861	11485	6305	36646	2321	72428
sociology	476	13956	6613	8838	9642	4131	2321	94826	140803
column total	56613	71356	110573	1E+05	131217	57374	72428	140803	761592

# Appendix X-1a

impact factor	Tournais in cop joc									
asummetric n	natrix citation data									
	anthropology		economics	geograp	informatio	politicalS	psychologi	sociology	row total	%ofTotalCite
anthropology	0	0	7	1	0	0	3	3	14	9.09090909
communicati	0	0	0	0	2	0	3	7	12	7.79220779
economics	0	0	0	4	0	2	0	30	36	23.3766233
geograph	1	0	0	0	0	0	0	2	3	1.94805194
	0	0	0	0	0	0	0	0	0	1.34003134
info&libSci	0	2	24	0	0	0	1	17	44	28.5714285
politicalSci		7	0	0	3	0	0	8		
psychology	0	13	0	4	0	5	4	0	19 26	12.3376623 16.8831168
sociology			_	_	5		-			
column totals		22	31	9		7	11	67	154	10
col:%ofTotal	1.298701299	14.28571	20.12987	5.8442	3.24675	4.54545	7.142857	43.50649351	154	10
		i	-:							
	matrix columns=c n labeled disciplines			(for ever	nnla anthron	ologu citoc	neuchologu f	our times)		
	inabelea aisciplines ibelea disciplines are		-						A)	
cited - Town	ibelea alscipilles are	cited by co	iailiii labelea al	scipillies	ror example	antimopolo	gy is cited by	psychology (wic	ej	
transpose of	asymmetric matrix	s citation da	ata							
•	anthropology			geograp	info. & libr	politicalS	psychology	sociology	row totals	%ofTotalCite
anthropology		0	0	1	0	0	1	0	2	1.29870129
communicati	0	0	0	0	0	2	7	13	22	14.2857142
economics	7	0	0	0	0	24	0	0	31	20.1298701
geography	1	0	4	0	0	0	0	4	9	5.84415584
info. & library	0	2	0	0	0	0	3	0	5	3.24675324
			_	_		_				
politicalScien	0	0	2	0	0	0	0	5	7	
psychology	0	0	0	0	0	1	0	4	11	7.14285714
psychology sociology	0 3 3	0 3 7	0 30	0	0	1 17	0	4	11 67	7.14285714 43.5064935
psychology sociology column totals	0 3 3 14	0 3 7 12	0 30 36	0 2 3	0 0 0	1 17 44	0 8 19	4 0 26	11 67 154	4.54545454 7.14285714 43.5064935
psychology sociology column totals col:%ofTotali	0 3 3 14 9.090909091	0 3 7 12 7.792208	30 36 23.376623	0 2 3 1.9481	0 0 0 0	1 17	0	4	11 67	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotali	0 3 3 14	0 3 7 12 7.792208	30 36 23.376623	0 2 3 1.9481	0 0 0 0	1 17 44	0 8 19	4 0 26	11 67 154	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotali	0 3 3 14 9.090909091	0 3 7 12 7.792208	30 36 23.376623	0 2 3 1.9481	0 0 0 0	1 17 44	0 8 19	4 0 26	11 67 154	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotal remember: Al	0 3 3 14 9.090909091 matrix (transpose	0 3 7 12 7.792208 e matrix) is	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows:	0 0 0 0	1 17 44	0 8 19	4 0 26	11 67 154	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotal remember: Al	0 3 3 14 9,090909091 t matrix (transpose	0 3 7 12 7.792208 e matrix) is	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows:	0 0 0 0 0	1 17 44 28.5714	0 8 19 12.33766	4 0 26 16.88311688	11 67 154	7.14285714 43.5064935
psychology sociology column totals col:%ofTotalt remember: At Symmetric M	0 3 3 14 9.090909091 matrix (transpose	0 3 7 12 7.792208 e matrix) is	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows:	0 0 0 0 0	1 17 44 28.5714	0 8 19	4 0 26 16.88311688	11 67 154 154	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotall remember: Al	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology	0 3 7 12 7.792208 e matrix) is le of asymr communic	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows:	0 0 0 0 0 cites	1 17 44 28.5714	0 8 19 12.33766	4 0 26 16.88311688 sociology	11 67 154 154 row totals	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al Symmetric M anthropology	0 3 3 14 9.090909091 r matrix (transpose atrix1 (lower triang anthropology 0	0 3 7 12 7.792208 e matrix) is le of asymnomic	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows: geograp	0 0 0 0 0 cites	1 17 44 28.5714 political s	0 8 19 12.33766 psycholog	4 0 26 16.88311688 sociology	11 67 154 154 row totals	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al Symmetric M anthropology communicati economics	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows: geograp 1 0	0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24	0 8 19 12.33766 psychologi 1 7	4 0 26 16.88311688 sociology 0 13	11 67 154 154 row totals 2 22	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al Symmetric M anthropology communicati economics geography	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0	0 30 36 23.376623 columns=cit	0 2 3 1.9481 ed, rows: geograp 1 0 0	0 0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24	0 8 19 12.33766 psychologi 1 7 0	4 0 26 16.88311688 sociology 0 13 0	11 67 154 154 row totals 2 22 24	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al Symmetric M anthropology communicati economics geography info&libSci	0 3 3 14 9.090909091 t matrix (transpose atrix1 (lower triang anthropology 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0	0 30 36 23,376623 columns=cit- metric matrix economics 0 0 0	0 2 3 1.9481 ed, rows= geograp 1 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 17 44 28.5714 political s 0 2 2 24 0	0 8 19 12.33766 psychologi 1 7 0 0	4 0 26 16.88311688 sociology 0 13 0 4	11 67 154 154 100 totals 2 22 24 5	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al Symmetric M anthropology communicati economics geography info&libSci politicalSci	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0	0 30 36 23.376623 columns=citric matrix economics 0 0 0	0 2 3 1.9481 ed, rows: geograp 1 0 0	0 0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24	0 8 19 12.33766 psychologi 1 7 0	4 0 26 16.88311688 sociology 0 13 0	11 67 154 154 100 totals 22 24 5 3	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotal remember: Al Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology	0 3 3 14 9.090909091 matrix (transpose artix1 (lower triang anthropology 0 0 0	0 3 7 12 7.792208 e matrix) is e communid 0 0 0 0 0	0 30 36 23.376623 columns=citring economics 0 0 0 0 0 24	0 2 3 1.9481 ed, rows: 1 9 9 9 9 9 0 0 0 0	0 0 0 0 cites	1 17 44 28.5714 political s 0 2 2 24 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3	4 0 26 16.88311688 sociology 0 13 0 4 0 5	11 67 154 154 164 164 176 186 186 186 186 186 186 186 186 186 18	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotali remember: Al Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0 0 0	0 30 36 23.376623 columns=citring economics 0 0 0 0 0 24 0	0 2 3 1.9481 ed, rows: 9 9eograp 1 0 0 0 0	0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24 0 0 0 0 0 5 5	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4	11 67 154 154 100 totals 2 22 24 5 3 31 15	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotal remember: Al Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 0	0 3 7 12 7.792208 e matrix) is e communid 0 0 0 0 0	0 30 36 23.376623 columns=citor metric matrix economics 0 0 0 0 0 24 0	0 2 3 1.9481 ed, rows: 9 9eograp 1 0 0 0 0	0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24 0 0 0 0 0 5 5	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0	4 0 26 16.88311688 sociology 0 13 0 4 0 5	11 67 154 154 154 164 175 175 175 175 175 175 175 175 178	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotali remember: Al Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0 0 0	0 30 36 23.376623 columns=citring economics 0 0 0 0 0 24 0	0 2 3 1.9481 ed, rows: 9 9eograp 1 0 0 0 0	0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24 0 0 0 0 0 5 5	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4	11 67 154 154 100 totals 2 22 24 5 3 31 15	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology column totals	0 3 3 14 9.090909091 t matrix (transpose atrix1 (lower triang anthropology 0 0 0 1 1 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0 0 0 2 7	0 30 36 23.376623 columns=cit- metric matrix economics 0 0 0 0 0 24 0	0 2 3 1.9481 ed, rows: geograf 1 0 0 0 0 0 0	0 0 0 0 cites	1 17 44 28.5714 political s 0 2 24 0 0 0 0 0 5 5	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0	4 0 26 16.88311688 sociology 0 13 0 4 0 5	11 67 154 154 154 164 175 175 175 175 175 175 175 175 178	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology column totals	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 1 0 2 atrix 2 (upper triang	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22	0 30 36 23.376623 columns=cit- metric matrix economics 0 0 0 0 24 0 24 0 24	0 2 3 3 1.9481 ed, rows: 0 0 0 0 0 0 0 0 0 0 5 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 17 44 28.5714 political s 0 2 24 0 0 0 0 0 5 31	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0 4 15	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4 0 26	11 67 154 154 154 154 154 155 26 128 128	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: At  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology column totals  Symmetric M	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 1 0 2 atrix 2 (upper triang anthropology	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22 gle of asym communic	0 30 36 23.376623 columns=cit- metric matrix economics 0 0 0 0 24 0 24 0 24	0 2 3 3 1.9481 ed, rows: 0 0 0 0 0 0 0 0 0 0 5 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 3	1 17 44 28.5714 political s 0 2 24 0 0 0 0 0 5 31	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0 4 15	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4 0 26	11 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotali remember: Al  Symmetric M anthropology communicati economics geography info&ibSci politicalSci psychology sociology column totals  Symmetric M anthropology anthropology	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 2 atrix 2 (upper trian anthropology 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22 gle of asymr communic 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 36 23.376623 columns=cit metric matrix economics 0 0 0 0 24 0 24 0 24 0 0 0 7	0 2 3 1.9481 ed, rows: geograf 0 0 0 0 0 0 4 4 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 17 44 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0 4 15	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4 0 26	111 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology column totals  Symmetric M anthropology communicati	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 2 atrix2 (upper trian anthropology 0 0 0	0 3 7 12 7.792208 e matrix) is e of asymre communic 0 0 0 0 2 7 13 22 gle of asymre communic 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 36 23.376623 columns=cit- metric matrix economics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 3 informatic	1 17 44 28.5714 28.5714 political s 0 0 0 0 0 5 31 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0 4 15 psychologi 3 3	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4 0 26 sociology sociology	111 67 154 154 154 154 155 156 128 128 128 128 128 128 128 128 128 128	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology column totals  Symmetric M anthropology communicati economics	atrix 2 (upper trian anthropology	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22 gle of asymr communic 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 30 36 23.376623 columns=cit- metric matrix economics 0 0 0 0 24 0 24 0 24 0 0 24 0 0 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 3 informatic 0 0	1 17 44 28.5714 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 0 0 4 15 psychologi 3 3 3	4 0 26 16.88311688 sociology 0 13 0 0 5 4 0 26 sociology 3 7 30	111 67 154 154 154 154 155 156 128 128 128 128 128 128 128 128 128 128	7.14285714 43.5064935 10
psychology sociology column totals col:%ofTotal remember: Al  Symmetric M anthropology communicati economics geography info&libSci psychology column totals  Symmetric M anthropology column totals  symmetric M anthropology communicati economics geography	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 1 2 atrix 2 (upper trian anthropology 0 7	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22 gle of asym communic 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 30 36 23.376623 columns=cit metric matrix economics 0 0 0 0 24 0 0 24 0 0 24 0 0 0 4 4 0 0 0 4 0 0 4 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 17 44 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 3 0 0 4 15 psychologi 3 3 3	4 0 26 16.88311688 sociology 0 13 0 4 0 5 4 0 26 sociology 3 7	111 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064933 10
psychology sociology column totals col:%ofTotali remember: Al  Symmetric M anthropology communicati economics geography info&libSci psychology sociology column totals  Symmetric M anthropology column totals  communicati economics geography info&libSci psychology sociology column totals	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 1 0 2 atrix 2 (upper trian anthropology 0 0 7 1	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22 gle of asymr communic 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 30 36 23.376623 columns=cit- metric matrix, economics 0 0 0 24 0 0 24 0 0 24 0 0 4 0 0 4 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 17 44 28.5714 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 3 0 0 4 15 psychologi 3 3 3 0 0 0	4 0 0 26 16.88311688 sociology 0 13 0 0 26 sociology 3 7 3 0 2 0 0	111 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotali remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology column totals  Symmetric M anthropology column totals  communicati economics geography info&libSci politicalSci politicalSci politicalSci	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 1 2 atrix 2 (upper trian anthropology 0 7 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0 0 2 7 13 22 gle of asym communio 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 36 23.376623 columns=citric matrix economics 0 0 0 0 24 0 0 24 0 0 0 0 0 0 0 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 3 informatio	1 17 44 28.5714 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 3 0 0 4 15 psychologi 3 3 3 0 0 0 0	4 0 0 26 16.88311688 sociology 0 0 13 0 0 26 sociology 3 7 30 2 2 0 0 17	111 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotal remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology sociology column totals  Symmetric M anthropology communicati	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 1 0 2 atrix 2 (upper trian anthropology 0 0 7 1	0 3 7 12 7.792208 e matrix) is le of asymr communic 0 0 0 0 2 7 13 22 gle of asymr communic 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 36 23.376623 columns=citric matrix economics 0 0 0 0 24 0 0 24 0 0 0 0 0 0 0 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 17 44 28.5714 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 3 0 0 4 15 psychologi 3 3 3 0 0 0	4 0 0 26 16.88311688 sociology 0 13 0 0 26 sociology 3 7 3 0 2 0 0	111 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064935 10
psychology sociology column totals col:XofTotali remember: Al  Symmetric M anthropology communicati economics geography info&libSci politicalSci psychology column totals  Symmetric M anthropology column totals  communicati economics geography info&libSci politicalSci politicalSci politicalSci	0 3 3 14 9.090909091 matrix (transpose atrix1 (lower triang anthropology 0 0 1 0 1 2 atrix 2 (upper trian anthropology 0 7 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 3 7 12 7.792208 e matrix) is le of asymr communio 0 0 0 2 7 13 22 gle of asym communio 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 30 36 23.376623 columns=citric matrix economics 0 0 0 0 24 0 0 24 0 0 0 0 0 0 0 0 0 0 0	0 2 3 3 1.9481 ed, rows: e	0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 3 informatio	1 17 44 28.5714 28.5714 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 8 19 12.33766 psychologi 1 7 0 0 3 3 0 0 4 15 psychologi 3 3 3 0 0 0 0	4 0 0 26 16.88311688 sociology 0 0 13 0 0 26 sociology 3 7 30 2 2 0 0 17	111 67 154 154 154 154 154 155 155 155 155 155	7.14285714 43.5064935 10

### Appendix X-1b

1979 WITHOUT self citations means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	0	0	3.5	1	0	0	2	1.5	8
communicat	0	0	0	0	1	1	5	10	17
economics	3.5	0	0	2	0	13	0	15	33.5
geography	1	0	2	0	0	0	0	3	6
info. & librar	0	1	0	0	0	0	1.5	0	2.5
politicalScier	0	1	13	0	0	0	0.5	11	25.5
psychology	2	5	0	0	1.5	0.5	0	6	_ 15
sociology	1.5	10	15	3	0	11	6	0	46.5
column total	8	17	33.5	6	2.5	25.5	15	46.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric).

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	0	0	7	0	0	0	2	3	12
communicat	0	0	0	0	2	2	4	6	14
economics	7	0	0	4	0	22	0	30	63
geography	0	0	4	0	0	0	0	2	6
info. & librar	0	2	0	0	0	0	3	0	5
politicalScier	0	2	22	0	0	0	1	12	37
psychology	2	4	0	0	3	1	0	4	14
sociology	3	6	30	2	0	12	4	0	57
column total	12	14	63	6	5	37	14	57	208 208

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	68	30	94	6	0	222	24	16	460
communicat	30	62	210	14	0	122	62	12	512
economics	94	210	920	60	0	510	240	26	2060
geography	6	14	60	5	0	34	17	0	136
info. & librar	0	0	0	0	0	0	0	0	0
politicalScier	222	122	510	34	0	870	150	30	1938
psychology	24	62	240	17	0	150	123	91	707
sociology	16	12	26	0	0	30	91	226	401
column total	460	512	2060	136	0	1938	707	401	6214 6214

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropology	2	7	0	0	3	0	0	10	22
communicat	7	222	48	52	21	65	54	90	559
economics	0	48	625	7	0	0	45	429	1154
geography	0	52	7	33	0	28	19	123	262
info. & librar	3	21	0	0	13	0	6	38	81
politicalScien	0	65	0	28	0	29	20	60	202
psychology	0	54	45	19	6	20	35	47	226
sociology	10	90	429	123	38	60	47	1315	2112
column total	22	559	1154	262	81	202	226	2112	4618

