

Intangible Knowledge

The Culture of Knowledge within Organisations from the Perspective of the Sociological Systems Theory

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ABSTRACT

Knowledge can get lost when workers leave the company, or it may be missed when new challenges emerge. Specific knowledge may be important for the value-added chain of an organization, and its inaccessibility could be a problem. The work on this paper seeks to juxtapose this problem with the concept of intangible knowledge. This concept is developed as an observation model for particular situations within organisations, in which specific, useful, knowledge is no longer available and is being missed.

This paper considers a potentially useful way to deal with absence of such knowledge by using the social science approach. In addition to social systems theory, the communication and cultural science view was selected here to propose a new understanding of the function of knowledge as a communicational or cultural parameter within structures and meanings of a social system. This should facilitate a better perception of the actions and dynamics inside organizations regarding knowledge or the lack thereof.

Keywords: organizational decisions, intangible knowledge, knowledge management, organizational communication, non-knowledge.

1. INTRODUCTION

Organisations no longer find it sufficient to have a concept of knowledge that regards knowledge as property, as a product, or as an entity. Knowledge Management Systems reached their zenith already in the late 1990s [1]. While good (information) systems are being used successfully even today, a management of knowledge, as intended by the original idea of Knowledge Management, seems to be the exception. In a study for which 50 organisations were queried, David de Long and Liam Fahey claim that organisational culture represents a major obstacle for the success of Knowledge Management Systems [2].

This shows that the importance of organisational culture for concepts such as 'Knowledge Sharing' or 'Knowledge Creation' was soon realised. However, the difficulties in integrating economic models with the concept of organisational culture became obvious, just as the complexity of developing these integrations into effective Knowledge Management models was soon apparent [3].

These challenges arose because the Knowledge Management idea started out with a purely economic conception of knowledge. It has been regarded as a production factor at the latest since end of the 1960s – overlapping with Peter Drucker's definition of knowledge being the 'fourth factor of production'

besides land, labour and capital [4]. As it became clearer that a definition of knowledge that is only based in economics cannot encompass all the different types of knowledge that are important to the value chain, researchers looked for additional categories of knowledge. The concept of 'tacit knowledge' nourished hopes that it would be applicable to all remaining knowledge-related problems. Fairly soon, however, even the creators of the SECI-model¹ recognised the existence of a component of knowledge that was not covered satisfactorily. In response to this, concepts such as Phronesis (here in the meaning of 'Social Structure Wisdom' or 'Group Wisdom') and Group Tacit Knowledge [5] were developed. Other authors preferred to improve understanding by distinguishing between implicit knowledge and tacit knowledge [6]. Enthusiasm for Knowledge Management as an idea has sensibly diminished in the meantime, and more organisations are seeking other paths to modern solutions for their (knowledge) problems. The systemic consulting approach is one of those paths.

Indeed it is difficult, on one hand, to regard knowledge as (trans-) portable, shareable, storable, or even as organisational capital, and on the other hand, to see how that knowledge has a life of its own, how it mutates, is variously interpreted and understood, and how it yet seems to be tied to particular persons, despite all efforts to make such knowledge available to all. An example of this is the salesperson passing his knowledge to others, and yet those others lag behind in the successes of their sales efforts. Until now, the quest for an escape from this dilemma led inevitably examination of organisational communications and organisational culture as the key to answering Knowledge Management problems [7]. But if 'culture' is defined through the aid of communication theory, new aspects open themselves, along with new fields of action for organisations. As Thomas Bauer defines it: culture is the reservoir of meaning for communications and acts as the social subjunctive for the communication of meaning. Communication is the speech reservoir for the culture and acts as the social indicative of meaning [8]. If meaning and communication influence knowledge within organisations, but these organisations build up on and act with an economic notion of knowledge, discord between (knowledge) expectations and (knowledge) results must necessarily occur.

This paper presents a new conceptual model, incorporating current developments in social studies and communication theory, tackling the primary problem of Knowledge Management – the lack of required knowledge at the proper time and place [9]. It attempts to merge knowledge concepts that were created within current thought models into a reflection model created specifically for dealing with intangible

¹ SECI' (Socialization, Externalization, Combination, Internalization) represents a model for the conversion of tacit to

knowledge and, in this way, to offer alternatives to concepts such as implicit knowledge, knowledge transfer, or related terms. The model being constructed in this paper aims to propose a new angle from which organisations may more easily engage in self-observation and self-reflection, independent of the manner (culture) that those organisations choose for dealing with knowledge and the non- knowledge.

