

GeoHumanities GIS and Ethics

What is GeoHumanities

- It is a concept to explain regions using geography and other art forms
- Many use word maps
- Others use artwork
- But in general it all describes place

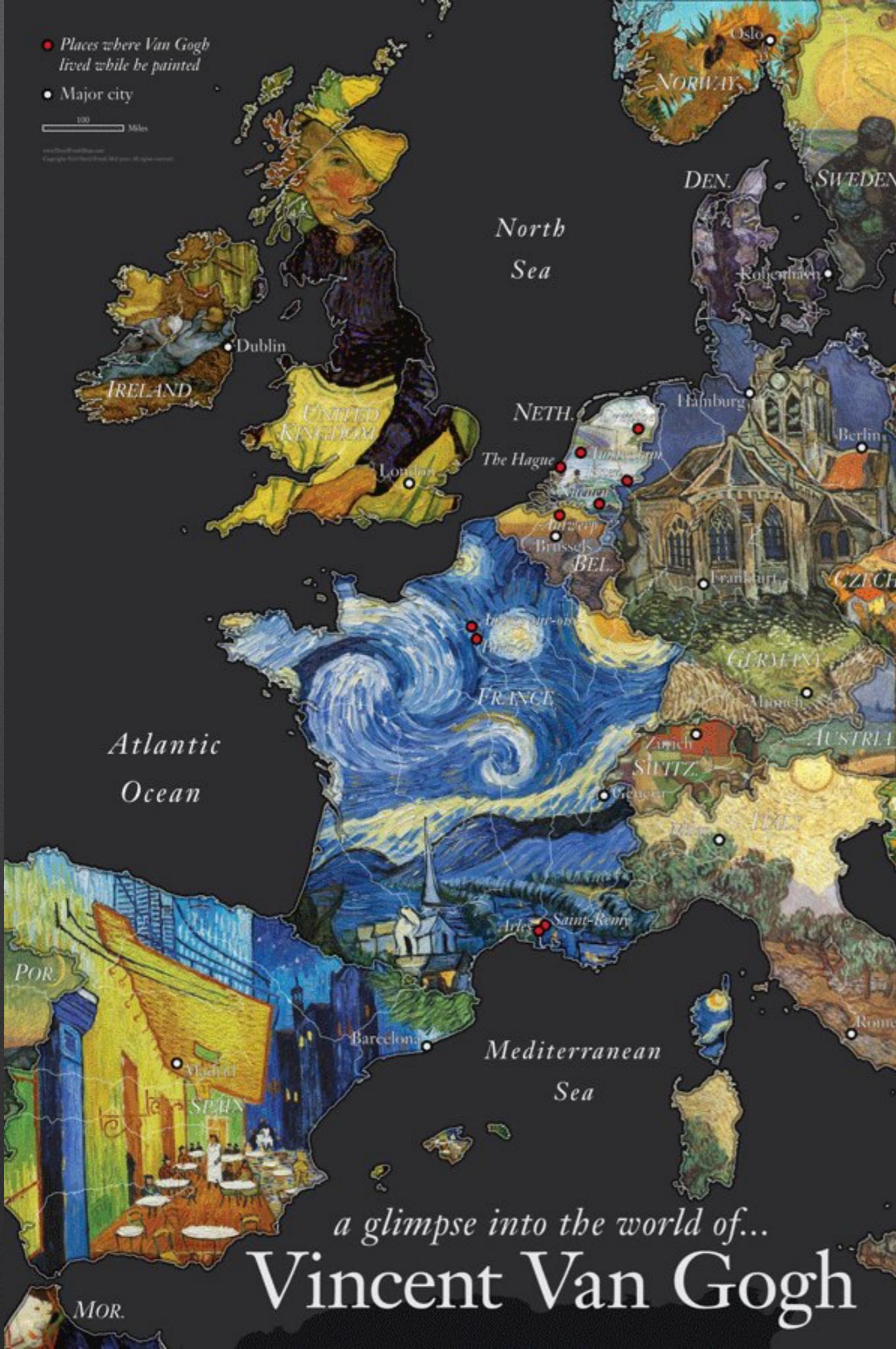
Howard Horowitz’s “wordmap”, a spectacular poem that ran in the New York Times in 1997