# Appendix X-1c

MITTELL COLLEGE	CONTRACTOR AND A LOCAL									
WITH SELF C										
	n labels are disc cipline of top 5 i				•			w labels (at le	ft) represen	t
asymmetric	matrix citation d	lata								
	anthropology		economic	geogra	informa	political	psycholo	sociology	row total	%ofTotalCited
anthropolo		0	7	1	0	0	3	3		31.293463
communica	0	34	0	0	2	0	3	7	46	3.1988873
economics	0	0	150	4	0	2	0	30	186	12.934631
	1			16	0		0			
geography		0	0		_	0	_	2	19	1.3212796
info&libSci	0	0	0	0	21	0	0	0	21	1.4603616
politicalSci	0	2	24	0	0	25	1	17	69	4.798331
psychology	1	7	0	0	3	0	162	8	181	12.586926
sociology	0	13	0	4	0	5	4	440	466	32.40612
column total	438	56	181	25	26	32	173	507	1438	100
col:%ofTotal	30.4589708	3.8943	12.5869	1.74	1.8081	2.225	12.031	35.257302	1438	100
remember: /	A matrix column	s=cites, ro	ows=cited							
	nn labeled disciplir			plines (f	or example	anthropol	ogy cites psy	chology four ti	mes)	
	labeled disciplines									
							, , , ,	,,,,,	3,	
transpose of	asymmetric ma	trix citatio	n data							
	anthropology	communic	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals	%ofTotalCited
anthropolog	436	0	0	1	0	0	1	0	438	30.458971
communicat	0	34	0	0	0	2	7	13	56	3.8942976
economics	7	0	150	0	0	24	0	0	181	12.586926
		0	4	16	0	0	0	4	25	1.7385257
geography	1									
	0	2	0	0	21	0	3	0	26	1.8080668
geography	0	2	0	0	0	25	0	5	32	2.2253129
geography info. & librar	0 0 3	0 3	0 2 0	0	0	25 1	0 162	5 4	32 173	2.2253129 12.030598
geography info. & librar politicalScier psychology sociology	0 0 3 3	2 0 3 7	0 2 0 30	0 0 2	0 0	25 1 17	0 162 8	5 4 440	32 173 507	2.2253129 12.030598 35.257302
geography info. & librar politicalScient psychology sociology column total	0 0 3 3 450	2 0 3 7 46	0 2 0 30 186	0 0 2 19	0 0 0 21	25 1 17 69	0 162 8 181	5 4 440 466	32 173 507 1438	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal	0 0 3 3 450 31.2934631	2 0 3 7 46 3.1989	0 2 0 30 186 12.9346	0 0 2 19 1.32	0 0 0 21 1.4604	25 1 17 69 4.798	0 162 8	5 4 440	32 173 507	2.2253129 12.030598 35.257302
geography info. & librar politicalScier psychology sociology column total col:%ofTotal	0 0 3 3 450	2 0 3 7 46 3.1989	0 2 0 30 186 12.9346	0 0 2 19 1.32	0 0 0 21 1.4604	25 1 17 69 4.798	0 162 8 181	5 4 440 466	32 173 507 1438	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal	0 0 3 3 450 31.2934631	2 0 3 7 46 3.1989	0 2 0 30 186 12.9346	0 0 2 19 1.32	0 0 0 21 1.4604	25 1 17 69 4.798	0 162 8 181	5 4 440 466	32 173 507 1438	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A	0 0 3 3 450 31.2934631 At matrix (trans	2 0 3 7 46 3.1989 poose matri	0 2 0 30 186 12.9346 x) is columi	0 0 2 19 1.32	0 0 0 21 1.4604	25 1 17 69 4.798	0 162 8 181	5 4 440 466	32 173 507 1438	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A	0 0 3 3 450 31.2934631 At matrix (transp	2 0 3 7 46 3.1989 pose matri	0 2 0 30 186 12.9346 x) is columi	0 0 2 19 1.32 ns=cited	0 0 0 21 1.4604 1, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587	5 4 440 466 32.40612	32 173 507 1438 1438	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A	0 0 3 3 450 31.2934631 At matrix (transp 4atrix1 (lower tr anthropology	2 0 3 7 46 3.1989 pose matri	0 2 0 30 186 12.9346 x) is column	0 0 2 19 1.32 ns=cited matrix)	0 0 21 1.4604 i, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587	5 4 440 466 32.40612 sociology	32 173 507 1438 1438	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric N anthropology	0 0 3 3 450 31.2934631 At matrix (transposed transposed	2 0 3 7 46 3.1989 pose matri iangle of a communic	0 2 0 30 186 12.9346 x) is column symmetric economics 0	0 0 2 19 1.32 ns=cited	0 0 0 21 1.4604 i, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587	5 4 440 466 32.40612 sociology	32 173 507 1438 1438 row totals	2.2253129 12.030598 35.257302 100
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geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric M anthropolog communicat economics	0 0 3 3 450 31.2934631 At matrix (transport of the second	2 0 3 7 46 3.1989 pose matri iangle of a communic 0 34	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150	0 0 2 19 1.32 ns=citec matrix) geogra 1 0	0 0 21 1.4604 1, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587 psycholog 1 7	5 4 440 466 32.40612 sociology 0 13	32 173 507 1438 1438 row totals 438 56 174	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric M anthropology communicat economics geography	0 0 3 3 450 31.2934631 At matrix (trans) 4atrix1 (lower tr anthropology 436 0	2 0 3 7 46 3.1989 pose matri iangle of a communic 0 34 0	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0	0 0 2 19 1.32 ns=citec matrix) geograf 0 0	0 0 21 1.4604 i, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587 psycholog 1 7 0	5 4 440 466 32.40612 sociology 0 13 0	32 173 507 1438 1438 row totals 438 56 174	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric M  anthropolog communicat economics geography info&libSci	0 0 3 3 450 31.2934631 At matrix (transport of the strict	2 0 3 7 46 3.1989 pose matri iangle of a communic 0 34 0	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0	0 0 2 19 1.32 ns=cited matrix) geogra 1 0 0 16	0 0 21 1.4604 1, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587 psycholog 1 7 0 0	5 4 440 466 32.40612 sociology 0 13 0 4	32 173 507 1438 1438 row totals 438 56 174 21	2.2253129 12.030598 35.257302 100
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geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric M  anthropolog communicat economics geography info&libSci	0 0 3 3 450 31.2934631 At matrix (transport of the strict	2 0 3 7 46 3.1989 pose matri iangle of a communic 0 34 0	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0	0 0 2 19 1.32 ns=cited matrix) geogra 1 0 0 16	0 0 21 1.4604 1, rows=ci	25 1 17 69 4.798 tes	0 162 8 181 12.587 psycholog 1 7 0 0	5 4 440 466 32.40612 sociology 0 13 0 4	32 173 507 1438 1438 row totals 438 56 174 21	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric M anthropolog communicat economics geography info&libSci politicalSci	0 0 3 3 450 31.2934631 At matrix (transport transport tr	2 0 3 7 46 3.1989 pose matri iangle of a communic 0 34 0 0	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0 0 24	0 0 0 19 1.32 ns=cited matrix) geogra 1 0 0 16 0 0 0	0 0 0 21 1.4604 i, rows=ci informati 0 0 0	25 1 17 69 4.798 tes political : 0 2 24 0 0 25	0 162 8 181 12.587 psycholog 1 7 0 0 3	5 4 440 466 32.40612 sociology 0 13 0 4 0	32 173 507 1438 1438 row totals 438 56 174 21 24	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric N  anthropology communicat economics geography info&libSci politicalSci psychology	0 0 3 3 450 31.2934631 At matrix (transport of the second	2 0 3 7 46 3.1989 pose matri 0 1 34 0 0 0 2 7	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0 0 24 0	0 0 2 19 1.32 ns=cited ns=cite	0 0 21 1.4604 1, rows=ci	25 1 17 69 4.798 tes political 9 0 2 24 0 0 25 0	0 162 8 181 12.587 psycholog 1 7 0 0 3 0 162	5 4 440 466 32.40612 sociology 0 13 0 4 0 5	32 173 507 1438 1438 1438 row totals 438 56 174 21 24 56	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col: %ofTotal remember: A  Symmetric N  anthropology communicat economics geography info&libSci politicalSci psychology sociology	0 0 3 3 450 31.2934631 At matrix (transport of transport	2 0 3 7 46 3.1989 pose matri 0 0 34 0 0 0 2 7	0 2 0 30 186 12.9346 x) is column expression of the conomics 0 0 150 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 2 19 1.32 ns=cited matrix) geogra 1 0 0 16 0 0 4	0 0 0 1.4604 1, rows=ci	25 1 17 69 4.798 tes political: 0 2 24 0 0 25 0	0 162 8 181 12.587 psycholog 1 7 0 0 3 0 162	5 4 440 466 32.40612 sociology 0 13 0 4 0 5 4	32 173 507 1438 1438 1438 row totals 438 56 174 21 24 56 177 466	2.2253129 12.030598 35.257302 100
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geography info. & librar politicalScier psychology sociology column total col: %ofTotal remember: A  Symmetric N  anthropology communicat economics geography info&libSci psychology column total  Symmetric N  anthropology column total  Symmetric N  anthropology column total	0 0 3 3 3 450 31.2934631 At matrix (transport of the second of the secon	2 0 3 7 46 3.1989 cose matri 0 34 0 0 2 7 13 56 communic 0 0 3 1 7	0 2 0 30 186 12.9346 x) is column symmetric economics 0 150 0 174 asymmetric economics 7 0 150 4 0	0 0 0 1.32 ns=cited n	0 0 0 1.4604 i, rows=ci	25 1 17 69 4.798 tes political: 0 2 24 0 0 25 0 5 5 political: 0 0 2 2 24 0 0 0 2 2 0 0 0 0 0 0 0 0 0	0 162 8 181 12.587 psycholog 1 7 0 0 3 0 162 4 177 psycholog 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 4 440 466 32.40612  sociology 0 13 0 4 0 5 4 440 466  sociology 3 7 30 2 0	32 173 507 1438 1438 1438 760 174 21 24 56 177 466 1412 1412 row totals 450 46 193 23	2.2253129 12.030598 35.257302 100
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geography info. & librar politicalScier psychology sociology column total col: %ofTotal remember: A  Symmetric N  anthropology communicat economics geography info&libSci politicalSci psychology communicat economics geography info&libSci politicalSci psychology sociology communicat economics geography info&libSci politicalSci psychology sociology sociology	0 0 3 3 3 450 31.2934631 At matrix (transport of the second of the secon	2 0 3 7 46 3.1989 cose matri 0 0 34 0 0 0 2 7 13 56 communic 0 0 3 1 7	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0 174 0 174 asymmetric economics 7 0 150 4 0 30 30	0 0 0 1.32 ns=cited n	0 0 0 1.4604 i, rows=ci	25 1 17 69 4.798 tes political: 0 2 24 0 0 25 0 5 5 political: 0 2 2 4 0 0 2 2 1 0 0 0 2 1 0 0 0 0 0 0 0 0 0 0	0 162 8 181 12.587 psycholog 1 7 0 0 3 0 162 4 177 psycholog 3 3 0 0 162 4 177 psycholog 3 0 162 8	5 4 440 466 32.40612  sociology 0 13 0 4 0 5 4 440 466  sociology 3 7 30 2 0 17 8 440	32 173 507 1438 1438 1438 760 174 21 24 56 177 466 1412 1412 row totals 450 46 193 23 23 45 177	2.2253129 12.030598 35.257302 100
geography info. & librar politicalScier psychology sociology column total col:%ofTotal remember: A  Symmetric N  anthropology communicat economics geography info&libSci politicalSci psychology column total  Symmetric N  anthropology column total  Symmetric N  anthropology column total  Symmetric N  anthropology communicat economics geography info&libSci politicalSci psychology	0 0 3 3 3 450 31.2934631 At matrix (transport of the second of the secon	2 0 3 7 46 3.1989 cose matri 0 0 34 0 0 2 7 13 56 communio 0 0 0 2 7 13 56 communio 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2 0 30 186 12.9346 x) is column symmetric economics 0 0 150 0 174 0 174 asymmetric economics 7 0 150 4 0 0	0 0 1.32 ms=cited matrix) geogra 1 0 0 0 4 21 cmatrix geogra 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 1.4604 i, rows=ci	25 1 17 69 4.798 tes political: 0 0 22 24 0 0 25 0 5 5 5 political: 0 2 2 2 4 0 0 2 2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 162 8 181 12.587 psycholog 1 7 0 0 3 0 162 4 177 psycholog 3 3 0 0 162 177	5 4 440 466 32.40612  sociology 0 13 0 4 0 5 4 440 466  sociology 7 30 2 0 17 8	32 173 507 1438 1438 1438 700 1438 56 174 21 24 56 177 466 1412 1412 row totals 450 46 193 23 23 45 177	2.2253129 12.030598 35.257302 100

### Appendix X-1d

# 1979 WITH self citation means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	436	0	3.5	1	0	0	2	1.5	444
communicat	0	34	0	0	1	1	5	10	51
economics	3.5	0	150	2	0	13	0	15	183.5
geography	1	0	2	16	0	0	0	3	22
info. & librar	0	1	0	0	21	0	1.5	0	23.5
politicalScier	0	1	13	0	0	25	0.5	11	50.5
psychology	2	5	0	0	1.5	0.5	162	6	_177
sociology	1.5	10	15	3	0	11	6	440	486.5
column total	444	51	183.5	22	23.5	50.5	177	486.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric).

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	436	0	7	0	0	0	2	3	448
communicat	0	34	0	0	2	2	4	6	48
economics	7	0	150	4	0	22	0	30	213
geography	0	0	4	16	0	0	0	2	22
info. & librar	0	2	0	0	21	0	3	0	26
politicalScier	0	2	22	0	0	25	1	12	62
psychology	2	4	0	0	3	1	162	4	176
sociology	3	6	30	2	0	12	4	440	497
column total	448	48	213	22	26	62	176	497	1492
									1492

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	190164	30	1144	458	0	222	946	1336	194300
communicat	30	1218	210	14	42	190	786	3534	6024
economics	1144	210	23420	124	0	4160	240	13226	42524
geography	458	14	124	261	0	34	17	944	1852
info. & librar	0	42	0	0	441	0	63	0	546
politicalScier	222	190	4160	34	0	1495	312	7635	14048
psychology	946	786	240	17	63	312	26367	4259	32990
sociology	1336	3534	13226	944	0	7635	4259	193826	224760
column total	194300	6024	42524	1852	546	14048	32990	224760	517044 517044

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	190098	7	3052	452	3	0	1470	1318	196400
communicat	7	1378	48	52	89	115	1290	6048	9027
economics	3052	48	23125	607	0	900	45	4929	32706
geography	452	52	607	289	0	28	19	1915	3362
info. & librar	3	89	0	0	454	0	492	38	1076
politicalScier	0	115	900	28	0	654	45	2685	4427
psychology	1470	1290	45	19	492	45	26279	3103	32743
sociology	1318	6048	4929	1915	38	2685	3103	194915	214951
column total	196400	9027	32706	3362	1076	4427	32743	214951	494692

# Appendix X-2a

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nthropolo		0	0	geogra 2	0	0	0	4	6	3.09278
communic	_	0	0	0	9	0	1	9	19	9.79381
economics		0	0	15	ő	1	17	24	57	29.3814
geography	_	0	0	0	0	0	0	3	3	1.54639
nfo&libSci		0	0	0	0	0	0	0	0	1.54039
oliticalSci	0	4	18	2	0	0	8	18	50	25.773
psychology	0	4	10	0	3	0	0	6	14	7.21649
sociology	0	7	3	8	0	0	27	0	45	23.1958
column tota		15	22	27	12	1	53	64	194	10
col:%ofTota		7.732	11.34	13.9	6.186	0.515	27.32	32.98969	194	10
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ranspose of	f asymmetric ma				info 0 ***	malikiid	an abote		manus kenteelis	1 - FY-t-100:
enthronolog	anthropology		economics 0		info. & lit	politicalS 0	psycholog	sociology 0	row totals	6ofTotalCite
enthropolog communicat		0	0	0	0	4	0	7	15	7.73195
conomics	0	0	0	0	0	18	1	3	22	11.3402
eography	2	0	15	0	0	2	ô	8	27	13.9175
nfo. & librar	0	9	0	0	0	0	3	0	12	6.18556
oliticalScie	0	0	1	0	0	0	0	0	1	0.51546
sychology	0	1	17	0	0	8	0	27	53	27.3195
sociology	4	9	24	3	0	18	6	0	64	32.9896
sociology column tota	6	19	57	3	0	50	14	45	194	32.98969 100
column tota col:%ofTota	6	19 9.794	57 29.381	3 1.55	0	50 25.77				10
column tota col:%ofTota remember:	3.0927835 At matrix (trans Matrix1 (lower to	9.794 pose matr	57 29.381 ix) is colum	1.55 ns=cite matrix)	0 0 d, rows=c	50 25.77 ites	7.2165	45 23.19588	194	
column tota col:%ofTota remember:	3.0927835 At matrix (trans Matrix1 (lower trans	9.794 pose matr	57 29.381 ix) is colum	1.55 ns=cite matrix)	0 0 d, rows=c	50 25.77 ites	14	45 23.19588	194 194	10
column tota col:%ofTota remember:	3.0927835 At matrix (trans Matrix1 (lower trans	9.794 pose matr riangle of a communi	57 29.381 ix) is colum asymmetric economics	3 1.55 ns=cite matrix) geogra	0 0 d, rows=c	50 25.77 ites political	7.2165 psycholog	45 23.19588 sociology	194 194 row totals	10
column tota col: %ofTota remember: Symmetric ! anthropolog communicat	3.0927835 At matrix (trans  Matrix1 (lower trans  anthropology	9,794 pose matr riangle of a communi	57 29.381 ix) is colum asymmetric economics	3 1.55 ns=cite matrix) geogra 0	0 0 d, rows=c	50 25.77 ites political	7.2165 psycholog	45 23.19588 sociology	194 194 row totals	10
column tota col:%ofTota remember: Symmetric I	6 3.0927835 At matrix (trans  Matrix1 (lower trans  anthropology  0	19 9.794 pose matr riangle of a communi	57 29.381 ix) is colum asymmetric economics 0	3 1.55 ns=citer matrix) geogra 0 0	0 0 d, rows=c	50 25.77 ites political 0 4	14 7.2165 psycholog 0 4	45 23.19588 sociology 0 7	194 194 row totals 0 15	10
column tota col: %ofTota remember: Symmetric ! anthropolog communicate economics geography	6 3.0927835 At matrix (trans Matrix1 (lower transhropology 0 0	9,794 pose matr riangle of a	57 29.381 ix) is colum asymmetric economics 0 0	3 1.55 ns=cited matrix) geogra 0 0	0 0 0 o o o o o o o o o o o o o o o o o	50 25.77 ites political 0 4 18	14 7.2165 psycholog 0 4 1	45 23.19588 sociology 0 7 3	194 194 row totals 0 15	10
column tota col: %ofTota remember: Symmetric ! anthropolog communicate economics geography nfo&libScl	6 3.0927835 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0	19 9.794 pose matr riangle of a communi 0 0	57 29.381 ix) is colum asymmetric economics 0 0	3 1.55 ns=citer matrix) geogra 0 0 0	o d, rows=c informati	50 25.77 ites political 0 4 18 2	14 7.2165 psycholog 0 4 1	45 23.19588 sociology 0 7 3 8	194 194 row totals 0 15 22	10
column tota col: %ofTota remember: Symmetric ! anthropolog communicate economics geography nfo&libSci coliticalSci	6 3.0927835 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0	57 29.381 ix) is colum asymmetric economics 0 0 0 0	3 1.55 ns=cite matrix) geogra 0 0 0 0	on on one of the original of the original of the original of the original of the original of the original of the original of the original of the original original of the original orig	50 25.77 ites political 0 4 18 2	psycholog 0 4 1 0 3	45 23.19588 sociology 0 7 3 8	194 194 row totals 0 15 22 10	10
column tota col: %ofTota remember: Symmetric ! enthropolog communicate economics geography info&libSci politicalSci psychology	6 3.0927835 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0	57 29.381 ix) is colum asymmetric economics 0 0 0 18	3 1.55 ns=cite matrix) geogra 0 0 0 2	0 0, rows=0 informati 0 0 0	50 25.77 ites political 0 4 18 2 0 0	psycholog 0 4 1 0 3	45 23.19588 sociology 0 7 3 8 0 0	row totals 0 15 22 10 3	10
column tota col:%ofTota remember: Symmetric ! anthropolog communicat economics	3.0927835 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0 0 4 4	57 29.381 ix) is colum asymmetric economics 0 0 0 18	3 1.55 ns=cite matrix) geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 d, rows=0 informati 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0	psycholog 0 4 1 0 3 0 0	45 23.19588 sociology 0 7 3 8 0 0	194 194 194 row totals 0 15 22 10 3 24 35	10
column tota col: %ofTota remember: Symmetric ! anthropolog communicat economics geography nfo&libScl coliticalScl psychology sociology	3.0927835 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0 0 0 0	19 9.794 pose matr communi 0 0 0 0 4 4 7	57 29.381 ix) is colum asymmetric economics 0 0 0 18 1	3 1.55 ns=cited matrix) geogra 0 0 0 0 2 0	0 0, rows=0 informati 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0	psycholog 0 4 1 0 3 0 27	45 23.19588 sociology 0 7 3 8 0 0 27	194 194 194 194 194 195 195 195 195 195 195 195 195 195 195	10
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column tota col: %ofTota remember:  Symmetric !  softmanical reconomics recon	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0 4 4 7 15	57 29.381 ix) is colum esymmetric economics 0 0 0 18 1 3 22 asymmetric	3 1.55 ns=cite matrix) geogra 0 0 0 2 0 8 10 c matrix	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 0 24	psycholog 0 4 1 0 3 0 27 35	45 23.19588 sociology 0 7 3 8 0 0 27 0 45	row totals 0 15 22 10 3 24 35 45 154 row totals	10
column tota col: %ofTota remember:  symmetric !  softmore of communicat conomics geography nfo&libScl coliticalScl cosychology column tota  Symmetric !  anthropolog	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 0 Matrix 2 (upper anthropology	19 9.794 pose matr riangle of a communi 0 0 4 4 7 15	57 29.381 ix) is colum esymmetric economics 0 0 0 18 1 3 22 asymmetric	3 1.55 ns=cite matrix) geogra 0 0 0 2 0 8 10 c matrix geogra	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 0 24	psycholog 0 4 1 0 3 0 27 35 psycholog	45 23.19588 sociology 0 7 3 8 0 0 27 0 45	row totals 0 15 22 10 3 24 35 45 154 154 row totals	10
column tota col: %ofTota remember:  Symmetric !  sonthropolog communicat economics geography nfo&libSci coliticalSci cosychology column tota  Symmetric !  softman tota  symmetric !	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 4 4 7 15	57 29.381 ix) is colum esymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1.55 ns=cite matrix) geogra 0 0 0 2 0 8 10 matrix geogra 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 0 24 political 0 0	psycholog 0 4 1 0 3 0 27 35 psycholog 0 1	45 23.19588 sociology 0 7 3 8 0 0 27 0 45	row totals 0 15 22 10 3 24 35 45 154 row totals 6 19	10
column tota col: %ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology column tota  Symmetric N anthropolog communicat economics geography column tota	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 0 0 Matrix 2 (upper anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 4 4 7 15 triangle of communi 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57 29.381 ix) is colum esymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1.55 ns=cite matrix) geogra 0 0 0 2 0 8 10 matrix geogra 2 0 15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 0 24 political 0 0 0	psycholog 0 4 1 0 3 0 0 27 35 psycholog 0 1 17	45 23.19588 sociology 0 7 3 8 0 0 27 0 45 sociology 4 9	row totals 0 15 22 10 3 24 35 45 154 row totals 6 19	10
column tota col: %ofTota remember:  Symmetric !  anthropolog communicat economics geography nfo&libScl politicalScl psychology column tota  Symmetric !  anthropolog communicat economics geography column tota	At matrix (trans  Matrix1 (lower trans  one one one one one one one one one one	19 9.794 pose matr riangle of a communi 0 0 4 4 7 15 triangle of communi 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57 29.381 ix) is colum esymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 0 15	3 1.55 ns=cite matrix) geogra 0 0 0 2 0 8 10 c matrix geogra 2 0 15 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 4 18 2 0 0 0 0 24 political 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	psycholog 0 4 1 0 3 0 0 27 35 psycholog 0 1 17 0	45 23.19588 sociology 0 7 3 8 0 0 27 0 45 sociology 4 9	194 194 194 194 194 194 194 194 194 194	10
column tota col: %ofTota remember: Symmetric ! Symmetr	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 Matrix2 (upper anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0 4 4 7 15 triangle of communi 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57 29.381 ix) is colum asymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 0 15 0	3 1.55 ns=cites matrix) geogra 0 0 0 2 0 8 10 c matrix geogra 2 0 15 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 24 political 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 7.2165 0 9 4 1 0 3 0 0 27 35 psycholog 0 1 1 17 0	45 23.19588 sociology 0 7 3 8 0 0 27 0 45 sociology 4 9 24 3 0	194 194 194 194 194 194 194 194 194 194	10
column tota col: %ofTota remember:  Symmetric !  Symmetri	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 Matrix 2 (upper anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0 4 4 7 15 triangle of 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57 29.381 ix) is colum asymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 0 15 0 15	3 1.55 ns=cites matrix) geogra 0 0 0 2 0 8 10 c matrix geogra 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 24 political 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0	psycholog 0 4 1 0 3 0 0 27 35 psycholog 0 1 17 0 0 8	45 23.19588 sociology 0 7 3 8 0 0 27 0 45 sociology 4 9 24 3 0 18	194 194 194 194 194 194 194 194 194 194	10
solumn tota sol: %ofTota emember:  Symmetric !  solthropolog sommunicat sconomics seography info&libScl soliticalScl sychology solumn tota  Symmetric !  solthropolog sommunicat sconomics seography solumn tota  symmetric !  solthropolog sommunicat sconomics seography info&libScl soliticalScl soliticalScl soliticalScl soliticalScl soliticalScl soliticalScl soliticalScl soliticalScl	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 Matrix2 (upper anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0 4 4 7 15 triangle of 0 0 0 0 0 1 0 1	57 29.381 ix) is colum asymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 1.55 ns=cited matrix) geogra 0 0 0 2 0 8 10 c matrix geogra 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 24 political 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	psycholog 0 4 1 0 3 0 0 27 35 psycholog 1 17 0 8 0	45 23.19588 sociology 0 7 3 8 0 0 27 0 45 sociology 4 9 24 3 0 18 6	194 194 194 194 194 194 194 194 194 194	10
solumn tota sol: %ofTota emember:  Symmetric !  solthropolog sommunicat sconomics seography info&libSci soliticalSci sychology solumn tota  Symmetric !  solthropolog sommunicat sconomics seography solumn tota  symmetric !  solthropolog sommunicat sconomics seography info&libSci soliticalSci soliticalSci soliticalSci	6 3.0927835 At matrix (trans  Matrix1 (lower trans  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 9.794 pose matr riangle of a communi 0 0 0 4 4 7 15 triangle of 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57 29.381 ix) is colum asymmetric economics 0 0 0 18 1 3 22 asymmetric economics 0 0 15 0 15	3 1.55 ns=cites matrix) geogra 0 0 0 2 0 8 10 c matrix geogra 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	50 25.77 ites political 0 4 18 2 0 0 0 0 24 political 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0	psycholog 0 4 1 0 3 0 0 27 35 psycholog 0 1 17 0 0 8	45 23.19588 sociology 0 7 3 8 0 0 27 0 45 sociology 4 9 24 3 0 18	194 194 194 194 194 194 194 194 194 194	10

