

THE VALUE OF DESIGN RESEARCH

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THE COMMON LAW AS A MODEL TO DETERMINE THE NATURE AND SCOPE OF KNOWLEDGE IN DESIGN RESEARCH

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ABSTRACT

It is now generally accepted that research in design cannot be governed by scientific objectivity and positivist formulae. Design deals with human interaction, with artefacts and situations that involve a great deal of uncertainty. Design researchers have therefore concluded that an epistemology of practice should be formulated linking what designers do, know, and say, with the experiences, knowledge and comments of end-users and other stakeholders. In considering how to develop this discipline, there is a model that design scholars haven't yet taken into account: Jurisprudence (in French 'le Droit'), and in particular Common Law (in French 'la Jurisprudence'). The substance of any law at any given time generally corresponds to what is understood to be convenient in accord with prior instances. The life of a Law is not based on logic so much as on experience. Common law (also known as 'case law' or 'precedent') is ultimately the instigation of common customs, which over time have obtained the force of law. This paper explores the similarities between research methodologies applied in Common Law and the interpretive nature of a Design Science, because both are an epistemology of practice. What would happen if in Design Research we applied the model of Common law to determine 'what the ruling' might be for any given situation?

Keywords: common law, epistemology, methodology, science, practice

1 THEORETICAL CONTEXT OR REASONS

It is now generally accepted that research in design cannot be founded in scientific objectivity and positivist formulae. Design deals with human interactions with artefacts and situations that contain a great deal of uncertainty. Of course material technologies equally play an important part in construction and mass production. However, in the end it is the usage of a designed product that causes it to belong in the world of social sciences. A Science of Design seems impossible.

The development of design research as a discipline is fundamentally based on the view that design has its own things to know and its own ways of knowing them. In Simon's classic *The Sciences of the Artificial*, which is frequently cited even today, he contends that '[t]he natural sciences are concerned with how things are. [...] Design, on the other hand, is concerned with how things ought to be, with devising artefacts to attain goals' (Simon, 1996 [1969]: 114). Buchanan, the contemporary design theorist, once suggested that 'scientists are concerned with understanding the universal properties of what is, while designers are concerned with conceiving and planning a particular that does not

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yet exist' (Buchanan, 1992: 17). Heylighen, Cavallin, and Bianchin developed an elaborate argument from a conceptual and psychological point of view: 'the mental activities of a scientist are characterized by a mind-to-world direction of fit. [...] In contrast, a designer's mental activities seem to be dominated by a world-to-mind direction of fit' (Heylighen, Cavallin, and Bianchin, 2009: 97-98). The beliefs of a scientist must be true, i.e. their mind must match the world. But designer's mental activities don't aim at truth, but rather at what should be, i.e. at making the world fit the mind (Galle and Kroes, 2014: 202).

In conclusion, most opinion among design methodologists and among designers holds that the act of designing itself is not and will not ever be a scientific activity, that is, that designing is itself a nonscientific or ascientific activity (Cross, 2001: 53). Archer encapsulated the view in stating his belief that 'there exists a designerly way of thinking and communicating that is both different from scientific and scholarly ways of thinking and communicating, and as powerful as scientific and scholarly methods of enquiry when applied to its own kinds of problems' (Archer, 1979: 17). Archer's view was developed further by Cross in the paper entitled 'Designerly Ways of Knowing' (1982), which explored the theoretical base for design as a discipline (Roworth-Stokes, 2011: 419). Shortly after, Donald Schön promoted a new view in his book *The Reflective Practitioner*, which challenged the technical rationality of Simon and sought to establish 'an epistemology of practice implicit in the artistic, intuitive processes which [design and other] practitioners bring to situations of uncertainty, instability, uniqueness and value conflict' (Schön, 1983: 43). He criticized the very technical view of design influenced by logical positivism, and urged design studies to attend to reflection-in-practice (Soo Meng, 2009: 60). Simon proposed a science of design, a body of intellectually tough, analytic, partly formalizable, partly empirical, teachable doctrine about the design process (Coyne, 2005: 6). As experienced craftsman, graphic designer, and product designer, respectively, Ferguson, Johnson and Dunne acknowledge that there is a kind of tacit knowledge that creative professionals possess which cannot be separated from their perception, judgment, and skill (Seago & Dunne, 1999: 16).