To summarise, a proposal is presented to find the answer to the following question: What properties must a concept of intangible knowledge have, to be understood as a quality factor of an organisational culture and, at the same time, to contribute to the acceptance of existing cultural traits within an organisation?

2. KNOWLEDGE AND NON-KNOWLEDGE

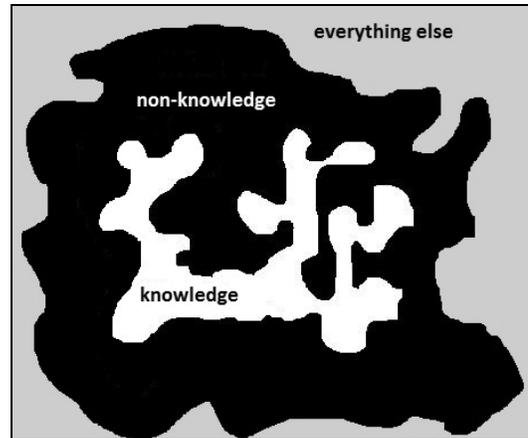
Missing knowledge is, as a first approximation, a form of non-knowledge. It is in this role that missing knowledge is targeted by Knowledge Management. Many organisations experience a need to manage knowledge, to store and extend it, a need that points to an increasing consciousness of non-knowledge in these organisations. Furthermore, for some years now organisational plans have been explicitly mentioning and paying attention to non-knowledge.

Knowledge and non-knowledge should not be understood as opposites in this context, but rather as related concepts, as non-knowledge is an important and integral part of the structure of knowing and knowledge. (Fig. 1 illustrates that knowing takes its shape only as it stands in contrast to non-knowledge.) If there is knowledge of or about a Thing, that knowledge is a model of the Thing. The knowledge is not this Thing, but it does represent the Thing. Everything else that is part of the Thing but that could not be included in the knowledge-model is non-knowledge [10]. Thus, knowledge is fundamentally a knowledge-model, and being a model, it is a simplification, a reduced structure, an effigy of a Thing. To quote Alfred Korzybski, "A map is not the territory" [11].

Non-knowledge is also of great importance in the realm of communications: It serves as a motive and instigation for communicating and is one of the most important sources of continued communication, and it also serves to maintain social systems. Using different words but covering the same concepts, Karl-Heinz Brodbeck describes non-knowledge as 'the knowledge of others'.

Viewed from this angle, non-knowledge can be regarded as a resource. Niklas Luhmann comments that if one applies the term uncertainty to the difference between knowledge and non-knowledge (and thereby to the form of knowledge), one has at the same time clarified, that uncertainty is not to be understood as a dysfunctional state, as it would be in the common usage of this term. Quite the opposite: existing as well as continually generated uncertainty is the most important resource of the autopoiesis of the system. In the absence of uncertainty, nothing would be left to decide, the organisation would find its end in just in a state of complete self-determinedness, and it would cease to exist for a lack of activity [12]. Luhmann also reminds us, that non-knowledge may equally serve as proof of innocence ("I am sorry, I did not know that!"). The non-knowledge of customers or competitors for example may well benefit businesses.

Figure 1: Contrasting knowledge and non-knowledge.



Ultimately, there are three kinds of non-knowledge that are important in this paper: non-knowledge of things that have not yet happened; non-knowledge belonging to the knowledge model as the other side of knowledge and the absent knowledge – a non-knowledge in the context of a particular situation, a part of which is the knowledge of others (corresponding to one's own non-knowledge), and which is covered as intangible knowledge in this paper.

3. INTANGIBLE KNOWLEDGE

In the concept of knowledge management systems – according to Dirk Baeker – knowledge does not occur as a problem-specific knowledge about an actual situation, but rather as an indication for correct decision-making. In an organisation, the decision is the problem, not the knowledge. The correctness of decisions, however, can only be determined in retrospect. In this context, 'correct' means correct according to the standards of care and information of the organisation under discussion. This is legitimising work in the context of the organisation [13].

