

Critical Realism and Organizational Culture— Framing Schein’s Model of Studying Organizational Culture by Using Critical Realism Philosophy

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How to cite this paper: Khaddour, W. N. (2025). Critical Realism and Organizational Culture—Framing Schein’s Model of Studying Organizational Culture by Using Critical Realism Philosophy. *Open Journal of Philosophy, 15*, 77-97.
<https://doi.org/10.4236/ojpp.2025.151006>

Received: October 24, 2024
Accepted: January 23, 2025
Published: January 26, 2025

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Abstract

This paper presents the two opposing viewpoints for studying organizational culture and clarifies the lack they contain through understanding the philosophies encompassing them. We have verified that this discussion between the two perspectives is a discussion between positivists and interpretivists. We believe that critical realism philosophy provides a way out of the controversy by presenting its ontology that is characterized by structure, difference, and change and by standing against the reduction of ontology to, or its dissolution in, epistemology. This ensures both an in-depth study of the organizational culture and the develop sound contributions to theoretical development without overselling the notion of generalizability. In doing so, this article outlines Schein’s three levels of analysis for studying organizational culture and framing it using critical realism philosophy.

Keywords

Critical Realism, Organizational Culture, Positivism Interpretivism

1. Introduction

In the early 1980s, organizational culture became a central concern in the study of organizational behavior. (Griffin & Moorhead, 2014: p. 494) The culture of an organization is often a difficult characteristic to define since many aspects of culture are intangible and cannot be seen. (Jreisat, 1997) Despite this difficulty, most authors seem to agree that organizational culture is central to the functioning of

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an organization. A surprising aspect of the recent rise in interest in organizational culture is that the concept, unlike virtually every other concept in the field, has no single widely accepted definition. Indeed, it often appears that authors feel compelled to develop their own definitions, which range from very broad to highly specific (Griffin & Moorhead, 2014: p. 494). And as examples of these definitions:

“A belief system shared by an organization’s members” (Spender, 1983: p. 2)

“Strong, widely shared core values” (O’Reilly, 1983: p. 1)

“The way we do things around here” (Deal & Kennedy, 1982: p. 4) “The collective programming of the mind” (Hofstede, 1980: p. 5) “Collective understandings” (Maanen & Barley, 1983: p. 25)

“A set of shared, enduring beliefs communicated through a variety of symbolic media, creating meaning in people’s work lives” (Kouzes, Caldwell, & Posner, 1983)

“A set of symbols, ceremonies, and myths that communicates the underlying values and beliefs of that organization to its employees” (Ouchi, 1981: p. 41)

“A dominant and coherent set of shared values conveyed by such symbolic means as stories, myths, legends, slogans, anecdotes, and fairy tales” (Peters & Waterman, 1982: p. 103)

“The pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and internal integration” (Schein, 2016: p. 14)

“Culture is a negotiated reality constructed by a social group of people as its preferred ways of operating” (Whiteley, 1995: p. 23).

Although the majority define culture as the values and beliefs that the group adopts, the difference lies in the depth and breadth of these values for these researchers. When one looks at these values and beliefs as deep structures linked to basic assumptions, one’s understanding will be different from the one who views these values and beliefs as superficial and narrow. Here, we will clarify the meaning of both visions:

(Martin & Frost, 1996) described cultural theory and research using a “culture wars” metaphor, and described culture research as a series of ongoing battles between opposing viewpoints. Martin (2002) argued that the uncertainties that spread throughout the field of organizational studies at the turn of the century, giving rise to the paradigm proliferation debates, are even more intense within the domain of organizational culture studies. Because advocates of opposing views have been drawn to the study of culture, these disputes have surfaced and been argued particularly vociferously. Organizational analysts hold varying conceptions of culture, but these different conceptions give rise to different research questions and interests and make it difficult to present a cumulative picture of what has been learned from cultural research (Martin, 2002: p. 52).

The ways culture has been developed in organization studies are as a critical variable (has view) and as a root metaphor (is view). First-perspective researchers treat culture as a reified object, a “thing” “out there” that can be objectively per-

ceived and measured, the same way, by anyone who views it (Martin, 2002: p. 34). From this premise, the (has-view) perspective holds that every organization possesses a culture which, along with its strategy, structure, technology and employees, is part of the organizational machine that can be controlled and managed (Huczynski & Buchanan, 2017: p. 119). In this approach, cultures are to be known through the study of patterns of relationships across and within boundaries. The desired outcomes of research into these patterns are statements of contingent relationships that will be applicable to those trying to manage organizations. The researchers do so while maintaining an outsider (etic) position with regard to the cultures being studied. Usually, in this etic research, categories are deduced from prior theory and research, not from material gathered during a study. A researcher might decide (drawing on prior research) which dimensions are important aspects of culture in organizations, and researcher might then construct a questionnaire, asking respondents to report cultural norms along these dimensions (Martin, 2002: p. 36). The key here is to explain cogently why these particular concepts and operationalizations were chosen, usually with reference to both reliability and validity. Underlying the interests of this is the search for predictable means for organizational control and improved means for organization management. And the issue of causality is of critical importance (Martin, 2002: p. 42). A key characteristic of this perspective is that it allows predictions 2528940:32167104. From this perspective, culture is acquired by employees. It is seen as capable of definition, intervention and control, representing a “tool for change” that can be used by managers (Huczynski & Buchanan, 2017: p. 119). The writers most associated with this view (Peters & Waterman, 1982; Deal & Kennedy, 1982; O’Reilly, 1983; Cameron & Quinn, 2011).

