

Chapter 1 : Typologies and Taxonomies - SAGE Research Methods

From what have been said, taxonomy is a method of partitioning (with purposeful and identified parameters) and giving names while typology is again a process of partitioning (based on identified).

History[edit] Although the principles were not clearly articulated, the application of basic typological techniques can occasionally be found in the work of early modern antiquaries. As early as the s, John Leland successfully identified Roman bricks under the misleading designation "Briton brykes" at several different sites, distinguishing them from more modern bricks by size and shape. Hildebrand published a fundamental paper on the development of fibulae in the s using the typological method, whereas Montelius at the same time went to international congresses and published smaller papers on this method. Another early example is the typology published in by Flinders Petrie for the objects mainly pottery found in prehistoric Egyptian graves.

Statistical methods for creating a typology[edit] With the development of statistical techniques and numerical taxonomy in the s, mathematical methods including Cluster analysis , Principal components analysis , correspondence analysis and Factor analysis have been used to build typologies. These techniques provide a qualitative way to articulate the degrees of consistency among particular attributes. Correlation coefficients created by these methods help archaeologists discern between meaningful and useless similarities between artefacts.

Ceramic typology[edit] For cultures that produced pottery, archaeologists invariably spend a great deal of time defining ceramic "types. Ideally, the attributes used to identify types are ones that are identifiable with the naked eye, and are found on small fragments of pottery, so that the sorting of potsherds into types is quick and straightforward. By sorting potsherds in terms of types, archaeologists can examine a series of potsherds including those lying on a site surface and quickly suggest when and where the pottery was made. By extension, they can estimate when a prehistoric site was used, whether there are any traded pieces, and so on. The names assigned to the ceramic types are arbitrary. Thus, for example, the type "Flagstaff Black-on-white" was first defined using a collection from the vicinity of Flagstaff, Arizona, and its primary design attribute is the use of black paint on a white background. Non-archaeologists should be aware of the limitations of ceramic typology. All such typologies are abstractions, and fail to describe all of the variability in an artistic tradition. Professional disagreement over specifics is common. Changes in ceramic design did not happen overnight, and archaeological typologies tend to break continua of design evolution into arbitrary but highly useful units. Most archaeological dates are approximate. They documented their work in books. It is based on the physical characteristics and the external features of an artifact. Some examples of morphological and descriptive typologies would be categorizing artifacts distinctively on their weight, height, color, material, or whichever class the individual decides upon. So, the projectile points could be sorted by weight, height, color, material, or however the archaeologists prefers. One of the first national typology bases available on the web, The Projectile Points Typology Database , exhibits how the arrowhead artifacts found are classified among the fifty states by region, state, or nationwide. In this particular example, the arrowheads are classified by their shape. The categories consist of: Each category may also be narrowed down into subsequent ones. Archaeologist classified these arrowheads based on the projectile point shape.

Chronological typology[edit] This type consists of sequential ordering of archaeological artifacts merely based on form.

Functional typology[edit] Artifacts organized into this kind of typology are sorted by the use they serve rather than the looks they have or the chronological sequence they possess.

Stylistic typology is not to be confused with classification of certain styles, for that would just entail organizing artifacts based on how they look. This type of typology accounts for information told through the artifact. Pottery is an example of a stylistic typology because the artifacts provide information on artistic evolution.

Chapter 2 : [Taxonomy and typology: are they really synonymous?].

How do we group different subjects on a variety of variables? Should we use a classification procedure in which only the concepts are classified (typology), one in which only empirical entities are classified (taxonomy), or some combination of both?

Those who have heard me speak, or have listened to more than one or two of my podcasts will have heard me suggest that the word taxonomy not only rhymes with taxidermy but in the hands of many a KM practitioner produces the same effect. Now in some ways this is a bit unfair, there is a clear role for taxonomies in many fields including knowledge management. The problem is when they taken to excess or used inappropriately. The issue is the general issue with categorisation is a situation where there is substantial change. I remember in IBM the taxonomy in the KM system took three years to catch up with the use of story telling, and by the time it did there was a clear distinction between story telling and micro-narrative. There is no clear agreement on the definitions of typology and taxidermy, well there are in biology but as we move into other fields it gets harder. To be honest I am less concerned about the labels than I am about the distinctions. In a typology the dimensions represent concepts, they do not necessarily exist in physical reality although they can. As such typologies generate heuristics which are more adaptive under changing circumstances. On the downside the concepts can be arbitrary may not be exhaustive and can easily be subject to clashes of interpretation. A taxonomy on the other hand classifies things based on clear empirical characteristics and will have rules that allow determination of location. They have clear boundaries mostly determined by cluster analysis allow rapid decision making. On the downside, once a taxonomy is established if something does not fit, it will be made to fit as the taxonomy itself creates a filtering mechanism through which we filter observable characteristics. Now in policy and in knowledge management, as applied to decision making, distinctions are the main socially constructed, subject to large variation in differing contexts and are difficult to subject to empirical validation. Names of course play a major role in human sense-making and carry with them historical meaning and implications for action. Names carry with them power, as any reader of myths and legends will tell you. I experienced that problem in IBM. We were developing a whole new concept of research in services, modeled on medical science, in which concepts and practice co-evolved. That meant you sold consultancy around intractable problems, then applied sound theory in a series of safe-to-fail experiments, modify practice as you went along. This created a major issue for IBM. The irony was even greater as one of the reasons IBM had bought DataSciences my original company was precisely because we understood services both in terms of delivery and creation I must tell the story of the Genus Programme one of these days. The message is very simple rigid boundaries have huge value in static situations so taxonomies work. But where things are subject to rapid change and the possibility of encountering novelty is high they are plain dangerous. However we do need constructs to make sense of the world and that is where conceptual frameworks, or typologies come into their own. A Cynefin postscript Now Cynefin is a bit of a hybrid. It is a conceptual framework so at that level its a typology, but the dimensions are based on natural science so there is an empirical aspect but its not from any form of cluster analysis. Now this is useful but it can lead to some confusions if people seize on it and make it a two by two matrix. It can, and is used as such but properly used it is a lot more. Some quick points here and I plan some more posts on aspects of this: Cynefin has five domains; simple, complicated, complex, chaotic and disordered. The disordered domain recognizes the essential inauthenticity to any typology of human experience so disorder is the state of not knowing which of the domains you are in and you may be in several. Disorder is frequently left out which is a pity. The chaos domain is always a transitional state and Cynefin is as much about movements between domains dynamics as it is about the domains themselves. Its very important to use the constrain based definition of the domain as that allows you to understand how to move between them. If there are no constrains its chaotic. If the constraints are severe enough to make agent behaviour predictable then its ordered, if the nature of those constrains are self-evident then its Simple, if they require analysis then they are Complicated. If the constrains and agents co-evolve then its Complex. That means that changing the constraints can change the nature of the system and consequently the nature of