### Appendix X-2b

#### 1980 WITHOUT self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	0	0	0	1	0	0	0	2	3
communicat	0	0	0	0	4.5	2	2.5	8	17
economics	0	0	0	7.5	0	9.5	9	13.5	39.5
geography	1	0	7.5	0	0	1	0	5.5	15
info. & librar	0	4.5	0	0	0	0	1.5	0	6
politicalScier	0	2	9.5	1	0	0	4	9	25.5
psychology	0	2.5	9	0	1.5	4	0	16.5	33.5
sociology	2	8	13.5	5.5	0	9	16.5	0	54.5
column total	3	17	39.5	15	6	25.5	33.5	54.5	194

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & li	politicals	psycholog	sociology	row totals
anthropolog	0	0	0	2	(	0	0	4	6
communicat	0	0	0	0		9 4	3	2	18
economics	0	0	0	15	. (	17	16	21	69
geography	2	0	15	0	(	2	0	5	24
info. & librar	0	9	0	0	(	0	3	0	12
politicalScier	0	4	17	2	(	0	8	18	49
psychology	0	3	16	0	**	8	0	21	51
sociology	4	2	21	5	(	18	21	0	71
column total	6	18	69	24	1	49	51	71	300

Matrix product A\*At (post mulitiplied)

	anthropology	communi	economics	geogra	info. 8	k lit	political9	psycholog	sociology	row totals
anthropology	20	36	126	12		0	76	24	16	310
communicat	36	163	233	27		0	170	81	27	737
economics	126	233	1091	72		0	598	144	579	2843
geography	12				ļ	0	54	18	0	192
info. & librar	0		0	0		0	0	0	0	0
politicalScien	76	170	598	54		0	732	142	314	2086
psychology	24			18		0	142			
sociology	16		579	0		0	314			1818
column total	310	737	2843	192		0	2086	502	1818	8488

Matrix product At\*A (pre multiplied)

	anthropology	communi	economics	geogra	info. &	lit	political <sup>S</sup>	psycholog	sociology	row totals
anthropolog	0	0	0	0		0	0	0	0	
communicat	0	81	97	64		12	0	221	96	571
economics	0	97	334	60		3	0	225	330	
geography	0	64	60	297		0	15	487	404	1327
info. & librar	0	12	3	0		90	0	9	99	213
politicalScier	0	0	0	15	·	0	1	17	24	57
psychology	0	221	225	487		9	17	1083	561	2603
sociology	0	96	330	404	-	99	24	561	1042	
column total	0	571	1049	1327	2:	13	57	2603	2556	

# Appendix X-2c

WITH SELF O	CITATIONS									
		delle ee cole	1000 h		at in constitution			labala čat l	-0)	
	n labels are disc	•			-		_	w labels (at it	art) represen	ic .
citations/dis	cipline of top 5	impact rac	tor journals	in top ]	ournal by	aiscipiine	l <del>-</del>			
asymmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	political	psycholo	sociology	row total	6ofTotalCited
anthropolo	57	0	0	2	0	0	0	4	63	5.550661
communic	0	58	0	0	9	0	1	9	77	6.784141
economics	0	0	155	15	0	1	17	24	212	18.67841
geography	0	0	0	44	0	0	0	3	47	4.140969
info&libSci	0	0	0	0	6	0	0	0	6	0.528634
politicalSci	0	4	18	2	0	4	8	18	54	4.757709
	0	4	10	0	3	0	134	6	148	13.03965
psychology		7		8		_				
sociology	0	_	3	_	0	0	27	483	528	46.51982
column tota	57	73	177	71	18	5	187	547	1135	100
col:%ofTota	5.0220264	6.432	15.595	6.26	1.586	0.441	16.476	48.19383	1135	100
	A matrix column									
	mn labeled discipli								-	
"cited" = row	labeled disciplines	are cited b	y column lab	eled disci	plines (for	example ar	nthropology	is cited by psyc	:hology twice)	
transpose of	asymmetric ma				1.6. 0.10					
	anthropology	communi							row totals	6ofTotalCited
anthropolog	57	0	0	0	0	0	0	0	57	5.022026
communicat	0	58	0	0	0	4	4	7	73	6.431718
economics	0	0	155	0	0	18	1	3	177	15.59471
geography	2	0	15	44	0	2	0	8	71	6.255507
info. & librar	0	9	0	0	6	0	3	0	18	1.585903
politicalScier	0	1	17	0	0	8	134	27	5 187	0.440529
psychology		_		_	_	_				
sociology	63	9	24	3 47	0	18	140	483	547	48.19383
column tota col:%ofTota	5.5506608	77 6.784	212 18.678	4.14	0.529	54 4.758	148 13.04	528 46.51982	1135 1135	100
							13.04	40.31902	1133	100
remember: /	At matrix (trans	pose matr	ix) is colum	ns=cite	a, rows=c	ices			-	
Symmetric N	4atrix1 (lower tr	iangle of a	symmetric	matrix)						
	anthropology	_	economics		informati	political	psycholog	sociology	row totals	
anthropolog	57	0	0	0	0	0	0	0	57	
communicat	0	58	0	0	0	4	4	7	73	
economics	0	0	155	0	0	18	1	3	177	
geography	0	0	0	44	0	2	0	8	54	
info&libSci	0	0	0	0	6	0	3	0	9	-
politicalSci	0	4	18	2	0	4	0	0	28	
	0	4	18	0	3	0	134	27	169	-
psychology										
sociology	0	7	3	8	0	0	27	483	528	
column tota	57	73	177	54	9	28	169	528	1095	
Symmetric N	4atrix 2 (upper t									
	anthropology	communi	economics	geogra	informati	political	psycholog	sociology	row totals	
anthropolog	57	0	0	2	0	0	0	4	63	
communicat	0	58	0	0	9	0	1	9	77	
economics	0	0	155	15	0	1	17	24	212	
geography	2	0	15	44	0	Ô	0	3	64	
info&libSci	0	9	0	0	6	Ö	0	0	15	
politicalSci	Ö	Ó	1	0	ő	4	8	18	31	
psychology	Ö	1	17	0	ő	8	134	6	166	
sociology		9	24	3	0	18		483	547	
SUCIDIODA	4	9	24	- 3	0	19	6	483	34/	I
	5.7	77	212	5.0	15	21	166	547	1175	
column tota	63	77	212	64	15	31	166	547	1175 1175	

### Appendix X-2d

#### 1980 WITH self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

anthr	ropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	57	0	0	1	0	0	0	2	60
communicat	0	58	0	0	4.5	2	2.5	8	75
economics	0	0	155	7.5	0	9.5	9	13.5	194.5
geography	1	0	7.5	44	0	1	0	5.5	59
info. & librar	0	4.5	0	0	6	0	1.5	0	12
politicalScie	0	2	9.5	1	0	4	4	9	29.5
psychology	0	2.5	9	0	1.5	4	134	16.5	167.5
sociology	2	8	13.5	5.5	0	9	16.5	483	537.5
column total	60	75	194.5	59	12	29.5	- 167.5	537.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

anth	ropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	57	0	0	2	0	0	0	4	63
communicat	0	58	0	0	9	4	3	2	76
economics	0	0	155	15	0	17	16	21	224
geography	2	0	15	44	0	2	0	5	68
Info. & librar	0	9	0	0	6	0	3	0	18
politicalScier	0	4	17	2	0	4	8	18	53
psychology	0	3	16	0	3	8	134	21	185
sociology	4	2	21	5	0	18	21	483	554
column total	63	76	224	68	18	53	185	554	1241

1241

Matrix product A\*At (post mulitiplied)

ridelix product	th me !	DOSC IIIUIIIU	prica						
anthr	opology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	3269	36	126	100	0	76	24	1948	5579
communicat	36	3527	233	27	54	402	447	4780	
economics	126	233	25116	732	0	3392	2577	12636	
geography	100	27	732	1945	0	142	18	1801	4765
info. & librar	0	54	0	0	36	0	18	0	108
politicalScie	76	402	3392	142	0	748	1214	9008	14982
psychology	24	447	2577	18	18	1214	18018	6547	28863
sociology	1948	4780	12636	1801	0	9008	6547	234140	270860
column tota	5579	9506	44812	4765	108	14982	28863	270860	379475 379475

Matrix product At\*A (pre multiplied)

Platrix prout	JCE AL A	pre muiup	neu)						
ant	hropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	3249	0	0	114	0	0	0	228	3591
communicat	0	3445	97	64	534	16	815	3999	
economics	0	97	24359	2385	3	227	2994	5499	35564
geography	114	64	2385	2233	0	23	487	4400	9706
info. & libra	0	534	3	0	126	0	411	99	1173
politicalScie	0	16	227	23	0	17	49	96	428
psychology	0	815	2994	487	411	49	19039	14406	38201
sociology	228	3999	5499	4400	99	96	14406	234331	263058
column tota	3591	8970	35564	9706	1173	428	38201	263058	360691

# Appendix X-3a

	n labels are disc	iplines wh	ose 1981 to	op impa	ct journals	were ex	amined; ro	w labels (at le	eft) represen	ıt
	cipline of top 5 i							, , , , , , , , , , , , , , , , , , , ,	,	
asymmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	politica	psycholo	sociology	row total	6ofTotalCited
anthropolo	0	0	0	0	0	0	3	11	14	6.306306
communic	0	0	0	0	0	0	90	11	101	45.4955
economics	0	1	0	3	0	2	5	15	26	11.71171
geography	0	0	0	0	0	0	0	0	0	(
info&libSci	0	0	0	0	0	0	0	0	0	(
politicalSci	0	5	17	1	0	0	2	8	33	14.86486
psychology	0	6	1	16	2	0	0	2	27	12.16216
sociology	1	10	1	1	1	3	4	0	21	9.459459
column tota	1	22	19	21	3	5	104	47	222	100
col:%ofTota	0.4504505	9.91	8.5586	9.46	1.351	2.252	46.847	21.17117	222	100
remember:	A matrix column	s=cites, n	ows=cited							
"cites" = colur	mn labeled discipli	nes cite rov	labeled disc	iplines (	for example	anthropol	ogy cites ps	ychology four ti	imes)	
"cited" = row	labeled disciplines	are cited b	y column lab	eled disci	plines (for	example a	nthropology	is cited by psyc	hology twice)	
		h - l 11 - 11 -								
transpose of	asymmetric ma			200000	info 0 III	political	neveheles	cacialone	row totale	/ office City
anthropolog	anthropology	communi	economics 0	geogra 0	into, & lit	politicals	psycholog 0	sociology 1	row totals	6ofTotalCited 0.45045
communicat	0	0	1	0	0	5	6	10	22	9.90991
economics	0	0	Ô	0	0	17	1	1	19	8.558559
geography	0	0	3	0	0	1	16	î	21	9.459459
info. & librar	0	0	0	0	0	- O	2	1	3	1.351351
politicalScier	0	0	2	0	0	0	0	3	5	2.252252
psychology	3	90	5	0	0	2	0	4	104	46.84685
sociology	11	11	15	0	0	8	2	0	47	21.17117
				_		-		-		21.1/11/
column tota	14	101	26	0	0	33	27	21	222	
column tota col:%ofTota	14 6.3063063		26 11.712	_				9.459459		100
col:%ofTota		101 45.5	11.712	0	0	33 14.86	27		222	100
col:%ofTota	6.3063063	101 45.5	11.712	0	0	33 14.86	27		222	100
col:%ofTota remember:	6.3063063 At matrix (trans	101 45.5 pose matr	11.712 ix) is colum	0 0 ns=cite	0	33 14.86	27		222	100
col:%ofTota remember:	6.3063063 At matrix (trans 4atrix1 (lower tr	101 45.5 pose matr	11.712 ix) is colum	0 0 ns=cited matrix)	0 0 d, rows=c	33 14.86 ites	27 12.162	9.459459	222 222	100
col:%ofTota remember: Symmetric N	6.3063063 At matrix (trans 4atrix1 (lower tr anthropology	101 45.5 pose matr iangle of a communi	11.712 ix) is colum esymmetric economics	0 0 ns=cited matrix) geogra	0 0 d, rows=c informati	33 14.86 ites	27 12.162 psycholog	9.459459 sociology	222 222 row totals	100
col:%ofTota remember:	6.3063063 At matrix (trans 4atrix1 (lower tr	101 45.5 pose matr	11.712 ix) is colum	0 0 ns=cited matrix)	0 0 d, rows=c	33 14.86 ites	27 12.162	9.459459	222 222	100
col: %ofTota remember: A Symmetric N anthropolog	6.3063063 At matrix (trans Hatrix1 (lower tr anthropology	101 45.5 pose matri iangle of a communi	11.712 ix) is colum asymmetric economics 0	0 0 ns=cited matrix) geogra 0	0 0 d, rows=c informati	33 14.86 ites political	27 12.162 psycholog	9.459459 sociology	222 222 row totals	100
col:%ofTota remember: Symmetric N anthropolog communicat economics	6.3063063 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0	101 45.5 pose matri iangle of a communi 0 0	11.712 ix) is colum symmetric economics 0 1 0	0 0 ns=cites matrix) geogra 0 0	0 0 d, rows=c informati 0 0	33 14.86 ites political 0 5 17	27 12.162 psycholog 0 6	9.459459 sociology 1 10	222 222 222 row totals 1 22 20	100
col:%ofTota remember: Symmetric N anthropolog communicat economics geography	6.3063063 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0	101 45.5 pose matriangle of a communi 0 0	11.712 ix) is column asymmetric economics 0 1 0	matrix) geogra 0 0 0 0 0 0 0 0 0	0 0 d, rows=c	33 14.86 ites political 0 5 17	27 12.162 psycholog 0 6 1	9.459459 sociology 1 10 1	222 222 222 row totals 1 22 20 18	100
col:%ofTota remember: Symmetric N anthropolog communicat economics geography info&libSci	6.3063063 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0	101 45.5 pose matr tangle of a communication of the	11.712 asymmetric economics 0 1 0 0	matrix) geogra 0 0 0 0 0 0 0 0	0 0 d, rows=c	33 14.86 ites political 0 5 17 1	27 12.162 psycholog 0 6 1 16	9.459459 sociology 1 10 1 1	222 222 222 202 203 183	100
col:%ofTota remember: Symmetric N anthropolog communicat economics geography info&libSci politicalSci	6.3063063 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0 0	101 45.5 pose matriangle of a communi 0 0	11.712 asymmetric economics 0 1 0 0 17	matrix) geogra 0 0 0 1	0 0, rows=c	33 14.86 ites political 0 5 17	27 12.162 psycholog 0 6 1	9.459459 sociology 1 10 1	222 222 222 202 20 18 3 26	100
symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology	6.3063063 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0 0 0	101 45.5 pose matr tiangle of a communication of the communication of th	11.712 asymmetric economics 0 1 0 0 17	matrix) geogra 0 0 0 1 16	0 0 d, rows=c informati 0 0 0	33 14.86 ites political 0 5 17 1 0 0	27 12.162 psycholog 0 6 1 16 2 0	9.459459 sociology 1 10 1 1 3 4	222 222 222 202 20 18 3 26 29	100
col:%ofTota remember: // Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology	6.3063063 At matrix (trans  Matrix1 (lower tr anthropology  0  0  0  1	101 45.5 pose matri iangle of a communi 0 0 1 0 0 5 6	11.712 ax) is column asymmetric economics 0 1 0 0 17 1	0 0 0 ns=cites matrix) geogra 0 0 0 0 1 16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites political 0 5 17 1 0 0 0 3	27 12.162 psycholog 0 6 1 16 2 0	9.459459 sociology 1 10 1 1 3 4	222 222 222 20 18 3 26 29 21	100
symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology	6.3063063 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0 0 0	101 45.5 pose matr tiangle of a communication of the communication of th	11.712 asymmetric economics 0 1 0 0 17	matrix) geogra 0 0 0 1 16	0 0 d, rows=c informati 0 0 0	33 14.86 ites political 0 5 17 1 0 0	27 12.162 psycholog 0 6 1 16 2 0	9.459459 sociology 1 10 1 1 3 4	222 222 222 202 20 18 3 26 29	100
col:%ofTota remember: // Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota	6.3063063 At matrix (trans  Matrix1 (lower tr anthropology  0  0  0  1	101 45.5 pose matri iangle of a communi 0 0 1 0 5 6 10	11.712 ix) is column asymmetric economics 0 1 0 0 17 1 1 20	0 0 0 ns=cites 0 0 0 0 0 0 0 1 16 18	0 0 0 0 0 0 0 0 0 2 1 3	33 14.86 ites political 0 5 17 1 0 0 0 3	27 12.162 psycholog 0 6 1 16 2 0	9.459459 sociology 1 10 1 1 3 4	222 222 222 20 18 3 26 29 21	100
sol:%ofTota remember: // Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota	6.3063063 At matrix (trans  Matrix1 (lower tr anthropology  0  0  0  1  Matrix 2 (upper tr	101 45.5 pose matriangle of a communication of the	11.712 ix) is colum issymmetric economics 0 1 0 0 17 1 20 asymmetric	matrix) geogra 0 0 0 1 1 18 c matrix	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites political 0 5 17 1 0 0 0 3	27 12.162 psycholog 0 6 1 16 2 0 0 4	9.459459 sociology 1 10 1 1 3 4 0 21	222 222 222 20 18 3 26 29 21	100
sol:%ofTota remember: // Symmetric M anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota Symmetric M	6.3063063 At matrix (trans  Matrix1 (lower tr anthropology  0  0  0  1  Matrix 2 (upper tr anthropology	101 45.5 pose matriangle of a communication of the	11.712 ix) is colum issymmetric economics 0 1 0 0 17 1 20 asymmetric economics	matrix) geogra 0 0 0 1 16 1 18 c matrix	informati  o  o  o  o  o  o  o  o  o  o  o  o  o	33 14.86 ites  political 0 5 17 1 0 0 3 26  political	27 12.162 psycholog 0 6 1 16 2 0 0 4 29	9.459459 sociology 1 10 1 1 3 4 0 21	222 222 222 20 18 3 26 29 21 140	100
sol:%ofTota remember:  Symmetric N  anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota Symmetric N  anthropolog	6.3063063 At matrix (trans  At matrix1 (lower tr anthropology  0  0  0  1  1  4atrix 2 (upper tr anthropology	101 45.5 pose matriangle of a communication of the	11.712 ix) is colum issymmetric economics 0 1 0 0 17 1 20 asymmetric economics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	matrix) geogra 0 0 0 1 16 1 18 c matrix geogra 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog	9.459459 sociology 1 10 1 1 3 4 0 21 sociology	222 222 222 20 18 3 26 29 21 140 row totals	100
sol:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat	6.3063063 At matrix (trans  At matrix (lower tr anthropology  0  0  0  1  4atrix 2 (upper tr anthropology  0  0  0  0  0  0  0  0  0  0  0  0  0	101 45.5 pose matriangle of a communication of the	11.712 ix) is column asymmetric economics 0 1 0 0 17 1 1 20 asymmetric economics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	matrix) geogra 0 0 1 16 1 18 c matrix geogra 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0 0	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology	222 222 222 20 18 3 26 29 21 140 row totals	100
sol:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota  Symmetric N anthropolog communicat economics	6.3063063 At matrix (trans Hatrix1 (lower tr anthropology 0 0 0 1 1 1 Hatrix 2 (upper tr anthropology 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	101 45.5 pose matri iangle of a communi 0 0 1 0 5 6 10 22 triangle of communi 0 0 0 0 0 0 0	11.712 ix) is column asymmetric economics 0 1 0 0 17 1 1 20 asymmetric economics 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	matrix) geogra 0 0 0 1 16 1 18 c matrix geogra 0 0 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 lites  political 0 5 17 1 0 0 3 26  political 0 2	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology 11 11 15	222 222 222 20 18 3 26 29 21 140  row totals 14 101 25	100
sol:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat economics geography	6.3063063 At matrix (trans  At matrix (lower tr anthropology  0  0  0  1  1  4atrix 2 (upper tr anthropology  0  0  0  0  0  0  0  0  0  0  0  0  0	101 45.5 pose matriangle of a communication of the	11.712 ix) is column asymmetric economics 0 1 0 0 17 1 1 20 asymmetric economics 0 3	0 0 0 ns=cited matrix) geogra 0 0 0 16 1 18 c matrix geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0 2	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90 5	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology 11 11 15	222 222 222 20 18 3 26 29 21 140 row totals 14 101 25	100
col:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat economics geography info&libSci	6.3063063 At matrix (trans  At matrix1 (lower tr anthropology  0  0  0  1  1  4atrix 2 (upper tr anthropology  0  0  0  0  0  0  0  0  0  0  0  0  0	101 45.5 pose matriangle of a communication of the	11.712 ix) is column asymmetric economics 0 1 0 0 17 1 1 20 asymmetric economics 0 3 0	0 0 0 ns=cites 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0 2 0 0 0	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90 5 0	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology 11 11 15 0 0	222 222 222 20 18 3 26 29 21 140 row totals 14 101 25 3	100
sol:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat economics geography info&libSci politicalSci politicalSci	6.3063063 At matrix (trans  At matrix (lower tr anthropology  0  0  0  1  1  4atrix 2 (upper tr anthropology  0  0  0  0  0  0  0  0  0  0  0  0  0	101 45.5 pose matr triangle of a communi 0 0 1 0 0 5 6 10 22 triangle of communi 0 0 0 0 0 0 0 0	11.712 ix) is colum issymmetric economics 0 1 0 0 17 1 20 asymmetric economics 0 3 0 2	0 0 0 ns=cites   matrix) geogra   0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0 2 0 0 0 0	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90 5 0	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology 11 11 15 0 0 8	222 222 222 20 18 3 26 29 21 140 row totals 14 101 25 3	100
col:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology column tota Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology	6.3063063 At matrix (trans  At matrix (lower tr anthropology  0  0  0  1  4atrix 2 (upper tr anthropology  0  0  3  4atrix 3 (upper tr anthropology  0  0  0  1  1  1  1  1  1  1  1  1  1	101 45.5 pose matri iangle of a communi 0 0 1 0 5 6 10 22 triangle of communi 0 0 0 0 0 0 0 0 0 0 90	11.712 ix) is column asymmetric economics 0 17 1 1 20 asymmetric economics 0 0 3 0 2 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0 0 2 0 0 2 0 0 2	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90 5 0 0	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology 11 11 15 0 0 8 2	222 222 222 220 18 3 26 29 21 140  row totals 14 101 25 3 0 12 102	100
sol:%ofTota remember:  Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota  Symmetric N anthropolog communicat economics geography info&libSci politicalSci politicalSci	6.3063063 At matrix (trans  At matrix (lower tr anthropology  0  0  0  1  1  4atrix 2 (upper tr anthropology  0  0  0  0  0  0  0  0  0  0  0  0  0	101 45.5 pose matr triangle of a communi 0 0 1 0 0 5 6 10 22 triangle of communi 0 0 0 0 0 0 0 0	11.712 ix) is colum issymmetric economics 0 1 0 0 17 1 20 asymmetric economics 0 3 0 2	0 0 0 ns=cites   matrix) geogra   0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 14.86 ites  political 0 5 17 1 0 0 3 26  political 0 2 0 0 0 0	27 12.162 psycholog 0 6 1 16 2 0 0 4 29 psycholog 3 90 5 0	9.459459 sociology 1 10 1 1 1 3 4 0 21 sociology 11 11 15 0 0 8	222 222 222 20 18 3 26 29 21 140 row totals 14 101 25 3	100

