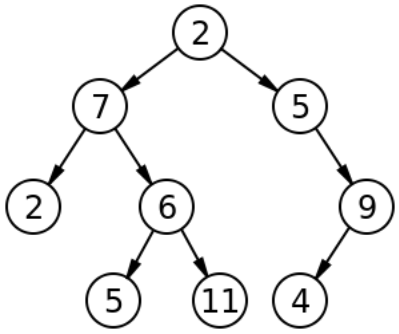
Competence without Comprehension

Posted on April 14, 2014 by Mahesh Sreekandath

Trees

An organizational structure is closely related to the overall intend of a particular machinery, and modern electronic machines are essentially formed by a hierarchical interplay of simpler sub-systems. Each part intended for a specific purpose, but together they accomplish a more complex task. Such machines can be represented by a tree structure, leaf nodes being associated with input sensors detecting external signals or one of the sinks working as the output link to the external world. Intermediate nodes implement various core aspects of the machine and the relative position of various internal nodes within this hierarchy depends on its own functional significance with regards to the whole system. In the case of a vehicle, the engine will be the root node while the drive-train might represent specific parts of the intermediate nodes and the wheels and steering become part of the leaf nodes. Note that the internals of the engine on its own might form a similar tree structure, so recursively we can apply this logic to explore various abstractions or sub-systems present within an organism.

Considering that the spare parts of a car might be used with multiple makes and models, the competence of these internal nodes need not in turn depend on its awareness of the larger purpose it serves. An organism intended for catering to only a quantified set of goals can be optimally sculpted by such a hierarchical structure, because here the sub-systems and their relative positions within the tree organization will be based on how their own abstract capabilities contribute to achievement of the overall goals.

