“Without the assumption of the existence of uniformities there can be no knowledge” Discuss this claim with reference to two areas of knowledge.

Uniformity underlies thoughts, theories and models that help us form complex systems of knowledge. Uniformities are fundamental ideas, concepts and axioms that are truthful in the past and remain consistent at present and in the future. Assumptions are viewed as the initial act of taking a stance without the process of discovering and proving presented knowledge. As the prescribed title suggested, the usefulness in assuming uniformity in a framework as a shortcut to derive knowledge is immense. Without the premise that all members in the group behave a certain way, multiple extraneous variables hinder the communication and production of knowledge. However, by overlooking the individual differences when homogenizing members, how can we ascertain that knowledge derived from and rendered based on these assumptions are valid and applicable in real-life? Thus, this essay seeks to explore the extent to which uniformity is necessary in facilitating understanding and producing valid knowledge in the field of Human Sciences and The Arts.

In the Natural Sciences, some of the key objects of study are fundamentally axiomatic in nature, demonstrating a limited number of measurable variables. In his book, Leon M. Lederman suggests that “[t]he history of atomism is one of reductionism – the effort to reduce all the operations of nature to a small number of laws governing a small number of primordial objects” (Lederman & Teresi, 2006). However, in the Human Sciences, we are not only dealing with “small number of primordial objects” but rather a large, complex system with interlinked variables that can be difficult to isolate, measure or model. This leads us to ask “to what extent is the assumption of uniformities increasingly limited as the systems become more complex?”
The Human Sciences ultimately seeks to understand and “develop laws and theories to explain [human] phenomena” (Lagemaat, 2015). These laws and theories are derived from empirical evidence from real-life or experimentation, often by correlation. Models are built upon this to either help visualize concepts or to “describe an abstract or hypothetical behaviour” (Rogers, 2012) that makes concepts tangible by simplification using inductive reasoning. This questions the generalizability of the knowledge that is later deductively reasoned from the models, aware of the uniform assumption that all members in the framework behave the same way. In Psychology, which studies human behaviour, the intrinsic uniqueness of human characteristics creates overwhelming variables that potentially render the production of new knowledge. For this, our dependency on the assumption of uniformities is greater to formulate a comprehensive and predictive model.

One example that demonstrates our reliance upon the assumption of uniformities is through the construction of model for culture. Hofstede defines culture as “a collective programming of the mind which distinguishes one group from another” (Jones, 2007, p. 2). This indicates that culture is a complex system, whereby elements such as Geography and History interact to form culture, therefore a reductionist approach would not be appropriate. Hofstede’s cultural dimension model theory is a longitudinal statistical study where he seeks differences between cultures (Hofstede, 2011). For instance, Hofstede assumes that the U.S.A is a highly individualistic national culture (Hofstede, 2011) – loosely-knitted social framework – disregarding the diverse and fragmented culture within.

The uniformity that governs Hofstede’s model is cultural homogeneity and the assumption that all individuals in the culture behave the same. Hofstede stated that individuals do not share all “subcultures” but most shared a common national culture (McSweeney, 2002) and only by presupposing that the domestic population is a homogenous whole can general conclusions be made (Jones, 2007). Cultural dimension is useful in Psychology because it measures the degree of cultural
bias and equally usefully in Economics where it is used to produce predict consumers’ behaviours in different cultures.

Nevertheless, as the cultural dimension model is rooted in the assumption of homogeneity, the analysis is constrained by the characters – the outcome is affected by arbitrariness (McSweeney, 2002) such as individual differences. In the ideal world where models, constants and knowledge is derived from, randomness and other attributes of reality are often ignored for convenience. Furthermore, we are likely to commit confirmation bias whilst extracting knowledge from models through deductive reasoning – taking the model for granted and adhering to the assumption. This limitation lies in our inability to recognise the significant variances that the model negates and inability to validate the uniformity in complex systems. Despite facilitating the production of new knowledge, the assumption of uniformity undermines the validity of knowledge as individual differences are overlooked.

Regardless, without this assumption, some concepts are too abstract to study. In cognitive psychology, Multistore Model of Memory (Atkinson & Shiffrin, 1968) visualises the process of memory, whereby there is no physical proof that different stores exist, the only possible way is to measure the behavioural outcome. Psychologists assumes that everyone follows the same cognitive process – rehearsal transfer short-term to long-term memory. This model established the basic understanding of the structure and process of memory to allow further expansion, which shows that the assumption of uniformity is potent in the development of models in abstract and unobservable concepts.

