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Peirce's inquiry on habits. A contemporary perspective

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“Nothing is so difficult, as not deceiving oneself.”
Wittgenstein, 1938

“When I communicate my thought and my sentiments to a friend with whom I am in full sympathy, so that my feelings pass into him and I am conscious of what he feels, do I not live in his brain as well as in my own - most literally?”
Peirce, 1866

Abbreviations

CD The Century Dictionary and Cyclopedia. 10 vols. Edited by William D. Whitney New York: The Century Company, 1889–1891.

CN *Charles Sanders Peirce: Contributions to the Nation*, III vol. Edited by K.L. Ketner, J.E. Coock (Lubbock: Texas Technological University Press, 1979).

CP *Collected Papers of Charles Sanders Peirce*, 8 vols. Edited by C. Hartshorne, P. Weiss, and A. Burks (Cambridge: Harvard University Press, 1932– 1958).

DPP *Dictionary of Philosophy and Psychology*. Edited by J.M. Baldwin (New York: Macmillan & co., 1901).

EP 2 *The Essential Peirce Vol. 2*. Edited by the Peirce Edition Project. (Bloomington: Indiana University Press, 1998).

NEM *The New Elements of Mathematics by Charles S. Peirce*, 4 vols. Edited by C. Eisele (The Hague: Mouton, 1976).

R A Harvard manuscript (Charles S. Peirce Papers, 1787-1951, MS Am 1632, Houghton Library, Harvard University) as listed in Richard Robin, *Annotated Catalogue of the Papers of Charles S. Peirce* (Amherst: University of Massachusetts Press, 1967); RL refers to letters that are listed in the correspondence section of Robin's catalogue; RS refers to manuscripts listed in R. Robin, "The Peirce Papers: A supplementary catalogue," *Transactions of the C. S. Peirce Society* 7 (1971): 37–57.

RLT *Reasoning and the logic of things: The Cambridge conferences lectures of 1898*. (Harvard University Press, 1992).

W *Writings of Charles S. Peirce: A Chronological Edition*, 7 vols. Edited by. E. Moore, C. J. W. Kloesel et al. (Bloomington: Indiana University Press, 1982-2009).

Contents

Introduction

This dissertation examines the general structure of the principle of habit, its mode of being, and its consequences for the problem of the mind and the self in relation to human beings. It does so from the perspective of Charles Sanders Peirce (1839-1914), an American philosopher and polymath who is regarded as the founder of pragmatism and of a general theory of signs (mainly defined as *semiotic*, that is, "the doctrine of the essential nature and fundamental varieties of possible semiosis") (EP2: 413). Peirce devoted much of his life to the study of logic and human reasoning, anticipating some fundamental advances in the field. Nevertheless, he also developed a rich and elaborate metaphysical system. My work sets out from an analysis of certain aspects of Peirce's idea of habit, from general ontological issues to their repercussions on human cognition and subjectivity.

The overall structure of this dissertation can be divided into two parts. The first and main one follows a three-step conceptual path that mirrors the threefold structure of the principle of habit. Here I will set out by emphasising the philosophical distinctiveness of habit and contrasting it with other approaches on habit. Then I will discuss its ontological position, before highlighting some of its fundamental metaphysical properties. In the second part I will defend the thesis that we can be defined as "creatures of habit" because we share the same ontological and temporal position as habits, as well as some fundamental characteristics, which have important consequences on our very idea of reasoning and subjectivity.

Three components of my central claim will immediately come into play: Peirce's proposal; the historical legacy of the concept habit and its pragmatist definition; and the contemporary debate on the topic, involving both Peirce's role in philosophies of habit and the role of habit in Peirce's philosophy. My dissertation strives to investigate both these roles.

Habits today

The range of application and explanatory power of the concept of habit are immense, yet its ontological and general constitution is rarely investigated (Sparrow & Hutchinson, 2013: 3). Scholars often prefer to focus on the description of individual habits from a physical or physiological standpoint and on how to exercise rational control over them. In most people's perception, in non-specialist literature[1], but also in most psychologists' view, habit is opposed to rationality, with respect to which it constitutes an obstacle to be circumvented or at least managed. One of the first points on which this work focuses is the dismantling of this common belief, and of reductionist approaches to the concept of habit. The philosophical depth of habit shows us another, more challenging, direction.

There are two dimensions to this depth. In its broadest sense, habit extends across the entire history of Western thinking, beginning with Plato and Aristotle, like a temporal axis. But in terms of intellectual depth too, it has a cross-cutting effect: for the scaffoldings that support habit are multi-layered. It is impossible to give an account of the principle of habit by relying merely on a handful of them, whether they be epistemological, sociological, or physiological views, as this study aims to demonstrate.

At the same time, it is widely known that, philosophically, the concept of habit ended up being frowned upon at the beginning of the last century, because it was regarded as dyadic, reductionistic, and 'worldly', owing primarily to its appropriation by behaviourist

[1] Some recent publications, especially by American journalist authors (Clear 2018; Duhigg 2013), clearly show a renewed interest in and approach to the concept: *Atomic Habits: An Easy & Proven Way to Build Good Habits & Break Bad Ones* and *The Power of Habit: Why We Do What We Do, and How to Change*. Duhigg, in particular, uses some expressions that are extremely revealing for me. Habits are not a 'destiny', they are part of the scientific dimension and therefore knowable, but above all they can be manipulated to implement our abilities in the most diverse fields of human action, from interpersonal relations to business. We will see in the central part of my work, on the contrary, that one of the most intriguing definitions used by Peirce is that of 'destiny', and that habits are not a tool at our disposal, but rather constitute a background which we cannot avoid and which we must learn to navigate.

psychology. However, at the present time, studies on philosophies of habits are at a particularly significant and fruitful crossroads.

On the one hand, some initial steps have been made towards reconstructing the bumpy journey of this foundational philosophical concept, which is thus regaining an important place in contemporary debate (Aiello, Paolucci, and Romele 2020; Bower and Carminada 2014; Carlisle 2014; Carlisle and Sinclair 2011; Piazza 2015; 2018; 2020; Sinclair 2019; Sparrow and Hutchinson, 2013). On the other hand, the fruitful theoretical potential of habit is being rediscovered thanks to the interdisciplinary attitude to which this concept lends itself (Bernacer, Lombo, and Murillo 2015; Giovagnoli and Lowe 2020; Kilpinen 2009; Sapiro 2015), and hence the reappraisal of currents, such as pragmatism (Caruana & Testa, 2020; Dreon, 2022), which have made habit one of their key concepts. The pragmatist tradition indeed explicitly characterises human being as "creatures of habit".

Among classical pragmatists, there has been a strong reappraisal of Dewey's broad and rich perspective in contemporary terms (Candiotto and Dreon 2021; Colapietro 2004; Dreon 2010; Miyahara and Robertson 2021). To fully re-evaluate a philosophy of habit in all of its heuristic aspects, I think it is important to add a Peircean-based account, through which it is very easy to argue, for example, against the 'unphilosophical' (often meaning non-metaphysical, purely psychophysiological) characteristics attributed to habits. In these same years in which philosophies of habit have regained ground in scholarly debate, a number of contributions have focused mainly on the concept of habit within Peirce's theory, from a variety of perspectives (Fabbrichesi 2019; Fernández 2012; 2014; Viola 2012; 2017; 2020a; West and Anderson 2016).

My dissertation aims to fit within this renewed tradition, but also aims to emphasise some specific features of Peirce's proposal – including some largely unnoticed ones – that define habit in its general mode of being.

A distinctive position

Peirce's thought is set in a precise historical context. The first point to stress is the fact that the American philosopher was at work from 1867, the year of his first and perhaps greatest philosophical contribution, to 1913, when his last writings were published just before his death. In 1859 *The Origin of Species* was published, a work which was destined to have a very strong impact on the birth of American pragmatism. The period from that date until the beginning of the following century was a peculiar and particularly prolific moment for the history of habit, which would increasingly move towards a specialist perspective. Nevertheless, between the 1860s and the 1890s', countless fundamental studies on the subject were published (Butler, 1878; Dumont, [1876] 2019; Egger, 1880; James, 1887; Murphy, 1869).

As I will show in my work, Peirce deviates on some fundamental respects from James' more famous perspective. At the same time, he was a Classical scholar who looked at ancient and medieval philosophy. His main points of reference were Aristotle and Scholasticism, which I will discuss in several passages. This perspective will also prompt me to follow an equally Classical itinerary, which moves from the most general questions to particular ones, starting with the most general of all – the categorical system.

The categories lie at the heart of Peirce's philosophy, and indeed we must be careful not to engage in any categorical reductionism in our work on this philosopher, lest categories become the only lens through which we read every other concept. However, since the research I wish to conduct is based on an investigation of the principle of habit in its most general aspect, namely as a mode of being, then it is necessary to start from the attributes of being, namely the categories.

This is especially the case because this point of view underlying Peirce's thesis, which I wish to bring out, is the one that differs most from the psychologistic readings of his time, which distanced the domain of habit from the sphere of philosophical reflection, as well as

from contemporary psychologistic readings, which place the concept above others, such as those of skill and routine.

Through the various steps of my work, a Peircean proposal will emerge that can be summarised as follows. There is an important difference between the general principle of habit and concepts used to express this principle, just as there is clear difference between the concept of habit and individual instances of it. This allows us to work on several analytical levels, and to verify the connections between them. Habit, in its most general sense, is irreducible to either of the two poles that make up standard philosophical dichotomies: it is neither potentiality neither actuality, but has an intermediate modal status, a "third mode of being", which already Aristotle seems to emphasise in certain passages. For Peirce habits realise a third, intermediate mode of being, largely coinciding with Peirce's third category, mediating between firstness and secondness.

The main characteristics of the concept of habit emerge from Peirce's metaphysical reflections, which I will use to conduct the main and most extensive part of my enquiry. Habits are inherently general and real; they are a mediation construct; they express themselves temporally in the conditional (they are a 'would-be'); they are resolved exclusively in a triadic relation; they are irreducible to either of the poles of which they are composed.

So, the concept of habit, as it arises from Peirce's works, reflects a much broader view compared to the perspectives offered by many other philosophers who put habits at the core of their architecture of thoughts. Despite the fact that my thesis is anything but definitional in content, I will begin with one of the many definitions provided by Peirce (which I will resume later), as it neatly sums up the characteristics I have mentioned, and on which all of my thoughts in this thesis are based.

> By a Habit I shall mean a character of anything, say of B, this character consisting in the fact that under circumstances of a certain kind, say A, B would tend to be such as is signified by a determinate predicate, say C. The same thing might be more briefly

> expressed by saying that I call any real 'would-be' a habit of the subject of such predication; but by stating the matter more fully I bring into prominence the fact that a "would-be" is a relation between three objects, A, B, and C. (R 681: 22)

Peirce stresses this triadic formula, which constitutes the structure of habits and is made up of a subject/object, a particular circumstance, and a predicate/conduct of action. The meaning of habit cannot be found in the specific occurrences that it determines. As Peirce repeatedly asserts, only this triadic relation exhausts the meaning of a genuine 'would-be', a habit. To put it in another way, a relationship emerges between these triadic terms and habit, whereby all of the terms acquire meaning from the habit's connection. This is our starting definition, because it relates three terms and provides the basis for subsequent inquiries. The three terms in the habitual relation, while inseparable from habit, acquire important meanings for my work. Circumstances constitute the trigger of habit, while individual action is the 'endpoint' in this relation; from it we derive the possibility of a critical evaluation of habit. Furthermore, a different role of subjectivity emerges, as 'only' one of the 'points' of the relation.

The leitmotif of my entire work lies between the interpretation and analysis of Peirce's account and the comparison with the scholarship on habit, highlighting the most innovative and theoretically relevant aspects of his philosophy of habit. In particular, in the first part I aim to bring out some characteristics of habits that stand out from the contemporary mainstream debate. This lays the groundwork for my main theoretical proposal, which I develop in the second chapter. Here I establish through an enquiry that is both historical and theoretical what I consider to be the hub of Peircean theory, and which also represents the junction between my work on Peirce and from Peirce.

The theory about habit's mode of being represents in the whole of my work the structure that emerges from the historical analysis of the concept of habit in the Peircean understanding and his distinctive trait as a crucial author for a philosophy of habit. Habit as a mode of being arises in turn primarily from the very close relationship between Peirce's theory of habit as category and the legacy of Aristotle, and thereafter of medieval philosophy.

The very metaphysical structure of what I call the general principle of habit derives from the comparison with the history of an ontology of the *Hexis*, which Peirce embraces and develops, and which at the same time allows me to actualise in contemporary debate. This investigation represents a further link, the one between the theoretical-metaphysical part of my work, and the two areas of the concept of habit where it shows itself at work, which represent leading areas of investigation of habit: its relationship with cognition and the self.

In the development of the second part of my work, as I continue my examination of Peircean theory and bring out its salient points, I will emphasise that the concepts I take into consideration from time to time derive directly from the metaphysical structure I sketch in the first part. That is, the triadicity, generality and mediation of habit just mentioned above, which derive from the ontological position described through the relation to the *Hexis*, flow directly into Peirce's conception of cognition and the self. My thesis aims to show that while the centrality of habit in these two aspects of Peirce's philosophy is taken for granted and widely acknowledged, the structure that underpins and justifies it is less so.