<http://wirednewyork.com/forum/showthread.php?t=9836&page=3>

Webber's 'map' of Amsterdam





[http://
blog.gisuser.com/
2013/07/15/esriuc-
map-gallery-peoples-
choice-winner-
inspired-by-van-gogh/](http://blog.gisuser.com/2013/07/15/esriuc-map-gallery-peoples-choice-winner-inspired-by-van-gogh/)

[https://
www.flickr.com/
photos/gisuser/sets/
72157634658904788/](https://www.flickr.com/photos/gisuser/sets/72157634658904788/)

Ethics of Geospatial Data

- Like all technology there are good uses and bad
- With geospatial technology most of the uses stem from invasion of privacy
- There are a few issues also with the data itself



[http://www.esri.com/news/arcnews/fall08articles/
implementing-gi-technologies.html](http://www.esri.com/news/arcnews/fall08articles/implementing-gi-technologies.html)

Privacy Concerns

- Having accurate information is very important but sometimes the information can be used for poor cases
- Tax assessors use property information for tax purposes and that information contains owner information
- A criminal who was arrested could potentially use that same information to find the arresting officer or judge's home
- There are cases where people can have their information opted out from being in the public record or others will just not include information that could be sensitive

How fine of a resolution do you need?

- Many people are concerned with Aerial Imagery for privacy concerns
- The biggest question is do you really need 1inch per pixel or more for many projects or is 6 inch or 12 inch fine enough
- Many people do not realize the temporal status of imagery but assume that there are live imagery



1 Inch Resolution

How fine of a resolution do you need?

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12 Inch Resolution

How fine of a resolution do you need?

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6 Inch Resolution

How fine of a resolution do you need?

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3 Inch Resolution

GPS Tracking

- This has been a hot topic that even the Supreme Court has heard
- In law enforcement there must be a warrant to attach a gps tracker to a vehicle
- Companies are adding gps trackers to their vehicles to monitor employee behavior
- Parents also have been adding gps trackers to the family cars when their kids start to drive



Bias of Geospatial Data

- Like any data, there could be bias based on the creator and it use.
- Geospatial data are often considered cold because of how it represents certain aspects
 - Dots on a map representing people
 - Can be anything though from a happy story or unhappy

Codes of Ethics

- GISCI (GIS Certification Institute) [http://www.gisci.org/
Ethics/CodeofEthics.aspx](http://www.gisci.org/Ethics/CodeofEthics.aspx)
- ASPRS [http://www.asprs.org/a/membership/
certification/appendix_a.html](http://www.asprs.org/a/membership/certification/appendix_a.html)
- Both mention maintain and provide the best product available with the least amount of bias

GISCI Code of Ethics

- This Code of Ethics is intended to provide guidelines for GIS (geographic information system) professionals. It should help professionals make appropriate and ethical choices. It should provide a basis for evaluating their work from an ethical point of view. By heeding this code, GIS professionals will help to preserve and enhance public trust in the discipline.
- This code is based on the ethical principle of always treating others with respect and never merely as means to an end: i.e., deontology. It requires us to consider the impact of our actions on other persons and to modify our actions to reflect the respect and concern we have for them. It emphasizes our obligations to other persons, to our colleagues and the profession, to our employers, and to society as a whole. Those obligations provide the organizing structure for these guidelines.
- The text of this code draws on the work of many professional societies. It is not surprising that many codes of ethics have a similar structure and provide similar guidelines to their professionals, because they are based upon a similar concept of morality. A few of the guidelines that are unique to the GIS profession include the encouragement to make data and findings widely available, to document data and products, to be actively involved in data retention and security, to show respect for copyright and other intellectual property rights, and to display concern for the sensitive data about individuals discovered through geospatial or database manipulations. Longer statements expand on or provide examples for the GIS profession.
- A positive tone is taken throughout the text of this code. GIS professionals commit themselves to ethical behavior rather than merely seeking to avoid specific acts. The problems with listing acts to be avoided are: 1) there are usually reasonable exceptions to any avoidance rule and 2) there is implicit approval of any act not on the list. Instead, this code provides a list of many positive actions. These explicit actions illustrate respect for others and help strengthen both an understanding of this ethos and a commitment to it.
- This code is not expected to provide guidelines for all situations. Ambiguities will occur and personal judgment will be required. Sometimes a GIS professional becomes stuck in a dilemma where two right actions are in conflict with each other or any course of action violates some aspect of this code. Help might come from talking with colleagues or reading relevant works such as those listed in the bibliography. Ultimately, a professional must reflect carefully on such situations before making the tough decision. Contemplating the values and goals of alternative ethical paradigms may be useful in reaching a decision: [ii]
 - View persons who exemplify morality as your own guide (Virtue Ethics)
 - Attempt to maximize the happiness of everyone affected (Utilitarianism)
 - Only follow maxims of conduct that everyone else could adopt (Kantianism)