Design tasks are commonly regarded as wicked or ill-structured, characterizations that pervade design research and practice (Kunz and Rittel, 1970; Rittel and Weber, 1973; Buchanan, 1992). Wicked problems are not objectively given but their formulation already depends on the viewpoint of those presenting them. There is no ultimate test of the validity of a solution to a wicked problem (Coyne, 2005: 7). The testing of solutions takes place in some practical context, and the solutions are not easily undone. For which finding an appropriate solution is very difficult and each solution to a problem creates new problems to be solved. Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan. Every wicked problem is essentially unique. Every wicked problem can be considered to be a symptom of another problem. The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution. The planner has no right to be wrong (Farrell & Hooker, 2013: 694-698).

In conclusion, design is a discipline, based on the reflective practice of design, but not a science. Therefore, design researchers have concluded that an epistemology of practice should be formulated linking what designers do, know,

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and say, with the experiences, knowledge and comments of end-users and other stakeholders. Simon proposes to build a science of design by emulating and extending the optimization methods, which have been developed in statistical decision methods and management science (Schön, 1983: 47). These research methods applied to the field of design are diverse and eclectic, including case study analysis, detailed process analysis, ethnographic study, computational analysis, focus groups, surveys, interviews and propositional design (Soo Meng, 2009: 60). It also makes sense that we would borrow established methods from disciplines engaged in human research, since design is fundamentally a human-centered activity. Observation methods have previously been borrowed from psychology by the human factors community and subsequently used by design, thereby giving them a laboratory model of scientific application. The growing consensus that the use of designed artefacts occurs in natural settings of work, home, and play has convinced many that human behaviour therefore should be studied in context. This has forged an increasingly greater connection with the philosophy and methods of anthropology and ethnography, fields acknowledged for their sensitivity to the study of human communities, while maintaining an awareness of the dangers of subjectivity, researcher bias, and influence. There are many traditional research methods that serve their purpose well, with little need to reinvent them for each intended use. Surveys, interviews, questionnaires, and focus groups (the traditional purview of market research) provide an efficient means to reach large numbers of people. If structured effectively, data collected, particularly from surveys and questionnaires, may be easily compiled, analysed, and visualized. Innovative methods typically are identified by their participatory nature, creative engagement and outcome, and their relatively specific application to design research. Examples include design workshops and other creative sessions in which participants (users) are invited to engage in the generation or manipulation of visual artefacts to communicate their thoughts or ideas. Whether collected using traditional, adapted, or innovative methods, the interpretation and analysis of information by design researchers often will result in formats that may appear unconventional. These formats may include quantitative summaries and text reports, but will likely be complemented with visual information in the form of sketches, diagrams and maps, models, photographic records, and videotape (Hanington, 2003: 15-16).

2 METHODS OF INQUIRY OR *RATIO DECIDENDI*

Lucila Carvalho and Andy Dong in his paper entitled 'Legitimizing design: a sociology of knowledge account of the field' seek to uncover the differences in what counts as valued design knowledge within various design disciplines using a sociology of knowledge approach based on Legitimation Code Theory (LCT). By examining the underlying structuring principles of various instances of design, they make explicit what is different and how such differences may affect the way one understands design. They understand that within the field of design, differing grounds exist for deciding what should count as relevant, within and amongst the design disciplines and its practitioners. To complicate matters, 'design' incorporates a range of disciplines, from architecture and engineering (which includes its own specializations such as mechanical, civil, electrical, and chemical) to new media and interior design. While all practice design in its broadest sense (the intentional production of a material work to satisfy functional needs) they also perform design in different ways (Carvalho and Dong, 2009: 485). Such differences can be understood as reflecting the various values, beliefs, and mores. These values and beliefs function as structuring

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principles which generate and organize design practices; they are related to what Bourdieu defines as 'habitus' (1983) in that these values become internalized codes which equip the designer to operate successfully within the 'rules of the game' of a design discipline. So, Carvalho and Dong assert that the debate is not about the surface-level descriptors of what designers do, such as the diversity of the knowledge needed to design in architecture and engineering, but what is the form taken by the knowledge that is valued, cultivated, and more generally emphasized within a discipline. For the authors it is a consequence of a sociological decision as to what counts as knowledge that leads to organizing principles around the formation of design disciplines as practicing versions of design, which may exhibit what is ultimately labeled as scientific or artistic sensibilities (Carvalho and Dong, 2009: 486).