Methodological remarks

My thesis will not proceed in a chronological order, by following Peirce's career; rather, consistently with its theoretical objective, it will follow a thematic order that supports my main argument (from the structure of habit to ontology and the impact of habit on cognition and subjectivity). In particular, my hypotheses, while based on Peirce's insights, will emerge from an analysis that proceeds back-and-forth between his work and contemporary interpretations.

Nevertheless, my work considers Peirce's entire oeuvre, from his early writings to his later ones. I will be drawing extensively upon the primary and secondary literature, privileging a critical approach and developing some comparisons with other philosophers

and with the contemporary literature on habit. To a lesser extent, I will also take account of Peirce's unpublished manuscripts, since many represent valuable sources.[2]

Precisely because Peirce's oeuvre is so extensive, his references to habit are countless. The aim of this thesis is not to provide an exhaustive account of all the areas in which Peirce uses the concept, or a collection of all the passages in which he invokes the notion of habit in support of his arguments. Due to the fragmentary nature of both Peirce's work and his use of the concept, adopting such an approach would have entailed the risk of writing a thesis without a clear structure. Moreover, not least through an extensive perusal of the secondary literature, I will attempt to show that there is no precise agreement among scholars on all of the meanings that the American philosopher assigned to this concept. Hence the need for me to focus on deriving from Peirce's vast corpus both his key thoughts on habit and a central and general perspective on the topic that might stand out from the most common ones.

Work plan

The dissertation is articulated into two main parts. The first part can be divided in two sections. The first section, which coincides with the first chapter, introduces some central concepts, tracing the boundaries of my thesis. The second one, which comprises the second and third chapters, presents my main argument about the mode of being of habit.

The second part of the dissertation, which includes the fourth and fifth chapters, investigates two aspects in which human beings can be considered "creatures of habit". Specifically, it analyses the crucial role of habit in relation to human cognition and the idea of subjectivity.

Chapter One provides an analysis of the conceptual boundaries of habit. My goal is to highlight some philosophical traits of this concept, starting from some 'negative' definitions of habit that can be drawn from Peirce's thought, while also taking the contemporary debate into account. In particular, I will provide a distinction between a 'broad' and a 'narrow' sense

[2] I was able to access these manuscripts through the digital copies in Milan University's possession.

of the term. In order to do so, I will develop my argument by showing – section by section – why habits cannot be entirely defined as *unreflected responses acquired through repetition*.

Chapters Two and Three jointly constitute my theoretical proposal concerning the mode of being of habits. Chapter Two directly addresses the question of modes of being in Peirce's thought. The first section is concerned with presenting the three modes of being that Peirce identifies. For Peirce, most philosophers' metaphysical systems acknowledge only one mode of existence, namely actuality, when there are two others that are equally important: firstness (the mode of being of possibility), which is indeterminate to the highest degree, and thirdness, which holds the other two modes together. This last modality is central to Peirce and is the one that defines habit. In the subsequent sections I take a closer look at the categorical framework in relation to habit, particularly within Peircean cosmology. At the end of the chapter, I directly address the question of this third mode of being by outlining a history of *hexis* itself.

Chapter Three draws together the conclusions reached in the previous chapter and seeks to isolate and better identify the characteristics of habit's mode of being. This will lead me to examine other aspects of Peircean metaphysics. In particular, beginning with his scholastic realism, my goal will be to demonstrate what the intrinsic generality and reality of habit consist in. In the second part of the chapter, however, I will deal with what I call the temporality of habit. That is, the question of why habit is a conditional ('would-be') whose meaning is resolved in the future. I will then analyse a fundamental trait of habit that opens up contemporary developments, namely, what makes it an anticipatory and predictive concept.

In the last two chapters I aim to draw the consequences that my theoretical proposal about habit implies for human beings. In particular, by showing the centrality of habit in human cognition and subjectivity, I seek to achieve a shift in perspective, that is: I aim to show that we can be defined as creatures of habit because we share its very mode of being.

Chapter Four sets out from the complex relationship between habit and intelligence. Far from being a dichotomy, Peirce shows that habit is the basic condition that enables human reasoning and defines its limits. Knowledge, belief, and meaning are intertwined to construct a complex 'habitual' theory of human cognition. In the last section I advance the following hypothesis: habit is neither an obstacle nor an aid to human reasoning, but rather an essential tool; and like all tools that define our being human – for this consists in the ability to adopt technologies – habit is ambivalent. It has two ambivalent sides that I will try to illustrate through a new "double law of habit".

Finally, as already mentioned, the last chapter aims to analyze the assumption of human being as a creature of habit, based on the theory developed in this work: Peirce shows that human being shares with habit some properties of its mode of being. What emerges is a different idea of subjectivity, which is not necessarily diminished, but is connoted by the habitual background in which we are immersed. In this way, the assumption that we possess habits is also overturned. The structure of habit defines us to a great extent, and this has other important consequences. The role of individuality is also reassessed. Habit primarily defines our 'ontological position' as creatures always waiting for further determination, creatures defined by the expectations and anticipations that constitute our innermost self.

What role, then, is left for human agency? I will show in the conclusion that mine is not an over-deterministic position: for what really enables our condition of 'being' human is the complex task of becoming aware of our own habits – that is, of our very mode of being and living.

1. The architecture of habits

The first chapter assumes in the context of my thesis the function of a groundwork, with regard to the methodology and delimitation of the concept, with respect to the theoretical proposals that I will advance based on Charles Peirce's philosophy of habit. In particular, this first section reviews a good deal of contemporary literature on habit, including both historical and theoretical studies of the philosophies of habit, as well as those focusing on the cognitive and psychological aspect, pragmatist and non-pragmatist. These latter represent, as I will show, the majority of studies on the concept in the last century.

In fact, the first aim of this part is to illustrate that the premises of my work stem from a different conception of habit than a large section of scholarship, including contemporary one. Mainstream reading of habit is still decidedly psychologist, and to some extent reductionist of the concept, which has effectively deprived it of its theoretical richness. Some important recent work and the historical reconstruction of the vicissitudes of habit throughout the history of Western philosophy are in part recomposing the rift that was created at the beginning of the twentieth century.

A second aim of this work is to illustrate Peirce's position, analysed in his more theoretical and general proposal, regarding the mode of being of habit. Indeed, I believe that Peirce's work on habit, as recent literature on the philosopher has already shown, definitely enriches the renewed field of habit scholarship. Indeed, Peirce is aware of the structure of the concept and its historical trajectories, and furthermore he makes it the cornerstone of his metaphysical and epistemological reflections, thus certainly creating a dense network of cross-references that is not easy to analyse but at the same time making him a necessary thinker for philosophies of habit.

This first chapter therefore develops along the aforementioned lines, subdividing my proposal into four sections, each one dealing with a 'negative' definition of habit. That is, I will show how habit cannot be entirely defined, contrary to how it is often done, as an unreflective, dyadic, acquired and repetitive behaviour. My argument against this canonical

definition will lead me to suggest an initial multi-level hypothesis, diversifying at least two aspects of this complex concept. This will show some fundamental characteristics of the concept that will constitute the theoretical backbone of my entire thesis.

1.1 What a habit is not

In order to better define a concept and, secondly, to better frame its place within an author's thought, it is helpful to define its boundaries, particularly by establishing what that concept cannot be identified with. This is especially true in our case, for two simple reasons. First, because clearly identifying the boundaries of the concept of habit in Charles Peirce's theory is anything but simple. Second, because definitions by negation best represent Peirce's way of thinking, the case of the 'self' being perhaps the most paradigmatic example (as he stated in 1903 *Lowell Lecture*): "We become aware of ourselves in becoming aware of the not-self" (CP 1.324).

In this section I aim to pursue a twofold objective. First, I will try to draw an initial outline of Peirce's treatment of habits, which I call "the architecture of habits", that is, the internal structure of the concept itself, its main embodiments, and characteristics. This will help me to approach the second step, by which I will develop the principal and most extensive part of my thesis. This deals with habits, viewed both in terms of the generality of their underlying principles (which are chiefly, yet not exclusively, metaphysical) and in terms of their specific embodiments (which are chiefly, yet not exclusively, epistemological).

I must therefore start by tracing the boundaries of this concept, by addressing two fundamental questions: the first concerns the specificity of Peirce's position in the conceptual history of habits, which is link to the second question, regarding the very definition of pragmatism.

The common usage of the word habit as defined by contemporary dictionaries tends to emphasise its repetitive, unconscious, acquired, and unreflective aspects, as something that is done often and regularly, even without having the awareness of the act. The Oxford

Dictionary captures an important nuance of the concept – namely, that habits as a tendency are a way of acting – but still emphasizes the involuntary and iterative aspect, by identifying habits with acquired ones: "A settled opinion or tendency to act in a certain way, especially one acquired by frequent repetition of the same act until it becomes almost or quite involuntary".[3] This usage is not limited to ordinary language: in this section I will show to what degree past and present studies in psychology, philosophy, and cognitive science engage with the above four points. This is unsurprising, because the fate of the concept of habit, whose rise and fall I will briefly recall in this opening section, had already been sealed by the beginning of the twentieth century. In the very year in which Peirce returned to Harvard for his lectures on pragmatism, the *American Journal of Psychology* defined "habit from the standpoint of psychology, as a more or less fixed way of thinking, willing, or feeling acquired through previous repetition of a mental experience" (Andrews 1903).

Note the very interesting reference to the triad of feeling, wanting, and thinking, which will have considerable weight in this discussion, and to mental repetition (as opposed to motor repetition). This is a much more interesting definition, which reflects the enormous discoveries made in the late nineteenth century, although it still stresses the repetitive component of habit. Clearly, the characteristics described above do not cover even a small part of the definition that will emerge from the Peircean account I will be drawing, and which overcomes or denies the acquired, repetitive, dyadic, and unreflective component of habits. This account seeks to transcend the common and mundane usage of the term 'habit', but also the one made by most modern philosophers.

The four points mentioned above concern the connotation of the term, but a first observation should be made regarding its denotation. As Winfried Nöth points out in his contribution in the *Consensus on Peirce's Concept of Habit*, "[m]ere ideas and feelings are not ordinarily among the objects of habits. […] It would sound strange to call someone's fixed idea, recurring dream, or fear of spiders as a habit, although the word habit, used

[3] See "Habit." Oxford English Dictionary, Oxford University Press, 2020

without a specific object of the habitual doing, may refer to the general way in which a person is mentally or morally constituted" (Nöth, 2016: 36). This does not sound strange to Peirce, according to whom habits can refer not only to the domain of actions, but also to that of feelings and thoughts. Nöth rightly adds that linking habits and thought is hardly a novelty in the history of philosophy.[4] More radically, I will show that the notion of "habit as knowledge" lies at the origins of the very concept of habit (as I will show in 4.1). What might seem surprising is to attribute habits to non-human agents, but Charles Darwin attributed habits to plants in his 1875 book *On the Movements and Habits of Climbing Plants*, "and a handbook of Crystallography of 1895 defines certain molecular properties of crystals as habits" (Nöth, 2016: 35). Peirce adopted the same approach, and this leads me, at the end of this section, to make a first distinction between a 'wide' and a 'narrow' sense of the term. In order to do so, I have to go through the connotations of this word, showing step by step why habits cannot be entirely defined as *unreflected responses acquired through repetition.*

1.2 Habit is not unintelligent behaviour

The allegedly unconscious, unreflective, and unintelligent nature of habit is the broadest issue to be addressed in relation to this topic. It does not concern only Peirce, as it divides the long tradition of enquiry into habit into two lines of interpretation:

> According to the first, habit is an obstacle to reflection and a threat to freedom. Insofar as we think and act out of habit, we are unable to know ourselves or reflect critically on the world, and so we are intellectually, morally, and spiritually impoverished. Habit is a degradation of life, reducing spontaneity and vitality to mechanical routine. Habit is the rut we get stuck in. It makes us bored with ourselves, and boring to others. According to the second interpretation, habit is an indispensable part of life: it not only brings order,

[4] "However, the expression habit of thought can be found in academic discourse. Shuger, for example, in Habits of Thoughts in the English Renaissance defines habits as 'interpretive categories […] which underlie specific beliefs, ideas, and values', and the historiographer Grendler discusses 'medieval habits of thought' criticized by Renaissance humanists" (Nöth, 2016: 36).