Thus, decisions based in knowledge have better chances to be accepted and to subsequently lead to more decisions. Management systems aim to make the knowledge needed for decisions to be freely available within the organisation, and to facilitate further decisions. Unsecured or not knowledge-based decisions imply additional risks for the organisation. Knowledge management therefore is another form of the absorption of uncertainty [14].

Against this backdrop of requiring legitimation of decisions, a lack of knowledge in decision situations mainly is a problem for organisations. Thus, intangible knowledge is here not defined as an object or non-object, but as a specific situation occurring within organisations.

When intangible knowledge poses a problem, one will look for solutions in such a situation, but also for possible causes. There are several reasons for that. If one examines the concept from perspectives such as the temporal, the factual, or the social dimension, the intangible knowledge concept can be understood as follows: (1) The knowledge needed for the correct decision used to be available in the organisation, or only available after intensive studies (temporal dimension). (2) The required knowledge does not reside (or has not resided, until now) within

the competencies of the organisation (factual dimension). (3) The necessary knowledge is being attributed to specific persons, and its absence is regarded as caused by a lack of communication (social dimension).

3.1 Intangible knowledge as a problem

Social decisions, that means decisions that have been communicated [15], do not require knowledge as a necessary condition (e.g. intuitive decisions), but their existence and annexation to social systems can be significantly easier by socially accepted knowledge.

Even though decisions are concerned with a (naturally) uncertain future, and non-knowledge therefore belongs to the decision structure just as knowledge does, organisational decisions are exposed to the pressure for legitimisation that was discussed earlier, and this pressure can only be processed with reason – and therefore only with socially accepted knowledge. A lack of such knowledge when in need of a decision may lead to categorising non-knowledge as an obstacle to making decisions.

For the examination of intangible knowledge acting as an obstacle, one may create an observational structure similar to the one for a problem. The problem comes into existence only if there is at least one observer who considers a situation to be a 'problem'. This concept of the problem response of the definition worked out in the systemic structure constellations (according to SySt®²). According to that methodology, the following thoughts identify a problem [16]:

- Without an Observer, without someone or something that has a problem, there is no problem.
- There cannot be a problem without a direction or a goal that must be attained.
- The problem requires obstacles, but an obstacle is always a potential resource.
- A reasonable problem contains at least one resource that so far has not been used or has not been fully used. Once all resources are 'consumed' without reaching the goal, the problem cannot be reasonable problem; rather, it is an insolvable question.
- No problem can exist for an extended period without offering benefits to the system. This part of the problem is called the 'hidden benefit'.
- Upon solving any problem, a new task offers itself, a task that should already be regarded as part of the problem.

The structure of a problem therefore is more than just the recognition of barriers. It also includes the possibility of acts after attaining the goal. Furthermore, it considers resources that may contribute to solving the problem as well as advantages that offer themselves to the observer until a solution is reached.

Intangible knowledge within organisations, however, is closely linked to decision pressure. It only appears if an observer has to take decisions or believes he or she may have to take decisions

² SySt®: a registered mark and also names the systemic structure constellation method generally.

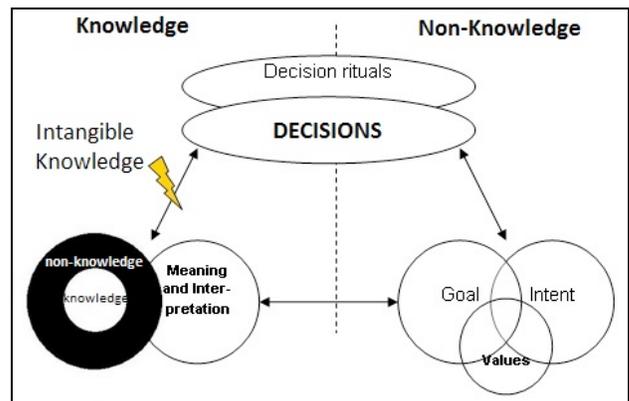
in the future, and alongside he or she identifies non-knowledge, which prevents him or her from taking the assumed correct decision in order to reach the desired goal. In the organisational context, the observer or actor always decides in his role as representative: He or she is acting representing an organisation, a group, or a team.

Intangible knowledge is best described by the following situation: An observer examines his or her individual and the explicit available collective knowledge, notices the non-knowledge concerning a decision for attaining a goal and he or she regards this as a problem.