This paper follows Carvalho and Dong proposing the use of a sociology of knowledge approach, but borrowed from a totally different source. Searching to build design's discipline, there's a model that design scholars haven't taken into account yet: the Jurisprudence (in French 'le Droit'), and in particular Common Law (in French 'la Jurisprudence') and more specifically Customary Law (in French 'droit coutumier'). Common law (also known as 'case law' or 'precedent') is ultimately the instigation of common customs, which over time have obtained the force of law. Common Law is developed by judges in the articulation of judicial and tribunal decisions. In this sense Common Law could be said to be more flexible than other fully statute-dependent legal systems because its advantageous elasticity enables those who administer it to adapt it to the varying conditions of society. Following next paragraphs it's easy to appreciate the similarities between the customary law and the design as an epistemology of practice.

Similarity 1: The primacy and ubiquity of customary law

In fact all law is customary. Law is grounded, fundamentally, in the practices of particular societies. All law, even legislation, finds its meaning in interpretive relationship to those practices. To understand law is to understand norms' relationship to the web of human interaction in a given society (Weber, 2009: 581). Law, conceived in customary terms, exists in intimate relation with the array of practices in any human society. Examining the nature of customary law across legal cultures demonstrates the way in which any legal order embodies particular, culturally shaped ways of conceiving of the very structure of normative obligation and normative relationship. Any order develops its own language of normative analysis, its own grammar, that materially shapes how the fundamental elements of legal relations are conceived (Weber, 2009: 583).

Similarity 2: The grounding of customary law in a particular society's practices

All law has to have some mechanism of social determination, some way of determining which norm, or which interpretation of a norm, is to serve as society's law when there are rival interpretations. This mechanism may involve determination by an 'official' (such as a judge) or by some other social process (deliberation and consensus, the determination of a council of elders, assertion and acquiescence, and so on). It is an error to think that norms emerge in customary legal orders without any intervention of human agency. The simple existence of mechanisms for specifying norms does not undermine those norms' customary nature. The crucial fact is that customary law exists in intimate interdependence with social practices, not that it has been exempt from some form of official determination (Weber, 2009: 584).

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Similarity 3: The process of reasoning and deliberation surrounds the derivation of norms from those practices

Customary law is not the result of mere habit, mere unreasoning repetition, but develops like a path across a field: people happen to walk on the same line, gradually beating a path into the ground until a right of way forms. Rather customary law is always marked by the need to organize and facilitate interaction. It has a reasoned dimension. Participants perceive the value of norms to their interaction and therefore follow those norms in their conduct. Weber refers to customary law as a 'language of interaction', which generates complementary and stable expectations of conduct among participants in a social order. Customary law enables participants to coordinate their actions through effective communication, predictably anticipating each other's actions: 'The perception that an action is obligatory arises (customary law is created) when the participants have come to guide their conduct toward one another by these expectancies' (Weber, 2009: 584).

Similarity 4: Intersubjective dimension of the process of deliberation

Weber also focuses our attention usefully on the relationship that exists between customary law and the practical conduct of interaction within a given society. The two are closely intertwined, indeed mutually constitutive. The practices can only work efficiently, frequently can only exist at all, if the norms are observed; if, for example, agreements are generally taken to be binding when concluded in the customary manner. The norms, in turn, are developed and then elaborated by participants who reflect upon the practices, consider their demands, try to articulate appropriate rules of conduct, and think about what those rules should mean in particular cases. It makes sense for participants to take the practices as the starting point, because, after all, practices furnish both the need for coordination and the concrete examples of living together from which one can fashion norms. Even among people who share little else (who have different ideas of justice, different interests, perhaps even different metaphysical commitments) the practices provide a nexus of interaction, from which norms to govern those practices can be identified (Weber, 2009: 585).