In contrast, some theorists advance the view that organizations are understood as cultures. They see organizational culture as something that the organization is. From this standpoint, individuals do things and work together in certain ways. Thus, they create a culture that evolves spontaneously and is therefore not capable of being man-aged. It holds that culture cannot be easily quantified or measured and that researchers must study it the way that anthropologists study other societies. Culture is produced and reproduced continuously through the routine interactions between organization members. Hence, organizational culture exists only in and through the social (inter)actions of employees (Huczynski & Buchanan, 2017: p. 120). The research agenda stemming from this perspective is to explore the phenomenon of organization as a subjective experience and to investigate the patterns that make organized action possible. They consider organization as a particular form of human expression. For organizational studies of culture, following this approach is essential for a researcher to learn, as far as is humanly possible, to view things from an emic or insider point of view (Martin, 2002: p. 37). Geertz assumes that the task of a cultural researcher is to study a singular way of life and not to produce abstractions that can be used to generalize across cultures. He seeks to describe a single culture richly and deeply (Geertz, 1973) or, to contrast a very

small number of cultures, mostly to highlight their differences (Geertz, 1983), or both. The objective of a single case study, then, is an appreciation of contextually specific knowledge rather than an understanding that emerges from the process of abstraction and generalization across cases. Geertz (1983: p. 232) admits that this approach is “rather entranced with the diversity of things.” One reason given for preferring to avoid generalization is the assumption that every culture is unique (Martin, 2002: p. 41). This approach seeks to understand social relations within organizations, and holds that a company’s culture may not necessarily conform to what management wants (Huczynski & Buchanan, 2017: p. 120). Writers associated with this view include Gagliardi (1986), Knights and Willmott (1987), Ogbonna and Harris (2014), Smircich (1983), Alvesson (2001) and Geerts (1973).

Research gap:

This binary division between the two previous points of view makes the accumulation of knowledge about organizational culture difficult, as a result of the rejection of the two previous views of the ideas generated by the other, represented by a split between simplification and complexity for the study of organizational culture, manageability and inability to manage organizational culture, and generalization between Cases versus studying each case separately.

The study’s key contributions:

First, understanding the philosophical roots of this dispute in views on organizational culture.

Second, presenting critical realism philosophy as a solution to this controversy by framing Schein’s model through this philosophy.

Research questions:

- 1) What are the philosophical roots of this dispute?
- 2) What are the shortcomings of each of these philosophies in the study of organizational culture?
- 3) Can critical realism bridge these shortcomings by applying its ontology?
- 4) Can Schein’s model be used to study organizational culture from a critical realism point of view?

2. Research Philosophy

2.1. Why Is the Philosophy of Research Important?

The term research philosophy refers to a system of beliefs and assumptions about the development of knowledge. And it is precisely what researchers are doing when embarking on research: developing knowledge in a particular field (Saunders, Lewis, & Thornhill, 2019: p. 125). Philosophical assumptions are not often addressed in research but are important because they drive the decisions made behind objects of study, methodology, and conclusions. Every researcher has these, but they may not be explicit (Armstrong, 2018).

These include assumptions about human knowledge and what constitutes acceptable knowledge in a field of study (epistemological assumptions), about the realities you encounter in your research (ontological assumptions) and the extent

and ways your own values influence your research process (axiological assumptions) (Saunders et al., 2019: p. 124).

A well-thought-out and consistent set of assumptions will constitute a credible research philosophy, which will underpin your methodological choice, research strategy and data collection techniques and analysis procedures. This will allow you to design a coherent research project, in which all elements of research fit together (Saunders et al., 2019: p. 126).