> consistency and comfort to our ever-changing experiences, but also allows us to be creative and free. On this view, habit is the living, dynamic embodiment of our intelligence and our desire. (Carlisle, 2014: 3)

Though the Peircean position cannot be pigeonholed so easily, the pragmatist tradition – of which Peirce cannot but be considered a representative – must be included in the second line of interpretation. With respect to other modern and contemporary traditions, the centrality of the relationship between habits and intelligence, or the prevalence of the former over the latter, represents one of the legacies of pragmatism. The assumption that habit is not just irrational and automatic behaviour, or that it does not involve the use of thought, is the core idea of the pragmatist theory of knowledge. Peirce and Dewey clearly established the relation between habits and thought in two very famous passages:

> The influence of habit is decisive because all distinctively human action has to be learned, and the very heart, blood and sinews of learning is creation of habitudes. Habits bind us to orderly and established ways of action because they generate ease, skill and interest in things to which we have grown used and because they instigate fear to walk in different ways, and because they leave us incapacitated for the trial of them. Habit does not preclude the use of thought, but it determines the channels within which it operates. Thinking is secreted in the interstices of habits (Dewey, LW2: 335)

> The whole function of thought is to produce habits of action; and that whatever there is connected with a thought, but irrelevant to its purpose, is an accretion to it, but no part of it. (W3: 265)

As these early observations show, the pragmatist position is more complex than the 'optimistic' second line of interpretation traced by Carlisle. Habits are a pivotal element of thought, and they are somewhat deterministic, in the sense that they orient and direct our reflections. It would be simplistic to consider them "the living, dynamic embodiment of our

intelligence and our desire". As I will show, in Peirce they tend to encompass every kind of behaviour, scaffolding a general theory of human agency:

> The fact that any real subject, on any particular sort of occasion, A, would not behave in the particular manner, B, is just as truly a 'habit', in my sense of the word, as if he were sure to behave in the manner B. For a 'habit' is nothing but the reality of a general fact concerning the conduct of any subject. (R 671: 7).

In any case, habits cannot be reduced to mechanical actions, unconnected to thought. Still, one might say that they determine us without our control, so again they cannot belong to our agency. However, this is not Peirce's position (Black, 2013: 9-14). Peirce repeatedly argues that habits can be easily modified "by the operation of self-control" (CP 1.348, 1903). Of course, this does not apply to all cases: for although habits are subject to self-control by definition, there are also habits that fall below the threshold of consciousness. In that case they are just simply not part of 'reasoning' as Peirce understands it, so his concept of habit may be seen to 'encompass' this dualism. In fact, contemporary philosophies seeking to overcome this dualism between automatic routine and intelligent action heavily rely on a pragmatic conception of habit.[5]

Contemporary literature has not yet overcome the two above-described interpretative lines. Testa and Caruana argue that the most common notion of habit still refers to an implicit mechanism of stereotyped responses, and they identify here too two different approaches: some philosophers follow the Cartesian-Kantian tradition,[6] enhanced by a mechanistic reading of James' theory, which necessarily leads them back to a very intellectualist division between "blind behavioural routines" and "intelligent action"; other philosophers, especially pragmatists, "have interpreted the notion of habit as a relational concept". In this way, Testa

[5] This is the case with the recent book *Habits. Pragmatist Approaches from Cognitive Science, Neuroscience, and Social Theory*, edited by Italo Testa and Fausto Caruana, which represents the most recent and important attempt in this direction.

[6] As clearly stated by Carlisle (Carlisle, 2014: 3,23,114,146), this 'pessimistic' line of interpretation includes many other philosophers, from Augustine to Montaigne, from Spinoza to Proust.

and Caruana claim that it might finally be possible to overcome dualism in philosophy and psychology, especially – but not exclusively – the one between routine and intelligent action. The dichotomy between goal-oriented cognitive activity and action, and between agents and their natural, social, and cultural environment, still persists in most contemporary debates (Caruana & Testa, 2020: 8).

This persistency, which concerns philosophy as well as neuroscience, psychology, and cognitive science, must be examined and understood. Graybiel, who has worked extensively on the structure of habits from a neuroscientific perspective (Graybiel 2008; Smith and Graybiel 2016), explains that the common definition of habit reflects a lack of cognitive activity: "most behavioral measures argued to reflect SR habits emphasize a lack of signs of cognitive influence. The SR associations are inferred from lack of evidence for purposeful or prospective behavior" (Smith & Graybiel, 201: 34). At a philosophical level, the term 'cognitive' usually refers to the idea of 'agency' and 'intentionality'. This tendency to discriminate by using categories and labels may explain the negative connotations often attributed to habits, and the resulting limited interest in them shown by the philosophy of action and analytic philosophy. This, of course, might lead us to misinterpret Peirce's account. Habits can fall outside our active control, they can be "highly stereotyped and mechanical", and they may even be labelled as 'negative' and as obstacles for our purposes and the achievement of our goals. Habits of this sort are certainly included in Peirce's approach, but Peirce's understanding is not limited to them, as we have seen, and the disagreement on these basic assumptions leads to a different perspective. Since the fundamental question in the analytic philosophy of action is to discern between "what counts as action, and what is merely behaviour, or, in other words, the question of what events are manifestation of agency", habits that are not clearly controllable cannot be part of meaningful actions, being a "mere behaviour" (Black, 2013:12). What is at issue here, is an assumed difference between behaviour and action. Usually this is based on the possession or lack of 'intentionality', as is evident from the contemporary literature on the topic. Pollard

summarizes the two factors just described – i.e. the idea that an action must involve an agent and reflect intentionality – by clearly describing these two tendencies. The first is:

> Assimilate habitual behaviors with types of behavior that do not have any important connection to agency. Examples include reflexes, bodily processes, compulsions and phobias. The thought seems to be that when we draw on these explanatory items, we do not implicate the agent, so if habits explain behaviors at all, that only shows that the behaviors being explained are not really actions (Pollard, 2021: 58).

Phobias and compulsions are part of habitual action in Peirce's terms, but they are still actions. The difference between behaviour and action can be expressed in the following terms: if a habit is associated with a specific situation, when the occasion arises, you will not need to process the sequence of thoughts and the action scheme to reach the action's goal; for if you focus on every step, it simply means you do not have that specific habit.[7] This entails certain consequences, but they pertain to other theoretical questions, for example whether habitual actions of this kind can be critically examined.

The "second line of resistance" that Pollard identifies concerns the "intellectualist" view that an action, or part of an action must be "intentional under some description" in order to be defined as such. In short, this boils down to necessarily associating an action with some psychological correlate: "depending on your view, this could be an act of will, an intention, a reason, a desire, a belief, or some suitably related combination of these states. Since habits, being patterns of behavior, are not amongst states of this sort, they cannot themselves provide explanations of actions, or at least not of those which can be regarded as intentional" (Pollard, 2021:58). For Peirce habits are certainly "patterns of behavior" and not concrete actions, but every time you have a case of the latter there is always a kind of behaviour underlying it. Moreover – and this is a pivotal point in Peirce's epistemology – beliefs are indeed habits of

[7] (W3: 261-262) This example also very clearly exemplifies the doubt-belief model of inquiry, which I will discuss later (see ch.4 especially 4.2).

a special kind.[8] The attitude of calling psychological items into question inevitably leads to the embracing of pessimistic view about habits, since this is the common view in psychology.[9] Miyahara and Robertson (2021) highlight the very dichotomy that is being addressed here, but they then develop an alternative answer based on John Dewey's pragmatist account of habit. They refer again to agency and intentionality: what is at stake here is not the vital role habits have in shaping our lives, but the "theoretical puzzle" they present us with. This puzzle derives "from the observation that habitual behaviours seem to exhibit two features that do not easily cohere with one another". On the one hand,

> [t]hey seem to be uncontrolled, almost automatic responses to environmental cues, which unfold very differently from paradigm intentional actions that unfold under the agent's attentive, voluntary control. When we perform an action out of habit, it is not because we have reflected upon the situation and decided that it's the most appropriate way to act. It is because we have repeatedly performed said action under similar conditions in the past (Miyahara & Robertson, 2021:1).[10]

According to this approach, habits can be counterproductive, or even disruptive of our being; furthermore, since they do not follow a deliberative process, "they can preclude our pursuance of more intelligent or context-appropriate courses of action" (*ibidem*). On the other hand, habits can "exhibit genuine intelligence". The two scholars here use examples that evidently follow the famous Jamesian argument that habits are capable of freeing us from lower mind activities:[11] there is no need to deliberate concerning our course of action, and

[8] Between habits as general patterns or tendencies and habits as beliefs (or other kinds of psychological embodiments) there is a relationship established on different levels, as will become clear by the end of this section.

[9] As can be observed in (Wood 2017; Wood and Rünger 2016). Wood's papers are quoted both by Testa and Caruana and by Miyahara and Robertson.

[10] The issue of habits as responses and as the result of repetition will be addressed in the next sections of this chapter.

[11] I will discuss Jamesian position in ch.4. Miyahara and Robertson provide the following example: "Suppose, for example, that you have a habit of driving to the office every morning. Even if you always take the same

the reason for this is the capability of habits "to shape our behaviours flexibly in response to the intricacies of our situations". It seems that habits can also support forms of intelligent behaviour, "rather than being a kind of anathema to intelligence across the board". In short, Miyahara and Robertson summarize two possible options, adding a third one, while their answer constitute the fourth. So, basically, two possibilities are given: either habitual actions are uncontrolled and automatic responses to situations or, since they sometimes adjust to the situations at hand, they exhibit intelligence. The third possibility is a further counter-argument to the second option: "uncontrolled responses to environmental cues cannot be intelligently adjusted to specific environments and objectives precisely because they are not controlled by the agent" (Miyahara & Robertson, 2021: 2).

These three issues, put together, give rise for the two scholars to a question that must be addressed by every thoroughgoing philosophical theory of habit, namely *the intelligence puzzle of habits*: "If habitual actions can unfold without attentive or voluntary control, how is it possible that they can be intelligently adjusted to specific situations?" (*ibidem*). I agree that a theory of habit must provide a solution to this puzzle, and indeed one of the theoretical arguments of my thesis addresses the question and attempts to provide an alternative answer. However, the first part of my answer, developed in this section and the following ones, suggests that the question is partly ill-posed, since habits, according to the Peircean account, do not meet the definition of *unintelligent responses acquired through repetition*.

1.3 Habits are not dyadic responses to stimuli

In studies on habits conducted within the fields of psychology and neuroscience (the areas where, from James' *Principles* onwards, the concept has been most extensively explored), it is widely acknowledged that habits are responses to certain stimuli. As Graybiel notes, "the

route, the traffic is not always the same and you need to adjust your driving flexibly to the situation-specific intricacies of that particular morning to safely arrive in your destination. Yet you can accomplish this feat while being absorbed in thinking about your current paper project, without drawing on anything but your ordinary driving habits" (Miyahara and Robertson 2021).

historical definition of habits is that they are behaviors rooted in SR associations that have been acquired through learning based on reinforcement" (Smith & Graybiel, 2016:33). This corresponds to a very specific theoretical development, which I will briefly recall, before outlining the Peircean account.

The stimulus-response association reflects an automatic and dyadic conception of habit. The development in question is well known, and was presented for the first time in the famous paper by Camic, in which he gave an account of the rise and fall of the concept in sociology (Camic 1986). While this scholar did not mention Peirce, but only James and Dewey, he identified a transition from a phase of feverish interest in habits to their devaluation (in philosophy and sociology), attributing this transition to the behaviouralist overtones that the concept acquired at the beginning of the twentieth century. [12] Thereafter the main reading of the concept assumed that one simply responds to environmental stimuli habitually. There would still be much to explore in relation to the reasons behind this trend and its development during the period in question, not to mention its contemporary reception.

In the early twentieth century, the notion of habit was at the core of debates even far removed from pragmatist perspectives (Pietarinen, 2005: 364), yet behaviouristic nuances and signs of the psychological turn to come were already visible. At the same time, at the turn of the 20th century, the tools through which the problem of habit was addressed were increasingly those of science, at the expense of philosophy (Piazza, 2018: 211). If we look at James and Dumont's theory of habits, we realise that although it is among the most philosophically meaningful, it already entails a shift towards a psychology of habit: In James' case, this shift brigs his interpretation close to present-day perspectives, as well as an essential source for psychological literature. Even Dumont's approach (Dumont, 2019 [1876]), which

[12] For the same reason, a further decline in the use of the concept went hand in hand with the rise of modern cognitive science (in its earliest formulation): "research on habit, because of its association with behaviorism, declined with the rise of cognitive science. For behaviorism, habits are analyzed as automatic and repetitive phenomena that follow laws of association between an external stimulus and observable response, 'excluding any reference to mental processes or states'" (Miyahara et al., 2020: 120).

had the considerable merit of expanding the 'realm' of habit in the same period in which Peirce was carrying out a similar work (and whose considerations provide interesting insights for my own work), ultimately leads to similar considerations, so much so that Sinclair describes it as "mechanistic and proto-behaviouristic" (Sinclair, 2019: 16, 78).

As also pointed out by Testa and Caruana in the introductory chapter of their book (Caruana and Testa 2020), these two lines of enquiry, one mechanistic and dyadic, the other relational (the pragmatist approach), reflect a much deeper divergence within the philosophical tradition. In their genealogical survey of the notion of habit (Barandiaran and Di Paolo 2014), Barandiaran and Di Paolo made a distinction between the associationist and the organicist historical trends. The associationist tradition "understands habits atomistically, as units that result from the association of ideas or between stimulus and response" and opposes them to rational and intentional levels of cognitive processing, resulting in the behaviourist notion of a singular routine of conditioned response. By contrast, the organicist tradition sees habits holistically, "as traversing a continuum from prereflexive to reflexive embodied cognitive processes, rather than in opposition to rational, volitional processes" (Caruana & Testa, 2020:8). The organicist line can be traced back to Aristotle and extends, through idealism and spiritualism, to phenomenology and pragmatism[13].