GISCI Code of Ethics Continued

- I. Obligations to Society
 - The GIS professional recognizes the impact of his or her work on society as a whole, on subgroups of society including geographic or demographic minorities, on future generations, and inclusive of social, economic, environmental, or technical fields of endeavor. Obligations to society shall be paramount when there is conflict with other obligations. Therefore, the GIS professional will:
 - 1. Do the Best Work Possible
 - Be objective, use due care, and make full use of education and skills.
 - Practice integrity and not be unduly swayed by the demands of others.
 - Provide full, clear, and accurate information.
 - Be aware of consequences, good and bad.
 - Strive to do what is right, not just what is legal.
 - 2. Contribute to the Community to the Extent Possible, Feasible, and Advisable
 - Make data and findings widely available.
 - Strive for broad citizen involvement in problem definition, data identification, analysis, and decision-making.
 - Donate services to the community.
 - 3. Speak Out About Issues
 - Call attention to emerging public issues and identify appropriate responses based on personal expertise.

GISCI Code of Ethics Continued

- II. Obligations to Employers and Funders
 - The GIS professional recognizes that he or she has been hired to deliver needed products and services. The employer (or funder) expects quality work and professional conduct. Therefore the GIS professional will:
 - 1. Deliver Quality Work
 - Be qualified for the tasks accepted.
 - Keep current in the field through readings and professional development.
 - Identify risks and the potential means to reduce them.
 - Define alternative strategies to reach employer/funder goals, if possible, and the implications of each.
 - Document work so that others can use it. This includes metadata and program documentation.
 - 2. Have a Professional Relationship
 - Hold information confidential unless authorized to release it.
 - Avoid all conflicts of interest with clients and employers if possible, but when they are unavoidable, disclose that conflict.
 - Avoid soliciting, accepting, or offering any gratuity or inappropriate benefit connected to a potential or existing business or working relationship.
 - 3. Be Honest in Representations
 - State professional qualifications truthfully.
 - Make honest proposals that allow the work to be completed for the resources requested.
 - Deliver an hour's work for an hour's pay.
 - Describe products and services fully.
 - Be forthcoming about any limitations of data, software, assumptions, models, methods, and analysis.

GISCI Code of Ethics Continued

- III. Obligations to Colleagues and the Profession
 - The GIS professional recognizes the value of being part of a community of other professionals. Together, we support each other and add to the stature of the field. Therefore, the GIS professional will:
 - 1. Respect the Work of Others.
 - Cite the work of others whenever possible and appropriate.
 - Honor the intellectual property rights of others. This includes their rights in software and data.
 - Accept and provide fair critical comments on professional work.
 - Recognize the limitations of one's own knowledge and skills and recognize and use the skills of other professionals as needed. This includes both those in other disciplines and GIS professionals with deeper skills in critical sub-areas of the field.
 - Work respectfully and capably with others in GIS and other disciplines.
 - Respect existing working relationships between others, including employer/employee and contractor/client relationships.
 - Deal honestly and fairly with prospective employees, contractors, and vendors.
 - 2. Contribute to the Discipline to the Extent Possible
 - Publish results so others can learn about them.
 - Volunteer time to professional educational and organizational efforts: local, national, or global.
 - Support individual colleagues in their professional development. Special attention should be given to underrepresented groups whose diverse backgrounds will add to the strength of the profession.

GISCI Code of Ethics Continued

- IV. Obligations to Individuals in Society
 - The GIS professional recognizes the impact of his or her work on individual people and will strive to avoid harm to them. Therefore, the GIS professional will:
 - 1. Respect Privacy
 - Protect individual privacy, especially about sensitive information.
 - Be especially careful with new information discovered about an individual through GIS-based manipulations (such as geocoding) or the combination of two or more databases.
 - 2. Respect Individuals
 - Encourage individual autonomy. For example, allow individuals to withhold consent from being added to a database, correct information about themselves in a database, and remove themselves from a database.
 - Avoid undue intrusions into the lives of individuals.
 - Be truthful when disclosing information about an individual.
 - Treat all individuals equally, without regard to race, gender, or other personal characteristic not related to the task at hand.