Similarity 5: Intersubjective dimension of the process of interpretation

The expressions of customary law therefore exist in an interpretive relationship with practice, mediated by other participants' interpretations and actions. That reasoning is necessarily evaluative. Participants seek to weigh the impact of past norms, judge the appropriateness or acceptability of that impact (what has proven important in previous decisions, what has proven ill-conceived) and seek to revise the norms and their application accordingly (Weber, 2009: 588).

The method distinctive to the common law lay in the procedure under which lawyers recovered the rules to underpin their arguments, and judges to justify their decisions, from the records of earlier judgments. Usually a sentence (decision-making) has three parts: *Reasons* is when a judge outlines the facts which he finds have been proved on the evidence and applies the law to those facts and arriving at a decision; *Ratio decidendi*, the reason for the decision is that part of a court's opinion that judges deciding later cases are required to follow, is the principle of law on which a decision is based; and *Obiter dictum* that contains argumentation that does not function as a precedent for future cases, but forms an extra support for the decision. This procedure (the doctrine of precedent) was made possible by the maintenance from an early stage of

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semi-official written records (the *Year Books*). Academic records of customary law are based on questionnaires, court observations, analyses of casebooks of traditional courts, collections of cases and case-complementary information from parties. Subsequently they were sustained by private series of reports before official law reporting became institutionalized. Consistency in decision-making was reinforced by the understanding that courts should, wherever possible, follow their own previous decisions and were obliged to follow those of courts superior to them in the judicial hierarchy, the doctrine of *stare decisis* (Roberts, 2001: 2280).

Many voices today speak against the codification of customary law, because codification will destroy one of the most important qualities of such law: its openness to accommodate reconciliatory solutions to problems, instead of allowing the law to win over the parties. Customary law is particularly open to negotiations: not only those required to achieve solutions acceptable to all the parties to a case, but also those that navigate between the application of different laws (Hinz, 2012: 90).

3 REPORTING RESULTS OR *OBITER DICTUM*

What would happen if in Design Research we applied the model of Common law to determine 'what the ruling' might be for any given situation? That means to determine what counts as valued design knowledge (discover the values, beliefs, and mores held by a design discipline). Let's take as an example a research project based on peoples' opinions, habits and customs. In this project, the people are those who value, judge and decide what is registered, what is good for accounting as knowledge, know-how or valuable information because it is considered a good design. The project has been carried out in Barcelona for just a year now and is called Onfan (<http://www.onfan.com/>). The project director, Ismael Vallvé, defines Onfan as a gastronomic guide, conceptualized as multilateral blogosphere based on the concept of social network. This platform was presented in Barcelona in 2013 under the patronage of Andoni Luis Aduriz, the owner and head chef of the Mugariz restaurant in Errenteria. User register with the platform, normally give their permission to Onfan to share their details on Facebook or other social media and therefore identify themselves. When the users are eating a dish that they like and which they think is exceptional, out of the ordinary, they take a photograph of it and post the photo, the name of the dish and the restaurant on the Onfan website. So unlike the good food guides produced to date, what Onfan values is not the restaurants as such, or even the chefs, but the dishes themselves; the work and the design for its own merit, because a dish is a design to be eaten.

As in musical composition the dish is an expressive medium and the recipe its means of fixation. As Christopher Buccafusto notes, 'cuisine belongs with the performative arts, and as for other such arts, the social survival of the culinary performance depends on words' (Buccafusto 2007: 1131). The recipe, the drawing, and the musical notation are simply means for fixing a work (the dish, the dance, or the symphony) in a tangible medium of expression. The recipe, the drawing and the musical notation allow otherwise ephemeral media to be 'perceived, reproduced, or otherwise communicated.' Most dishes at most restaurants are based on recipes in what one may call the Culinary Public Domain; in other words, these recipes have been produced for years, if not for generations, and their original creators are unknown. But there are innovative dishes that have no gastronomic precedent. There are new culinary creations a

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part from the articulations of those dishes already in the culinary public domain (Buccafusto 2007: 1139). The Onfan Project is detecting the recipe, which serves as the means of fixation and communication of the dish, the design work of authorship.