Although the claims made by behaviourism are widely debated (Ryle, 2009 [1949]: 300), this attitude is summed up by Ryle as the view that habits are one-track dispositions, based on the dichotomy "intelligent capacities versus habits" (Ryle, 2009 [1949]: 30-33). But this opposition does not exhaust Peirce's view and approach. Habits do not consist in a single-track response to a stimulus, or in "some collection of particular responses, or some particular arrangement of matter" (Black, 2013:9). Black clearly summarizes the argument I am advancing in this section: "habits need not be mechanical relationships between a tightly circumscribed antecedent condition and a highly stereotyped response" (Black, 2013: 13).

[13] There are many authors in this tradition who have adopted an anti-dualistic stance. For example, in his study on Ravaisson's habit theory, Sinclair states: "An acquired habit, on Ravaisson's account, is not a blind, dead reaction to external stimuli, but rather self-propelling" (Sinclair, 2019: 59).

So, what does Peirce offer against this view? His response unravels on multiple levels, but to keep to the topic of this section, I will provide two different answers, which will be fully analysed in the following chapters.

First of all, habits are not single responses, because the concept of habit for Peirce cannot in any way be reduced to its single manifestations, which commonly (but not exclusively) consist in an action: "To define a man's habit [is] to describe how it would lead him to behave and upon what sort of occasion—albeit this statement would by no means imply that the habit consists in that action" (CP 2.664,1910). This involves some of the most prominent aspects of Peirce's philosophy, namely pragmatic maxim analysis and his concept of "realism" (which will be discussed in 3.1). Furthermore, habits cannot be reduced to a dyadic concept, such as that of an SR response, because they function in the same way as semiosis, that is, "a cooperation of *three* subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs" (CP. 5.484, 1907).

The contiguity between habits and semiosis deserves some further discussions, but for the moment it is sufficient to show that the definition I quoted in the introduction is one of the most analytic provided by Peirce and I think is fairly explanatory as regards the impossibility of regarding the concept of habit as a dyadic one, since it states that habit is a relation between three objects:

> by a Habit I shall mean a character of anything, say of B, this character consisting in the fact that under circumstances of a certain kind, say A, B would tend to be such as is signified by a determinate predicate, say C. The same thing might be more briefly expressed by saying that I call any real "would-be" a habit of the subject of such predication; but by stating the matter more fully I bring into prominence the fact that a "would-be" is a relation between three objects, A, B, and C. (R 681: 20-22, 1913).

1.4 Habits are not only acquired

Contemporary definitions that focus on the acquired aspect of habits only minimally capture the history and theoretical potential of the concept. It is only natural, and partially right, to consider habits to be acquired, especially in contrast to instincts and natural dispositions. Much of the history of philosophy points in this direction, and the Aristotelian origin of the concept is not so far from this generic idea. However, many distinctions must be made, based on the different views that emerge from historical research (Carlisle, 2014; Funke, 1958; Pareyson, 2005;[14] Piazza, 2018; Sparrow & Hutchinson, 2013). The acquisition of habits is a common assumption when the idea of habit is opposed to that nature, as when Aristotle shows that our temperament can come from either birth or habit (*Nic. Eth. 1154a33*). Hence the expression that has become one of the most famous in the history of thought: "habit is like a second nature". However, if we follow Aristotle correctly, it is clear that the scenario is more tangled. As Piazza points out (Piazza, 2018: 21-34), in the Aristotelian corpus this expression is nowhere to be found, whereas in many passages Aristotle claims that habit is a quasi-nature (*De mem.*, 2, 452 a 29-30; *Eth. Nic.*, VII. 10, 1152 a 30-33; *Rhet.*, I. 11, 1370 a 6-7). The affinity between inclination and habits is greater than the discrepancy between innate and acquired disposition, for according to Aristotle habits can take root in first nature with equal efficiency, replacing or strengthening it.

At a first glance, Peirce acknowledges one narrow sense of the concept, which clearly coincides with the idea of habits as a kind of acquired law (CP 2.292, CP 5.538, EP2: 413). In this sense, they can also be opposed to natural dispositions. For Bergman, this "narrow acceptation is intrinsically connected to the idea of acquirement" (Bergman, 2012: 134). However, drawing on the debates of his time, Peirce argues for the existence of inherited habits, functioning as "predispositions" (West, 2016: 26), or prejudices,[15] even in those cases that apparently go against common sense: for example, habits that control actions, or habits

[14] The Italian philosopher held a course in 1958/59 devoted entirely to the topic of habit.

[15] "Those prejudices, whether they be inherited or acquired, were first formed under the influence of the environing world, so that it is not surprising that they are largely right or nearly right" (EP2: 534).

of mind as beliefs and inference-guiding principles. The philosopher writes: "that which determines us, from given premises, to draw one inference rather than another is some habit of mind, whether it be constitutional or acquired" (W3: 245); "the cognition of a rule is not necessarily conscious, but is of the nature of a habit, acquired or congenital" (CP 2.711, 1893). Even symbols (one of the signs of his main trichotomy) can rely on a habit "acquired or inborn" (EP2: 9, CP 2.297, 1902).[16]

As is widely known, these new and broad conceptions stemmed from the evolutionary idea of the heritability of habits, which had opened up the great debate on the dichotomy between instincts and habits, a debate which it was impossible for any serious thinker to ignore.[17] This topic had already been investigated by Darwin and Lamarck;[18] indeed, the dialectic between instincts and habits was a prominent issue in the last decades of nineteenth century, up to Lloyd Morgan's work, which was entirely devoted to the subject (Lloyd Morgan 1896). In his writings from this period, Peirce addresses the issue in an original way, even foreshadowing his 'wider' sense of the term habit:

> If I may be allowed to use the word "habit," without any implication as to the time or manner in which it took birth, so as to be equivalent to the corrected phrase "habit or disposition", that is, as some general principle working in a man's nature to determine

[16] Linking this topic to the above-discussed issue of behaviourism, Nöth rightly points out that "[n]othing is less compatible with the behaviorist theory of habit formation than the notion of an 'inborn disposition'" (Nöth, 2016: 43).

[17] For example, as Vincenti points out in the introduction to the Italian translation of Dumont's work on habit: "the study of psychological facts hinges on the reflection on heredity, in fact connecting psychic mechanisms to biological laws" (Dumont, 2020: 25, *my translation*).

[18] "In his *Zoological Philosophy*, Lamarck writes that 'every species has derived from the action of the environment in which it has long been placed the *habits* which we find in it. These habits have themselves influenced the parts of every individual in the species, to the extent of modifying those parts and bringing them into relation with the acquired habits.' Darwin makes frequent reference to 'inherited habit' in *The Descent of Man*, and even in *On the Origin of Species* he states that 'There can be little doubt that use in our domestic animals strengthens and enlarges certain parts, and disuse diminishes them; and that such modifications are inherited'" (Carlisle 2014: 69).

> how he will act, then an instinct, in the proper sense of the word, is an inherited habit, or in more accurate language, an inherited disposition. But since it is difficult to make sure whether a habit is inherited or is due to infantile training and tradition, I shall ask leave to employ the word "instinct" to cover both cases. (CP 2.170, 1902)

As Stjernfelt recalls, this is a strong ontological claim, "which insists that there is no principal difference between habits acquired during the phylogenetic course of evolution and habits acquired in the ontogenetic development of the individual" (Stjernfelt, 2016: 248).[19] So Peirce opposes acquired habits to dispositions in a narrower sense, but then he adds many exceptions, while even making these terms interchangeable when habit is assumed as a 'general principle'. So acquired habits constitute a very limited semantic range, if we accept the hypothesis of the existence of habits as inborn, so to speak, even when the opposition between habits and natural dispositions takes on some fuzzy boundaries. However, in my proposal, the opposition 'acquired' vs 'general principle' must also be taken into account.

What does habit as a general principle consists in? Carlisle provides an interesting suggestion in her discussion of modern philosophy, which I will consider in order to introduce the Peircean account (Carlisle, 2014: 58-59). Starting from an analysis of Spinoza's and Hume's theories, she argues that their view is limited to a subjective and psychological principle. In this sense, habits are strictly acquired because they emerge through an encultured and subjective process (or form of indoctrination), and hence are not among the aspects of the natural world. Habits thus represent only a modality of thought, not a modality of being. This is extremely interesting because it refers to the double conceptual sphere of being and having that is associated with the original formulation of Aristotelian *hexis*. Habits are acquired as a subjective mode of thought, we possess them[20] (we have them); on the

[19] "The old writers call [them] dispositions, but I do not think there was any advantage in calling them by a separate name, but rather the reverse. Some call them 'hereditary habits'. If they are that, they are innate" as Peirce states in 1905 "Materials for Monist article" (R288: 65–67).

[20] An important aim of this work is to show that the modality of 'possession' is not the best one to explain the relationship between the human being and the principle of habit.

contrary, in the natural world they are a mode of existence (of being), in which we are immersed.[21]

To get back to Carlisle's argument, she then quotes Deleuze's *Empiricism and Subjectivity*, in which the French author presents habit as a paradox, insofar as it is a principle that is both form by degrees and immanent in human nature. Carlisle underlines that – as I have shown – there is a difference between acquired habits and habit as a principle, but this nonetheless suggests that we must take the innate/acquired dichotomy into account. This dichotomy leads to the hypothesis that:

> habit belongs not just to human nature, but to the natures of other animals, plants, and even crystals. Surely the 'pathways' forged through habit are not simply in our own minds, but in the minds and bodies of other beings, and also in the landscape, revealing patterns of life, movement and growth. Habits are created through experience, acquired gradually through our encounters and interactions, and yet they already belong to the things that form the content of this experience (Carlisle, 2014: 59).

Peirce was not the first, of course, to extend the realm of habits to nature. However, this second sense of habit as a principle inscribed in nature perfectly fits into his account, as the "wider and perhaps still more usual sense" of the term, denoting "a specialization, original or acquired, of the nature of a man, or an animal, or a vine, or a crystallisable chemical substance, or anything else", whereby "he or it will behave, or always tend to behave, in a way describable in general terms upon every occasion (or on a considerable proportion of the occasions) that may present itself of a generally describable character" (CP 5.538, 1902).

Based on our discussion so far, a distinction can be made between habits as a way of thinking, which tend to be acquired, and habits as a way of being, as a dispositional principle. In relation to the former understanding of habits, a further distinction can be drawn: although we acquire a large number of habits through our experience, and largely through a subjective

[21] The whole Peircean account indeed tends to emphasise the latter aspect, even in relation to thought, as I will discuss in ch. 4.

and psychological process, it can be also stated the natural and social environment in which we move is already pre-organized. So, as entities within this environment, shaped by thousands of years of evolution, to some extent we will tend to proceed in one direction rather than another, to acquire some habits instead of others. This was especially evident for the generation of thinkers and in the period to which Peirce belonged.[22]

Regarding the second way of understanding habits, it becomes quite clear that habits in this sense are not acquired, because they are both a co-extensive principle of nature and a regulatory principle of our existence. We may also put it this way: some habits are formed, develop, and change following a process of acquisition, and usually give rise to a certain way of thinking, acting, and responding (in which case it is possible to talk of responses); but they do so in an adaptive and facilitated way, due to the environmental stimuli to which we are exposed. However, there is also a general principle underlying the formation of habits, or a general tendency to behave "in a way describable in general terms upon every occasion (or on a considerable proportion of the occasions) that may present itself of a generally describable character", as Peirce stated. This tendency puts human beings in the position to be 'willing to', 'ready to', or 'forward';[23] it pertains to the sphere of being and affects all human beings without distinction, beyond the different individual processes of habit-acquisition.

1.5 Habits are not only repetition

The issue of repetition points to some of the main themes related to habit, which can be traced back to two underlying ones: the temporal aspect and the possibility of change. The former falls within the complex discourse on the ontology of habits, dealing with the causal

[22] This demonstrates the strong revival of the pragmatist tradition and of pragmatist philosophers from this historical period by contemporary scholars seeking to supporting a different approach to cognition, ecological issues, and the construction of a different philosophical anthropology (as in Dreon 2022).

[23] As I will show, this hypothesis can be identified in a specific thread in the history of habit, and it will constitute the main metaphysical statement of my thesis.

relationship between a series of acts in the past and a possible future event, if the laws of habit allow it, based on the assumption that habits are temporally located. The latter theme revolves around the question of whether – and, if so, how – the possibility of change can emerge within the repetitive structure of habitual action. In other words, it introduces the problem of determinism. I will address these issues in relation both to the metaphysical discussion of habits and to the consequences of habits for human beings.