2.2. Research Philosophies Most Commonly Adopted by Researchers

2.2.1. Positivism

Working in the tradition of the natural scientists, if your research reflects the philosophy of positivism, then you will probably adopt the philosophical stance of the natural scientist. You will prefer working with an observable social reality (Saunders, Lewis, & Thornhill, 2009: p. 112). And its expectation that the social world could be shown to be a composite of a number of behavioural regularities which would eventually be described by social laws akin to those of natural science (Sayer, 2000: p. 4). Positivists share a realist commitment to an objective world that exists independently of researchers, and they limit this world to empirical “facts” (i.e., things that are observable). (Edwards, Mahoney, & Vincent, 2014: p. 3)

The theories empiricists and positivists develop tend to be based upon statements about event regularities and the manner in which such regularities are correlated. As regularities are best demonstrated through the empirical observation of events, it follows that more observations mean better science. As a consequence, positivists tend to favour large and quantitative data sets, often the product of the answers to questionnaires, which can be mined for statistical regularities and correlations. The objectives of such research are to 1) induce strongly supported propositions from empirical observations and 2) to test and improve these in the effort to assert invariable laws through experimentation (Edwards, Mahoney, & Vincent, 2014: p. 3). Once statistically significant relationships are “confirmed,” any laws generated to describe the regularities observed are deemed to be universally applicable (Edwards et al., 2014: p. 4).

Another important component of the positivist approach to research is that the research is undertaken, as far as possible, in a value-free way (Saunders et al., 2009: p. 114).

The assumption is that “the researcher is independent of and neither affects nor is affected by the subject of the research” (Remenyi, Williams, Money, & Swartz, 1998: p. 33).

We note that this philosophy is the framework for the study of organizational culture as a variable, through:

- Researchers treat organizational culture as a reified object, a “thing” “out there” that can be objectively perceived and measured the same way by anyone who views it.

- Researchers do so while maintaining an outsider position.
- Researchers improved predictable means for organizational control and management.
- Researchers see culture as capable of definition, intervention and control.
- Dimensions that measure culture are deduced from prior theory and research, not from material gathered during a study.

In the case of positivism whether two events are temporally related, rather than on explaining why they may be related. In practical terms, such a position implies asking “What works?”, rather than “What works, for whom, in what circumstances, and why?” (Pawson, 2013).

From a CR position, this reification of correlations rather disregards the independent role(s) of broader context(s), which social phenomena cannot be arbitrarily separated. As a result, positivists and empiricists produce “thin” accounts of research phenomena, which can only describe, but not explain, empirical events. (Edwards et al., 2014: p. 4).

Sayer points out that “social systems are necessarily open, and that they evolved rather than equilibrated, not least because people have the capacity to learn and change their behavior (Sayer, 2000: p. 5).

2.2.2. Interpretivism

Interpretivism developed as a critique of positivism but from a subjectivist perspective (Saunders et al., 2019: p. 140). It tries to understand the differences between humans as social actors. The challenge to interpretivists is to enter the social world of research subjects and understand their world from their point of view (Saunders et al., 2009: p. 116).

Interpretivism emphasises that humans are different from physical phenomena because they create meanings. Interpretivists study these meanings (Saunders et al., 2019: p. 140).

Interpretivism approaches either adopt a strong idealist position, in which each person constructs their own reality, or a weak idealist position, where reality exists but is constructed inter-subjectively (Healey & Hodgkinson, 2015). Interpretivist positions do not necessarily deny reality, but we can know nothing about it (Edwards et al., 2014: p. 5), and it may be problematic, multiple, or entirely socially constructed (Smith, 2006).

Idealists, in different ways, doubt that there can be any more or less valid knowledge (Danermark, Ekström, Jakobsen, & Karlsson, 2005: p. 22). Or, as Hindess and Hirst point out: “Objects of discourse do not exist. The entities discourse refers to are constituted in it and by it” (Hindess & Hirst, 1977: p. 20). And Flax formulates this postmodern position: “In fact Man is a social, historical, or linguistic artifact. ...Man is forever caught in the web of fictive meaning, in chains of signification, in which the subject is merely another position in language.” (Flax, 1990: p. 32).

An axiological implication of this is that interpretivists recognize that their in-

terpretation of research materials and data, and thus their own values and beliefs, play an important role in the research process.

Crucial to the interpretivist philosophy is that the researcher has to adopt an empathetic stance. The challenge for the interpretivist is to enter the social world of the research participants and understand that world from their point of view (Saunders et al., 2019: p. 141).

We note that this philosophy is the framework for studying organizational culture as a root metaphor, through:

- Research agenda stemming from this perspective is to explore the organizational culture as a subjective experience and to investigate the patterns that make organized action possible.
- They do not seek to make predictions, discover generalizable laws, or build theories of causality.
- Appreciation of contextually specific knowledge rather than an understanding that emerges from the process of abstraction and generalization across cases.
- View things from an emic or insider point of view.
- They reflect a particular set of circumstances and interactions involving individuals coming together at a specific time.

Sayer critiques interpretivism's tendency to reduce social life wholly to the level of meaning, ignoring material change and what happens to people, regardless of their understanding. He points out that "Critical realists argued that while interpretative understanding was an important and necessary feature of any social science, it did not mean that there was no scope for causal explanation" (Sayer, 2000: p. 6).

And as (Sayer, 2000: p. 7) writes, "Once such social phenomena are constructed, they gain some degree of independence from their original constructors and from subsequent actors".