# Appendix X-3b

	OUT self-citatio							
means of up	pper/lower tria	ngles fror	n assymeti	<u>ric matr</u>	<u>rix values</u>	(this ma	trix is syr	nmetric)
	anthropology	commun	economics	geogra	info. & lil	politicals	psycholog	sociology
anthropolog	0	0	0	0	0	0	1.5	6
communica	0	0	0.5	0	0	2.5	48	10.5
economics	0	0.5	0	1.5	0	9.5	3	8
geography	0	0	1.5	0	0	0.5	8	0.5
info. & libra	0	0	0	0	0	0	1	0.5
politicalScie	0	2.5	9.5	0.5	0	0	1	5.5
psychology	1.5	48	3	8	1	1	0	3
sociology	6	10.5	8	0.5	0.5	5.5	3	0
column tota	7.5	61.5	22.5	10.5	1.5	19	65.5	34
absolute va	lue differences	of upper	/lower triar	ngles fr	om assyn	netric ma	atrix value	s (this matri:
	anthropology							
anthropolog	0	0	0	0	0	0	3	10
communica	0	0	1	0	0	5	84	1
economics	0	1	0	3	0	15	4	14
geography	0	0	3	0	0	1	16	1
info. & libra	0	0	0	0	0	0	2	1
politicalScie		5	15	1	0	0	2	5
psychology	3	84	4	16	2	2	0	2
						5	2	0
sociology	10	91	14	1	1			34
column tota	13	91	37	21	3	28	113	34
Matrix prod	uct A*At (post							
	anthropology							
anthropolog		391	180	0	0	94	22	12
communica	391	8221	615	0	0	268	22	360
economics	180	615	264	0	0	138	84	39
geography	0	0	0	0	0	0	0	0
info. & libra politicalScie	94	0 268	138		0	383	79	76
psychology		200	84	0	0	79	301	79
sociology	12	360	39	0	0	76	79	129
column tota		9877	1320	0		1038		695
Matrix prod	uct At*A (pre n	nultiplied)				100 10		
	anthropology							
anthropolog		10	1	1	1	3	4	0
communica	10	162	101	114	22 3	32	55 38	120
economics	1	101	291 34	34 267	33	3 9	21	138 85
geography info. & libra	1	114 22	34	33	5	3	4	4
politicalScie		32	3	9	3	13	22	30
psychology	4	55	38	21	4	22	8154	1114
sociology	0	67	138	85	4	30	1114	535
column tota	21	563			75	115	9412	

# Appendix X-3c

WITH SELF (		_								
	CITATIONS									
	n labels are disc							w labels (at le	eft) represen	t
itations/disc	cipline of top 5 i	impact fac	tor journals	in top j	ournal by	discipline	-			
symmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	political	psycholo	sociology	row total	6ofTotalCite
nthropolo	584	0	0	0	0	0	3	11	598	33.0022
communic	0	70	0	0	0	0	90	11	171	9.43708
economics	0	1	144	3	0	2	5	15	170	9.38189
geography	0	0	0	50	0	0	0	0	50	2.75938
nfo&libSci	0	0	0	0	35	0	0	0	35	1.93156
ooliticalSci	0	5	17	1	0	16	2	8	49	2.70419
psychology	0	6	1	16	2	0	192	2	219	12.0860
sociology	1	10	1	1	1	3	4	499	520	28.6975
column tota	585	92	163	71	38	21	296	546	1812	10
ol:%ofTota	32.284768	5.077	8.9956	3.92	2.097	1.159	16.336	30.13245	1812	10
	A matrix column			L		L.,				
	nn labeled discipli									
cited = row	labeled disciplines	are cited b	y column lab	elea alsci	plines (for	example at	thropology	is cited by psyc	nology (wice)	
ranspose of	asymmetric ma	trix citatio	on data							
	anthropology	communi		geogra	info. & lit	politicalS	psycholog	sociology	row totals	6ofTotalCite
anthropolog	584	0	0	0	0	0	0	1	585	32.2847
communicat	0	70	1	0	0	5	6	10	92	5.07726
conomics	0	0	144	0	0	17	1	1	163	8.99558
geography	0	0	3	50	0	1	16	1	71	3.91832
nfo. & librar	0	0	0	0	35	0	2	1	38	2.0971
ooliticalScier	0	0	2	0	0	16	0	3	21	1.1589
sychology	3	90	5	0	0	8	192	400	296	16.3355
sociology column tota	11 598	171	15 170	50	35	49	219	499 520	546 1812	30.1324
col:%ofTota	33.002208	9.437	9.3819	2.76	1.932	2.704	12.086	28.69757	1812	10
	At matrix (trans					21701	121000	20103737	2075	
emember.	at indicine (cidina				TOWS-C	tes				
		pose man	ix) is coluin	ns=cite	a, rows=c	ites				
			ix) is coluin	ns=cite	d, rows=c	ites				
Symmetric M	Matrix1 (lower tr				, rows=c	ites				
Symmetric M	Matrix1 (lower tr anthropology		symmetric	matrix)			psycholog	sociology	row totals	
	anthropology 584	communi	economics 0	matrix) geogra 0	informati 0	political 0	0	1	585	
enthropolog communicat	anthropology 584 0	communi 0 70	economics 0	matrix) geogra 0	informati 0	political :	0 6	1 10	585 92	
anthropolog communicat	anthropology 584 0 0	communi 0 70	economics 0	matrix) geogra 0 0	informati 0	political 0	0 6 1	1	585	
enthropolog communicat economics	anthropology 584 0 0	communi 0 70	economics 0 1 144	matrix) geogra 0 0 0	informati 0 0 0	political 0 5 17 1	0 6 1 16	1 10	585 92 164 68	
enthropolog communicat economics geography nfo&libSci	snthropology 584 0 0 0	iangle of a communi	osymmetric economics 0 1 144 0	matrix) geogra 0 0 0 50	0 0 0 0 0	political : 0 5 17 1 0	0 6 1 16 2	1 10 1 1	585 92 164 68 38	
anthropolog communicat economics geography info&libSci politicalSci	snthropology 584 0 0 0 0 0	ommuni 0 70 1 0 0 0	asymmetric economics 0 1 144 0 0	matrix) geogra 0 0 0 50 1	0 0 0 0 0 35	political 0 5 17 1 0 16	0 6 1 16 2	1 10 1 1 1 3	585 92 164 68 38 42	
anthropolog communicat economics geography info&libSci politicalSci	snthropology 584 0 0 0	riangle of a communi 0 70 1 0 0 5 6	osymmetric economics 0 1 144 0	matrix) geogra 0 0 0 50	0 0 0 0 0	political 0 5 17 1 0 16	0 6 1 16 2	1 10 1 1	585 92 164 68 38 42 221	
anthropolog communicat economics geography info&libSci politicalSci psychology	snthropology 584 0 0 0 0 0	ommuni 0 70 1 0 0 0	asymmetric economics 0 1 144 0 0	matrix) geogra 0 0 0 50 1	0 0 0 0 0 35	political 0 5 17 1 0 16	0 6 1 16 2	1 10 1 1 1 3	585 92 164 68 38 42	
enthropolog communicate economics geography info&libSci politicalSci politicalSci psychology sociology	snthropology 584 0 0 0 0 0	riangle of a communi 0 70 1 0 0 5 6	asymmetric economics 0 1 144 0 0	matrix) geogra 0 0 0 50 1	0 0 0 0 0 35	political 0 5 17 1 0 16	0 6 1 16 2	1 10 1 1 1 1 3 4	585 92 164 68 38 42 221	
enthropolog communicate economics geography nfo&libSci politicalSci politicalSci posychology sociology	384 0 0 0 0 0 0 0 0 1	community	0 144 0 0 17	matrix) geogra 0 0 0 50 1 16	informati 0 0 0 0 35 0 2	political 9	0 6 1 16 2 0 192 4	1 10 1 1 1 1 3 4 499	585 92 164 68 38 42 221 520	
enthropolog communicate economics geography info&libSci politicalSci politicalSci psychology sociology	384 0 0 0 0 0 0 0 0 1	community	0 144 0 0 17	matrix) geogra 0 0 0 50 1 16	informati 0 0 0 0 35 0 2	political 9	0 6 1 16 2 0 192 4	1 10 1 1 1 1 3 4 499	585 92 164 68 38 42 221 520	
enthropolog communicate economics geography info&libSci politicalSci politicalSci psychology sociology	384 0 0 0 0 0 0 0 0 1	community	0 144 0 0 17	matrix) geogra 0 0 0 50 1 16	informati 0 0 0 0 35 0 2	political 9	0 6 1 16 2 0 192 4	1 10 1 1 1 1 3 4 499	585 92 164 68 38 42 221 520	
enthropolog communicat economics geography nfo&libScl politicalScl psychology sociology column tota	anthropology 584 0 0 0 0 0 1 585 4atrix 2 (upper 1	riangle of a communi 0 70 1 1 0 0 5 6 10 92	asymmetric economics 0 11 144 0 0 17 1 1 164	matrix) geogra 0 0 0 50 1 16 1 68	informati 0 0 0 35 0 2 1 38	political 0 5 17 1 1 0 16 0 3 3 42	0 6 1 16 2 0 192 4 221	1 10 1 1 1 1 3 4 499 520	585 92 164 68 38 42 221 520	
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enthropolog communicat economics geography nfo&libSci colliticalSci psychology sociology column tota Symmetric N	anthropology 584 0 0 0 0 0 1 585 4atrix 2 (upper tanthropology 584 0	riangle of a communi 0 70 1 1 0 0 5 6 10 92 triangle of communi 0 70	asymmetric economics  1 144 0 0 17 1 1 164 asymmetric	matrix) geogra 0 0 0 50 1 16 1 68 matrix geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	informati 0 0 0 35 0 2 1 38 informati 0 0	political 0 0 5 17 1 0 16 0 0 3 42 political 0 0 0	0 6 1 16 2 0 192 4 221 psycholog	1 10 1 1 1 3 4 499 520 sociology	585 92 164 68 38 42 221 520 1730 1730 row totals 598 171	
enthropolog communicat economics geography nfo&libScl soliticalScl psychology sociology column tota Symmetric M	anthropology 584 0 0 0 0 0 1 585 4atrix 2 (upper tanthropology 584 0 0	riangle of a communi 0 70 1 1 0 0 92 triangle of communi 0 70 0	asymmetric economics  1 144  0 0 17  1 1  164  asymmetric economics	matrix) geogra 0 0 0 50 1 16 1 68 matrix geogra 0 0 3	informati 0 0 0 35 0 2 1 38	political 0 0 5 17 1 0 16 0 0 3 42 political 0 0	0 6 1 16 2 0 192 4 221	1 10 1 1 1 3 4 499 520	585 92 164 68 38 42 221 520 1730 1730 row totals	
enthropolog communicat economics geography nfo&libSci coliticalSci cosychology cociology column tota symmetric N enthropolog communicat economics geography	anthropology 584 0 0 0 0 0 1 585 4atrix 2 (upper tanthropology 584 0 0 0 0	riangle of a communi 0 70 1 1 0 0 5 6 10 92 triangle of communi 0 70 0 0 0	asymmetric economics 0 11 144 0 0 17 1 164 asymmetric economics 0 0 144 3	matrix) geogra 0 0 0 50 1 16 1 68 matrix geogra 0 0 3 50	Informati 0 0 0 35 0 2 1 38 Informati 0 0 0 0	political 0 0 16 0 0 3 42 political 0 0 0 0 2 0 0	0 6 1 16 2 0 192 4 221 psycholog 3 90 5	1 10 1 1 1 3 4 499 520 sociology 11 11 15 0	585 92 164 68 38 42 221 520 1730 1730 row totals 598 171 169 53	
enthropolog communicat economics geography info&libScl politicalScl psychology sociology column tota	anthropology 584 0 0 0 0 0 1 585 fatrix 2 (upper tanthropology 584 0 0 0 0 0 0	riangle of a communi 0 70 1 1 0 0 5 6 10 92 triangle of communi 0 70 0 0 0 0 0	asymmetric economics 0 11 144 0 0 17 1 164 asymmetric	matrix) geogra 0 0 0 50 1 16 1 68 c matrix geogra 0 0 3 50 0	Informati 0 0 0 35 0 2 1 38 Informati 0 0 0 35	political : 0	0 6 1 16 2 0 192 4 221 psycholog 3 90 5	1 10 1 1 1 3 4 499 520 sociology 11 11 15 0	585 92 164 68 38 42 221 520 1730 1730 row totals 598 171 169 53 35	
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enthropolog communicat sconomics geography nfo&libSci politicalSci psychology sociology column tota symmetric N enthropolog communicat economics geography nfo&libSci politicalSci psychology sociology sociology	anthropology	riangle of a communi 0 70 1 1 0 0 5 6 10 92 triangle of communi 0 70 0 0 0 0 0 0	asymmetric economics 0 11 144 0 0 17 1 164 asymmetric economics 0 144 3 0 2	matrix) geogra 0 0 0 50 1 16 1 68 c matrix geogra 0 0 0 0 0 0 0 0 0	informati 0 0 0 35 0 2 1 38 informati 0 0 0 35 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	political 0 5 17 1 0 16 0 0 3 3 42 political 0 0 0 16 0 0 16 0 0 0 16 0 0 0 0 16 0 0 0 0	0 6 1 16 2 0 192 4 221 psycholog 3 90 5 0 0 2 192	1 10 1 1 1 3 4 499 520 sociology 11 11 15 0 0 8 2	585 92 164 68 38 42 221 520 1730 1730 1730 row totals 598 171 169 53 35 28 294 546	
enthropolog communicate economics geography nfo&libSci politicalSci psychology sociology column tota Symmetric N enthropolog communicate economics geography nfo&libSci	anthropology 584 0 0 0 0 0 1 585 4atrix 2 (upper tanthropology 584 0 0 0 0 3	riangle of a communi 0 70 1 0 0 0 0 0 0 0 90	asymmetric economics  0 11 144 0 0 17 1 164 asymmetric economics 0 144 3 0 2 5	matrix) geogra 0 0 0 50 1 16 1 68 c matrix geogra 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Informati 0 0 0 35 0 2 1 38 Informati 0 0 0 35 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	political : 0	0 6 1 16 2 0 192 4 221 psycholog 3 90 5 0 0 2 192	1 10 1 1 1 3 4 499 520 sociology 11 11 15 0 0 8	585 92 164 68 38 42 221 520 1730 1730 row totals 598 171 169 53 35 28 294	

### Appendix X-3d

1981 WITH self citation

	means of upper/lower	triangles from ass	ymetric matrix values	(this matrix is symmetric)
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anth	ropology	communi	economic	geogra	info. & lit	politicalS	psycholo	sociolog	row totals
anthropolog	584	0	0	0	0	0	1.5	6	591.5
communicat	0	70	0.5	0	0	2.5	48	10.5	131.5
economics	0	0.5	144	1.5	0	9.5	3	8	166.5
geography	0	0	1.5	50	0	0.5	8	0.5	60.5
info. & librar	0	0	0	0	35	0	1	0.5	36.5
politicalScier	0	2.5	9.5	0.5	0	16	1	5.5	35
psychology	1.5	48	3	8	1	1	192	3	257.5
sociology	6	10.5	8	0.5	0.5	5.5	3	499	533
column total	591.5	131.5	166.5	60.5	36.5	35	257.5	533	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

anth	ropology	communi	economic	geogra	info. & lit	politicalS	psycholo	sociolog	row totals
anthropolog	584	0	0	0	0	0	3	10	597
communicat	0	70	1	0	0	5	84	1	161
economics	0	1	144	3	0	15	4	14	181
geography	0	0	3	50	0	1	16	1	71
info. & librar	0	0	0	0	35	0	2	1	38
politicalScien	0	5	15	1	0	16	2	5	44
psychology	3	84	4	16	2	2	192	2	305
sociology	10	1	14	1	1	5	2	499	533
column total	597	161	181	71	38	44	305	533	1930

Matrix product A\*At (post mulitiplied)

anth	ropology	communi	economic	geogra	info. & lit	politicalS	psycholo	sociolog	row totals
anthropology	341186	391	180	0	0	94	598	6085	348534
communicat	391	13121	685	0	0	618	17722	6549	39086
economics	180	685	21000	150	0	2618	1188	7668	33489
geography	0	0	150	2500	0	50	800	50	3550
info. & librar	0	0	0	0	1225	0	70	35	1330
politicalScien	94	618	2618	50	0	639	463	4116	8598
psychology	598	17722	1188	800	70	463	37165	1845	59851
sociology	6085		7668	50	35	4116	1845	249130	275478
column total	348534	39086	33489	3550	1330	8598	59851	275478	769916

Matrix product At\*A (pre multiplied)

CIMILIA DIOMS			Charles I						
anth	ropology	communi	economic	geogra	info. & lit	politicalS	psycholo	sociolog	row totals
anthropology	341057	10	1	1	1	3	1756	6923	349752
communicat	10	5062	245	114	22	112	7507	5827	18899
economics	1	245	21027	466	3	563	950	2797	26052
geography	1	114	466	2767	33	25	3093	584	7083
info. & librar	1	22	3	33	1230	3	388	503	2183
politicalScien	3	112	563	25	3	269	54	1655	2684
psychology	1756	7507	950	3093	388	54	45018	3494	62260
sociology	6923	5827	2797	584	503	1655	3494	249536	271319
column total	349752	18899	26052	7083	2183	2684	62260	271319	740232