Here, however, it is necessary to answer the preliminary question of whether repetition is really an indispensable component of habit. The answer is both yes and no, depending on what is meant by repetition and what aspect of habit one is considering. The first caveat concerns the different senses in which a habit is perceived within language: if it is limited to an act/event repeated over time in a regular manner, then no, this definition based on repetition is not sufficient to define a habit, especially if we attribute a dispositional modality to it. If, on the other hand, repetition constitutes the main mode of habit acquisition (but not the only one – and not all philosophers agree on this principle either), then it is possible to answer in an affirmative way, by emphasising an aspect which already emerges from the Aristotelian definition. But this needs to be analysed in depth, so I will proceed step by step.

By analysing the previous three points, I have already shown that the 'pessimistic' and reductive approaches to habits tend to limit their range, by contrasting their specific characteristics with those of intelligent behaviour, which, on its part, does not merely have those properties, but expands or fully rejects them. For example, Ryle emphasises that the difference between habitual and intelligent behaviour lies precisely in the fact that the former is repeated over and over again, and thus lacks the adaptability characterising the essence of intelligence: "it is of the essence of merely habitual practices that one performance is a replica of its predecessors. It is of the essence of intelligent practices that one performance is modified by its predecessors" (Ryle, 2009 [1949]: 30).

In his *Anthropology from a Pragmatic Point of* View, Carlisle (Carlisle, 2013: 43) takes Kant's statements as a paradigmatic example of this vision. For Kant habit is "a physical

inner necessitation to proceed in the same manner that one has proceeded until now",[24] and "leads to thoughtless repetition of the very same act (monotony) and so becomes ridiculous" (Kant, 2007 [1798]: 261). But a habit is not the repetition of the very same act, nor a replica of its predecessors; however, it can lead to this kind of behaviour. Better put, monotonous behaviour – the repetition of the same act at different moments – may have a habit as its efficient cause. In her *Preface* to the English translation of Ravaisson's doctoral thesis *De L'Habitude* (1838) (Ravaisson 2008), Catherine Malabou makes these distinction clear. She quotes the entry for 'Habitude' in Lalande's famous philosophical dictionary.[25] The French philosopher uses a quotation from Tönnies to highlight the two senses of habit:

> I consider that conceptual thought must distinguish what language confuses, namely (1) habit as *objective fact*, which consists in the regular repetition of an event, for example: 'he has a habit of getting up early'. Here, the causes or the motives are indifferent; they can be extremely varied: medical prescription, the pleasure of walking in the morning, lack of sleep, etc.; (2) habit as *subjective disposition*: in this case, habit is itself the motive and, as disposition, I call it without hesitation a *form of willing* (*des Willens*). (Lalande, 1928: 393)

Malabou explains that, according to Ravaisson, these two senses are both at work and "proceed from the same principle", which makes habits simultaneously results and causes. So, the constitution of habit is the "story of two agonistic powers" (Ravaisson, 2008: ix-x). More radically than the example just mentioned would suggest, habit can consist in that specific regularity, but never in the repeated act. We may have the habit of getting up early every morning, but if we take a morning *x* in which we got up early, it is possible that what

[24] This is *one* aspect of the habitual world, namely *hysteresis*, which has been extensively debate over the centuries, by connecting habits with others fundamental concepts, for example Machiavelli's one of *fortuna*. The Italian philosopher uses this concept to show how human beings are incapable of adapting to changing circumstances, continuing to carry on the same old habits (and therefore their bad luck derives from this incapacity to adapt to changing environment).

[25] André Lalande, *Vocabulaire technique et critique de la philosophie* (Paris: PUF, 1926).

caused that specific act was a doctor's appointment. So is that morning *x* still part of our habit? I think it is an instance, and like all instances it can objectively be regarded as part of a habit, indistinguishable from other instances from an external perspective. While it can never constitute the habit as a whole, it is certainly an important part of it.

As Sinclair states, "[f]rom the many different instances – repetition is never wholly repetition of the same, and always involves difference to some degree – we gain an unreflective facility, in reproducing the act and perhaps even a tendency to reproduce the act; habit as a disposition is the power, a synthetic power, to isolate the same in the different instances, and thus to develop itself as a capacity to produce acts of that sort in the future" (Sinclair, 2018: 14-15). Another question arises from this: can there be any real repetition of the same? A pragmatic account of habit that takes account of the different circumstances in which – and the reasons why – a certain subject might act, answers in the negative. We actively engage with the environment and circumstances are always changeable, as are our purposes – the deepest motivations that affect us.

Moreover, to avoid the "accusation of repetitiveness" directed at the concept, it is necessary to accept the thesis of habit as a disposition (Sinclair 2020). Emmanuel Bourdieu[26] provides evidence in support of the above argument in *Savoir Faire,* where he presents his dispositional theory of action (Bourdieu, 1998: 38-39):

> An assertion that describes an accumulation of dispositional actualisations as desired does not have the same logical and linguistic properties as the corresponding attribution of disposition. For example, the following two statements are not logically equivalent: (39) This glass is fragile. (40) This glass has broken n times, n being any finite number. Indeed, (40) does not logically imply (39), even if the opposite is true. This is because a series of eventualities is itself an eventuality. However, we have shown that one cannot reduce a dispositional statement to the description of a contingency. Therefore, a dispositional statement is not equivalent to a series of event statements. […] The content

[26] He is the son of the famous sociologist and philosopher; the book is based on his doctoral dissertation.

> of an attribution of a disposition thus exceeds that of any statement of fact, including that of an infinity of descriptions of actualisations of that disposition.[27]

This argument obviously echoes the Peircean one, to which I will come back shortly – in fact, Peirce and pragmatism constitute Bourdieu's main source.[28] As already noted above, repetition is indeed a key element of habits, because it coincides with the process and modality of their acquisition. Considering the theoretical distinctions I have made, we might say that the repetition of instances is an essential ingredient for the habit formation process, as well as for its possible outcomes. This statement can broadly be accepted, with the necessary specifications concerning the very first origin of the concept of instance. As I will show below, Aristotle's theory of habituation to virtues is much more complex than the idea of a mere repetition of the same kind of activity (Lockwood, 2013: 19). What Aristotle says, more specifically, is that a *hexis* is determined and strengthened by engagement in the same sort of activity (*Nic. Eth.* 2.1, 1103b21-22). So repetition is fundamental for attaining a virtue, because a *hexis*, which is the *genus* of moral virtue, is a specific 'state' formed by activities (*energeiai*), or instances, of the same kind (Lockwood 2013; Rodrigo 2011; Viola 2014). However, it is as true as it is false that character formation (more specifically, the formation of a virtuous character) is solely grounded in the passive repetition of activities: "merely passive repetition forms character (*l'ethos*) no more than prattling develops the mind" (Rodrigo, 2011: 17). As has been widely shown, the semantic history of the terminology related to habits is particularly meandering (Piazza 2018), as it unravels through the history of philosophy in multiple ways.

What is of interest here is that even in the case of the importance of repetition for habit formation at least two different lines of thought can be identified. Most modern interpretations, whether within the associationist or the organicist strand, reaffirm the role of repetition in establishing habits, but above all in facilitating the successive performance of

[27] My own translation from the French text.

[28] I would like to thank Prof. Emmanuel Renault who, after first hearing my theoretical proposal, brought Bourdieu's contribution to my attention.

certain actions. By adopting a different perspective on this topic, it may be argued that Locke, Hume, and Reid, on the one hand, and Ravaisson and other 19th-century French philosophers of habit, on the other, agree about this typically human ability to develop a faculty through the constant and necessary repetition of the acts required to establish it. This is not the only one factor involved, of course, since according to Ravaisson acquisition also depends on *disposition* (Sinclair, 2019:12).

More peculiarly, there are other thinkers who downplay or even abolish the role of repetition, relying on two assumptions. Some stress the role of the will as opposed to the automatism of repetition. Aquinas made this point clear, by stating that what we achieve through *consuetudo* – the mere repetition of the same act – should not be defined as a habit (Carlisle, 2013; Kent, 2002), "a habit is that whereby we act when we will" (*Ia, IIae, q.49, a.3*). Even more interesting – because it anticipates some of Peirce's arguments – is the perspective of those thinkers who focus on the intensity of the same act rather than on repetition, and on the causal importance of the former. For example, Suarez states that the first act must have the power to cause the establishment of a habit, otherwise many repetitions of it will be unable to do so (Des Chene, 2013: 116). The first causal move must have the potentiality to create a habit: subsequent repetitions can only increase or decrease its power. In the 19th century, the growing importance of physiology and psychology provided the efficiency of repetition with an empirical underpinning, namely brain plasticity. However, the issue was far from having been settled. Dumont, who may be credited with the first shift towards a psychology of habit, did not agree at all with the physiologists of his time. In one passage of *De L'Habitude*, in his attempt to broaden the influence of habit on human and natural activity, he quotes Lemoine, with whom he agrees for once:

> La continuité, dit-il, ou la prolongation d'un mouvement, d'une action, d'une impression, d'un état quelconque est aussi propice que la répétition à engendrer l'habitude. Car, entre une action ou un état répété et un état ou une action prolongée, il n'y a de différence que dans les intervalles qui brisent la continuité dans le temps de

> cette action ou de cet état. De telle sorte qu'une manière d'être qui ne se serait produite qu'une seule fois, mais qui se serait prolongée pendant une durée d'un jour, équivaut naturellement à la production vingt-quatre fois répétée à des intervalles quelconques du même état pendant une seule heure. Peut-être enfin faut-il ajouter à la répétition ou à la prolongation du mouvement, comme une cause aussi puissante de l'habitude, l'intensité du mouvement, la vivacité de l'impression ou l'énergie de l'effort […], quelle est à lui sa raison d'être et d'où lui vient sa puissance de préparer l'acte futur ? Il faut de toute nécessité reconnaître qu'elles sont dans le premier acte, que le second est déjà, pour une part si faible que l'on voudra, un effet de l'habitude, sans qu'il résulte cependant de la répétition plus ou moins fréquente d'un même mouvement ; mais qu'il suffit d'un premier mouvement pour créer le germe d'une habitude, auquel chaque mouvement ultérieur ajoutera quelque nouveau développement. (Lemoine, 1875: 2-3)

Dumont follows the same reasoning as the one just outlined. If the first repetition did not already create the impulse towards the formation of habit, thousands of repetitions could not generate it, because repetitions provide the accumulation of something that must be produced in the first instance. Dumont also quotes Aristotle, who, in *De Memoria* (*II, 3, 451b*), states that we acquire a new habit better with just one impression than with multiple reiterated ones. The case of memory is quite revealing, in this respect: we often remember things we see just once in a more vivid way than things we see every day.

As I shall now illustrate, Peirce combines these last two points, revealing a tension that is nonetheless productive – as, I believe, is typical of pragmatism. A distinctive feature of this philosophical approach is its capacity to combine concepts, or to shed light on them, by overturning their perspectives. For Dewey habits ensure the possibility of repetition: for only organisms which have habits can perform in a repetitive way. But even so, repetition remains an artificial condition, because the environment and conditions are never the same, and this is also the key point for Peirce. For Dewey,

> [t]he view that habits are formed by sheer repetition puts the cart before the horse. The ability to repeat is a result of a formation of a habit through the organic redispositions effected by attainment of a consummatory close. This modification is equivalent to giving some definite direction to future actions. As far as environing conditions remain much the same, the resulting act will look like a repetition of a previously performed act. However, conditions differ. Sheer repetition is, in the case of the human organism, the product of conditions that are uniform because they have been made so - mechanically - as in much school and factory "work." Such habits are limited in their manifestation to the rather artificial conditions in which they operate. They certainly do not provide the model upon which a theory of habit formation and operation should be framed. (LW12: 39)

Peirce is aware of the received view, he embraces it and reshapes it in an original way, consistent with his general approach, especially as regards the overriding statement – discussed above – that habits do not depend on their empirical occurrences. Peirce's position can be summarised as follows: i) repetition is not a constitutive ingredient of habit, because the individual actions that constitute single instances of it do not fulfil its meaning; ii) repetition is indeed an important but not essential ingredient of habit formation, which may never occur. Kilpinen (Kilpinen, 2016: 201-207) shows that if one considers a Peircean account without analysing its temporal and logical evolution, then it is tempting to conclude that the philosopher slipped into what he calls "the illusion of repetition", which must be discarded in order to affirm his 'realist' position. For Kilpinen, the affirmation of ontological realism in Peirce's mature work goes hand in hand with the rejection of the 'nominalist' view which interprets habitual behaviour as a collection of independent singular actions that are repeated over time[29].

[29] How is this issue connected to the nominalist-realist opposition? Peirce's conditional modalities are just as real as present, current ones and past ones, which have already occurred.