The interpretivist position complicates any attempt at arriving at transferrable knowledge (Smith, 2006).

2.2.3. Critical Realism

Critical realism maintains that a scientific method necessarily involves observation of events, but due to the deep dimension of reality, it cannot be reduced to observation of phenomena at the empirical level. To acquire usable knowledge, it is essential that we know the mechanisms that produce the empirical events, which are seldom directly visible.

Critical realism began with a double argument (Bhaskar, 2020)

1) For ontology and against the reduction of ontology to, or its dissolution in, epistemology.

2) For a new ontology characterized by structure, difference and change. Key characteristics of the new ontology were distinctions between the domains of the real, the actual and the empirical, and between open and closed systems, together generating a critique of the reduction of the domain of the real to the actual and

giving rise to the idea of a stratified and differentiated world.

The first argument means that we can gain knowledge of actually existing structures and generative mechanisms, albeit not in terms of a mirror image, but certainly in terms of theories, which are more or less truthlike (Danermark et al., 2005: p. 10). This brings us to the statement that reality has an objective existence but that our knowledge of it is conceptually mediated: facts are theory-dependent, but they are not theory-determined. This in turn means that all knowledge in fact is fallible and open to adjustment. But not all knowledge by far is equally fallible (Danermark et al., 2005: p. 15).

By actively employing the ontology of critical realism, researchers have the potential to develop sound contributions to theoretical development without overselling the notion of generalizability. This potential reflects why critical realist researchers can extend findings beyond localized and case-specific types of knowledge (Frederiksen & Kringelum, 2021).

Researchers cannot assume that mechanisms activated in one context will provide similar effects in future or in other contexts (Wynn & Williams 2012). Mirani (2013) argues that the nature of the organizational mechanisms explored can vary from context to context (localized) but nevertheless always add to the “how” aspect of the phenomenon under study (generalized). Therefore, while long-term offshoring will unfold differently in different contexts—understanding the phenomenon in depth can provide insights that can help managers precipitate certain events through the intentional management of organizational mechanisms (if such mechanisms render themselves manageable) (Mirani, 2013).

The second argument is informed by two implications:

1) Critical realism presents a “depth ontology”, which consists of experienced events (the empirical), events which could be experienced (the actual), and the real or “deep” (Fleetwood, 2005). This “deep” consists of intransitive entities (physical, social and cognitive), which have the power to generate observable events through the operation of mechanisms.

Roy Bhaskar described social reality as having three layers. (Bhaskar, 1978)

- The real domain
- The actual domain
- The empirical domain

The real domain is the deepest layer of social reality which contains structures. And structures are those intangible forces that enable or constrain action (Anderson, 2020: p. 45).

Within the actual domain, individuals perform actions (or refrain from performing actions) leading to events (or nonevents). The complex web of structures within the deeper real domain governs individuals’ actions in the actual domain (Anderson, 2020: p. 46). Even though structures enable and constrain action, it is our actions that create, maintain, and change structures (Reed, 1997).

The structures of our social system govern the actions available to us, but we have agency. We can use our agency to choose activities that reproduce the sys-

tem's structures or change them (Anderson, 2020: p. 46).

In the empirical domain, it is the surface level of social reality, and in this domain, individuals have observations and experiences. By understanding these structures, individuals can develop plans to implement desired actions (Anderson, 2020: p. 52).

2) For CR researchers, reality is a stratified, open system of emergent entities (Edwards et al., 2014: p. 6).

According to Elder-Vass (2010), the metaphor of a laminated system helps to delineate the relationships between entities. The liability of entities represents the way in which an entity can be affected by other entities (Sayer, 2000). As an entity, an organization can be divided into various sub-entities, such as departments, teams, managers and employees. These sub-entities represent different layers of an organization (Elder-Vass, 2010), which enable researchers to regard the roles of the parts and how they may affect the causal impacts at other levels in the organization (Kringelum & Brix, 2021). However, this does not mean that the "top" entity or system is always determined by the lower entities, or the parts. This is where emergence comes in. Emergence happens when an entity has causal properties that are greater than the sum of its "lower level" parts (Elder-Vass, 2010). That enables the researcher to carry out a multi-level study at the level of the organization as a whole, the level of the groups, and the level of individuals.

Critical realism claims to be able to combine and reconcile ontological realism, epistemological relativism and judgmental rationality (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998: xi). As the last characteristic (judgmental rationality) suggests, there are some theoretical and methodological tools we can use in order to discriminate among theories regarding their ability to inform us about the external reality (Danermark et al., 2005: p. 10).

In their own research practice, critical realists recognizably use two distinct explanatory logics, moving from the empirical to the real through the use of abduction and retrodution (Edwards et al., 2014: p. 17).

Abduction re-describes the observable everyday objects of events (usually provided by interviewees or observational data) in an abstracted and more general sense in order to describe the sequence of causation that gives rise to observed regularities in the pattern of events.