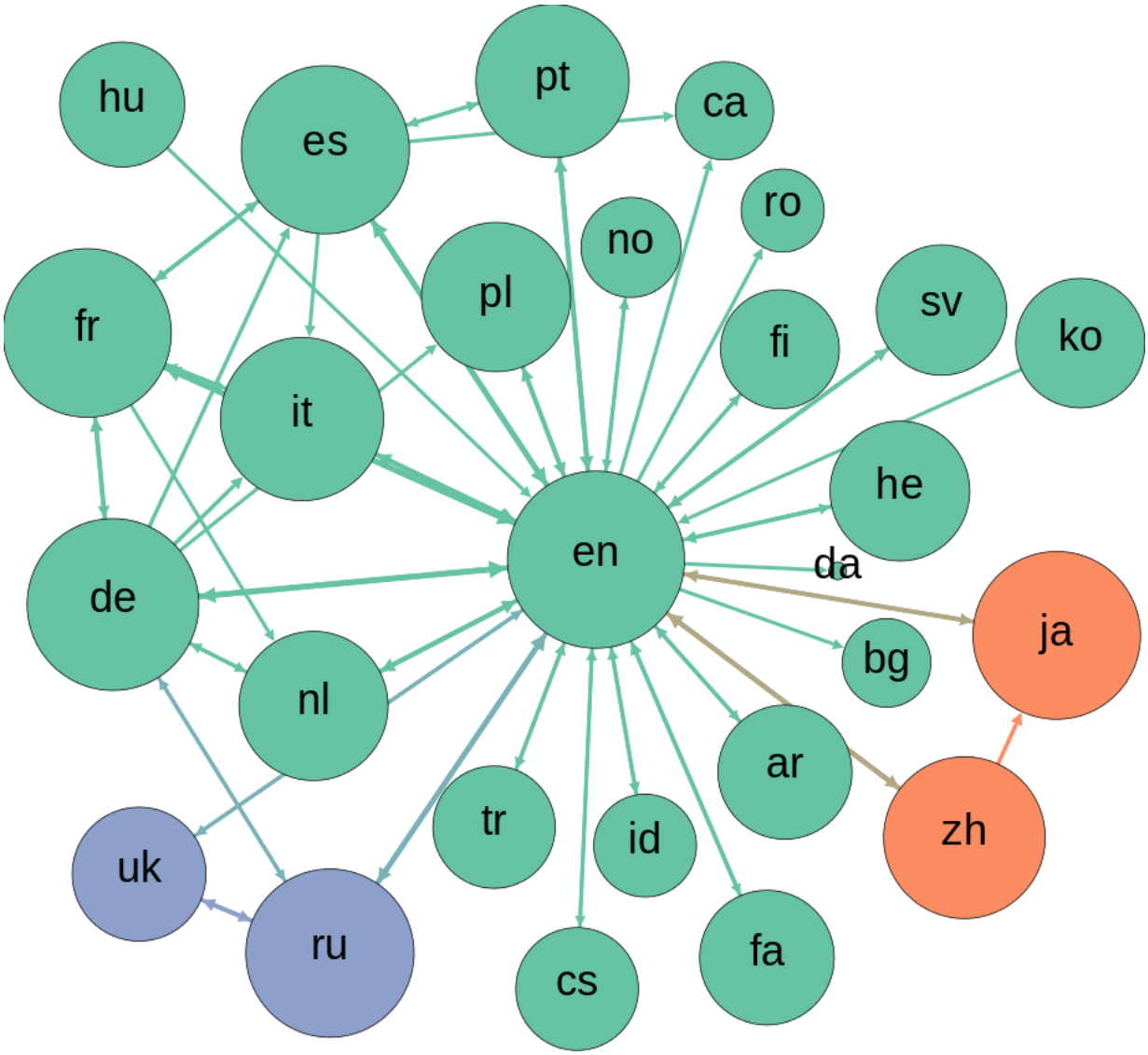


Tree organization can be associated with most computer software architectures and highly integrated semiconductor hardware designs. These are complex machines which integrate generic computational modules and make them talk to each other by connecting them via various communication channels. Here also the choice and relative positioning of these modules within the organism depends on the overall larger purpose and similarly these individual modules on their own need not be aware of this fact. A persistent hierarchical structure is implausible for a machine which lacks concrete quantified set of ends and instead exist to serves an infinite

number of individual wishes, so an engine like catallaxy cannot have a persistent organizational structure.

Graphs

Market comprises of several individuals & institutions meshed in a web of causal relationships where every entity is connected to a large number of other active entities. A graph is one of the structural classifications capable of representing the attributes of such a complex network. Here the individuals or groups of individuals (corporations) can be symbolic of the nodes and the contractual relationships among them form the edges. Similar to a machine we can recursively explore such a graph and comprehend how its nodes might be inherently structured. How they in turn might be comprising of multiple other nodes and what their classification might be (binary tree, ordered tree etc). A large firm will be usually of a tree structure because quite like a machine they are optimally designed for servicing a quantified set of goals. Perhaps market order can be imagined as an infinitely large graph with islands of trees.



Vertexes (nodes) form edges between them by engaging in a transaction, here an exchange happens when there is a value addition for both the parties involved. Value is indeed a subjective term and monetary gains are merely a subset here, for example an individual might prefer to transact with a locally owned business than a big corporation even though that might involve a relatively less monetary gain. Catallaxy is constantly engaging in creation and destruction of millions of such connections among its nodes, only those nodes who offer transactions which constantly accrue value for sufficiently large number of other nodes remain attractive while those which stagnate or worsen are culled.

Agile Organization

Resources are always scarce, in fact only time will tell whether it was prudent for me to invest time on this post instead of doing something else. Attributes like human preferences, climate conditions and natural resources are all evolving continuously and so are our challenges. We are indeed attempting to solve a problem with an uncertain premise. Only ideal we can attempt is value addition while remaining within the margins of various resource and circumstantial constrains. An evolving environment mandates a constant alteration in our methods and such an evolving premise seek an equally adaptive solution.

A catallaxy does not possess a constant prioritized set of aggregate ends, hence the resource allocation cannot be predetermined or predicted. Scope is open-ended and limited only by the resources at our disposal. Hence it is incompatible with a rigid tree organization. Unlike applied sciences the challenge in economics is not about prioritizing requirements and then designing an optimal structural arrangement of resources but it is to solve an abstract coordination problem.

Gist

Markets exist for individuals to seek value addition, some might value giving charitable donations, others might be seeking a specific productivity tool or all they might want is freshly brewed cup of coffee. Information is dispersed and the primary problem is about discovering the best plausible alternatives for the employment of our limited resources. An unemployed individual needs to discover the ideal job or that training program best suited for his particular talents or financial constraints. In other words he needs to discover how and to whom he can add value. Abstract problem is indeed about discovering the most productive return for our investments. In some cases this investment might be just time, it's about coordinating such investments with opportunities within a evolving order. It's about solving the Hayekian knowledge problem.

Institutions should aid in the resolution of the abstract knowledge problem, aiming at specific ends will influence structural arrangement of material resources. Every resource arbitrarily diverted via institutional means will at the same time inhibit its employment for alternative productive ends and impedes with our ability for adapting to constantly changing circumstances. Enforcing a particular set of material goals will translate to structural rigidity which is incompatible with an evolving premise, in other words, constraints placed on edge formations between various nodes will only exacerbate knowledge problem by aligning us closer to the tree structure and further away from the agile and adaptable graphs.

Notes:
— Title of this post borrowed from here
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