# Appendix X-4a

	ELF CITATIONS									
lote: colum	n labels are disc	iplines wh	ose 1982 to	p impa	t journals	were exa	amined; ro	w labels (at l	eft) represer	t
itations/dis	cipline of top 5	mpact fact	tor journals	in top j	ournal by	discipline				
symmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	political	psycholo	sociology	row total	6ofTotalCited
anthropolo	0	0	0	0	0	0	0	4	4	2.051282
communic	0	0	0	0	12	0	2	17	31	15.89744
economics	0	0	0	2	2	4	0	19	27	13.84615
geography	0	0	0	0	0	0	1	1	2	1.025641
nfo&libSci	0	0	0	1	0	0	0	0	1	0.512821
politicalSci	0	10	20	0	0	0	13	8	51	26.15385
	0	11	13	0	0	5	0	7	36	18.46154
psychology	0	14	2	10	0	8	9	ó	43	22.05128
sociology	0	35	35		_	17	25	56	195	
column tota col:%ofTota	0	17.95	17.949	13 6.67	7.179	8.718		28.71795		100
01:960Fl0ta	U	17.95	17.949	6.67	7.179	8.718	12.821	28./1/95	195	100
	A matrix column									
	mn labeled discipli									
cited = row	labeled disciplines	are cited b	y column lab	eled disci	plines (for	example at	taropology	is cited by psyc	inology (wice)	
ranspose of	asymmetric ma	trix citatio	n data							
	anthropology		economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals	6ofTotalCited
enthropolog	0	0	0	0	0	0	0	0	0	(
communicat	0	0	0	0	0	10	11	14	35	17.94872
economics	0	0	0	0	0	20	13	2	35	17.94872
geography	0	0	2	0	1	0	0	10	13	6.666667
nfo. & librar	0	12	2	0	0	0	0	0	14	7.179487
politicalScier	0	0	4	0	0	0	5	8	17	8.717949
						-				211 21 2 12
	0	2	0	1	0	13	0	9	25	
psychology	4	17	19	1	0	13 8	0 7	9	25 56	12.82051 28.71795
psychology sociology column tota	4	17 31	19 27	1 2	0 0	13 8 51	0 7 36	9 0 43	25 56 195	12.82051 28.71795 100
psychology sociology column tota col:%ofTota	4 4 2.0512821	17 31 15.9	19 27 13.846	1 2 1.03	0 0 1 0.513	13 8 51 26.15	0 7	9	25 56	12.82051 28.71795 100
psychology sociology column tota col:%ofTota	4	17 31 15.9	19 27 13.846	1 2 1.03	0 0 1 0.513	13 8 51 26.15	0 7 36	9 0 43	25 56 195	12.82051 28.71795 100
psychology sociology column tota col:%ofTota	4 4 2.0512821	17 31 15.9	19 27 13.846	1 2 1.03	0 0 1 0.513	13 8 51 26.15	0 7 36	9 0 43	25 56 195	12.82051 28.71795 100
psychology sociology column tota col:%ofTota remember:	4 4 2.0512821 At matrix (trans	17 31 15.9 pose matri	19 27 13.846 ix) is colum	1 2 1.03 ns=cited	0 0 1 0.513	13 8 51 26.15	0 7 36	9 0 43	25 56 195	12.82051 28.71795 100
psychology sociology column tota col:%ofTota remember:	4 4 2.0512821 At matrix (trans	17 31 15.9 pose matri	19 27 13.846 ix) is colum	1.03 ns=cited matrix)	0 0 1 0.513 d, rows=c	13 8 51 26.15 ites	0 7 36 18.462	9 0 43 22.05128	25 56 195	12.82051 28.71795
psychology sociology column tota col: %ofTota remember: Symmetric N	4 4 2.0512821 At matrix (trans	17 31 15.9 pose matri	19 27 13.846 ix) is colum	1.03 ns=cited matrix)	0 0 1 0.513 d, rows=c	13 8 51 26.15 ites	0 7 36	9 0 43 22.05128	25 56 195 195	12.82051 28.71795 100
psychology sociology column tota col:%ofTota remember: Symmetric N	4 4 2.0512821 At matrix (trans 4atrix1 (lower tr anthropology	17 31 15.9 pose matri iangle of a	19 27 13.846 ix) is colum asymmetric economics	1.03 ns=cited matrix) geogra	0 0 1 0.513 d, rows=c	13 8 51 26.15 ites	0 7 36 18.462	9 0 43 22.05128 sociology	25 56 195 195 row totals	12.82051 28.71795 100
psychology sociology column tota col:%ofTota remember:	4 2.0512821 At matrix (trans Hatrix1 (lower tr anthropology 0	17 31 15.9 pose matri communi	19 27 13.846 ix) is colum asymmetric economics	1 2 1.03 ns=cited matrix) geogra 0	0 0 1 0.513 d, rows=c	13 8 51 26.15 ites	0 7 36 18.462 psycholog	9 0 43 22.05128 sociology	25 56 195 195 row totals	12.82051 28.71795 100
psychology sociology column tota col:%ofTota remember: Symmetric N anthropolog communicat economics	4 2.0512821 At matrix (trans Hatrix1 (lower tr anthropology 0 0	17 31 15.9 pose matri iangle of a communi	19 27 13.846 ix) is colum esymmetric economics 0	1 2 1.03 ns=cited matrix) geogra 0 0	0 0 1 0.513 d, rows=c informati	13 8 51 26.15 Ites	0 7 36 18.462 psycholog 0 11	9 0 43 22.05128 sociology 0 14	25 56 195 195 195 row totals	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember: Symmetric Nanthropolog communicate economics geography	4 2.0512821 At matrix (trans  Hatrix1 (lower transhropology 0 0 0 0	17 31 15.9 pose matri iangle of a communi 0 0	19 27 13.846 ix) is column asymmetric economics 0 0	1 2 1.03 ns=cited geogra 0 0 0 0	0 0 1 0.513 d, rows=c informati 0 0	13 8 51 26.15 ites political 0 10 20	0 7 36 18.462 psycholog 0 11 13	9 0 43 22.05128 sociology 0 14 2	25 56 195 195 195 row totals 0 35 35	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember:  Symmetric Nanthropolog communicate economics geography info&libScl	4 2.0512821 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0	17 31 15.9 pose matri	19 27 13.846 ix) is column asymmetric economics 0 0	1.03 ns=cited matrix) geogra 0 0	0 0 1 0.513 d, rows=c informati 0 0	13 8 51 26.15 ites	0 7 36 18.462 psycholog 0 11 13	9 0 43 22.05128 sociology 0 14 2	25 56 195 195 row totals 0 35 35	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember:  Symmetric Nanthropolog communicate economics geography info&libSci politicalSci	4 2.0512821 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0	17 31 15.9 pose matri iangle of a communi 0 0 0	19 27 13.846 ix) is column asymmetric economics 0 0 0	1 2 1.03 ns=cited geogra 0 0 0 0 1	0 0 1 0.513 d, rows=c informati 0 0 0	13 8 51 26.15 ites political 0 10 20	0 7 36 18.462 psycholog 0 11 13 0	9 0 43 22.05128 sociology 0 14 2 10	25 56 195 195 195 row totals 0 35 35 11	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember:  Symmetric Nanthropolog communicate economics geography info&libScl politicalScl psychology	4 2.0512821 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0 0 0	17 31 15.9 pose matri iangle of a communi 0 0 0 0	19 27 13.846 ix) is colum asymmetric economics 0 0 0 0 0 20	1 2 1.03 ns=cited matrix) geogra 0 0 0 1 1 0 0 0	0 0 0.513 d, rows=c informati 0 0 0	13 8 51 26.15 ites political 0 10 20 0 0	0 7 36 18.462 psycholog 0 11 13 0 0 5	9 0 43 22.05128 sociology 0 14 2 10 0 8	25 56 195 195 195 row totals 0 35 35 11 1 43	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember: Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	4 4 2.0512821 At matrix (trans  fatrix1 (lower trans  0 0 0 0 0 0 0 0 0 0 0	17 31 15.9 pose matri iangle of a communi 0 0 0 0 10 11	19 27 13.846 ix) is colum asymmetric economics 0 0 0 0 20 13	1 2 1.03 ns=cited matrix) geogra 0 0 0 1 1 0 10	0 0 1 0.513 d, rows=c informati 0 0 0	13 8 51 26.15 ites political 0 10 20 0 0 0 8	0 7 36 18.462 psycholog 0 11 13 0 0 5	9 0 43 22.05128 sociology 0 14 2 10 0 8 9	25 56 195 195 195 row totals 0 35 35 11 1 43 38 43	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember: Symmetric N anthropolog communicat geography info&libScl politicalScl psychology sociology	4 2.0512821 At matrix (trans  Matrix1 (lower tr anthropology 0 0 0 0 0 0 0	17 31 15.9 pose matri iangle of a communi 0 0 0 0	19 27 13.846 ix) is colum asymmetric economics 0 0 0 0 0 20	1 2 1.03 ns=cited matrix) geogra 0 0 0 1 1 0 0 0	0 0 0.513 d, rows=c informati 0 0 0	13 8 51 26.15 ites political 0 10 20 0 0	0 7 36 18.462 psycholog 0 11 13 0 0 5	9 0 43 22.05128 sociology 0 14 2 10 0 8	25 56 195 195 195 70w totals 0 35 35 11 1 43 38 43	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember: Symmetric N anthropolog communicat geography info&libScl politicalScl psychology sociology	4 4 2.0512821 At matrix (trans  fatrix1 (lower trans  0 0 0 0 0 0 0 0 0 0 0	17 31 15.9 pose matri iangle of a communi 0 0 0 0 10 11	19 27 13.846 ix) is colum asymmetric economics 0 0 0 0 20 13	1 2 1.03 ns=cited matrix) geogra 0 0 0 1 1 0 10	0 0 1 0.513 d, rows=c informati 0 0 0	13 8 51 26.15 ites political 0 10 20 0 0 0 8	0 7 36 18.462 psycholog 0 11 13 0 0 5	9 0 43 22.05128 sociology 0 14 2 10 0 8 9	25 56 195 195 195 row totals 0 35 35 11 1 43 38 43	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember: Symmetric Nanthropolog communicate economics geography info&libScl politicalScl psychology sociology column tota	4 2.0512821 At matrix (trans  fatrix1 (lower trans  orange of trans  orang	17 31 15.9 pose matri iangle of a communi 0 0 0 0 10 11 14	19 27 13.846 (x) is colum asymmetric economics 0 0 0 0 20 13 2	1 2 1.03 ns=cited matrix) geogra 0 0 0 1 1 0 11	0 0 0.513 d, rows=c informati 0 0 0 1	13 8 51 26.15 ites political 0 10 20 0 0 0 8	0 7 36 18.462 psycholog 0 11 13 0 0 5	9 0 43 22.05128 sociology 0 14 2 10 0 8 9	25 56 195 195 195 70w totals 0 35 35 11 1 43 38 43	12.82051 28.71795 100
psychology sociology column tota col: %ofTota remember: Symmetric Nanthropolog communicate economics geography info&libScl politicalScl psychology sociology column tota	4 2.0512821 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0 0 0 0 4atrix2 (upper	17 31 15.9 pose matri iangle of a communi 0 0 0 10 11 14 35	19 27 13.846 ix) is colum  asymmetric economics 0 0 0 0 13 2 35 asymmetric	1 2 1.03 ns=cited matrix) geogra 0 0 0 1 1 1 1 1 c matrix	0 0 0.513 d, rows=c informati 0 0 0 1	13 8 51 26.15 ites political 0 10 20 0 0 0 5 8	0 7 36 18.462 psycholog 0 11 13 0 0 5 0 9	9 0 43 22.05128 sociology 0 14 2 10 0 8 9	25 56 195 195 195 row totals 0 35 35 31 11 1 43 38 43 206	12.82051 28.71795 100
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### Appendix X-4b

1982	WIT	HOLD	self	citation

means of upp	per/lower tr	iangles fro	m assym	etric ma	trix value	s (this ma	trix is syn	metric)	
ar	nthropology	communi	economic	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropology	0	0	0	0	0	0	0	2	2
communicat	0	0	0	0	6	5	6.5	15.5	33
economics	0	0	0	1	1	12	6.5	10.5	31
geography	0	0	1	0	0.5	0	0.5	5.5	7.5
info. & librar	0	6	1	0.5	0	0	0	0	7.5
politicalScien	0	5	12	0	0	0	9	8	34
psychology	0	6.5	6.5	0.5	0	9	0	8	30.5
sociology	2	15.5	10.5	5.5	0	8	8	0	49.5
column total	2	33	31	7.5	7.5	34	30.5	49.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

a	nthropology	communi	economic	geogra	info. & li	politicals	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	0	4	4
communical	0	0	0	0	12	10	9	3	34
economics	0	0	0	2	2	16	13	17	50
geography	0	0	2	0	1	0	1	9	13
info. & libra	. 0	12	2	1	0	0	0	0	15
politicalScie	0	10	16	0	0	0	8	0	34
psychology	0	9	13	1	0	8	0	2	33
sociology	4	3	17	9	0	0	2	0	35
column tota	4	34	50	13	15	34	33	35	218

Matrix product A\*At (post mulitiplied)

ar	nthropology	communi	economic	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropology	16	68	76	4	0	32	28	0	224
communicat	68	437	347	19	0	162	119	18	1170
economics	76		385	19	2	152	153	52	1186
geography	4	19	19	2	0	21	7	9	81
info. & librar	0				1	0		10	13
politicalScien	32	162	152	21	0	733	426	297	1823
psychology	28	119	153	7	0	426	364	220	1317
sociology	0	18	52	9	10	297	220	445	1051
column total	224	1170	1186	81			1317	1051	

Matrix product At\*A (pre multiplied)

ar	nthropology	communi	economic	geogra	info. & lit	politicals	psycholog	sociology	row totals
anthropology	0	0	0	0	0	0	0	0	0
communicat	0	417	371	140	0	167	256	157	1508
economics	0	371	573	20	0				1574
geography	0	140	20	105	4	88	90	38	485
info. & librar	0	0	0	4	148	8	24	242	426
politicalScier	0	167	81	88	8	105	72	111	632
psychology	0	256	278	90	24	72	255	139	1114
sociology	0	157	251	38	242	111			1718
column total	0	1508	1574	485	426	632	1114	1718	