As mentioned above the Onfan users post a photo and name of the dish and the place where they are eating. The name of the dish is indirectly a description of its ingredients and contains elements of a recipe. For example, 'Cod with Romesco Sauce' or 'Cod Gratin with Aioli' or 'Emulsion of Mushroom Cream and Cod with gratings of Hake' (obviously these examples have come directly from the Onfan website). Once this information has been posted Onfan does a series of things. One is to suggest other dishes recommended by others users, which are similar in terms of ingredients that have been deemed to be worthy of recommendation and in places that are close to their area of action. It also suggests that users contact other users who tend to recommend similar dishes. Over time Onfan gets to know the tastes of its users through their recommendations and can therefore put them in touch with others with similar tastes. The philosophy of the organisers is that users have a much better guarantee if they go to eat a particular dish in a particular place following the recommendation of someone who has already been there and has the same criteria for evaluating the food as them. And they know that because Onfan knows that and will have told them. So how do they know? Because the action of recommending a dish exposes the users criteria for evaluation. Onfan can detect, register and then process these criteria.

It is not difficult to realise that with such a simple inversion of terms (from recommending restaurants to recommending dishes) Onfan have managed to ensure that the design product itself emerges. This design product is evaluated and to a certain extent 'judged' and 'approved' by the users. Of course all based on the evaluation criteria of users about what is a good design in the field of gastronomy, criteria which evidently are formed by gastronomic customs and habits. The organisers of Onfan are aware of the tool that they have in their hands and so they have also developed a research sub-project, which they have called 'Gastronomic DNA' (<http://www.adngastronomico.com>). Through this platform Onfan builds up a bank of dishes, or rather, design formulae and a bank of interaction data for its users: What and where they have eaten, what kind of speciality the users said surprised them or that they would like to try. And from that they extract what they call 'a molecule' based on the weightings of the opinions of their users (Figure 1).

They have a committee of mathematicians, sociologists and professionals from the world of gastronomy from the Open University of Catalonia and the Polytechnics University of Catalonia to research user tastes and decide how to process and express them. All of this is summarised in a graphic map which, more than just a graphic representation or algorithm, or a formula for taking users to places of interest, is like a 'judicial sentence' under which certain designs (dishes) have been passed (recommended) based on the uses (eating habits) of the users. These maps fulfil all the scientific conditions to be considered as knowledge on the world of food design. At the start they indicate the food designs that are normal for the participating sample; what the users consider to be a 'good design', since they have approved and recommended it. But there are also atypical dishes, which are out of the ordinary and rarely ordered; dishes that are composed of unique, original elements. If we look at the Gastronomic DNA map presented below we can see a crown of ingredients

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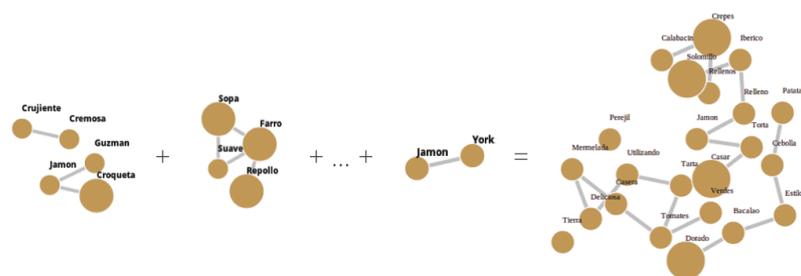
that remain separated and isolated. This illustration was given to us by Gonzalo Pérez, community manager of the Gastronomic DNA research project and is of a provisional nature and so is shown here with a degree of prudence (Figure 2).