Thus, the more complex the system, the more we rely on the models and assumption of uniformities to produce knowledge but the validity of knowledge decreases. The assumption of uniformity is useful in the process of forming inductive reasoning but the validity of the backwards deductive reasoning is limited.
As aforementioned, the assumption of the existence of uniformity is necessary in approaching systems with increasing complexity. Thus, within an area with a somewhat subjective nature, such as The Arts with infinite interpretations, there must be uniformity in methodology in order for the writers to successfully convey intended meaning and sensation. However, this raises the question whether The Arts, which rely on creativity and imagination, can be chained to the uniformity of interpretation in order to render robust knowledge. This raises the question “to what extent does the assumption of uniformity restrain imagination thus limiting the production of new knowledge?”

Arthur Symons stated that “[s]ymbolism would have no value if it were not seen also, under one disguise or another, in every great imaginative writer” (Yeats, 1900). Symons implied that the comprehension of literary works bases on the understanding of language and preconceived ideas. Language is rule-governed in grammar and meaning-bounded (Lagemaat, 2015), so, writers assume the audience understands the semantics using the same rules, which leads to the effective transfer and accumulation of foundational knowledge to further extend. Without this assumption of uniformity in interpretation, the communication of ideas, complex or not, cannot be established. All literary devices function the same, by presuming an image or reference possess the same meaning to readers; readers, in turn, surmise connotation and significant with the same principle, create link and enhance understanding of texts. This same principle leads to creation of allusion – “indirect reference to something supposed to be known, not explicitly mentioned” (YourDictionary, n.d.).

The personal knowledge gains from understanding allusion and symbolism weaves its way to daily language and propagated to the shared knowledge system. For example, The Sword of Damocles originates from Greek mythology, where King Dionysius offered to switch place with Damocles, a courtier, to experience his power and authority. Ultimately, he realised that there is a sharp sword hangs above his head by a single horse-hair (Andrews, 2016). Thus, the term “having a sword of
Damocles hanging over your head” encapsulates this fear in a threatening situation; readers, pre-exposed to the concepts, instantly connect two situations together. This idea of semantics is seen in other areas of knowledge where a term is loaded with years of foundational knowledge that becomes part of language system – Darwin’s evolution theory. However, the use of literary devices requires cross-referencing between concepts, writers rely on the assumption that audience uniformly understands ideas to maximise the effect.

However, as The Arts is innately subjective with open-interpretation nature, there is no guarantee that the exact semantic of a symbol is replicated to all audiences. According to the combination theory, creativity consists of “taking existing ideas or elements and combining them in new ways” (Lagemaat, 2015); hence, symbols and allusion, when coupled with new characters and context, could produce something original. This is clearest seen in Visual Arts where artists have more freedom to use art to educate and communicate. Take Salvador Dali’s surrealist painting “The Persistence of Memory” (figure 1.), the use of melting clocks as central imagery universally represents the trope of time or ‘running out of time’ that we understand from existed uniformity.

But this existing trope combines with surrounding images – desert, lack of people, colour scheme – generate a dreamy atmosphere to present the “useless, irrelevant, and arbitrary” (Gottesman, 2016) concept of time in daily life. Dali utilised the assumption that people uniformly associates ‘clock’ to ‘time’ and demonstrate uniquely create to create a novel sensation.
Thus, to an extent, uniformity restrains imagination in interpreting symbol from the establishment of norms and rules. As art educates and communicates, rather than restraining, it facilitates the understanding and create a platform for artists to develop or even reject to produce new ideas – uniformity creates an opportunity to deviate from convention.

As the prescribed title suggests, the assumption of the existence of uniformity is essential for the production of knowledge by providing a bedrock for successful communication and deriving knowledge inductively and deductively. In both the Human Sciences and The Arts, uniformity provides a fixed genesis that everyone and everything behaves in the same manner to facilitate transmission and understanding to further extent complex systems. With its eminent handiness, assumption of uniformity is limited to reductionist systems and wrong assumption in approaching complex system leads to wrong conclusion. Aware of this limitation, instead of taking the assumption
of uniformities for granted, one must be cautious of its hindrance, to think “outside the box” with other area of knowledge to develop valid and robust knowledge.

Word count: 1600

References


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