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# Appendix X-4c

	FATIONS									
lote: column la	abels are discipli	nes whose	1982 ton imn	act iourn	ale wara ay	amined: ro	w lahels (at	left) renresent	citations/disc	inline of ton 5
	ournals in top jou			acc Joann	als were er	iairiirea, re	om labels (ac	iercjiepieseik	okadonsiaiso	pinie or top o
summetric mai	trix citation data	L								
	nthropology		economics	geograp	informatio	politicalS	psuchologi	sociologu	row total	%ofTotalCite
nthropology	473	0	0	0	0	0	0	4	477	33,3100558
ommunicati	0	83	0	0	12	0	2	17	114	7.96089385
conomics	0	0	112	2	2	4	0	19	139	9.7067039
eograph	0	0	0	20	0	0	1	1	22	1.53631284
eograph		0		20		0	0			
nfo&libSci	0		0	0	10 0			0	11	0.76815642 4.12011173
oliticalSci	0	10	20	_		8	13	8	59	
sychology	0	11	13	0	0	5	142	7	178	12.430167
ociology	0	14	2	10	0	8	9	389	432	30.1675977
olumn totals	473	118	147	33	24	25	167	445	1432	10
ol:%ofTotal	33.03072626	8.240223	10.265363	2.3045	1.67598	1.74581	11.66201	31.07541899	1432	10
emember: A m	atrix columns=c	ites, rows=	cited							
cites" = column la	abeled disciplines	cite row labo	eled disciplines	(for exar	nple anthrop	ology cites	psychology f	our times)		
cited" = row labe	eled disciplines are	cited by col	lumn labeled di	sciplines (	for example	anthropolo	gy is cited by	psychology twic	e)	
ranspose of as	symmetric matri:									
	anthropology									%ofTotalCite
nthropology	473 0	0 83	0	0	0	10	0	0 14	473	33.0307262 8.24022346
conomics	0	83	112	0	0	20	13	2	118 147	10.2653631
eography	0	0	2	20	1	0	0	10	33	2.30446927
nfo. & library	0	12	2	0	10	0	0	0	24	1.67597765
oliticalScien	0	0	4	Ö	0	8	5	8	25	1.74581005
sychology	0	2	0	1	0	13	142	9	167	11.6620111
				1						
sociology	4	17	19	1 22	0	8	7	389	445	31.0754189
sociology column totals	4 477	17 114	19 139	1 22 1.5363	0 11	8 59	7 178	389 432		31.07541898 100 100
sociology column totals col:%ofTotal	4 477 33.31005587	17 114 7.960894	19 139 9.7067039	1.5363	0 11 0.76816	8	7	389	445 1432	31.0754189: 10
sociology column totals col:%ofTotal	4 477	17 114 7.960894	19 139 9.7067039	1.5363	0 11 0.76816	8 59	7 178	389 432	445 1432	31.0754189 10
sociology column totals col:%ofTotal	4 477 33.31005587	17 114 7.960894	19 139 9.7067039	1.5363	0 11 0.76816	8 59	7 178	389 432	445 1432	31.0754189 10
sociology solumn totals sol:%ofTotall emember: At m	4 477 33.31005587	17 114 7.960894 e matrix) is	19 139 9.7067039 columns=cit	1.5363 ed, rows=	0 11 0.76816	8 59	7 178	389 432	445 1432	31.0754189 10
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cociology column totals col:%ofTotal emember: At m	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473	17 114 7.960894 e matrix) is le of asymn communic 0	19 139 9.7067039 columns=cito metric matrix economics 0	1.5363 ed, rows= geograp 0	0 11 0.76816 cites informatio	8 59 4.12011 political s	7 178 12.43017 psychologi 0	389 432 30.16759777 sociology	445 1432 1432	31.0754189: 10
sociology column totals col:://ofTotal emember: At m Symmetric Mate anthropology	477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473	17 114 7.960894 e matrix) is le of asymn communid 0 83	19 139 9.7067039 columns=cit- metric matrix economics 0 0	1.5363 ed, rows= geograp 0	0 11 0.76816 cites informatio 0	8 59 4.12011 political s 0	7 178 12.43017 psychology 0	389 432 30.16759777 sociology 0	445 1432 1432 row totals 473	31.0754189: 10
sociology column totals col:://ofTotal emember: At m Symmetric Mate anthropology	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473	17 114 7.960894 e matrix) is le of asymn communic 0	19 139 9.7067039 columns=cito metric matrix economics 0	1.5363 ed, rows= geograp 0	0 11 0.76816 cites informatio	8 59 4.12011 political s	7 178 12.43017 psychologi 0	389 432 30.16759777 sociology	445 1432 1432 row totals 473	31.0754189 10
cociology column totals col://ofTotal emember: At m Symmetric Mate anthropology communicati economics	477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473	17 114 7.960894 e matrix) is le of asymn communid 0 83	19 139 9.7067039 columns=cit- metric matrix economics 0 0	1.5363 ed, rows= geograp 0	0 11 0.76816 cites informatio 0	8 59 4.12011 political s 0	7 178 12.43017 psychology 0	389 432 30.16759777 sociology 0	445 1432 1432 row totals 473	31.0754189 10
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cociology column totals col:%ofTotall emember: At m  Symmetric Mate anthropology communicati economics geography nfo&libSci	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0	17 114 7.960894 e matrix) is le of asymmod communid 0 83 0	19 139 9.7067039 columns=cito metric matrix economics 0 0 112	1.5363 ed, rows= geograp 0 0	0 11 0.76816 cites informatio 0 0	8 59 4.12011 political s 0 10 20	7 178 12.43017 psycholog 0 11 13	389 432 30.16759777 sociology 0 14 2	445 1432 1432 row totals 473 118 147	31.0754189 10
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sociology solumn totals sol:%ofTotall emember: At m	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 0	17 114 7.960894 e matrix) is le of asymmocommunid 0 83 0 0 0	19 139 9.7067039 columns=cito netric matrix economics 0 0 112 0 20 13	1.5363 ed, rows= geograp 0 0 0 20 1 0	0 11 0.76816 cites informatio 0 0 0 1 10 0	8 59 4.12011 political s 0 10 20 0 0 8	7 178 12.43017 psychologi 0 111 13 0 0 5 142	389 432 30.16759777 sociology 0 14 2 10 0 8	445 1432 1432 row totals 473 118 147 31 11 51	31.0754189 10
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cociology column totals col://ofTotal emember: At m communicati economics ec	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 0	17 114 7.960894 e matrix) is communid 0 83 0 0 0 10 11	19 139 9.7067039 columns=cito netric matrix economics 0 0 112 0 20 13	1.5363 ed, rows= geograp 0 0 0 20 1 0 0	0 11 0.76816 cites informatio 0 0 0 1 10 0	8 59 4.12011 political s 0 10 20 0 8 5	7 178 12.43017 psychologi 0 111 13 0 0 5 142	389 432 30.16759777 sociology 0 14 2 10 0 8 9	row totals 473 147 31 111 51 180 4432	31.0754189 10
cociology column totals col://ofTotall emember: At m  Symmetric Mate anthropology communicati economics geography info&libSci coliticalSci cosychology cociology column totals	477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 473 473	17 114 7.960894 e matrix) is communic 0 83 0 0 0 10 11 14	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2	1.5363 ed, rows= geograp 0 0 20 11 0 10 31	0 11 0.76816 cites informatio 0 0 0 1 10 0	8 59 4.12011 political s 0 10 20 0 8 5	7 178 12.43017 psychologi 0 111 13 0 0 5 142	389 432 30.16759777 sociology 0 14 2 10 0 8 9	row totals 473 147 31 111 51 180 4432	31.0754189 10
cociology column totals col:%ofTotal emember: At m  Symmetric Mate anthropology communicati economics geography nfo&libSci coliticalSci esychology cociology column totals	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473 473	17 114 7.960894 e matrix) is communic 0 83 0 0 0 10 11 14 118	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147	1.5363 ed, rows= geograp 0 0 0 1 0 10 31	0 11 0.76816 cites informatic 0 0 0 1 1 10 0 0	8 59 4.12011 political s 0 0 0 0 0 0 8 5 8	7 178 12.43017 psycholog 0 11 13 0 0 5 142 9	389 432 30.16759777 sociology 0 14 2 10 0 8 9 389 432	row totals 473 147 31 111 51 180 4432	31.0754189 10
cociology column totals col:%ofTotal emember: At m  communicati conomics leography nfo&libSci coliticalSci sychology column totals	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473 473 473 473 473 473 473	17 114 7.960894 e matrix) is communic 0 83 0 0 10 11 14 118 gle of asym communic	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147	1.5363 ed, rows= geograp 0 0 0 1 0 10 31 geograp	0 11 0.76816 cites informatic 0 0 0 1 1 10 0 0	8 59 4.12011 political s 0 0 0 0 0 0 8 5 5 8	7 178 12.43017 psycholog 0 11 13 0 0 5 142 9	389 432 30.16759777 sociology 0 14 2 10 0 8 9 389 432	row totals 1432 1432 1432 1432 1432 1473 118 119 119 143 1443 1443 160 160 160 160 160 160 160 160 160 160	31.0754189 10
cociology column totals col:%ofTotal emember: At m  communicati economics leography nfo&libSci coliticalSci esychology column totals column totals	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 473 473  trix 2 (upper trian anthropology 473	17 114 7.960894 e matrix) is le of asymr communio 0 83 0 0 10 11 14 118  gle of asymr communio 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147	1.5363 ed, rows= geograp 0 0 20 1 0 31 style="background-color: right;">0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 11 0.76816 cites informatio 0 0 1 1 10 0 0 11	8 59 4.12011 political s 0 0 0 8 8 51	7 178 12.43017 psychologi 0 11 13 0 0 5 142 9 180	389 432 30.16759777  sociology 0 14 22 10 0 8 9 389 432  sociology	445 1432 1432 1432 1432 1433 1147 31 111 51 180 432 1443 1443 1443 row totals	31.0754189 10
cociology column totals col::xofTotal emember: At m  Symmetric Mate enthropology communicati economics geography nfo&libSci coliticalSci esociology column totals symmetric Mate enthropology	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473 473 473 473 473 473 473	17 114 7.960894 e matrix) is communic 0 83 0 0 10 11 14 118 gle of asym communic	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147	1.5363 ed, rows= geograp 0 0 0 1 0 10 31 geograp	0 11 0.76816 cites informatic 0 0 0 1 1 10 0 0	8 59 4.12011 political s 0 0 0 0 0 0 8 5 8	7 178 12.43017 psycholog 0 111 13 0 0 5 142 9 180	389 432 30.16759777 sociology 0 14 2 10 0 8 9 389 432	row totals 1432 1432 1432 1432 1432 1473 118 119 119 143 1443 1443 160 160 160 160 160 160 160 160 160 160	31.0754189 10
cociology column totals col:%ofTotal emember: At m  Symmetric Mate anthropology communicati economics geography info&libSci coliticalSci esychology cociology column totals  Symmetric Mate anthropology communicati economics	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 473 473  trix 2 (upper trian anthropology 473	17 114 7.960894 e matrix) is le of asymr communio 0 83 0 0 10 11 14 118  gle of asymr communio 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147	1.5363 ed, rows= geograp 0 0 20 1 0 31 style="background-color: right;">0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 11 0.76816 cites informatio 0 0 1 1 10 0 0 11	8 59 4.12011 political s 0 0 0 8 8 51	7 178 12.43017 psychologi 0 11 13 0 0 5 142 9 180	389 432 30.16759777  sociology 0 14 22 10 0 8 9 389 432  sociology	445 1432 1432 1432 1432 1433 1147 31 111 51 180 432 1443 1443 1443 row totals	31.0754189 10
cociology column totals col://ofTotall emember: At m  Symmetric Mate anthropology communicati economics peography info&libSci coliticalSci coliticalSci cology cociology column totals  Symmetric Mate anthropology communicati economics	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473  trix2 (upper trian anthropology 473 0	17 114 7.960894 e matrix) is communic 0 0 0 10 11 14 118 gle of asym communic 0 83	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147 metric matrix economics 0 0 112 112 1147	1.5363 ed, rows= geograp 0 0 0 20 10 31 geograp 0 0 20 20 20 20 20 20 20 20 20 20 20 20	0 11 0.76816 cites informatio 0 0 0 11 10 0 0 11 informatic 0	8 59 4.12011  political s 0 0 0 0 0 8 5 5 8 5 5 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 178 12.43017 psychologi 0 111 13 0 0 5 142 9 180 psychologi 0 2	389 432 30.16759777  sociology  0 14 2 10 0 8 3 389 432  sociology 4 17	row totals 1432 1432 1432 1432 1432 1473 111 51 180 432 1443 1443 1443 170w totals	31.0754189 10
cociology column totals col::xofTotal emember: At m  Symmetric Mate enthropology communicati economics peography nfo&libSci coliticalSci esychology column totals communicati economics economics economics economics economics economics economics economics economics economics	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473  trix 2 (upper trian anthropology 473 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17 114 7.960894 e matrix) is le of asymr communic 0 0 0 10 11 14 118  gle of asym communic 0 83 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147 metric matri economics 0 0 112 2 147	1.5363 ed, rows= geograp 0 0 0 10 31 geograp 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 11 0.76816 cites informatio 0 0 0 11 10 0 0 11 informatio 0	8 59 4.12011 political s 0 0 0 8 8 51	7 178 12.43017 psychologi 0 111 13 0 0 5 142 9 180 psychologi 0 2	389 432 30.16759777  sociology 0 14 2 10 0 8 9 389 432  sociology 4 17	row totals 1432 1432 1432 1432 1432 1473 118 147 31 111 51 180 432 1443 1443 170	31.0754189 10
cociology column totals col::xofTotal emember: At m  control of the control of th	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473 473  trix 2 (upper trian anthropology 473 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17 114 7.960894 e matrix) is communic 0 0 0 10 11 14 118 gle of asym communic 0 83	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147 metric matrix economics 0 0 112 112 1147	1.5363 ed, rows= geograp 0 0 0 20 1 0 10 31 geograp 0 0 20 20 20 20 20 20	0 11 0.76816 cites informatio 0 0 1 1 10 0 0 11 informatio 0 11	8 59 4.12011  political s 0 0 0 8 5 5 8 5 5 1	7 178 12.43017 psychologe 0 111 13 0 0 5 142 9 180 psychologe 0 2	389 432 30.16759777  sociology 0 14 2 10 0 8 9 389 432  sociology 4 17 19	1432 1432 1432 1432 1432 1433 147 31 11 51 180 432 1443 1443 100 totals 1443 1443 1443 1443 1443	31.0754189 10
sociology column totals col::xofTotal emember: At m symmetric Mate communicati economics geography nfo&libSci coliticalSci communicati economics sychology column totals communicati communicati economics communicati economics communicati economics communicati economics conomics	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 473 473  trix 2 (upper trian anthropology 473 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17 114 7.960894 e matrix) is le of asymr communic 0 0 0 10 11 14 118  gle of asym communic 0 83 0 0 10 11 14 118	19 139 9.7067039 columns=cito metric matrix economics 0 0 112 0 20 13 2 147 metric matri economics 0 0 112 2 2 2 2	1.5363 ed, rows=  geograp  0 0 20 10 0 31  geograp 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 11 0.76816 cites information 0 0 0 11 information 0 11 information 0 12 2 0 10 10	8 59 4.12011 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 178 12.43017 psychologi 0 11 13 0 0 5 142 9 180 psychologi 0 2 0	389 432 30.16759777  sociology 0 14 22 10 0 88 99 389 432  sociology 4 17 19 1	row totals 1432 1432 1432 1432 1432 1473 118 147 31 111 51 180 432 1443 1443 170	31.0754189 10
cociology column totals col::xofTotal emember: At m continue the continue totals continue the continue totals	4 477 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 473 473 473 473 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17 114 7.960894 e matrix) is communic communic 0 0 0 0 10 11 14 118 gle of asym communic 0 83 0 0 10 2 12 0 2	19 139 9.7067039 columns=citor netric matrix, economics 0 0 112 0 20 13 2 147 metric matri economics 0 0 112 2 4 0	1.5363 ed, rows=  geograp  0 0 20 10 0 31  geograp 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 11 0.76816 cites informatio 0 0 0 11 10 0 0 11 informatio 0 12 2 0 0	8 59 4.12011 political s 0 0 0 8 8 51	7 178 12.43017 psychologi 0 11 13 0 0 5 142 9 180 psychologi 0 2 0 1 1 0 0 1 1 1 1 3 1 1 1 1 1 1 1 1 1 1	389 432 30.16759777  sociology 0 14 2 10 0 8 9 389 432  sociology 4 17 19 11 0 8 8 7	row totals 1432 1432 1432 1432 1432 1431 111 51 180 432 1443 1443 1443 165	31.0754189 10
cociology column totals col:%ofTotal emember: At m communicati conomics leography nfo&libSci coliticalSci conomics communicati conomics cociology cociology column totals communicati conomics communicati conomics conomics conomics conomics	473 33.31005587 natrix (transpose trix1 (lower triang anthropology 473 0 0 0 0 0 473 473  trix 2 (upper trian anthropology 473 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17 114 7.960894 e matrix) is communio 0 83 0 0 10 11 14 118  ole of asym communio 0 33 0 0 10 11 14 118 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 139 9.7067039 columns=cito metric matrix economics 0 112 0 20 13 2 147 metric matrix economics 0 112 2 147 metric matrix 2 147 4 4	1.5363 ed, rows=  geograp  0 0 20 10 0 31  geograp 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 11 0.76816 cites informatio 0 0 1 1 0 0 0 11 informatio 0 1 1 2 2 0 0	8 59 4.12011 political s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 178 12.43017 psycholog 0 111 13 0 0 5 142 9 180 psycholog 0 2 0 0 1 1 1 0 0 1 1 1 0 0 1 1 1 0 0 1 1 1 0 0 0 0 0 1 1 1 0	389 432 30.16759777  sociology 0 14 22 10 0 8 9 389 432  sociology 4 17 19 1	row totals 1432 1432 1432 1432 1433 1147 31 111 511 180 432 1443 1443 1443 165 477 114 139 24 24 333 165	31.0754189 10

### Appendix X-4d

1982 WITH self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

anth	ropology	communi	economi	geogra	info. & lit	politicals	psycholog	sociology	row totals
anthropolog	473		0	0	0	0	0	2	475
communicat	0	83	0	0	6	5	6.5	15.5	116
economics	0	0	112	1	1	12	6.5	10.5	143
geography	0	0	1	20	0.5	0	0.5	5.5	27.5
info. & librar	0	6	1	0.5	10	0	0	0	17.5
politicalScier	0	5	12	0	0	8	9	8	42
psychology	0	6.5	6.5	0.5	0	9	142	8	172.5
sociology	2	15.5	10.5	5.5	0	8	8	389	438.5
column total	475	116	143	27.5	17.5	42	172.5	438.5	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

_									
ant	hropology	communi	economi	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	473	0	0	0	0	0	0	4	477
communicat	0	83	0	0	12	10	9	3	117
economics	0	0	112	2	2	16	13	17	162
geography	0	0	2	20	1	0	1	9	33
info. & librar	0	12	2	1	10	0	0	0	25
politicalScier	0	10	16	0	0	8	8	0	42
psychology	0	9	13	1	0	8	142	2	175
sociology	4	3	17	9	0	0	2	389	424
column total	477	117	162	33	25	42	175	424	1455

Matrix product A\*At (post mulitiplied)

ant	thropology	communi	economi	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	223745	68	76	4	0	32	28	1556	225509
communicat	68	7326	347	19	120	992	1316	7793	17981
economics	76	347	12929	59	22	2424	1609	7667	25133
geography	4	19	59	402	20	21	149	598	1272
info. & librar	0	120	22	20	101	0	0	10	273
politicalScier	32	992	2424	21	0	797	2312	3473	10051
psychology	28	1316	1609	149	0	2312	20528	4221	30163
sociology	1556	7793	7667	598	10	3473	4221	151766	177084
column total	225509	17981	25133	1272	273	10051	30163	177084	487466

Matrix product At\*A (pre multiplied)

ant	thropology	communi	economi	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	223729	0	0	0	0	0	0	1892	225621
communicat	0	7306	371	140	996	247	1984	7014	18058
economics	0	371	13117	244	224	689	2124	3157	19926
geography	0	140	244	505	14	88	110	3948	
info. & librar	0	996	224	14	248	8	24	242	1756
politicalScier	0	247	689	88	8	169	886	3287	5374
psychology	0	1984	2124	110	24	886	20419	4634	30181
sociology	1892	7014	3157	3948	242	3287	4634	152101	176275
column total	225621	18058	19926	5049	1756	5374	30181	176275	
									482240

# Appendix X-5a

WITHOUT SE	ELF CITATIONS									
	n labels are disc			-	-			w labels (at l	eft) represer	ıt.
citations/dis	cipline of top 5 i	mpact fac	tor journals	in top j	ournal by	discipline	-			
symmetric	matrix citation of	data								
	anthropology	commun	economic	geogra	informa	political	psycholo	sociology	row total	6ofTotalCited
anthropolo	0	0	0	0	0	1	2	14	17	11.48649
communic	0	0	0	1	3	1	2	10	17	11.48649
economics	0	0	0	12	0	2	0	28	42	28.37838
	0	0	0	0	0	0	0	0	0	(
geography	0			0	_		0	0	_	
info&libSci		0	0		0	0			0	
politicalSci	0	8	9	5	0	0	0	14	36	24.3243
psychology	0	1	0	0	1	0	0	3	5	3.378378
sociology	0	21	1	6	0	1	2	0	31	20.9459
column tota	0	30	10	24	4	5	6	69	148	100
col:%ofTota	0	20.27	6.7568	16.2	2.703	3.378	4.0541	46.62162	148	100
remember:	A matrix column	s=cites, n	ows=cited							
	mn labeled discipli			iplines (	for example	anthropol	ogy cites ps	ychology four t	imes)	
"cited" = row	labeled disciplines	are cited b	y column lab	eled disci	plines (for	example ar	nthropology	is cited by psyc	thology twice)	
transpose of	asymmetric ma	trix citatio	on data							
	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals	6ofTotalCited
anthropolog	0	0	0	0	0	0	0	0	0	(
communicat	0	0	0	0	0	8	1	21	30	20.27027
economics	0	0	0	0	0	9	0	1	10	6.756757
geography	0	1	12	0	0	5	0	6	24	16.2162
info. & librar	0	3	0	0	0	0	1	0	4	2.702703
politicalScier	1	1	2	0	0	0	0	1	5	3.378378
psychology	2	2	0	0	0	0	0	2	6	4.054054
sociology	14	10	28	0	0	14	3	0	69	46.62162
column tota	17	17	42	0	0	36	5	31	148	100
col:%ofTota	11.486486	11.49	28.378	0	0	24.32	3.3784	20.94595	148	100
remember:	At matrix (trans	pose matr	ix) is colum	ns=cite	d, rows=c	ites				
Symmetric N	4atrix1 (lower tr	iangle of a	asymmetric	matrix)						
	anthropology	communi	economics	geogra	informati	political:	psycholog	sociology	row totals	
anthropolog	0	0	0	0	0	0	0	0	0	
communicat	0	0	0	0	0	8	1	21	30	
economics	0	0	0	0	0	9	0	1	10	
geography	0	0	0	0	0	5	0	6	11	
info&libSci	0	0	0	0	0	0	1	0	1	
politicalSci	0	8	9	5	0	0	Ô	1	23	
psychology	0	1	0	0	1	0	0	2	4	1
sociology	0	21	1	6	0	1	2	0	31	
column tota	0	30	10	11	1	23	4	31	110	
									110	
Symmetric N	Matrix 2 (upper t	triangle of	asymmetric	matrix	)					
,	anthropology		_			political	psycholog	sociology	row totals	
enthropolog	0	0	0	0	0	1	2	14	17	1
communicat	0	0	0	1	3	1	2	10	17	
										1
economics	0	0	0	12	0	2	0	28	42	-
geography	0	1	12	0	0	0	0	0	13	
info&libSci	0	3	0	0	0	0	0	0	3	
politicalSci	1	1	2	0	0	0	0	14	18	
psychology	2	2	0	0	0	0	0	3	7	
sociology	14	10	28	0	0	14	3	0	69	
column tota	17	17	42	13	3	18	7	69	186	
									186	
									100	1

### Appendix X-5b

#### 1983 WITHOUT self citation

means of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

	anthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0.5	1	7	8.5
communicat	0	0	0	0.5	1.5	4.5	1.5	15.5	23.5
economics	0	0	0	6	0	5.5	0	14.5	26
geography	0	0.5	6	0	0	2.5	0	3	12
info. & libra	0	1.5	0	0	0	0	0.5	0	2
politicalScie	0.5	4.5	5.5	2.5	0	0	0	7.5	20.5
psychology	1	1.5	0	0	0.5	0	0	2.5	5.5
sociology	7	15.5	14.5	3	0	7.5	2.5	0	50
column tota	8.5	23.5	26	12	2	20.5	5.5	50	

absolute value differences of upper/lower triangles from assymetric matrix values (this matrix is symmetric)

an	thropology	communi	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	1	2	14	17
communicat	0	0	0	1	3	7	1	11	23
economics	0	0	0	12	0	7	0	27	46
geography	0	1	12	0	0	5	0	6	24
info. & librar	0	3	0	0	0	0	1	0	4
politicalScier	1	7	7	5	0	0	0	13	33
psychology	2	1	0	0	1	0	0	1	5
sociology	14	11	27	6	0	13	1	0	72
column total	17	23	46	24	4	33	5	72	224
			•						224

Matrix product A\*At (post mulitiplied)

		THE RESERVE OF THE PARTY OF THE							
S	nthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	201	145	394	0	0	196	42	5	983
communicat	145		294	0	0	145	33	11	743
economics	394	294	932	0	0	452	84	74	2230
geography	0	0	0	0	0	0	0	0	0
info. & librar	0	0	0		0	0	0	0	0
politicalScien	196	145	452	0	0	366	50	207	1416
psychology	42		84	0	0	50	11	21	241
sociology	5	11	74	0	0	207	21	483	801
column total	983	743	2230	0	0	1416			6414

Matrix product At\*A (pre multiplied)

а	nthropology	communi	economics	geogra	info. & lib	politicalS	psycholog	sociology	row totals
anthropolog	0	0	0	0	0	0	0	0	0
communicat				166	1	21	42	115	944
economics	0	93 166	82	51	0	1	2	126	355
geography	0	166	51	206	3	31	14		887
info. & librar	0	1	0	3	10	3	6	33	
politicalScien	0	21	1	31	3	7	6	80	149
psychology	0		2	14	6	6	12	48	
sociology	0	115	126	416	33	80	48	1285	2103
column total	0			887		149	130		