The goal in the situation of intangible knowledge however, must be presented in a more differentiated manner: On one hand, there is a goal, and on the other hand, there is an intention. Both are influenced by the essence and values of the organisation and reflect those in some way. The goal is the explicitly communicated element of desire, and the intention reflects the implicit purposes and desires of the organisation and/or of the observer. The manifest expressions of goal and intention are different. But while the intention in most cases cannot be used for the legitimisation of decisions, the goal usually can. The intention may be observable in the actions, but only partially communicable. However, intentions that overlap the goal can be used for legitimisation purposes. All other intentions generally remain hidden behind an action, often even from the actor himself.

Goals and intentions are components of the present non-knowledge about the future. This represents virtual or latent possibilities that look attractive to the observer as seen from the perspective of the Now. Goals and intentions referred to models of the future as they exist now, models that can only be oriented by past decisions and knowledge as well as conscious non-knowledge, and they are thereby themselves elements of those models. Thus the foundation of goals and intentions lies in non-knowledge. In this respect, they already represent solutions for a specific kind of intangible knowledge: The non-knowledge about what has not yet happened.

Figure 2: The decision situation and intangible knowledge in the organisation [17].



The knowledge base for decisions is therefore a part of the knowledge models of the organisation (the organisational knowledge to which the observer has access) and of the observer (individual knowledge) as well as all the information of past decisions that has been subsumed into these knowledge models. The non-knowledge in this case is that one which

cannot/shall not/will not be known. The knowledge model (and the associated previous decisions) offers clear hints regarding the reservoir of meaning and interpretation of the organisation, which acts both as a relevance filter as well as an aid in sensing which knowledge (or which kind of knowledge) will be accepted within the organisation as legitimisation for decisions. Once a decision has finally been made, it will belong to the knowledge base of the organisation.

The sustained decision and its elements (goal, intent, values, knowledge base, and reservoir of interpretation) are linked with one another dynamically and cyclically (see figure 2).

If one examines the decision process from this angle, other possibilities in dealing with problems come to the fore. An observer who feels that the knowledge for a decision is missing, would need – from a knowledge management perspective – to locate this knowledge or generate it himself. He could then acquire that knowledge before deciding, or run the risk of taking a decision despite his awareness of the existence of tacit knowledge. However, the aspect of intangible knowledge deals with other possibilities too. As each element that is required to take a decision is (cyclically) linked to other elements, every element may become a resource should problems arise.

It follows that the observer has both his individual as well as the organisational knowledge available as resources. These are at the same time opportunities for the detection of non-knowledge. They serve as helpers even while they act as substitute knowledge.

But also the (modified) possible interpretations, goals, intentions, and the values of the organisation can be resources for decisions. As a correct decision is closely related to a goal or to an intention (the decision will be only regarded as correct if it leads closer to the goal/intention), intangible knowledge can also serve as an occasion to examine the goals and intentions of the organisation, to challenge them, and possibly to modify them. Many organisations reach for such changes of values or interpretation pool if they come to the conclusion that a different culture would be more suited to solving the problems. Such changes could and should also influence and modify decision rituals. The intangible knowledge can, if it is regarded holistically and in its entirety, serve as a daily small inspiration for (critical) self-reflection and thereby become a resource in itself.

3.2 *Intangible knowledge as an opportunity*

A situational element, such as intangible knowledge means to be, is defined phenomenologically by an actor (or observer): An actor is, in every phase of his life, in a certain situational context, which opens to him certain possible actions and denies him others. On the one hand, the situational context of an action is being considered, but on the other hand the plan-hierarchy of the actor's life and his plan-oriented interests [18] are important elements to describe and understand a situation too.

Phenomenology assumes that an actor strives to handle a situation, and that he tries to do so by interpreting unknown elements of the situation (uncertainties) with new or different knowledge. In routine cases, common knowledge (or habit) would be sufficient to deal with the situation such that the 'plan-oriented interest' could be satisfied. A difficult situation

however would not be amenable to solution via routine actions, requiring the use of other knowledge elements [19].

From the point of view of systems theory, this means that the observer, in his self-referentiality and in his operative demarcation against his environment, attempts to learn from the irritations of that environment, but only as long as this learning is of service to his survival as (social or consciousness) system. Dealing with a situation helps the system to build its identity, which represents the inner order that allows the observer to process meaning [20].