However, Kilpinen sees a tension between a more classic and routine view of habit, filtered through the previous history of the concept, and a 'revolutionary' view, which embraces new and broader ideas such as consciousness, intelligence, and even self-criticism: "I find reason to stick to my above suggestion about an essential tension in Peirce's early understanding of 'habit'. On some occasions, he relates it to repetition and routine, in other cases he takes it as open for the acting subject's reflection—even during its occurrence, not just retrospectively" (Kilpinen 2016: 203). So, for Kilpinen, Peirce's statements on how repetitive actions suffice to define a habit are often equivocal, especially in his earlier writings, "where Peirce appears to follow the ordinary understanding, relate the phenomenon of 'habit' to repetition without further ado, and to equate it also with the notion of "routine" (*ivi*: 201). In his mature work, then, Peirce sets out "explicitly to discard the idea about repetition as a defining characteristic" and "dissociates the idea of habit from repetitive action (which has been the received view)" (Kilpinen 2016: 206).[30]

Kilpinen's reconstruction is comprehensive and persuasive, but in the light of the previous distinction, I would be inclined to rephrase it with support from Peirce's texts. The core argument is that Peirce maintains the same idea throughout his work, as formulated in points i) and ii) above, and that the tension Kilpinen brings out is all within point ii), but does not affect the first view, viz. that habit can be replaced by an idea of repetitive routine.

So, Peirce articulates two points: firstly, even when emphasising the role of repetition, he is quite clear in stating the greater importance of general conduct compared to acts.

[30] I have already showed that the received view is the one provided by physiological psychology, which stresses the role of repetition in facilitating nervous associations. In Peirce's case, there is also the direct reference to Murphy's work, as underlined by Kilpinen, and before him by Houser and Kloesel (EP1: 380): "They quote Murphy's book Habit and Intelligence (first published in 1869) to the effect that 'The definition of habit, and its primary law, is that all vital actions tend to repeat themselves; or [at least] tend to become easier on repetition.' Houser and Kloesel suggest this to be the source for the formulation that Peirce used above (EP 1: 200– 201; 1880). It is known that Peirce owned a copy of Murphy's book and drew on it in his own work. However, it is questionable whether he needed to turn to it for the idea that a habit might be due to effects of repetition. That idea was old hat, the only new ingredient that Murphy brought to this discussion was to relate it explicitly to physiological psychology" (Kilpinen 2016: 203).

Secondly, even though repetition is an important ingredient of habit formation, he adds other, equally powerful components. I agree with Kilpinen that Peirce's definition in *The Algebra of Logic* (1880) seems very narrow, almost behaviouristic: on this occasion, Peirce uses the term "responding", which seems to refer to a dyadic SR dimension. It is also true that the focus here is on finding a correspondence between the laws of logic and those of nervous association, and – most importantly – that he is talking about the physiological correlate of habit formation, and not the way in which it works:

> Now, all vital processes tend to become easier on repetition. […] Accordingly, when an irritation of the nerves is repeated, all the various actions which have taken place on previous similar occasions are the more likely to take place now, and those are most likely to take place which have most frequently taken place on those previous occasions. […] Hence, a strong habit of responding to the given irritation in this particular way must quickly be established. (W4: 164)

What Peirce emphasises – and what allows us to avoid possible misinterpretations with regard to this point – is to the human ways of responding, of course, but also – and above all – forms of behaviour, or conduct in its general outline. He states that this is his focus in no uncertain terms: "I need not repeat that I do not say that it is the single deeds that constitute the habit. It is the single 'ways,' which are conditional propositions, each general, —that constitute the habit" (CP 5.510, 1905). In a text written five years later, he further explains: "I should think that the performance of a certain line of behavior, throughout an endless succession of occasions, without exception, very decidedly *constituted* a habit." (CP 2.667, 1910). It is the line of behaviour performed on each individual occasion that counts. The "single ways" are general because the repeated act is singular, as will become quite clear from my later analysis. This is why, when referring to the human being in his entirety and potentiality (and in his process of historical development), Peirce can even deny the role of repetition, understood as the performance of single acts over a period of time: "Habits are not for the most part formed by the mere slothful repetition of what has been done, but by the

logical development of the potential germinal nature of the man, generally by an effort, the accident of having done this or that merely having an adjuvant effect" (NEM 4: 143, 1898).

In many other cases, the role of repetition in the establishment of habit is unquestionably affirmed, but seems to be complemented by other, innovative elements. The most interesting ones from the perspective of the present enquiry are inward processes/fancies, sensations and impressions, and efforts/imagination. Through the notion of inward actions and sensations Peirce argues that no "previous reactions that are externally manifest" (CP 5.538, 1902) can play an important role in the formation of habits, taking account of the fact that previous iterations – be they inward or outward – are not the only conditions required.[31] So the formula for the formation of habit "depends on the repetition of instances and sensations" (CP 2.712, 1883), but

> [v]ery often it is not an outward sensation but only a fancy which starts the train of thought. In other words, the irritation instead of being peripheral is visceral. In such a case the activity has for the most part the same character; an inward action removes the inward excitation. A fancied conjuncture leads us to fancy an appropriate *line of action*. It is found that such events, though no external action takes place, strongly contribute to the formation of habits of really acting in the fancied way when the fancied occasion really arises. (W4: 164)

Inward reiterations can also be supported by a direct effort directed towards one's own conduct, and imagining an eventuality can easily establish a mode of behaviour if this eventuality actually occurs (as exemplified by the famous and funny case of Peirce's particularly brilliant brother):

> *Reiterations in the inner world – fancied reiterations – if well-intensified by direct effort, produce habits,* just as do reiterations in the outer world; *and these habits will have power to influence actual behaviour in the outer world;* especially, if each reiteration be

[31] This idea also allows Peirce to embark on a reflection on the role of self-control in habit formation, development, and change.

> accompanied by a peculiar strong effort that is usually likened to issuing a command to one's future self. (EP2: 413, 1907)

> I remember that one day at my father's table, my mother spilled some burning spirits on her skirt. Instantly, before the rest of us had had time to think what to do, my brother, Herbert, who was a small boy, had snatched up the rug and smothered the fire. We were astonished at his promptitude, which, as he grew up, proved to be characteristic. I asked him how he came to think of it so quickly. He said, 'I had considered on a previous day what I would do in case such an accident should occur.' This act of stamping with approval, 'endorsing' as one's own, an imaginary line of conduct so that it shall give a general shape to our actual future conduct is what we call a ***resolve***. (CP 5.538, 1902)

The attempt made here to draw some boundaries and establish some guidelines with regard to the concept of habit, which I intend to pursue further, has brought out some interesting specific features that a Peircean approach can combine and enhance. To complete this preparatory section dealing with the architecture of habits, it is necessary to analyse an issue that has already emerged in these first pages, namely the great variety of concepts that presuppose habit, as theoretical developments of this concept. Not only that, but in these early pages I have analysed some characteristics that either may or may not be considered part of habit, but – as it is widely known – "Peirce's theory of habit is a dynamic theory in the sense that it does not restrict itself to describing why and how we have habits but also examines how habits increase and how they diminish. The law of habit, as Peirce calls it, includes the habit of habit change" (Nöth, 2016:40). This is a major aspect of his treatment of habits as a whole.

However, what is most important, and what constitutes the main challenge and difficult for a truly Peircean philosophy of habit, is what has been called his "relational holism", which will be "central to all future pragmatist treatments of the subject" (MacMullan, 2013: 215). On the same page of MacMullan's work is a quote from Shapiro that clarifies what is meant by this definition: "[h]abit is used by Peirce to designate an initially bewildering variety of

things, including beliefs, logical principles, dispositions, instincts and personality. It is a broad concept which covers under one umbrella what other philosophers might want to separate as the bodily or the mental, or the rational and the irrational" (Shapiro, 1973: 26). The challenge is now to begin unravelling this tangle.

1.6 A multi-layered theory

In order for my own theoretical proposal to emerge, it is necessary to proceed through a parallel analysis of Peirce's work, to be integrated at times by examining kindred pragmatist theories and developing a close comparison with some of the main philosophies of habit. The preliminary work done on the boundaries of the concept, on what it highlights and what it excludes, will help to bring out certain key elements in support of my own theory. The analysis of Peirce's work will therefore be carried out in parallel to the outlining of my own proposal, while often also serving as a preliminary investigation that allows me to draw certain comparisons and put my own theory to the test. This work is just as challenging as advancing my main hypothesis and no less theoretical. Why? because we need to build a scaffold for Peircean theory in order for it to be implemented. The reason for this is quite simple: the concept of habit is not dealt with separately by the American philosopher in a particular work, or in a separate context, but is present in all his reflections: logical, psycho-physiological, and metaphysical-cosmological.

Peircean literature reflects this trend. It is vast, yet treats the subject of habit by focusing on individual concepts and analysing either specific areas of Peirce's thought – such as semiotics, pragmatism, and metaphysics (Colapietro 2009; Hookway 2011; Massecar 2016; Miller III 1978; Raposa 1984) – or individual instantiations of the general idea of habit, especially beliefs and symbols (Aliseda 2016; Fernández 2012; Määttänen 2015a; Nöth 2010; Pitt 2005; Tiercelin 1989). My aim is not to bring all of Peirce's analyses of habit together into a single theory – I do not think that Peirce's works allow an operation of this kind – but rather to disambiguate the meanings he assigns to the concept of habit and to show their

mutual consistency. Intensive use has been made of Peirce's most famous papers – which fall among the few he published in his own lifetime – to show the link between habits and semiotics, or – which is rather similar – between habits and Peirce's epistemology. But the philosopher's treatment of the topic encompasses every area of his thought, and the work to be done is of the opposite sort: we must not merely examine those passages where Peirce directly addresses the concept of habit – and there are very few – but trace the role it plays in Peirce's philosophical architecture, not least through related notions.[32] Peirce's use of this concept is therefore different from that of many other authors, and it is certainly more extensive. One can only agree with the above-quoted words by Shapiro (1973) and with Anderson (2016), who in her introduction to *Consensus on Peirce's Concept of Habit* speaks of the layeredness of Peircean theory. This is particularly true because, unlike in the case of other philosophers of habit, when it comes to Peirce no single definition is sufficient to encapsulate all its various characteristics. My solution, therefore, which is partly based on an engagement with Anderson's ideas, consists in identifying some levels in the manifestation of habit. I will list these levels below, alongside the various fields I will be exploring, and elaborate on them throughout the discussion.

I propose to distinguish between the "principle" of habit, a principle "at least coëxtensive with life" (W4: 553), and habits "of something" and "as something", which have more specific traits and applications (while not coinciding with single actions and routines). As I will show, in many passages Peirce clearly illustrates what we might call the embodiments and properties of habits: e.g., "an expectation is a habit of imaging" and a belief is a habit of thought "active in the imagination" (CP 2.148, 1902). This means that the principle of habit combines some specific concepts that have certain characteristics with other broader concepts, related to a different area of thought. What is interesting is that these embodiments do not encompass all the fields of application of habits, but are rather concepts

[32] The term 'habit' and words derived from it occur 891 times in the Collected Papers, the most extensive edition of Peirce's writings, covering his entire career. Just to give an idea, these are more occurrences than those of the terms 'icon', 'index', and 'symbols' – his main trichotomy of signs – combined.

representing types of habit, which allow us to bring to the surface certain characteristics that will gradually be incorporated into my theory of habit.

The architecture that is being established can therefore be formulated by analysing these elements, the areas of Peirce's thought, the embodiments of habits, their main characteristics, and the concepts that are inextricably linked to them. Peirce's idea of habit makes it possible to link the two aforementioned brilliant inventions: the pragmatic maxim and his semiotic system, particularly through one of the sign-relations classes, the symbol.

So, as regards the link with other ideas, my task will be to investigate liminal concepts, such as the ones that are central to Peirce's pragmatism and epistemology, (like self-control, common-sense and intuition), along with others of equal importance such as plasticity, expectation, prediction, tendency, disposition, anticipation, law, chance. Consequently, I will also consider what disciplines these concepts bring into play. Peirce's philosophy is marked by a high degree of continuity: it is impossible to analyse only isolated parts of it, and the concept of habit is a pivotal example in this respect, since it cuts across his whole thought and interacts with different contexts.

On the other hand, recognizing the main characteristics of the concept will help us to understand what I call the 'internal structure' of Peirce's habit, which allows us to clarify why many key concepts of his are encompassed by habit: beliefs, the guiding principles of inference, and even symbols in their 'ultimate' meaning. The complementary phase consists in showing the relevance of the concept of habit within Peirce's thought, by following his classification of sciences, which is to say: by focusing, on the one hand, on logical and semiotic considerations, and the enunciation of pragmatism, (a) which constitute the epistemological side of the concept; and, on the other hand, (b) on the role played by habits in his metaphysics and cosmology.

I will here outline the structure of Peirce's classification, which my thesis will follow in its various steps, from cosmology and metaphysics to cognition and the self. The main characteristics of the concept, as they emerge from Peirce's reflections in all these different

contexts, are the following: habits are intrinsically general and real (in a specific sense); they are a construct of mediation between different dichotomies of thought; they express themselves temporally in the conditional (they are a "would-be"); they exclusively exist in a triadic relation and are irreducible to one of the edges from which they are composed – therefore, in this respect they function like semiosis.

Besides, (a) habits are partly 'embodied' in these fundamental concepts: beliefs; the meaning of symbols (they are also the ultimate logical interpretant of symbols); and the guiding principle of inference. In the second part (b) we can instead isolate two fundamental aspects: habits are the main element of thirdness and a sort of 'law' of nature, which regulates the organic world as well as the inorganic one.