Abduction involves redescription or recontextualization, in terms of a characteristic causal mechanism or process which serves to explain event, to produce the most plausible explanation of the mechanisms that caused the events.

Retrodution involves imagining a model of a mechanism, which, if it were real, would account for the phenomenon in question.

Retrodution, on the other hand, seeks to ascertain what the world (i.e., the broader context) must be like in order for the mechanisms we observe to be as they are and not otherwise. This, in turn, suggests a number of other causal processes are also at play to affect the mechanism observed, suggesting the opportunity to understand more about the relationship between the mechanisms we

observed and the contexts in which it operates (Edwards et al., 2014).

3. The Benefits of Applying a Critical Realism Ontology to Study Organizational Culture

1) Because of critical realism stance against the reduction of ontology to, or its dissolution in, epistemology, that enables organizational culture researchers to benefit from previous studies in this field, under special condition, and they have the potential to develop sound contributions to theoretical development without overselling the notion of generalizability. This potential reflects why critical realist researchers can extend findings beyond localized and case-specific types of knowledge, which contradicts the Interpretivists view and its dependence on the uniqueness of each case under no conditions, and enables researchers to use causation, but not with the same causal logic used by positivists who search for linear associations used by positivists who search for linear associations and rarely test the necessary and sufficient conditions.

2) Because of Critical realism presents a “depth ontology” that enables researchers to stratify the organizational culture into:

- The superficial manifestations of organizational culture that can be observed. This means not being satisfied with superficial appearances when studying culture, as the positivists claim.

- The actual domain can be tested using in-depth studies, and in this domain, we can use agency to suggest activities that reproduce the system’s structures or change them.

This contradicts what the interpretive says about the inability to intervene, and also does not mean that it is possible to change the culture easily through simple administrative procedures as the positivism claims.

- And the real domain consists of structures and mechanisms that cannot be tested but can be reached by causal explanation through the use of abduction and retroduction.

And this stratification of organizational culture enables researchers to extend beyond external manifestations and return these manifestations to deeper levels that explain to researchers why things are done in the organization the way they are.

3) And because critical realism sees reality as an open system of entities that characterized by ontological emergence, it also enables researchers to carry out a multi-level study, at the level of sub-cultures and the level of individuals’ cultures, without reducing the culture of the organization to those cultures.

Those arguments and implications will be explained by examining Schein’s model of studying organizational culture.

4. Schein’s Three Levels of Analysis

When we look at Schein’s Three Levels of Analysis, we find that he studies organizational culture in a way that is closer to the critical realism approach. On the

first hand, he recognizes the depth of culture in terms of extending beyond superficial appearances, as there are values and assumptions that are difficult to observe directly, and on the other hand, he defines leadership (which represents the agency) as follows: “leadership is the management of culture” (Schein, 2016: p. 101).

Now we will explain what Schein meant by each of the artifacts, the Espoused Beliefs and Values, and the basic assumptions:

First, Artifacts: Artifacts are surface appearances and superficial manifestations of culture that reflect what Schein calls basic assumptions (Schein, 2016: p. 29).

Second, Espoused Beliefs and Values: (Schein, 2016: pp. 29-30)

Schein says when a group is first created or when it faces a new task, issue, or problem, the first solution proposed to deal with it reflects some individual’s own assumptions about what is right or wrong, what will work or will not work. Those values proposed that can be empirically tested and that continue to work reliably in solving the group’s problems will become transformed into assumptions for the group.

But, certain value domains—those dealing with the less controllable elements of the environment or with aesthetic or moral matters—may not be testable at all. In such cases, consensus through social validation is still possible, but it is not automatic. And, the strategies and goals of the organization may fall into this category of espoused beliefs in that there may be no way of testing them except through consensus, because the link between performance and strategy may be hard to prove,

And he also talks about some beliefs and values that cannot be tested at all, but group members reinforce each other’s values and beliefs, to be taken for granted, and those who do not accept such values and beliefs are in danger of being thrown out of the group. The test of whether they work or not is how comfortable and anxiety-free members are when they abide by them. As these values continue to provide meaning, comfort and reduce uncertainty, they turn into non-negotiable basic assumptions even though they may not be correlated with actual performance.

Often, espoused beliefs and values are so abstract that they can be mutually contradictory, such as when a company claims to be equally concerned about stockholders, employees, and customers or when it claims both the highest quality and lowest cost. Espoused beliefs and values often leave large areas of behavior unexplained, leaving us with a feeling that we understand a piece of the culture but still do not have the entire culture in hand.

To get to that deeper level of understanding, decipher the pattern, and predict future behavior correctly, we have to understand the category of basic assumptions more fully.

Third, Taken-for-Granted Underlying Basic Assumptions: The Cultural DNA (Schein, 2016: pp. 30-31).