# Appendix X-5c

Note: colum	n labels are disc	iplines wh	ose 1983 to	p impa	t journals	were ex	amined; ro	w labels (at le	eft) represen	t
itations/dis	cipline of top 5	impact fac	tor journals	in top j	ournal by	discipline	-			
asymmetric	matrix citation (	data								
	anthropology	commun	economic	geogra	informa	political	psycholo	sociology	row total	6ofTotalCited
anthropolo	532	0	0	0	0	1	2	14	549	37.52563
communic	0	99	0	1	3	1	2	10	116	7.928913
economics	0	0	86	12	0	2	0	28	128	8.749146
geography	0	0	0	37	0	0	0	0	37	2.5290
info&libSci	0	0	0	0	4	0	0	0	4	0.273413
politicalSci	0	8	9	5	0	11	0	14	47	3.212577
psychology	0	1	0	0	1	0	130	3	135	9.227614
	0	21	1	6	0	1	2	416	447	30.55366
sociology column tota	532	129	96	61	8	16	136	485	1463	100
col:%ofTota	36.363636	8.817	6.5619	4.17	0.547	1.094	9.296	33.15106	1463	100
001: 9601 lOta	30.303030	8.817	0.3019	4.17	0.547	1.094	9.290	33.15106	1403	100
	A matrix column			inlines #	for avanuals	anthonon	nau altas na	uchology four ti	man and a	
	mn labeled discipli labeled disciplines									
creed = row	abeled disciplines	are cited b	y continuin iabi	ered disci	pinies (10f)	example at	ion opology	is cited by payo	monogy (WICE)	
transpose of	asymmetric ma	trix citatio	on data							
	anthropology	_	economics	geogra	info. & lib	politicals	psycholog	sociology	row totals	6ofTotalCite
enthropolog	532	0	0	0	0	0	0	0	532	36.36364
communicat	0	99	0	0	0	8	1	21	129	8.817498
economics	0	0	86	0	0	9	0	1	96	6.561859
geography	0	1	12	37	0	5	0	6	61	4.16951
nfo. & librar	0	3	0	0	4	0	1	0	8	0.546822
politicalScier	1	1	2	0	0	11	0	1	16	1.093643
politicida lo di ci	*									
	2	2	0	0	0	0	130	2	136	9.295967
psychology		2 10	0 28	0	0	0 14	130 3	2 416	136 485	
psychology sociology column tota	2 14 549	10 116	28 128	0 37	0	14 47	3 135	416 447	485 1463	9.295967 33.15106 100
psychology sociology column tota col:%ofTota	2 14 549 37.525632	10 116 7.929	28 128 8.7491	0 37 2.53	0 4 0.273	14 47 3.213	3	416	485	33.15106
psychology sociology column tota col:%ofTota	2 14 549	10 116 7.929	28 128 8.7491	0 37 2.53	0 4 0.273	14 47 3.213	3 135	416 447	485 1463	33.15106 100
psychology sociology column tota col:%ofTota	2 14 549 37.525632	10 116 7.929	28 128 8.7491	0 37 2.53	0 4 0.273	14 47 3.213	3 135	416 447	485 1463	33.15106 100
psychology sociology column tota col:%ofTota remember:	2 14 549 37.525632 At matrix (trans	10 116 7.929 pose matr	28 128 8.7491 ix) is colum	0 37 2.53 ns=cited	0 4 0.273	14 47 3.213	3 135	416 447	485 1463	33.15106 100
psychology sociology column tota col:%ofTota remember:	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr	10 116 7.929 pose matri	28 128 8.7491 ix) is colum	0 37 2.53 ns=cited matrix)	0 4 0.273 d, rows=c	14 47 3.213 ites	3 135 9.2276	416 447 30.55366	485 1463 1463	33.15106 100
psychology sociology column tota col: %ofTota remember: A	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology	10 116 7.929 pose matr	28 128 8.7491 ix) is colum asymmetric economics	0 37 2.53 ns=cited matrix) geogra	0 4 0.273 d, rows=c	14 47 3.213 ites	3 135 9.2276 psycholog	416 447 30.55366 sociology	485 1463 1463 row totals	33.15106 100
psychology sociology column tota col:%ofTota remember: Symmetric M	2 14 549 37.525632 At matrix (trans datrix1 (lower tr anthropology 532	10 116 7.929 pose matr	28 128 8.7491 ix) is colum asymmetric economics	0 37 2.53 ns=cited matrix) geogra	0 4 0.273 d, rows=c informati	14 47 3.213 ites	3 135 9.2276 psycholog	416 447 30.55366 sociology	485 1463 1463 row totals 532	33.15106 100
psychology sociology column tota col:%ofTota remember: / Symmetric N anthropolog communicat	2 14 549 37.525632 At matrix (trans  Hatrix1 (lower tr anthropology 532 0	10 116 7.929 pose matri iangle of a communi 0 99	28 128 8.7491 ix) is colum asymmetric economics 0	0 37 2.53 ns=cited matrix) geogra 0 0	0 4 0.273 d, rows=c informati	14 47 3.213 ites political	3 135 9.2276 psycholog	416 447 30.55366 sociology 0 21	485 1463 1463 row totals 532 129	33.15106 100
psychology sociology column tota col: %ofTota remember: A Symmetric N anthropolog communicat economics	2 14 549 37.525632 At matrix (trans  Hatrix1 (lower transhropology 532 0 0	10 116 7.929 pose matri iangle of a communi 0 99	28 128 8.7491 ix) is colum asymmetric economics 0 0 86	0 37 2.53 ns=cited matrix) geogra 0 0	0 4 0.273 d, rows=c informati 0 0	14 47 3.213 ites political 0 8	3 135 9.2276 psycholog 0 1	416 447 30.55366 sociology 0 21	485 1463 1463 row totals 532 129 96	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0	28 128 8.7491 ix) is colum asymmetric economics 0 0 86	0 37 2.53 ns=cited matrix) geogra 0 0 0	0 4 0.273 d, rows=c informati 0 0	14 47 3.213 ites political 0 8 9	3 135 9.2276 psycholog 0 1 0	416 447 30.55366 sociology 0 21 1	485 1463 1463 row totals 532 129 96 48	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libScl	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37	0 4 0.273 d, rows=c informati 0 0 0	14 47 3.213 ites political 0 8 9 5 0	3 135 9.2276 psycholog 0 1 0 0	416 447 30.55366 sociology 0 21 1 6	485 1463 1463 row totals 532 129 96 48 5	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N enthropolog communicat economics geography info&libSci politicalSci	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0 0	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5	0 4 0.273 d, rows=c informati 0 0 0 4	14 47 3.213 ites political 0 8 9 5 0	3 135 9.2276 psycholog 0 1 0 0	416 447 30.55366 sociology 0 21 1 6 0	485 1463 1463 row totals 532 129 96 48 5	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0 0	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0	0 4 0.273 d, rows=c informati 0 0 0 4 0	14 47 3.213 ites political 0 8 9 5 0 111 0	3 135 9.2276 psycholog 0 1 0 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2	485 1463 1463 1463 row totals 532 129 96 48 5 34 134	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libScl politicalScl psychology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0 0	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5	0 4 0.273 d, rows=c informati 0 0 0 4	14 47 3.213 ites political 0 8 9 5 0	3 135 9.2276 psycholog 0 1 0 0	416 447 30.55366 sociology 0 21 1 6 0	485 1463 1463 row totals 532 129 96 48 5	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0 0	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0	0 4 0.273 d, rows=c informati 0 0 0 4 0	14 47 3.213 ites political 0 8 9 5 0 111 0	3 135 9.2276 psycholog 0 1 0 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2	485 1463 1463 1463 row totals 532 129 96 48 5 34 134	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat geography info&libScl politicalScl psychology sociology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0 0	10 116 7.929 pose matr communi 0 99 0 0 0 8	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5	0 4 0.273 d, rows=c informati 0 0 0 4 0	14 47 3.213 ites political 0 8 9 5 0 111 0	3 135 9.2276 psycholog 0 1 0 1 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2 416	485 1463 1463 row totals 532 129 96 48 5 34 134 447	33.15106 100
sychology sociology column tota col: %ofTota remember: A symmetric N enthropolog communicat seconomics geography nfo&litoSci ooliticalSci osychology sociology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0 0	10 116 7.929 pose matr communi 0 99 0 0 0 8	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5	0 4 0.273 d, rows=c informati 0 0 0 4 0	14 47 3.213 ites political 0 8 9 5 0 111 0	3 135 9.2276 psycholog 0 1 0 1 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2 416	485 1463 1463 1463 row totals 532 129 96 48 5 34 134 447	33.15100 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 532 0 0 0	10 116 7.929 pose matr communi 0 99 0 0 0 8	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0 0	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5	0 4 0.273 d, rows=c informati 0 0 0 4 0	14 47 3.213 ites political 0 8 9 5 0 111 0	3 135 9.2276 psycholog 0 1 0 1 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2 416	485 1463 1463 1463 row totals 532 129 96 48 5 34 134 447	33.15106 100
psychology sociology column tota col: %ofTota remember: / symmetric N symmetric N symmetric N symmetric N symmetric N sociology sociology sociology sociology sociology sociology	2 14 549 37.525632 At matrix (trans  Matrix1 (lower tr anthropology 532 0 0 0 0 532  Matrix 2 (upper	10 116 7.929 pose matri iangle of a communi 0 99 0 0 0 8 1 129	28 128 8.7491 ix) is colum economics 0 0 86 0 0 9 0 1	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5 0 48	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5	14 47 3.213 ites political 0 8 9 5 0 11 0 1	3 135 9.2276 psycholog 0 1 0 1 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2 416	485 1463 1463 1463 row totals 532 129 96 48 5 34 134 447	33.15106 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography nfo&libSci psychology sociology sociology sociology	2 14 549 37.525632 At matrix (trans  Hatrix1 (lower tr anthropology 532 0 0 0 0 532  Hatrix 2 (upper lanthropology	10 116 7.929 pose matri iangle of a communication of the communication o	28 128 8.7491 ix) is colum economics 0 0 86 0 0 9 0 1 96	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5 0 48	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5	14 47 3.213 ites political 0 8 9 5 0 111 0 1 34 political	3 135 9.2276 psycholog 0 1 0 0 130 2 134	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447	485 1463 1463 1463 row totals 532 129 96 48 5 34 134 447 1425	33.15106 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology sociology column tota  Symmetric Nanthropolog	2 14 549 37.525632 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0 532  Hatrix 2 (upper lanthropology 532	10 116 7.929 pose matriangle of a communication	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0 9 0 1 96 asymmetric 0 96	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5 0 48 c matrix geogra	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5 5 informati 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 47 3.213 ites political 0 8 9 5 0 11 0 1 34	3 135 9.2276 psycholog 0 1 0 130 2 134	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447	485 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549	33.15106 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology sociology column tota  Symmetric Nanthropolog	2 14 549 37.525632 At matrix (trans  Hatrix1 (lower tr anthropology 532 0 0 0 0 532  Hatrix 2 (upper lanthropology	10 116 7.929 pose matri iangle of a communication of the communication o	28 128 8.7491 ix) is colum economics 0 0 86 0 0 9 0 1 96	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5 0 48	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5	14 47 3.213 ites political 0 8 9 5 0 111 0 1 34 political	3 135 9.2276 psycholog 0 1 0 0 130 2 134	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447	485 1463 1463 1463 row totals 532 129 96 48 5 34 134 447 1425	33.15106 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci psychology sociology column tota  Symmetric Nanthropolog communicate psychology sociology column tota	2 14 549 37.525632 At matrix (trans  Hatrix1 (lower tr anthropology 0 0 0 0 532  Hatrix 2 (upper lanthropology 532	10 116 7.929 pose matriangle of a communication	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0 9 0 1 96 asymmetric 0 96	0 37 2.53 ns=cited matrix) geogra 0 0 0 37 0 5 0 48 c matrix geogra	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5 5 informati 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 47 3.213 ites political 0 8 9 5 0 11 0 1 34	3 135 9.2276 psycholog 0 1 0 130 2 134	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447	485 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549	33.15100 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicat economics geography info&libSci politicalSci psychology sociology column tota	2 14 549 37.525632 At matrix (trans  Matrix1 (lower tr anthropology 532 0 0 0 532  Matrix 2 (upper tanthropology 532 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 116 7.929 pose matriangle of a communication of the series of the	28 128 8.7491 ix) is colum economics 0 0 86 0 9 0 1 96 asymmetric	0 37 2.53 ns=cited matrix) geogra 0 0 5 0 6 48 c matrix geogra 0 1	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5 informati 0 3	14 47 3.213 ites political 0 8 9 5 0 11 0 1 34 political 1 1	3 135 9.2276 psycholog 0 1 0 130 2 134	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447 sociology	485 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549 116	33.15100 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci psychology sociology column tota  Symmetric Nanthropolog communicate economics geography info&libSci psychology sociology column tota  Symmetric Nanthropolog communicate economics	2 14 549 37.525632 At matrix (trans  Matrix1 (lower tr anthropology 532 0 0 0 532  Matrix 2 (upper tr anthropology 532 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 116 7.929 pose matri iangle of a communi 0 99 0 0 8 1 21 129 triangle of communi 0 999 0	28 128 8.7491 ix) is colum economics 0 0 86 0 9 0 1 96 asymmetric economics 0 0 86 0 9 0 1 96	0 37 2.53 ns=cited matrix) geogra 0 0 5 0 6 48 cmatrix geogra 0 1 1 12	0 4 0.273 d, rows=c informati 0 0 0 4 0 1 0 5 1 informati 0 0 3 0 0 1 1 0 0 1 1 0 0 1 1 0 1 1 1 1	14 47 3.213 ites political 0 8 9 5 0 11 0 1 34 political 1 1 2	3 135 9.2276 psycholog 0 1 0 130 2 134 psycholog 2 2	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447 sociology 14 10	485 1463 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549 116 128	33.15100 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology sociology column tota  Symmetric Nanthropolog communicate economics geography info&libSci psychology sociology column tota symmetric Nanthropolog communicate economics geography	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 0 0 0 0 532 4atrix 2 (upper tr anthropology 532 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 116 7.929 pose matr iangle of a communi 0 99 0 0 8 1 21 129 triangle of communi 0 99 0 1	28 128 8.7491 ix) is colum asymmetric economics 0 0 86 0 9 0 1 96 asymmetric economics 0 0 0 9 0	0 37 2.53 ns=cited matrix) geogra 0 0 5 0 6 48 c matrix geogra 0 1 12 37	0 4 0.273 d, rows=c informati 0 0 0 0 4 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	14 47 3.213 ites political 0 8 9 5 0 111 0 1 34 political 1 1 2 0 0	3 135 9.2276 psycholog 0 1 0 130 2 134 psycholog 2 2 0	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447 sociology 14 10 28	485 1463 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549 116 128 50	33.15100 100
psychology sociology column tota col: %ofTota remember: / Symmetric N anthropolog communicate economics geography info&libScl politicalScl psychology column tota symmetric N anthropolog communicate economics geography info&libScl psychology column tota symmetric N anthropolog communicate economics geography info&libScl politicalScl politicalScl	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 0 0 0 532 4atrix 2 (upper anthropology 532 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 116 7.929 pose matr iangle of a communi 0 99 0 0 8 1 21 129 triangle of communi 0 99 0 1 3	28 128 8.7491 ix) is colum  asymmetric economics 0 0 86 0 1 96 asymmetric economics 0 0 1 96 1 2 0 86 12 0	0 37 2.53 ns=cited matrix) geogra 0 0 6 48 c matrix geogra 0 1 12 37 0 0	0 4 0.273 d, rows=c informati 0 0 0 0 1 1 0 5 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0	14 47 3.213 ites political 0 8 9 5 0 111 0 1 34 political 1 2 0 0 0	3 135 9.2276  psycholog 0 1 0 130 2 134  psycholog 2 0 0 0 0	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447 sociology 14 10 28 0	485 1463 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549 116 128 50 7	33.15106 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology sociology column tota  Symmetric Nanthropolog communicate economics geography info&libSci psychology sociology column tota column to	2 14 549 37.525632 At matrix (trans  fatrix1 (lower tr anthropology 532 0 0 0 0 532  fatrix 2 (upper tr anthropology 532 0 1 0 1 1	10 116 7.929 pose matr  iangle of a communication of the communication o	28 128 8.7491 ix) is colum  asymmetric economics 0 0 86 0 0 1 96 asymmetric economics 0 0 1 96 2 2	0 37 2.53 ns=cited matrix) geogra 0 0 0 6 48 c matrix geogra 0 1 1 2 37 0 0 0	0 4 0.273 d, rows=c informati 0 0 0 0 4 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	14 47 3.213 ites political 0 8 9 5 0 111 34 political 1 2 0 0 11	3 135 9.2276  psycholog 0 1 0 130 2 134  psycholog 2 0 0 0 0 0 0	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447 sociology 14 10 28 0 0	485 1463 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549 116 128 50 7 29	33.15100 100
psychology sociology column tota col: %ofTota remember: // Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology column tota  Symmetric Nanthropolog communicate economics geography info&libSci politicalSci psychology column tota conomics geography info&libSci politicalSci psychology psychology info&libSci politicalSci psychology	2 14 549 37.525632 At matrix (trans 4atrix1 (lower tr anthropology 0 0 0 0 532 4atrix 2 (upper tr anthropology 532 0 0 0 1 1 2	10 116 7.929 pose matr iangle of a communi 0 99 0 0 8 1 21 129 triangle of communi 0 99 0 1 3 1 2	28 128 8.7491 ix) is colum  asymmetric economics 0 0 86 0 1 96 asymmetric economics 0 1 96 1 2 0 2	0 37 2.53 ns=cited matrix) geogra 0 0 0 6 48 c matrix geogra 0 1 1 2 37 0 0 0 0	0 4 0.273 d, rows=c informati 0 0 0 0 4 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	144 47 3.213 ites political 0 8 9 5 0 111 0 1 34 political 1 1 2 0 0 0 111 0 0	3 135 9.2276  psycholog 0 1 0 130 2 134  psycholog 2 0 0 0 130	416 447 30.55366 sociology 0 21 1 6 0 1 2 416 447 sociology 14 10 28 0 0	485 1463 1463 1463 1463  row totals 532 129 96 48 5 34 134 447 1425 1425  row totals 549 116 128 50 7 29 137	33.15106 100

# Appendix X-5d

anti	ropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	532	0	0	0	0	0.5	1	7	540.5
communicat	0	99	0	0.5	1.5	4.5	1.5	15.5	122.5
economics	0	0	86	6	0	5.5	0	14.5	112
geography	0	0.5	6	37	0	2.5	0	3	49
info. & librar	0	1.5	0	0	4	0	0.5	0	6
politicalScier	0.5	4.5	5.5	2.5	0	11	0	7.5	31.5
psychology	1	1.5	0	0	0.5	0	130	2.5	135.
sociology	7	15.5	14.5	3	0	7.5	2.5	416	466
column total	540.5	122.5	112	49	6	31.5	135.5	466	

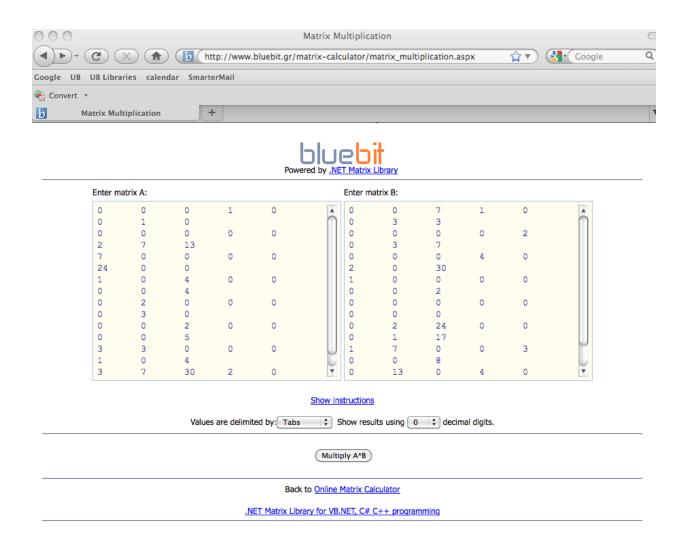
anth	ropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropolog	532	0	0	0	0	1	2	14	549
communicat	0	99	0	1	3	7	1	11	122
economics	0	0	86	12	0	7	0	27	132
geography	0	1	12	37	0	5	0	6	61
info. & librar	0	3	0	0	4	0	1	0	8
politicalScier	1	7	7	5	0	11	0	13	44
psychology	2	1	0	0	1	0	130	1	135
sociology	14	11	27	6	0	13	1	416	488
column total	549	122	132	61	8	44	135	488	1539 1539

				THE R. P. LEWIS CO., LANSING, MICH.	44
Matrix	product	JA*A	(post	mulitiplied	3)

8	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropology	283225	145	394	0	0	207	302	5829	290102
communicat	145				12				
economics	394	294	8328	444	0	1248	84	11808	22600
geography	0	37		1369	0	185			
info. & librar	0	12	0	0	16	0	4	0	32
politicalScien	207	948	1248	185	0	487	50	6042	9167
psychology	302		84	0	4	50	16911	1529	19272
sociology	5829	6250	11808	222	0	6042	1529	173539	205219
column total	290102	17994	22600	2257	32	9167	19272	205219	566643 566643

PIGUIA VIOUS	THE PLANT	HIMPHOTES	1						
	anthropology	communi	economics	geogra	info. & lit	politicalS	psycholog	sociology	row totals
anthropology	283024	0	0	0	0	532	1064	7448	292068
communicat	0	10307	93	265	298	208	370	9841	21382
economics	0	93	7478	1083	0	272	2	2950	11878
geography	0	265	1083	1575	3	86	14	2912	5938
info. & librar	0	298	0	3	26	3	136	33	
politicalScien	532	208	272	86	3	128	6	650	1885
psychology	1064	370	2	14	136	6	16912	1270	19774
sociology	7448	9841	2950	2912	33	650	1270	174341	199445
column total	292068	21382	11878	5938	499	1885	19774	199445	552869

Appendix Y-1: Matrix Multiplication using BlueBit online Calculator (screenshot)



#### Appendix Y-2: Example of Matrix Multiplication Output (using BlueBit)

# Online Matrix Multiplication - Results Page Powered by .NET Matrix Library

#### Matrix Multiplication Results

#### Input matrix A:

0.000	0.000	7.000	1.000	0.000	0.000	3.000	3.000
0.000	0.000	0.000	0.000	2.000	0.000	3.000	7.000
0.000	0.000	0.000	4.000	0.000	2.000	0.000	30.000
1.000	0.000	0.000	0.000	0.000	0.000	0.000	2.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	2.000	24.000	0.000	0.000	0.000	1.000	17.000
1.000	7.000	0.000	0.000	3.000	0.000	0.000	8.000
0.000	13.000	0.000	4.000	0.000	5.000	4.000	0.000