The image shows the gastronomic DNA of the city of Barcelona. In the centre are the dishes (based on their ingredients) that are best liked by users in Barcelona and the city's areas where you can find them. The points that are separated and which generate this independent crown are those that users have liked and recommended but are out of the ordinary. They are innovative designs and have some ingredients that are similar to standard recipes but others that set them apart. It would not be too much to say that if we want to know where the greatest food design in Barcelona is taking place and how it is being done, what the most creative recipes are, we would need to locate the dishes that form this separate crown. In legal terms we could say that the crown consists of cases without jurisprudence and society must judge whether they are acceptable as new cases that can provide a legal precedent or whether they should be dismissed. Over the years, if the Onfan project continues, we will find out which of these dishes have created jurisprudence (because they appear in the centre) and which have been dismissed because they were not 'good designs' and no longer appear (Figure 3).

Thanks to the Gastronomic DNA research project we could find out, in the field of food design, the main objective of innovation, the predominant discourse, the accepted standard practices, the typical setting in which innovation occurs in society and the criteria for success (and failure). And that is no small feat!

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Combining DNA



PIPELINE. Collection of dishes -> Bag of Words and N-gram Analysis -> Matrix Dish Representation -> Combined DNA

Figure 1 –Culinary DNA, **Gastronomic DNA** Project by Onfan, Barcelona, 2014, www.adngastronomico.com

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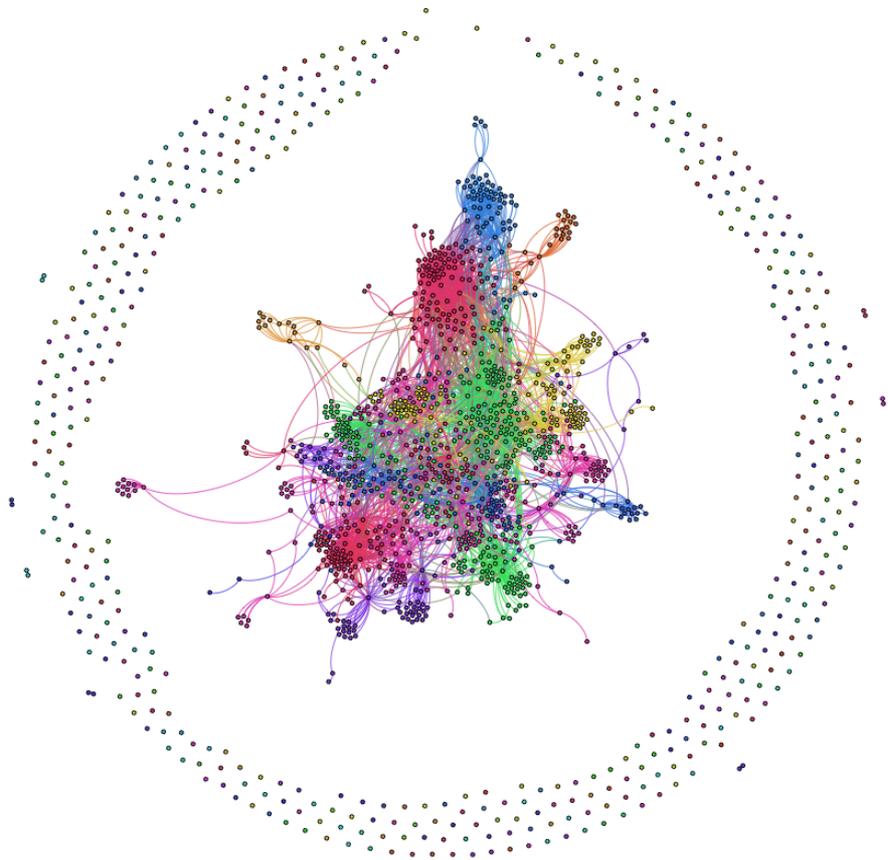


Figure 2 – Barcelona's Culinary DNA, **Gastronomic DNA** Project by Onfan, Barcelona, 2014, www.adngastronomico.co



Figure 3 – Barcelona's Culinary DNA, **Gastronomic DNA** Project by Onfan, Barcelona, 2014, www.adngastronomico.com/

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