This proposal has a twofold objective within my thesis. On the one hand, it serves to frame individual portions of the theory within the general sciences. Just as the 'symbol' is one of the key elements in the reflections linking semiotics and maxim of pragmatism, so the concept of 'law' is key to understanding the cosmological structure and the role of habits within it. However, this layered structure allows me to show the continuities by which the different parts of the theory are connected. The tendency towards generalization is the very principle that guides the laws of the cosmos, as it establishes the law in which symbols are grounded.

After these preliminary clarifications, my thesis will pass from more general principles to more detailed ones. Since I aim to investigate in the last part the reasons why the human being can be defined as a creature of habit – and what this entails – it will be necessary to start from the 'mode of being' of habits, by analysing what laws regulate their development and their ontological position. I will then investigate the similarities between these laws and those governing the mind, and illustrate the consequences of the general structure of habit with regard to our idea of self, identity, and rationality.

2. The habit’s mode of being

The second chapter represents the main theoretical proposal concerning the ontological and metaphysical structure of habit. Habit in Peirce's thought is brought into direct connection with the analysis of the metaphysical categories of reality. The starting point for Peirce is indeed represented by his complex theory of categories, and the role that habit plays within them, in particular assuming the key role of the third Peircean category, which in his architecture represents generality, mediation, thought. In this way habit reconciles with a category of being, acting as a medium between the other two categories that Peirce calls ‘ideas of feelings’ (firstness) and ‘acts of reaction’ (secondness).

The relationship between the three Peircean categories occupies the entire first part of this section, in their metaphysical and cosmological manifestations (also expressing a precise idea Peirce had of the role of evolutionism). Through the analysis of the characteristics that the categories assume, my work consists of laying the foundations of my subsequent investigation, namely habit as a phenomenon exemplifying thirdness, a specific mode of being that mediates between others and is declined from time to time in specific attributes.

Chance and Law are the extremes of the structure of the cosmos between which habit mediates, just as potentiality and actuality are the modalities between which habit becomes a third mode of being, continuity between the categories of the real. Through this comparison I then come to the main point of the Peircean formulation, showing how the relation between the principle of habit and being comes directly from the history of the concept itself, in Aristotle’s original formulation and through the scholastic legacy.

The history of *hexis* is a history of habit as a mode of being and its relation to potentiality and actuality. Analysing the history of this mode of being means reassessing certain dichotomies, starting precisely with that between having and being, which have occupied privileged positions in Western thought. In fact, contemporary authors who have placed habit as a general structure at the centre of their reflections assume a different attitude

towards the fundamental properties of being, the hegemony of the modality of actuality and a certain idea of subjectivity.

Moreover, leading habit back to its original dimension also means rewriting the very history of its conceptual evolution and distancing it from those reductionist readings I introduced in the first chapter. Peirce represents, in my opinion, an author thanks to whom one can analyse habit in its most general structure from a privileged position thanks to the profound connection he holds with the history of the concept on the one hand, and with the fundamental constituents of being, the categories, on the other.

2.1 One, two, three modes of being

To analyse any phenomenon, it is necessary to begin from the most general conception of it. In the previous chapter, I have divided the analysis of habit into several categories, starting from habit as a general principle in relation to being: habits pertain to being as its predicate, i.e. a category.

It is essential to start from the broadest of explanations: despite the many contemporary studies on cognition, and despite the psychologistic turn of the late 19th century, as far as the present topic is concerned Peirce remains a classical thinker. As Aristotle had declared two thousand years earlier, habits are part of a specific category, and their mode of being identifies a precise mode of reality; hence, they have to do with metaphysics, as that discipline which "endeavors to comprehend the Reality of Phenomena" (EP2: 197).

An in-depth analysis of Peircean phenomenological categories falls beyond the scope of the present work. However, since it is through them, in their metaphysical and cosmological manifestations, and thanks to the *triadomania* [33] of Peirce's way of thinking,

[33] "I fully admit that there is a not uncommon craze for trichotomies. I do not know but the psychiatrists have provided a name for it. If not, they should. 'Trichimania,' [?] unfortunately, happens to be preëmpted for a totally different passion; but it might be called *triadomany.* I am not so afflicted; but I find myself obliged, for truth's sake, to make such a large number of trichotomies that I could not [but] wonder if my readers, especially those of them who are in the way of knowing how common the malady is, should suspect, or even opine, that I am a victim of it" (CP 1.568, 1910).

that my thesis attempts to offer a solution to the problem of the mode of being of habits, my discussion should start from this point.

The first aim of my research is to problematise Peirce's position on the mode of being of habits, from their role in metaphysics and cosmology to their affinities with Aristotelian modalities. This path, always oriented by Peirce's thought, will lead me to identify a more precise ontological position for the concept of habit, in order to bring out some fundamental notions that will lead us to the second part of my work.

Peirce's categorial genesis represents a truly fundamental contribution to the history of thought, and one which occupied the American philosopher for a very long time. Peirce first identified the argumentation and structure of his categorical system at a very young age. Peirce derived the idea central all his original philosophical reflections [34] from the Kantian argument that categories rest upon formal logic:

> The first question, and it was a question of supreme importance requiring not only utter abandonment of all bias, but also a most cautious yet vigorously active research, was whether or not the fundamental categories of thought really have that sort of dependence upon formal logic that Kant asserted. I became thoroughly convinced that such a relation really did and must exist. (EP2: 424)

By 1867, Peirce had already made his "one contribution to philosophy" (CP 8.213, 1905) in "On a New List of Categories". Starting from the Kantian assumption that "the function of conceptions is to reduce the manifold of sensuous impressions to unity", Peirce's theory aims at give "rise to a conception of gradation among those conceptions which are universal" (W1: 49). Already at the very beginning of his research, he identified a list of categories, which would accompany – almost unchanged – his entire philosophical reflection. The two poles of this gradation are *Being* and *Substance*,[35] which were later removed from his theory in 1885.

[34] "I, alone of our number, had come upon the threshing-floor of philosophy through the doorway of Kant" (EP2: 400).

[35] "Thus substance and being are the beginning and end of all conception. Substance is inapplicable to a predicate, and being is equally so to a subject" (W2: 50).

In 1867, the three 'ways' in which being is connected to substance were defined as *Quality*, *Relation*, and *Representation*, but later the categories became "pure formal structures, mathematically shaped, that can be applied to every field of reality" (Fabbrichesi, 1992: x). It was after his greatest logical discovery that Peirce carried out his first reappraisal of the categories:

> Accordingly, after 1885 one finds Peirce distinguishing a formal and a material aspect of the categories, and seeking to prove that his formal categories have some application in experience (1.299, 1.301, 1.452). The categories of the "New List" were based upon the subject - predicate theory of the proposition, and once Peirce discovered the logic of relations, that theory of the proposition had to be abandoned. When he revised the categories in 1885, he defined them in their formal aspects as three sorts of relations, monads, dyads, and triads. (Murphey, 1965: 15)

Driven, as always, by his terminological obsession, Peirce gave his categories their final form by drawing on the most general concepts possible, those of first, second, and third. Peirce's categories – logical and formal in their genesis and conception – find their ultimate expression in his phenomenological analysis, because they are drawn from the *phaneron*.[36] They are also listed as the *Ceno-Pythagorean Categories*, on account of their new connection with numbers (CP 2.87, 1902):[37]

[36] "Phaneroscopy is the description of the *phaneron;* and by the *phaneron* I mean the collective total of all that is in any way or in any sense present to the mind, quite regardless of whether it corresponds to any real thing or not. If you ask present *when*, and to *whose* mind, I reply that I leave these questions unanswered, never having entertained a doubt that those features of the phaneron that I have found in my mind are present at all times and to all minds. So far as I have developed this science of phaneroscopy, it is occupied with the formal elements of the phaneron" (CP 1.284, 1905).

[37] "The cenopythagorean categories are doubtless another attempt to characterize what Hegel sought to characterize as his three stages of thought. They also correspond to the three categories of each of the four triads of Kant's table. But the fact that these different attempts were independent of one another (the resemblance of these Categories to Hegel's stages was not remarked for many years after the list had been under study, owing to my antipathy to Hegel) only goes to show that there really are three such elements" (CP 8.329, 1904).

> In pursuing this study I was long ago (1867) led, after only three or four years' study, to throw all ideas into the three classes of Firstness, of Secondness, and of Thirdness. This sort of notion is as distasteful to me as to anybody; and for years, I endeavored to pooh-pooh and refute it; but it long ago conquered me completely. Disagreeable as it is to attribute such meaning to numbers, and to a triad above all, it is as true as it is disagreeable. The ideas of Firstness, Secondness, and Thirdness are simple enough (CP 8.328, 1904).

A study of the categories and their phenomenological structure falls outside the scope of the present work, so I will simply refer to the vast literature on the topic, and to existing overviews of the various stages of Peircean thought as regards the categories.[38] Instead, the attributes of the three categories of Firstness, Secondness, and Thirdness, and their metaphysical and cosmological manifestations, will constitute a starting point for my examination of the mode of being of habit.

Why? Although, as we shall see, the issue is far more complex than might seem at first, the answer to this question is quite simple. Among the countless definitions of the three categories provided by Peirce regarding the three categories, I will consider what strikes me as the most direct and radical one from the perspective of the present enquiry: "according to my view, there are three categories of being; ideas of feelings, acts of reaction, and habits" (CP 4.157, 1897). Habits are the prototypical phenomenon of the third category, and much of my work will consist in analysing the reason for this, questioning this assumption in the light of my research, and inferring some important consequences for philosophies of habit.

So, categories are both experiential elements of what is simply given before our eyes, the *phaneron*, and ontological ones. The relation between the categories and their structure is not a matter for *Phaneroscopy*, which only describes what appears or seems, since it involves metaphysical concerns. The first step, then, is to analyse what primarily constitutes

[38] See, for example, (Atkins 2006; 2018; Esposito 1979; Fabbrichesi 1986; 1992; Houser 1983; Rosensohn 1974).

the three categories. According to the description which Peirce offers in a letter to Lady Welby, already quoted above,

> Firstness is the mode of being of that which is such as it is, positively and without reference to anything else.
>
> Secondness is the mode of being of that which is such as it is, with respect to a second but regardless of any third.
>
> Thirdness is the mode of being of that which is such as it is, in bringing a second and third into relation to each other. (CP 8.328, 1904)

I have selected these definitions to begin with, from among the many available, because they encompass in the most general way the structure that underlies the categories, in any field, and that incorporates all others. Furthermore, from this definition of thirdness, the two crucial characteristics of habit emerge, partially discussed in chapter one. Habits are a triadic and mediation construct, or rather a mediating one, because they are irreducibly triadic. Much of the Peircean philosophy of habit and of the pragmatist approach in general revolves around this issue. I shall now further illustrate this threefold division through Peirce's own complex thought, by framing it in his metaphysical and cosmological reflections. I will then move on to analyse the mode of being of which habits are constituted.

Metaphysics is a rather uncomfortable word for Peirce and the concept of habit – and of course for my thesis too. However, my hypothesis addresses questions that, by definition, must be considered metaphysical, and indeed draws from them a key to approach the issue of the human being as a creature of habit. Why is metaphysics an uncomfortable issue? If we look at the subject of habits, we find that in the decades we are analysing it was leaving the domain of metaphysics and entering the more specific one of psychology.[39] On the other hand, as far as Peirce is concerned, the metaphysical question, and even more so his

[39] This clearly emerges in historical reconstructions, particularly the very detailed one by Marco Piazza (2018).

evolutionary cosmology, have been considered either very complex, if not confusing, issues or put on the back burner compared to reflections on topics falling within other disciplines.[40]

2.2 Ontological elements

> Some think to avoid the influence of metaphysical errors, by paying no attention to metaphysics; but experience shows that these men beyond all others are held in an iron vise of metaphysical theory, because by theories that they have never called in question. No man is so enthralled by metaphysics as the totally uneducated; no man is so free from its dominion as the metaphysician himself. Since, then, everyone must have conceptions of things in general, it is most important that they should be carefully constructed (W1: 490).

From his earliest youthful writings onwards, Peirce argues for the indispensability of having "concepts in general", and thus a metaphysical system to support one's reflections. I consider the paper in question – and especially the above-quoted passage – to be remarkable, because in addition to mentioning the term habit for the first time, as the third element of consciousness (W1: 491), it employs a metaphor that seems most fitting in relation to our problem. Just as there is no person more "enthralled" to the domain of metaphysics than the one who does not recognise its power, so there is no person more enslaved by habit than the one who does not recognise its primary role in human intelligence and behaviour.

Peirce indeed "carefully constructs" his own general concepts, by sifting through the various systems that in his opinion have followed one another in the history of philosophy with his typical shrewdness, justifying his own choice. He presents his division of the various possible metaphysical systems in the fourth lecture he gave at Harvard in 1903, and partly also in the third. In the previous lectures, consistently with his deep, albeit indirect,

[40] A great deal of literature traces the struggles and challenges of Peirce's metaphysics and cosmology: see for example Brioschi, 2016; Fabbrichesi, 1986; Miller III, 1978; Murphey, 1965; Reynolds, 2002; Rosenthal, 1994.