A situation of decision is not only one in which there are several alternatives one should choose from, but also a situation that has an observer capable of examining them. A computer cannot decide, because it can neither make a choice (distinguish between 'good' and 'not good'; prefer something over something else) nor it can look beyond the facts and imagine the 'possible'. The existence of 'possibility' requires the idea of the negative, of the impossible, of 'were', 'could', 'had', 'would', etc. If 'possibility' were to be regarded as only a situation, for which realisation all conditions would have to be fulfilled (and were the conditions not fulfilled, it would be 'impossible' in the first place), the term would be devoid of meaning. Then in that case, only that would be possible that had already happened. For a computer there are therefore no possibilities, as it has neither a choice (only calculations) nor the capability of considering possibilities. The concept of decision consequently presupposes the existence of possibilities for a subject. That means, this concept demands the ability to imagine a future that one can permit or deny. Thomas Fuchs summarises that the prerequisite for freedom of choice is a space of thinking, of possibilities, in which one can move freely from the constraints of facts [21].

A decision on one hand affirms the existence of a system; on the other hand, it is also part of the autopoietic existence of that system. The continued existence of an observational system depends also of its capacity to absorb uncertainty. Uncertainty comes into being where knowledge and non-knowledge exists at the same time. It comes into being because of that difference [22]. Luhmann describes the absorption of uncertainty within organisations also as 'system-internal creation of information', as decisions create the difference and thereby turn into information. The absorption of uncertainty may therefore also be seen as a sequence of decisions – that means, absorption of uncertainty characterises the condition of sequentiality in the decision process. [23]

Thomas Fuchs combines three characteristics that are part of the nature of a decision (see Fuchs 2007:106): (1) The specific temporality of the decision process (which must be understood as dynamic, growing, and maturing); (2) the imagination of possibilities (future-orientation of the process); (3) the role of feelings and judgements before the decision.

According to the social systems theory, feelings only influence system related decisions through structural coupling. The reasons for decisions based on feelings are therefore to be found in the environment of the system. Here, the personality behind a decision steps to the fore, a personality that may then be integrated into the system as a symbol for the quality of decisions or knowledge. Decisions can be evaluated according to the system's rules of judgement.

Looking at decision-making in a difficult situation (lack of knowledge and a large uncertainty for the future), there will be a phase, according to Fuchs, that can be regarded as the search for coherence. The observer considers future possibilities, their advantages and risks, but also the obstacles and the available resources on the way there. These considerations comprise a 'relation to the self' and make the search for an explication of a conception of life evident. To decide means therefore to feel one's way to an experience of coherence, of congruence of imagined possibilities and a newly actualised design of one's self, containing one's own motives, experiences, inclinations, and desires. If it succeeds, this process leads to a decision as an evidentially manifestly congruence: the feeling of having made the right decision [24].

However, as Fuchs admits, this congruence is not often reached in practice [25]. In its place appears arbitrariness or spontaneity, reason without regard for motives or feelings, or the delegation of the decision.

After all, according to Fuchs, when we decide we move within the horizon of the future; to each decision is related an anticipation of one's own 'becoming. Non-knowledge about that which has not yet happened cannot be replaced with 'other' knowledge. This kind of non-knowledge may only be reduced by decisions. Only with decisions it is possible to create a predictable future [26]. The maturing process of a decision is related to its nature as a process and therefore to its temporality. The maturing of a decision happens in a spiral in which conscious (explicit, verbalised) components and subconscious (implicit, intuitive) components influence and drive one another. Decision is therefore neither a rational-discursive nor an irrational-blind process but rather, in case of success, the arrival of a perceptible congruence; it is a form of generation of meaning beyond calculation [27].