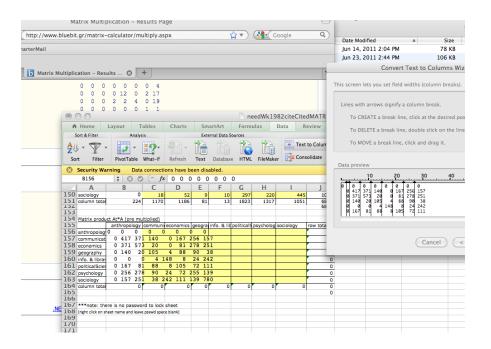
#### Input matrix B:

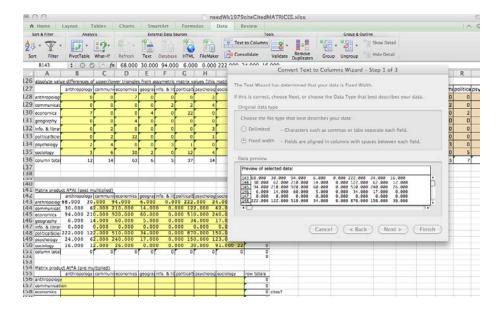
```
0.000
      0.000
             0.000 1.000 0.000
                                 0.000
                                        1.000
0.000
      0.000
             0.000
                   0.000
                          0.000
                                 2.000
                                        7.000 13.000
7.000
      0.000
             0.000
                   0.000
                          0.000 24.000
                                        0.000
                                               0.000
1.000
      0.000
             4.000
                   0.000
                          0.000 0.000
                                        0.000
                                               4.000
0.000
      2.000
             0.000
                   0.000
                           0.000
                                 0.000
                                        3.000
                                               0.000
0.000 0.000 2.000 0.000
                          0.000 0.000
                                        0.000
                                               5.000
3.000
     3.000 0.000 0.000
                          0.000 1.000
                                        0.000
                                               4.000
3.000 7.000 30.000 2.000
                          0.000 17.000
                                        8.000
                                               0.000
```

#### Matrix product A\*B

```
68.000
        30.000 94.000
                       6.000
                                0.000 222.000
                                              24.000
                                                      16.000
30.000 62.000 210.000 14.000
                                0.000 122.000 62.000
                                                      12.000
                                0.000 510.000 240.000
94.000 210.000 920.000 60.000
                                                      26.000
 6.000 14.000 60.000
                        5.000
                                0.000
                                      34.000
                                               17.000
                                                        0.000
 0.000
         0.000
                 0.000
                        0.000
                                0.000
                                        0.000
                                                0.000
                                                       0.000
222.000 122.000 510.000 34.000
                                0.000 870.000 150.000
                                                       30.000
24.000 62.000 240.000
                        17.000
                                0.000 150.000 123.000
                                                      91.000
16.000 12.000 26.000
                        0.000
                                0.000 30.000 91.000 226.000
```

Appendix Z: Text to columns (screenshot)





Appendix AA: Excel formulas in cite/cited binomial matrix

2009	ANTH	СОМ	ECON	GEOG	InfoLib	PoliSci	PSYC H	SOC	Tin (Intotals)
anthropolo gy	0	1	0	0	1	0	1	1	=SUM(B14 0:I140)
communic ation	0	0	0	0	1	0	1	1	=SUM(B14 1:I141)
economics	0	1	0	1	1	1	1	1	=SUM(B14 2:I142)
geography	0	0	0	0	0	0	0	1	=SUM(B14 3:I143)
info&libSci	0	1	0	0	0	0	0	1	=SUM(B14 4:I144)
politicalSci	0	1	1	1	1	0	1	1	=SUM(B14 5:I145)
psycholog y	1	1	1	1	1	1	0	1	=SUM(B14 6:I146)
sociology	0	1	1	1	1	1	1	0	=SUM(B14 7:I147)
Tout (OUTtotal s)	=SUM(B140 :B147)	=SUM(C140 :C147)	=SUM(D140 :D147)	=SUM(E140 :E147)	=SUM(F140 :F147)	=SUM(G140 :G147)	=SUM(H140 :H147)	=SUM(I140: I147)	=SUM(J14 0:J147)
Tlink (IN+OUT)	=SUM(B148 +J140)	=SUM(C148 +J141)	=SUM(D148 +J142)	=SUM(E148 +J143)	=SUM(F148 +J144)	=SUM(G148 +J145)	=SUM(H148 +J146)	=SUM(I148 +J147)	=SUM(B14 8:I148)
TlinkMaxO UT tlinkMaxIN	=MAX(0,B14 8-J140) =MAX(J140- B148,0)	=MAX(0,C14 8-J141) =MAX(0,J14 1-C148)	=MAX(0,D14 8-J142) =MAX(J142- D148,0)	=MAX(0,E14 8-J143) =MAX(J143- E148,0)	=MAX(0,F14 8-J144) =MAX(J144- F148,0)	=MAX(0,G1 48-J145) =MAX(J145- G148,0)	=MAX(0,H14 8-J146) =MAX(J146- H148,0)	=MAX(0,I14 8-J147) =MAX(J147 -I148,0)	

# Appendix AB: Excel formulas from citation percent spreadsheet

	Н	1	J	K	L	M	N	0	Р	Q	R	S
4		geography		information &		political science		psychology		sociology		
5	%ColumnTotal(	cites	%ColumnTotal(cit	cites	%ColumnTotal(cites)	cites	%ColumnTotal(ci		%ColumnTota		%ColumnTotal(cite	
	=(G6/G14)/0.01		=(I6/I14)/0.01	=Z6	=(K6/K14)/0.01	=AA6	=(M6/M14)/0.01		=(06/014)/0.		=(Q6/Q14)/0.	
7	=(G7/G14)/0.01	=Y7	=(I7/I14)/0.01	=Z7	=(K7/K14)/0.01	=AA7	=(M7/M14)/0.01	=AB7	=(07/014)/0.	=AC7	=(Q7/Q14)/0.	
8	=(G8/G14)/0.01	=Y8	=(I8/I14)/0.01	=Z8	=(K8/K14)/0.01	=AA8	=(M8/M14)/0.01	=AB8	=(08/014)/0.	=AC8	=(Q8/Q14)/0.	
9	=(G9/G14)/0.01	=Y9	=(I9/I14)/0.01	=Z9	=(K9/K14)/0.01	=AA9	=(M9/M14)/0.01	=AB9	=(09/014)/0.	=AC9	=(Q9/Q14)/0.	
10	=(G10/G14)/0.0	=Y10	=(I10/I14)/0.01	=Z10	=(K10/K14)/0.01	=AA10	=(M10/M14)/0.01	=AB10	=(010/014)/0	=AC10	=(Q10/Q14)/0	
	=(G11/G14)/0.0			=Z11	=(K11/K14)/0.01	=AA11	=(M11/M14)/0.01		=(011/014)/0		=(Q11/Q14)/0	
	=(G12/G14)/0.0			=Z12	=(K12/K14)/0.01		=(M12/M14)/0.01		=(012/014)/0		=(Q12/Q14)/0	
13	=(G13/G14)/0.0	=Y13	=(I13/I14)/0.01	=Z13	=(K13/K14)/0.01	=AA13	=(M13/M14)/0.01	= AB13	=(013/014)/0	=AC13	=(Q13/Q14)/0	
14	=SUM(H7+H8+H	=SUM(I6:I13)	=SUM(J6:J13)	=SUM(K6:K13	=SUM(L6:L13)	=SUM(M6:M13)	=SUM(N6:N13)	=SUM(06:013	=SUM(P6:P13	=SUM(Q6:Q:	=SUM(R6:R13	=SUM(O14+M14+K14+I14+G14+E14+C14)
15	=SUM(G14/S14)		=SUM(I14/S14)/0	1	=SUM(K14/S14)/0.01		=SUM(M14/S14)/		=SUM(014/S:			=SUM(D15+F15+H15+J15+L15+N15+P15+R15)
16												· ·
17												
18												
19		geography		information &		political science		psychology		sociology		
20	%ColumnTotal(c	cites	%ColumnTotal(cit	cites	%ColumnTotal(cites)	cites	%ColumnTotal(ci	cites	%ColumnTota	cites	%ColumnTotal(cite	
21	=(G21/G29)/0.0	=Y21	=(I21/I29)/0.01	=Z21	=(K21/K29)/0.01	=AA21	=(M21/M29)/0.01	=AB21	=(021/029)/0	=AC21	=(Q21/Q29)/Q	
22	=(G22/G29)/0.0	=Y22	=(I22/I29)/0.01	=Z22	=(K22/K29)/0.01	=AA22	=(M22/M29)/0.01	=AB22	=(022/029)/0	=AC22	=(Q22/Q29)/0	
23	=(G23/G29)/0.0	=Y23	=(123/129)/0.01	=Z23	=(K23/K29)/0.01	=AA23	=(M23/M29)/0.01	=AB23	=(023/029)/0	=AC23	=(Q23/Q29)/0	
24	=(G24/G29)/0.0	=Y24	=(I24/I29)/0.01	=Z24	=(K24/K29)/0.01	=AA24	=(M24/M29)/0.01	=AB24	=(024/029)/0	=AC24	=(Q24/Q29)/0	
	=(G25/G29)/0.0		=(I25/I29)/0.01	=Z25	=(K25/K29)/0.01	=AA25	=(M25/M29)/0.01		=(025/029)/0		=(Q25/Q29)/0	
26	=(G26/G29)/0.0	=Y26	=(I26/I29)/0.01	=Z26	=(K26/K29)/0.01	=AA26	=(M26/M29)/0.01	=AB26	=(026/029)/0	=AC26	=(Q26/Q29)/Q	
	=(G27/G29)/0.0			=Z27	=(K27/K29)/0.01	=AA27	=(M27/M29)/0.01		=(027/029)/0		=(Q27/Q29)/0	
28	=(G28/G29)/0.0	=Y28	=(I28/I29)/0.01	=Z28	=(K28/K29)/0.01	=AA28	=(M28/M29)/0.01	=AB28	=(028/029)/0	=AC28	=(Q28/Q29)/Q	
		=SUM(I21:I28			=SUM(L21:L28)	=SUM(M21:M28		=SUM(021:02				=SUM(Q29+O29+M29+K29+I29+G29+E29+C29)
	=SUM(G29/S29)		=SUM(I29/S29)/0	)	=SUM(K29/S29)/0.01		=SUM(M29/S29)/		=SUM(029/S2		=SUM(Q29/S2	=SUM(D30+F30+H30+J30+L30+N30+P30+R30)
. 21												

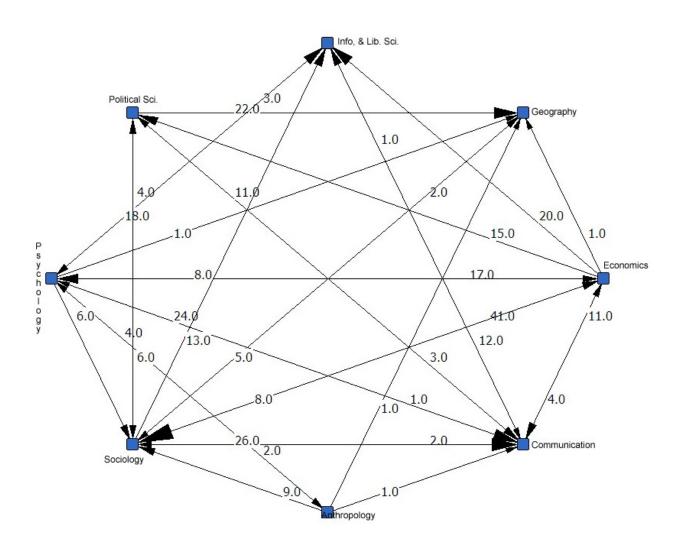
# Appendix AC: Excel formulas ratio spreadsheet

∠ A	В	C	D	E	F	G
1						
Citation totals/discipline ratios WI	TH					
i i	cites	cited	more likely to cite others tha	in to	more likely to be cited by o	hers th
anthropology	= '1979Percents'!C29	= '1979Percents'!C60	=(B5&","&C5)	=QUOTIENT(B5,C5)	=(C5&","&B5)	=QUOTIENT(C5,B5)
communication	='1979Percents'!E29	='1979Percents'!E60	=(B6&","&C6)	=QUOTIENT(B6,C6)	=(C6&","&B6)	=QUOTIENT(C6,B6)
economics	= '1979Percents'!G29	= '1979Percents'!G60	=(B7&","&C7)	=QUOTIENT(B7,C7)	=(C7&","&B7)	=QUOTIENT(C7,B7)
geography	= '1979Percents'  29	= '1979Percents'!160	=(B8&","&C8)	=QUOTIENT(B8,C8)	=(C8&","&B8)	=QUOTIENT(C8,B8)
info&libSci	='1979Percents'!K29	='1979Percents'!K60	=(B9&","&C9)	EQUOTIENT(B9,C9)	=(C9&","&B9)	=QUOTIENT(C9,B9)
politicalSci	='1979Percents'!M29	='1979Percents'!M60	=(B10&","&C10)	=QUOTIENT(B10,C10)	=(C10&","&B10)	=QUOTIENT(C10,B10)
psychology	='1979Percents'!029	= '1979Percents'!060	=(B11&","&C11)	=QUOTIENT(B11,C11)	=(C11&","&B11)	=QUOTIENT(C11,B11)
sociology	='1979Percents'!Q29	='1979Percents'!Q60	=(B12&","&C12)	=QUOTIENT(B12,C12)	=(C12&","&B12)	=QUOTIENT(C12,B12)
totals	=SUM(B5:B12)	=SUM(C5:C12)				
Citation totals/discipline ratios WI	T⊩					
	cites	cited	more likely to cite others tha		more likely to be cited by o	
anthropology	2233	2242	=(B19&","&C19)	=QUOTIENT(B19,C19)	=(C19&","&B19)	=QUOTIENT(C19,B19)
communication	242	188	=(B20&","&C20)	=QUOTIENT(B20,C20)	=(C20&","&B20)	=QUOTIENT(C20,B20)
economics	323	412	=(B21&","&C21)	=QUOTIENT(B21,C21)	=(C21&","&B21)	=QUOTIENT(C21,B21)
geography	188	160	=(B22&","&C22)	=QUOTIENT(B22,C22)	=(C22&","&B22)	=QUOTIENT(C22,B22)
info&libSci	298	240	=(B23&","&C23)	=QUOTIENT(B23,C23)	=(C23&","&B23)	=QUOTIENT(C23,B23)
politicalSci	137	150	=(B24&","&C24)	=QUOTIENT(B24,C24)	=(C24&","&B24)	=QUOTIENT(C24,B24)
psychology	263	298	=(B25&","&C25)	=QUOTIENT(B25,C25)	=(C25&","&B25)	=QUOTIENT(C25,B25)
sociology	466	460	=(B26&","&C26)	=QUOTIENT(B26,C26)	=(C26&","&B26)	=QUOTIENT(C26,B26)
totals	=SUM(B19:B26)	=SUM(C19:C26)				

# Appendix AD: Excel formulas for graph percent data

<b>A</b>	А	В	С	D	E	F	G	Н	
34 %s for asym	nmetric matrix WITHOUT s							check	
35		CITES/CITED	row%ofTotalCited					=B45-C36	<-=B45-C36
36 anthropology		=C36-B45	='1979Percents'!D61					=C45-C37	<=C45-C37
37 communication	1	=C37-C45	='1979Percents'!F61		CITES/CITED formula: =row%total-col%total			=D45-C38	etc.
38 economics		=C38-D45	='1979Percents'!H61		check formula: =col%total-row%total			=E45-C39	
39 geography		=C39-E45	='1979Percents'!J61	D				=F45-C40	
40 info. & library so	ience	=C40-F45	='1979Percents'!L61					=G45-C41	
41 politicalScience	,	=C41-G45	='1979Percents'!N61	1				=H45-C42	
42 psychology		=C42-H45	='1979Percents'!P61					=145-C43	
43 sociology		=C43-I45	='1979Percents'!R61						
44				_		<u>_</u>			
45 columns:%c	ofTotalCites	=L45	=M45	=N45	=045	=P45	=Q45	=R45	=S45
48 %s for asym	nmetric matrix WITH self-c				В			check	
49	meeric maerix wirm seir c	CITES/CITED	row%ofTotalCited					=B59-C50	<-=B59-C50
50 anthropology		=C50-B59	='1979Percents'!D46					=C59-C51	<=C59-C51
51 communication	1	=C51-C59	='1979Percents'!F46		CITES/CITED formula: =row%total-col%total			=D59-C52	etc.
52 economics		=C52-D59	='1979Percents'!H46		check formula: =col%total-row%total			=E59-C53	
53 geography		=C53-E59	='1979Percents'!J46	С				=F59-C54	
54 info. & library so	ience	=C54-F59	='1979Percents'!L46					=G59-C55	
55 politicalScience		=C55-G59	3.6144578313253					=H59-C56	
56 psychology		=C56-H59	='1979Percents'!P46	5				=159-C57	
57 sociology		=C57-I59	='1979Percents'!R46						
59 col%ofTotal	lCited	<b>~L5</b> 9	r=M59	r=N59	<b>*</b> =059	<b>№</b> P59	<b>r</b> =Q59	r=R59	<b>*</b> =\$59
60 notice poli s	sci flips when own citations				A				
62 63		negative#=they cite others more than the positive#=they are cited by others more							

Appendix AE: UCINET 2008 graph showing weighted edges



Appendix AF-1: Example of runstream file used by v56

```
strt05NC.prt
strt05NC.crd
              strat05-09NOscs,symMatx1-lwrTri,Rot
RUN NAME
N-CONCEPTS
                5
N-DATASETS
CRITERION PAIR n/a=citeCounts
CONLABELS
                ANTH
                COMM
                ECON
                GEOG
                INFLIB
                POLSCI
                PSYCH
                SOC
OPERATIONS
                COMPARISONS
SPECIFICATIONS
MAXVAL
              20000
END OF SPECIFICATIONS
OPTIONS
             23,24,22,18,8,9,12,13,14,15,16
READ DATA
(8F8.0)
                 0
                           0
                                    0
                                              0
                                                       0
                                                                11
                                                                           0
        0
                 0
                           4
                                    0
                                              0
                                                     219
                                                                 4
                                                                         17
                                                      14
        0
                 4
                           0
                                    0
                                              0
                                                                 1
                                                                         11
        0
                 0
                           0
                                    0
                                              0
                                                       0
                                                                           3
                                                                 0
                                                       2
                                                                19
                                                                         14
        0
                 0
                           0
                                    0
                                              0
               219
                                    0
                                              2
                                                       0
                                                                 5
                                                                         10
        0
                          14
                 4
                                    0
                                             19
                                                       5
                                                                 0
                                                                           8
       11
                           1
                                    3
        0
                17
                          11
                                             14
                                                      10
                                                                 8
                                                                           0
(8F8.0)
                 0
                           0
                                    0
                                              0
                                                       0
                                                                18
                                                                           1
                 0
                           0
                                    0
                                              0
                                                       0
                                                                 1
                                                                           0
        0
                 0
                                    1
                                                        2
                                                                           4
        0
                           0
                                              0
                                                                16
                                                       2
        0
                 0
                           1
                                    0
                                              0
                                                                 0
                                                                           8
        0
                 0
                           0
                                    0
                                              0
                                                       2
                                                                18
                                                                         15
                 0
                           2
                                     2
                                              2
                                                       0
                                                                 0
        0
                                                                         17
       18
                 1
                          16
                                    0
                                             18
                                                       0
                                                                 0
                                                                           5
        1
                 0
                           4
                                    8
                                             15
                                                      17
                                                                 5
                                                                           0
(8F8.0)
                 0
                           0
                                    0
                                              0
                                                       0
                                                                 1
                                                                           1
        0
                 0
                           0
                                    0
                                              0
                                                     229
                                                                14
                                                                         11
                 0
                                                                           0
        0
                           0
                                    0
                                              0
                                                        1
                                                                 0
        0
                 0
                           0
                                    0
                                              0
                                                       0
                                                                 0
                                                                           2
```

Appendix AF-2: Example of runstream file used by v56

0	0	0	0	0	0	40	17
0	229	1	0	0	0	1	3
1	14	0	0	40	1	0	4
1	11	0	2	17	3	4	0
(8F8.0)							
0	0	0	0	0	0	4	0
0	0	11	0	1	11	24	27
0	11	0	0	0	0	5	7
0	0	0	0	0	22	1	5
0	1	0	0	0	0	18	13
0	11	0	22	0	0	0	6
4	24	5	1	18	0	0	0
0	27	7	5	13	6	0	0
(8F8.0)							
0	0	0	0	0	0	19	0
0	0	2	0	42	13	10	40
0	2	0	0	0	4	10	9
0	0	0	0	0	4	1	17
0	42	0	0	0	2	59	28
0	13	4	4	2	0	5	4
19	10	10	1	59	5	0	4
0	40	9	17	28	4	4	0

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