ASPRS Code of Ethics

Code of Ethics of the American Society for Photogrammetry and Remote Sensing

Honesty, justice, and courtesy form a moral philosophy which, associated with mutual interest among people, should be the principles on which ethics are founded.

Each person who is engaged in the use, development, and improvement of the mapping sciences (Photogrammetry, Remote Sensing, Geographic Information Systems, and related disciplines) should accept those principles as a set of dynamic guides for conduct and a way of life rather than merely for passive observance. It is an inherent obligation to apply oneself to one's profession with all diligence and in so doing to be guided by this

Code of Ethics.

Accordingly, each person in the mapping sciences profession shall have full regard for achieving excellence in the practice of the profession and the essentiality of maintaining the highest standards of ethical conduct in responsibilities and work for an employer, all clients, colleagues and associates, and society at large, and shall . . .

- 1. Be guided in all professional activities by the highest standards and be a faithful trustee or agent in all matters for each client or employer.**
- 2. At all times function in such a manner as will bring credit and dignity to the mapping sciences profession.**
- 3. Not compete unfairly with anyone who is engaged in the mapping sciences profession by:**
 - a. Advertising in a self-laudatory manner;**
 - b. Monetarily exploiting one's own or another's employment position;**
 - c. Publicly criticizing other persons working in or having an interest in the mapping sciences;**
 - d. Exercising undue influence or pressure, or soliciting favors through offering monetary inducements.**

ASPRS Code of Ethics Continued

4. Work to strengthen the profession of mapping sciences by:

- a. Personal effort directed toward improving personal skills and knowledge;
- b. Interchange of information and experience with other persons interested in and using a mapping science, with other professions, and with students and the public;
- c. Seeking to provide opportunities for professional development and advancement of persons working under his or her supervision;
- d. Promoting the principle of appropriate compensation for work done by person in their employ.

5. Undertake only such assignments in the use of mapping sciences for which one is qualified by education, training, and experience, and employ or advise the employment of experts and specialists when and whenever clients' or employers' interests will be best served thereby.

6. Give appropriate credit to other persons and/or firms for their professional contributions.

7. Recognize the proprietary, privacy, legal, and ethical interests and rights of others. This not only refers to the adoption of these principles in the general conduct of business and professional activities, but also as they relate specifically to the appropriate and honest application of photogrammetry, remote sensing, geographic information systems, and related spatial technologies. Subscribers to this code shall not condone, promote, advocate, or tolerate any organization's or individual's use of these technologies in a manner that knowingly contributes to:

- a. deception through data alteration;
- b. circumvention of the law;
- c. transgression of reasonable and legitimate expectation of privacy.

Legal Requirements of Geospatial Data

- Geospatial data can be legally binding
- An example is the New York State Wetland Layer
 - DEC only regulates the wetlands on that layer
- Another is assessment boundaries
 - Tax Parcels
 - Special Districts
 - School
 - Fire
 - Sewer
- In NYS GIS data is even mentioned in the archive schedules

NYS Records Retention Schedule 8.[1008]e

- Geographic Information System (G.I.S.) street/road data file used as base maps for system operation, derived from official G.I.S. data maintained by other unit of local government:
- NOTE: Appraise these records for archival value. If G.I.S. data layers contain "value added" information on highways, roads, streets and transportation structures not found in the source files from which they were created, they may have secondary uses. Contact the State Archives for additional advice in this area.
- 0 years after no longer needed

NYS Archives

- Basically this talks about the data being live and will be superseded whenever a new version is created
- In NYS there is no need to archive the old data
- But there is the responsibility to maintain the highest quality dataset since it is the only one required

Assignment

- Choose an (1) ethical dilemma from <https://www.e-education.psu.edu/research/projects/gisethicsproducts>
- Then using the ASPRS and GISCI code of ethics explain in a write up how you would deal with the issue in your dilemma
- Due Nov 18th

Readings

- [https://www.gisci.org/Portals/0/About/
craig_UJ_vol5no2.pdf](https://www.gisci.org/Portals/0/About/craig_UJ_vol5no2.pdf)
- [http://www.directionsmag.com/webinars/
distinguished-geospatial-speaker-series-ethics-in-gis-
education-and-pr/467287](http://www.directionsmag.com/webinars/distinguished-geospatial-speaker-series-ethics-in-gis-education-and-pr/467287)