When a solution to a problem works repeatedly, it comes to be taken for granted. What was once a hypothesis, supported only by a hunch or a value, gradually comes to be treated as a reality? We come to believe that nature really works this way.

Basic assumptions, in the sense defined here, have become so taken for granted that you find little variation within a social unit. This degree of consensus results from repeated success in implementing certain beliefs and values.

The implicit assumptions that actually guide behavior tell group members how to perceive, think about, and feel about things. Basic assumptions are generally nonconfrontable and nondebatable and, hence, extremely difficult to change. To learn something new in this realm requires us to resurrect, reexamine, and possibly change some of the more stable portions of our cognitive structure.

Such learning is intrinsically difficult because the reexamination of basic assumptions temporarily destabilizes our cognitive and interpersonal world, releasing large quantities of basic anxiety. Rather than tolerating such anxiety levels, we tend to want to perceive the events around us as congruent with our assumptions, even if that means distorting, denying, projecting, or, in other ways, falsifying to ourselves what may be going on around us. It is in this psychological process that culture has its ultimate power. Culture is a set of basic assumptions that define what we pay attention to, what things mean, how we react emotionally to what is going on, and what actions we should take in various kinds of situations. After we have developed and integrated a set of such assumptions, we will have created a “thought world” or “mental map”. That assumptions often deal with fundamental aspects of life—the nature of time and space; human nature and human activities; the nature of truth and how we discover it; the correct way for the individual and the group to relate to each other; the relative importance of work, family, and self-development; the proper role of men and women; and the nature of the family. Broader assumptions about human nature often derive from the larger culture in which the organization is embedded or from occupational units that cut across organizations.

5. An Example of Schein’s Three Levels of Analysis

DEC Corporation

Digital Equipment Corporation in Maynard: the founder, Ken Olsen.

Massachusetts Digital Equipment Corporation (DEC) was the first major company to introduce interactive computing in the mid-1950s, and it became a very successful manufacturer of what came to be called “mini computers.”

Artifacts

What Schein recalls most vividly from his first encounters with this organization was:

- A very dynamic environment in the sense of rapid pace, and a high rate of interaction among employees, seemingly reflecting enthusiasm, intensity, energy, and impatience.

- As he began to attend the regular staff meetings of the senior management group, he was quite struck by the high level of interpersonal confrontation, argumentativeness, and conflict. And it was also noticeable that such anger did not carry over outside the meeting.
- There were very few people who had visible status in terms of how people deferred to them.
- He learned from further observation that this style of running meetings was typical and that meetings were very common, to the point where people would complain about all the time spent in committees.
- There were many levels in the technical and managerial hierarchy, but he sensed that the hierarchy was just a convenience, not something to be taken very seriously. However, the communication structure was taken very seriously. There were many committees already in existence, and new ones were constantly being formed. The company had an extensive email network that functioned worldwide; engineers and managers traveled frequently and were in constant telephone communication with each other. Olsen (the founder) would get upset if he observed any evidence of under-communication or miscommunication.

Schein reacted very positively to the informality, but very negatively to the unruly group behavior, but he did not really understand why these things were happening and what significance they had for members of the company. And to gain some understanding, Schein had to get to the next level: the level of espoused beliefs, values, and behavioral norms.

Espoused Beliefs, Values, and Behavioral Norms

- A high value was placed on personal responsibility. If someone made a proposal to do something and it was approved, that person had a clear obligation to do it or, if it was not possible to do, to come back and renegotiate. The phrase “He who proposes, does” was frequently heard around the organization.
- Employees at all levels were responsible for thinking about what they were doing and were enjoined at all times to “do the right thing,” which, in many instances, meant being insubordinate. If the boss asked you to do something that you considered wrong or stupid, you were supposed to “push back” and attempt to change the boss’s mind. If the boss insisted and you still felt that it was not right, you were supposed to not do it and take your chances on your own judgment. If you were wrong, you would get your wrist slapped but would gain respect for having stood up for your own convictions.
- The principle of thinking for oneself and doing the right thing was very strongly reinforced.
- It was also a rule that you should not do things without getting “buy-in” from others who had to implement the decision, who had to provide needed services, or who would be influenced by it. Employees had to be very individualistic and, at the same time, very willing to be team players.
- To reach a decision and to get buy-in, the individual had to convince others of

the validity of his or her idea and be able to defend it against every conceivable argument, which caused the high levels of confrontation and fighting that Schein observed in groups.

- Each person should figure out the essence of his job and be very clear about it. Asking the boss what was expected was considered a sign of weakness.
- Schein also found out that people could fight bitterly in group meetings, yet remain very good friends. There was a feeling of being a tight-knit group, a kind of extended family under a strong father figure, Ken Olsen, which led to the norm that fighting does not mean that people dislike or disrespect each other.
- The company was founded by engineers and was dominated by an engineering mentality in that the value of a proposed new product was generally judged by whether the engineers themselves liked it and used it, not by external market surveys or test markets. DEC engineers loved sophisticated customers like scientists and lab managers who could relate to the complex products, give good feedback, and thereby stimulate product improvements. Ordinary customers were talked about in a rather disparaging way.
- Olsen (the founder) emphasized absolute integrity in designing, manufacturing, and selling. He viewed the company as highly ethical, and he strongly emphasized the work values associated with the Protestant work ethic—honesty, hard work, high standards of personal morality, professionalism, personal responsibility, integrity, and honesty. It was especially important, to be honest and truthful in their relations with each other and with customers.