situational assessment and decision making. Simple is next to Chaotic as complacency, or inappropriate application of constraints which can lead to catastrophic failure again movement. Ideally the framework is socially constructed, the boundaries emerge from the data, ideally with the four points method I described in my paper on the history of Cynefin. However, it can also be used as a categorisation framework where boundaries precede the data and the HBR article largely focuses on this aspect as it was an approach more familiar to the readers. So Cynefin is a hybrid. But it's not a pure hybrid as the dimensions themselves have an empirical base in the natural sciences. It can also be used as a taxonomy, but with care. Again, you see the medical model of research, in which soundly rooted science is experimented with in practice both to modify the theory and co-evolve sound practice. A post post script on the use of Cynefin by others. Now as Cynefin has gained in popularity, recently getting an award as one of the 50 most cited papers in , it has been subject to a lot of use, modification and some misuse. It is not wrong but neither is it fully right as it ignores the disordered domain and to some extent the importance of dynamics. All well and good, Joseph Pelrine has done some excellent work and published papers using the basic Cynefin domains and there are many other examples of useful developments and alternative perspectives; too numerous to mention. At the other extreme and about the only occasion on which I have ever intervened I have seen the name and shape taken and redefined while retaining the name. Now this has only happened with one individual and I now confine myself to patiently making the point from time to time that people should create their own names for their own models rather than trying to catch a lift on a more powerful brand calling it Cynefin-like really is pathetic by the way. It seems that anything with four categories from the OODA loop different versions of OODA would apply in each domain to Causal Layered analysis clearly a complicated domain tool is matched category for category and while such might be explained away as a mash up in the main I think it's more of a hashup. Variations are used by many others sometimes with acknowledgement, sometimes without, sometimes as a parallel invention. All part of the rich tapestry of ideas. However, I do think I have some authority over the use of those terms within the basic form of the Cynefin representation and even more so when the Cynefin name is used.

Chapter 3 : Typologies and Taxonomies in Social Science - SAGE Research Methods

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Smith Policy Studies Journal, Sep There are two basic approaches to classification. The first is typology, which conceptually separates a given set of items multidimensionally. The key characteristic of a typology is that its dimensions represent concepts rather than empirical cases. The dimensions are based on the notion of an ideal type, a mental construct that deliberately accentuates certain characteristics and not necessarily something that is found in empirical reality Weber, As such, typologies create useful heuristics and provide a systematic basis for comparison. Their central drawbacks are categories that are neither exhaustive nor mutually exclusive, are often based on arbitrary or ad hoc criteria, are descriptive rather than explanatory or predictive, and are frequently subject to the problem of reification Bailey, A second approach to classification is taxonomy. Taxonomies differ from typologies in that they classify items on the basis of empirically observable and measurable characteristics Bailey, , p. The article then goes on to explain the difficulty of applying the more strict taxonomic classifications to, in this case, policy: Scholars such as Steinberger , T. Smith , and, especially, Schneider and Ingram make a persuasive case that the very concept of a policy category is a social construction, something rooted in individual perceptions. What distinguishes a redistributive from a regulatory policy is an individual judgment, not an observable, policy-specific equivalent to height or length. From Association for Linguistic Typology mission statement: Typology as a tainted term and concept in modern biology. Essentialism assumes that the diversity of inanimate as well as of organic nature is the reflection of a limited number of unchanging universals [cf. The link from essence to type is made as follows; cf. Here, the intended criticism is rather explicit. Only implicit, though, are criticisms like those that we both heard from our own ca. Yet taxonomy has long been an extremely positive term in modern biology and the one positively evaluated use of type in biology involves type specimens, which are employed taxonomically! Taxonomy is often employed synonymously e. And, as for the importance of systematics: The entire geological chronology hinges on the correct identification of the fossil key species. Discuss this with me on Twitter or suggest a change.

Chapter 4 : Typology or Taxonomy? - Cognitive Edge

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Chapter 5 : Typology versus taxonomy

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Chapter 7 : Typologies and Taxonomies : Kenneth D. Bailey :

From "Typologies, taxonomies, and the benefits of policy classification" by Kevin B. Smith (Policy Studies Journal, Sep). There are two basic approaches to classification.

Chapter 8 : SAGE Books - Typologies and Taxonomies

Typology and taxonomy constructions are increasingly used as a method of analysis in health services and public health research. Although taxonomy and typology have different definitions in the dictionary, these terms are often used synonymously.

Chapter 9 : Typology (archaeology) - Wikipedia

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