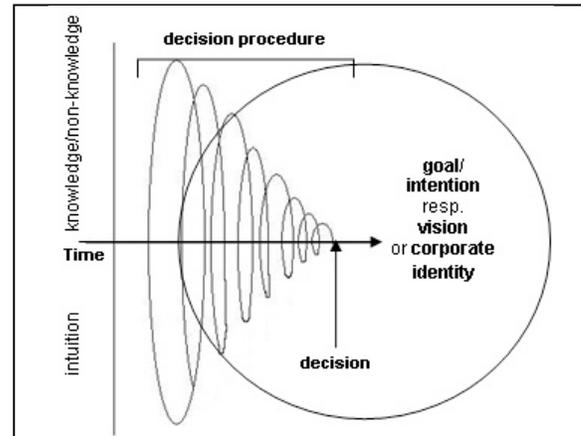
The process character of decision-making evidences the vulnerability of the factors leading to a decision. It points to the fact that there are no determining factors for a decision – as desires, reasons, drives, identity, will, knowledge – and motives change constantly and influence one another at the same time. The deciding-process cannot happen 'objectively' as choices must be made and possibilities have to be taken into consideration. To make a decision, persons therefore have to commit themselves and take sides.

Figure 3 is an attempt to illustrate this process graphically within the framework of an organisation. Even though the pictured congruence is being idealised, it still shows the phenomenological imagination of the process of 'correct' deciding by an actor in and for an organisation.

This representation of decisions complements figure 2 by showing the intuition, the feeling, the emotions of the actor in addition to the other factors. It also shows that also in organisations having rules for every single act, decisions are in the end taken by human beings, using their bodies and their senses, their personalities, their experiences and imaginations. If a specific decision situation some item of knowledge is missing, the intuition of the actor can therefore attempt to undertake the tasks of the missing knowledge. It is equally likely however, that during this process, questions regarding goal, intention or vision of the organisation, or regarding the culture of the organisation, are created rather than decisions. Perhaps the decision is delegated to some other person, one that probably

has that knowledge. Perhaps a decision is taken not to decide on the current situation, or decided to work on improving the resources for the impending decision.

Figure 3: Congruence of the decision-making process



Once one recognises a problem as an intangible knowledge situation, this recognition can serve as a stepping stone to the next higher level of observation, where routines are challenged and analysed. This is the opportunity that intangible knowledge offers to an organisation.

3.3 Intangible knowledge as the twelfth camel

A well-to-do Arab left his eleven camels to his three sons. His will stipulated that Ahmed, the eldest, should receive half of the camels. The second son, Ali, was to receive a quarter of the camels. Benjamin, the youngest, was to receive the sixth part of the camels. How was the division to be made, without cutting the camels to pieces? The wise neighbour volunteered his advice to solve the problem for them. He added one of his own camels to the herd, bringing the number of camels to twelve. The eldest son then received six camels, Ali received three camels and Benjamin, the youngest, took possession of two camels. After thus distributing eleven camels, the last camel was returned to the neighbour.

This tale makes clear what science in general does for society. It offers perspectives, opportunities, or points of view that can then be used and relied upon. Thereby it absorbs uncertainty and increases the chance that expectations may be fulfilled.

The model of intangible knowledge wants to be no more than a twelfth camel. It is an offering directed to the observers of the problem situation to adopt this new perspective. Accepting this point of view may serve to alter situations, create new knowledge, or support the self-reflection of a system.

4. CONCLUSIONS

Current concepts of knowledge as they are used in knowledge management employ an economic understanding of the concept of a system. To comprehend knowledge in its dynamic and to understand the potential of a knowledge model, a structural model of knowledge is insufficient. Both, the organisation's internal communication structure and the process of creation of knowledge (in which meanings play a significant role), have to be considered as elements of knowledge. This approach can

help organisations understand themselves also as social, open and cultural systems, free from economic constraints and dogmatic positions.

The concept of intangible knowledge wishes to offer a contribution to achieve this consciousness and to serve as the inspiration for considering a new kind of knowledge-perspective. This way to look at knowledge is intended to allow the open, critical observation of organisational structures and, at the same time, to respect and take into account the dynamic of social systems. Consequences to organisations arising by the application of this point of view may be considered in a further step. Competition and staying ahead of competitors will still determine the goals of an organisation. Concentrating on only these two factors however, prevents an observer from regarding the organisation as a place for creativity, as a model of one's own conception of life and as a communication system. The openness and cultural diversity that organisations may enable at their best are relegated to the background by the usual technological and economic viewpoint. If organisational culture is regarded as an unimportant sideshow of organisational processes, there is a good chance that intangible knowledge is spreading within the organisation. If organisations are considered from a cultural point of view, new paths and solutions can be explored.

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