And Schein also sees that those values represented simultaneously the macro culture of academia, in which ideas always have to be attacked and tested; the macro occupational engineering culture, in which elegance is a high value; and the micro-culture of a start-up, in which the founder's values and operational methods are the primary influence on how the organization evolves. Ken Olsen was a very puritanical New Englander, and he infused those personal values into the organization.

Schein now “knew” what the espoused values and principles were but did not really understand “why” some of these values were so strongly held.

Basic Assumptions:

To understand the implications of these values and to understand “why” some of these values were so strongly held and to show how they relate to overt behavior, Shen sought the underlying assumptions and premises on which this organization was based.

It was only by seeing the combination of assumptions—around:

- Individual creativity, entrepreneurial spirit
- Group conflict as the source of truth
- Individual responsibility, do the right thing
- Commitment to each other as a family, paternalistic family
- Commitment to innovation

- Moral Commitment to solving customer problems
- Engineering arrogance, we know what is best for customers
- Internal competition, and let the market decide
- Belief in internal competition and central control
- Moral commitment to solve

The observable day-to-day behavior could be explained. It is this level of basic assumptions and their interconnections that define some of the essence of the culture—the key genes of the cultural DNA at this stage of DEC’s development. This DNA is a mixed combination of U.S. macro-cultural values of individualism, competition, and pragmatism and family values such as loyalty, frugality, truth, and commitment to customers as represented by Ken Olsen and the engineers he hired.

6. Schein’s Levels of Culture Intersect with Critical Realism

We notice that the ontology proposed by Schein’s study is identical to the critical realism philosophy in terms of dividing culture into three levels.

The artifacts, as Schein said, are superficial appearances, and they represent the empirical level of critical realism philosophy. Schein warned against relying on them to understand the culture.

The values, as talked about by Schein, are the solutions to the new problems facing the organization, and they represent the founder and leaders’ perceptions of these solutions. The researcher believes that they represent the actual level of critical realism and agency.

The implicit assumptions that actually guide behavior, tell group members how to perceive, think, and feel about things. And researchers have to understand them to explain “why” the values were so strongly held and to show how they relate to overt behavior. The researcher believes that it represents the structures and mechanisms of the real level of critical realist philosophy.

Schein increased the depth of studying organization’s culture as he introduced broader macro cultures in the study of organizations, as he argues: “My choice of what to include was premised on which dimensions would be most useful when we try to understand how organizational cultures are nested in broader macro cultures” (Schein, 2016: p. 83). He also reviewed the major ways in which language, reality, time, space, truth, human activity, nature, and relationships can be categorized.

We also notice that the stratification of culture helped Schein regarding the study of the existing entities within the organization, as we found from the previous example that studying both the individual culture (founder culture) and the culture of groups, such as the culture of engineers, added to his understanding of the organizational culture, but without reducing the culture of the organization to those cultures, as Schein said: “The DNA of DEC’s culture survived while the organization as an economic entity failed”. (Schein, 2016: p. 64) In other words, in the end, there was a unique culture, the culture of DEC.

And we introduce an example of abduction and retroduction made by Schein:

When Schein began to attend the regular staff meetings of the senior management group, he was quite struck by the high level of interpersonal confrontation, argumentativeness, and conflict. And it was also noticeable that such anger did not carry over outside the meeting.

Schein, in the beginning, attributed the causes of the event when analyzing the values to the following causes:

- Do the right thing, which, in many instances, meant being insubordinate.
- The principle of thinking for oneself and doing the right thing was very strongly reinforced.
- Employees had to be very individualistic and, at the same time, very willing to be team players.
- To reach a decision and to get buy-in, the individual had to convince others of the validity of his or her idea and be able to defend it against every conceivable argument, which caused the high levels of confrontation and fighting that Schein observed in groups.
- There was a feeling of being a tight-knit group, a kind of extended family under a strong father figure, Ken Olsen.
- And then returned the event to these causes when he studied the basic assumptions:
 - Group conflict as the source of truth
 - Internal competition
 - Commitment to each other as a family, paternalistic family

Schein re-describes the observable everyday objects in an abstracted and more general sense in order to describe the sequence of causation that gives rise to event, and this is what we can say an abducting of the explanatory reasons for what happens in the meetings, and what helped Schein in doing that is the hierarchical stratification of reality into three levels.

As retroduction suggests, a number of other causal processes are also at play to affect the mechanism observed, and the opportunity to understand more about the relationship between the mechanisms we observed and the contexts in which it operates.

We notice that Schein also benefited from the hierarchical stratification of reality by referring the events at the level of values to specific contexts, namely:

- The macro culture of academia is one in which ideas always have to be attacked and tested.
- Macro occupational engineering culture is one in which elegance is of high value.
- And the micro-culture of a start-up, in which the founder's values and operational methods are the primary influence on how the organization evolves. Ken Olsen was a very puritanical New Englander, and he strongly emphasized the work values associated with the Protestant work ethic—honesty, hard work, high standards of personal morality, and especially important was being hon-

est and truthful in their relations with each other and with customers.

And referring the events at the level of basic assumptions to a broader context:

The DNA of U.S. macro-cultural values of individualism, competition, and pragmatism and family values such as loyalty, frugality, truth, and commitment to customers.

We also note that Schein recommended researchers in the field of culture to research in depth by using the anthropological study as he argues: “you have to think like the anthropologist, lean heavily on observation, and then follow up with various kinds of inquiry” (Schein, 2016: p. 184). And many possible ways of gathering data, as Schein recommended, are shown in the following list: (Schein, 2016: p. 185)

- Demographics: measurement of “distal variables”.
- Content analysis of documents and organizational products such as stories, myths, rituals, symbols, and other artifacts.
- Ethnography or participant observation: asking to hang around, shadowing selected participants, sitting quietly to observe but avoiding getting involved even if asked.
- Participation in a volunteer or helping role.
- Asking members to fill in questionnaires, ratings, objective tests, and scales as individuals and anonymously, with scoring done by outsiders.
- Educational interventions, projective tests, assessment centers, and interviews - Action research or organizationally initiated contract research.
- Incidental clinical inquiry as part of a helping or consulting process.
- Total involvement in improvement processes such as statistical quality control or “lean” process redesign.
- Take a regular job for some time to fully experience the culture.

This also coincides with critical realism philosophy in that it does not depend on a single method when researching. As Sayer argued, “the extensive/intensive distinction is not identical to the survey-analysis/case-study or ethnography distinction: extensive approaches might be used within a single case study; intensive approaches do not have to be limited to single cases and can use other methods besides ethnographic ones” (Sayer, 2000: p. 21).

When Schein talks about the possibility of generalization, we note that his position is identical to that of critical realism, as he does not reject generalizations like the interpretivists, and he differs from the causal logic employed by positivists’ investigators who seek linear associations and rarely test for necessary and sufficient conditions. As he argued, “The DEC story should remind us that we cannot really make generalizations about culture without specifying the age, size, and underlying technology of the company because each of those factors played a role in what the DEC culture became, and we also have to consider in what way the given company culture is nested in various occupational and national macro cultures. We cannot make generalizations about culture without specifying whether we are talking about a first- or a second-generation company still run by the founder or

about a company run by general managers who have been appointed by boards and have worked their way up the managerial ladder” (Schein, 2016: p. 44).

Also, when talking about intervention and changing culture, he contradicts interpretivism, but he did not consider it an easy matter as well as the positivists claim. And that corresponds to critical realism, which, although it holds that the real level has causal effects on the actions of individuals, individuals have the agency that enables them to change these structures. As he argued, “Organizations then may find themselves with beliefs, values, norms, and basic assumptions that are to some degree dysfunctional and will require change that will typically involve some culture change. And it now falls to leadership again to identify the problem, to assess how the existing culture will aid or hinder the required changes, and to launch what can now be appropriately called a culture-change program” (Schein, 2016: p. 101).

7. Conclusion

The study of organizational culture through critical realism philosophy provides a way out of the controversy between positivism and interpretivism philosophies by ensuring both an in-depth study of the organizational culture and sound contributions to theoretical development that help managers understand and manage their culture.

This study provides researchers in the field of organizational culture with a model of study that corresponds to critical realism philosophy, namely Schein’s model, as Schein’s model provides the researcher with methods for analyzing culture that extend beyond external manifestations and return these manifestations to deeper levels that explain to researchers why things are done in the organization the way they are. The stratification of culture introduced by Schein helps researchers to study the existing entities within the organization, as we found from the previous example that studying both individuals’ cultures and the groups’ cultures adds to our understanding of organizational culture but without reducing the culture of the organization to those cultures. This stratification of reality into three levels will also help researchers in doing abduction and retroduction, as we see in the previous example.

Critical realism philosophy also provides researchers with several benefits: The researchers can benefit from the various previous studies and not only take from one of the options (interpretivists or positivists), and also enables the researcher to benefit from different strategies for research such as (survey, case study, ethnography, archival research), and also enables the researcher to develop new propositions through the use of abduction and retroduction, whereas in a science based on critical realism, are two indispensable modes of inference besides induction and deduction (Danermark et al., 2005: p. 15).

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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