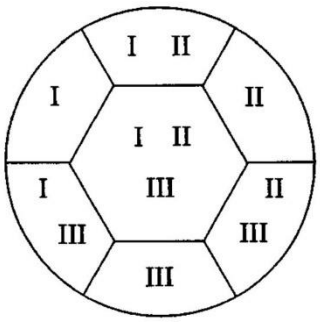
indebtedness to Hegel (mentioned above), he had clarified the general role of the three categories and their classification:

> Hegel was quite right in holding that it was the business of this science to bring out and make clear the *Categories* or fundamental modes. He was also right in holding that these *Categories* are of two kinds; the Universal Categories all of which apply to everything, and the series of categories consisting of phases of evolution (EP2: 143).
>
> His three stages of thought, although he does not apply the word *category* to them, are what I should call Hegel's Universal Categories. My intention this evening is to limit myself to the Universal, or Short List of Categories, and I may say, at once, that I consider Hegel's three stages as being, roughly speaking, the correct list of Universal Categories (EP2: 148).

The Peircean categories correspond to the "Universal" ones, matching the three Hegelian stages of thought. There are also categories for the various phases of evolution, dealt with in his later cosmological writings. So, as we already know, "a category is an element of phenomena of the first rank of generality" (EP2: 148), and since we initially draw our categories from the phenomenological world, phenomenology can be seen to underlie all other sciences.

Indeed, Peirce's ultimate classification of the sciences follows a strict categorical interpretation, in which phaneroscopy is identified as first philosophy, i.e. the firstness of philosophy, while metaphysics is thirdness and ontology, in turn, is the firstness of metaphysics (Ambrosio 2016; Atkins 2006; B. E. Kent 1987). Therefore, "[t]he three categories furnish an artificial classification of all possible systems of metaphysics", based on a combinatorial scheme whereby "[i]t depends upon what ones of the three categories each system admits as important metaphysico-cosmical elements" (EP2: 164). So, categories shapes all the various systems, because the choice of how many categories are real and at work in nature constitutes a whole new metaphysical view: "it would seem that no division of theories of metaphysics could surpass in importance a division based upon the

consideration of what ones of the three categories each of the different metaphysical systems has fully admitted as real constituents of nature" (EP2: 179-180). The possible combinations are summed up by Peirce as follows, depending – as is clear from the diagram that Peirce himself presents – on whether a system accepts only one category, or a combination of two, or all three:



I Nihilism, so-called, and Idealistic Sensualism.

II Strict individualism. The doctrine of Lutoslawski and his unpronounceable master.

III Hegelianism of all shades.

II III Cartesianism of all kinds, Leibnizianism, Spinozism and the metaphysics of the physicists of today.

I III Berkeleyanism.

III Ordinary Nominalism.

I II III The metaphysics that recognizes all the categories may need at once to be subdivided. But I shall not stop to consider its subdivision. It embraces Kantism, —Reid's philosophy and the Platonic philosophy of which Aristotelianism is a special development. (EP2: 180)

In this passage Peirce comes to some fundamental conclusions. Of all the various systems examined, only one such as his own, which takes the reality of all categories into account, can truly be called Aristotelian – what other philosophers mistakenly call themselves.[41] So

[41] Here Peirce states: "I should call myself an Aristotelian of the scholastic wing, approaching Scotism, but going much further in the direction of scholastic realism" (EP2: 180). This sentence encapsulates the complex issue of Peirce's realism, especially the reality of thirdness and its implications, and also the very close connection between his own understanding of habits and Aristotle's, which I shall discuss in detail in the last section and in the next chapter.

what is the specific difference between Aristotle's system, and Peirce's too, compared to all others? The main difference, and the revolutionary point here, is the fact that recognizing all three categories active in the world at once implies the assumption of three modes of being or, better, of three modalities that capture the *status* of the modes of being. According to Peirce, only Aristotle (and, to a lesser extent, Schelling) have identified another mode of being besides *actual reactive existence*, whereas all subsequent philosophers have failed to do so, "in recognizing no other mode of being than being *in actu*" (EP2: 180). Peirce explains that they "recognize but one mode of being, the being of an individual thing or fact, the being which consists in the object's crowding out a place for itself in the universe, so to speak, and reacting by brute force of fact, against all other things. I call that existence" (CP 1.21-22, 1903).

As can be seen from the above-quoted list of metaphysical systems, Peirce's observations are framed within the vast philosophical debate between nominalism and realism, which I shall discuss in the next chapter, but the crucial point here is the identification of three modes of being, and of the relations and interdependencies between them.

The three modes of being correspond to the three phenomenological categories; indeed, they *are* the categories, insofar as they constitute the ontological structure of Peirce's view of the world. It is ontology that identifies the elements of reality, of the world, by dividing them into modalities that reflect possibility, existence (or, as we shall see, actuality), and a third, 'general', and 'mediating' element between the two. Through this ontological division, the possible metaphysical systems mentioned above are established, leading, as its main outcome, to the recognition that all three categories are really at work within the world. Moreover, the three modes of being add to the present argumentation some interesting characteristics that Peirce uses to define them, and which will then allow me to describe the structure of habits.

So, whereas most modern philosophers recognize only ‘existence’, or the mode of being of actual facts, for Peirce it is quite clear that “there are three modes of being. I hold that we can directly observe them in elements of whatever is at any time before the mind in any way. They are the being of positive qualitative possibility, the being of actual fact, and the being of law that will govern facts in the future” (CP 1.23, 1903). Here we find some new insights: as we have seen, existence is a matter of actuality, while firstness, or quality, amounts to pure possibility. Thirdness is something in between, a law that possess real power over future facts. Thirdness is a law insofar as, being general, it has the power to govern facts, individual instances, but law in itself is a matter of dyadic reactions, of secondness, as I will show in the next sections. This is a tricky issue that can be solved only by looking at Peirce’s evolutive cosmological structure. Before addressing this issue, however, it is necessary to investigate the relations between the triads I am highlighting and how Peirce characterises them from time to time by pointing to slight differences and adding important details.

What Peirce’s description of modes of being suggests is not only their obvious applicability to all phenomena of reality, as the most general element that exists, but a multidimensionality that reveals their internal relationship and links with other pivotal categories of nature and thought. Over the years, and depending on the topic explores, Peirce brought these characterisations of the different modes of being together into a complex and multifaceted framework. During his cosmological efforts, he stated again “that all that there is, is First, Feelings; Second, Efforts; Third, Habits” (CP 6.210, 1898), thereby confirming that habit is the third element of what there is *in general*, not a small part or specific side of a category. Then again, in his “Prolegomena to an Apology for Pragmaticism”, he recalls the interpenetration between the categories and modalities of possibility and actuality, already seen in a previous quote. In this case the third, previously envisaged as a law oriented towards future facts, is defined as a “Destiny (or freedom from destiny)” (CP 4.549, 1906). A similar, if less poetic, concept as that of destiny can be found in a text written three years later, in

which this glance towards the future, towards a future law that will condition future events, takes on the connotations of "necessitation":

> So, then, there are these three modes of being: first, the being of a feeling, in itself, unattached to any subject, which is merely an atmospheric possibility, a possibility floating *in vacuo,* not rational yet capable of rationalization; secondly, there is the being that consists in arbitrary brute action upon other things, not only irrational but anti-rational, since to rationalize it would be to destroy its being; and thirdly, there is living intelligence from which all reality and all power are derived; which is rational necessity and necessitation. A feeling is what it is, positively, regardless of anything else. Its being is in it alone, and it is a mere potentiality. A brute force, as, for example, an existent particle, on the other hand, is nothing for itself; whatever it is, it is for what it is attracting and what it is repelling: its being is actual, consists in action, is dyadic. That is what I call *existence.* A reason has its being in bringing other things into connexion with each other; its essence is to compose: it is triadic, and it alone has a real power (CP 6.342-43, 1909)

In the light of these different descriptions of the concepts of one, two and three, I will draw some initial conclusions. The first (phenomenologically, feeling) is pure possibility, meaning that it is not composed, unanalysed, monadic, with no extension, a mere instant which gives no indication of any subject, no rational property. The second, being described phenomenologically as a reaction, consists in everything there is at any given moment in time. It is actual existence, dyadic in itself because it is constitutionally opposed to something else which gives it its proper meaning. However, a first and a second are never able to form anything else, as it is necessary for their very existence that they be connected through a third. The third is real, or has a real power towards the future; it is something that for its very nature connects things and establishes relations that enable other elements to acquire reality in some way. It cannot be individual, it cannot be in the present, being most of all something *in between the actual and the possible*. The study of modes of being, on the other hand, involves

not only an internal interaction between categories, but also an exterior entanglement between them and other ideas that Peirce employs and brings together, resulting in a more complex relationship between the same modes of being.

What emerges is, first of all, a temporal dimension that describes the second as a present instant and the third as a destiny, a 'power' projected forward. There is also a hierarchical-taxonomic dimension in which the first is constituted as an ineffable spark, while the second is a precise individuality regulated by a third, a generality that includes all other specific individualities. Perhaps the most important dimension, then, is the topological-relational one, in which the third element, trivalent and median, acts as a link between a first, not localized in space and time, a pure instant, a pure generating possibility, and a second, situated precisely in a single, individual point in space-time, a sheer event and a clash with what is *hic et nunc*.

These dimensions represent a conceptual structure that will provide a way to frame habits' proper mode of being at the end of this chapter. However, in this analysis many other conceptual issues have emerged: they arise from further reflections by (and about) Peirce on the categories, involving his cosmological framework. From this point onwards, a number of questions branch off, involving the principle of habit in the most general sense, as I have defined it in the first chapter. They concern evolution and the law that supports it, the alleged dualism of mind and matter, the conflict between law and habit, and the consequent proliferation of the principle of habit throughout the organic and inorganic world.

2.3 Chance, law, and habit-taking. An evolutionary cosmology

The first three natural numbers that in 1885 Peirce definitively matched with the three categories represent a fundamental step forward in his theory, and in our understanding of the principle of habit. More specifically, a precise combination of these three numbers actually provides Peirce with a "guess at the riddle of the universe". In relation to my argument, it provides the main feature of habit and a first hint as to its ontological position.

According to Peirce, three elements alone are the *active* elements in the world; as such, they are not only formal and general categories, but the sole ingredients of the universe. They spring directly from the main characteristics of the three modes of being described above, to which they precisely correspond within the construction and development of the cosmos. For Peirce, these three elements are "first, chance; second, law; and third, habit-taking" (W6: 208). Even more important for the present discussion is the fact that the third element mediates between the other two (W5: 293). As I will show, a possible cosmological categorial order constitutes a postulate deriving from my thesis on habit's ontology and metaphysical properties.

This fundamental insight is the starting point of Peirce's cosmological reflections, which involve other basic concepts, like synechism, his objective idealism, and the importance of evolutionary inheritance, which I will discuss in the following sections. Peirce focused on this topic for at least fifteen years, from 1883 to 1898, while also touching upon it in his later works. It is therefore necessary to begin with the role of categories in cosmology, first of all by clarifying what this role is within the architecture of Peircean thought.

My argumentation does not consist in a defence of Peirce's cosmology, nor in a contemporary reading of his metaphysical theories in the light of the latest scientific discoveries – although such a reading certainly reveals the insightfulness of some of Peirce's intuitions, which are still challenging nowadays (Kull 2014). Moreover, discoveries made in the physical and life sciences over the last century demonstrate that Pierce's speculative theories should indeed be re-evaluated (Deacon 1998; Favareau 2010; Fernández 2010). Mine is instead an analysis starting *from* his cosmology, in accordance with the categorical distinction drawn earlier, and in relation to the general principle of habit and the role it plays in this theoretical framework.

As Brioschi perfectly puts it in her recent article (Brioschi 2016), Peircean cosmology has always been seen as the "black sheep" of his thought, if not totally rejected (Short 2010): for many years it has been "a target of derision and contempt by scientists and philosophers

moved by a strong antipathy toward some philosophic conceptions that ground his cosmological speculations" (Fernández and Campbell 2019).[42] This is due to the complexity of Peirce's writings, which – as mentioned – span a considerable period of time; to the fact that his cosmology has long been considered a reflection detached from the rest of his work; and to a kind of speculative thought that is largely opposed to the positivist outlook of the early twentieth century (Brioschi 2016: 52). Despite this, there is an extensive body of literature to draw on, and the complex articulation of Peirce's proposal has been an object of interest from the outset (just to quote a few works from different decades that show the topic's relevance through time, I will refer to Brioschi, 2016; Fabbrichesi, 1986; Fernández & Campbell, 2019; Hookway, 1997; Lane, 2011a; Pape, 1984; Reynolds, 2002; Sheriff, 1994). What is of interest here is that the discussion about the three elements "active in the world" that I presented at the beginning of this section, does not concern cosmology as a whole – namely, "[t]he general science or theory of the cosmos or material universe, of its parts, elements, and laws; the general discussion and coordination of the results of special sciences" (CD: 1288-89) – but rather a specific branch of metaphysics "relating to the world as it exists in time and space, and to the order of nature".

In his full and remarkable classification of sciences, developed at the end of the century, Peirce defines cosmology as a branch of "physical metaphysics", along with the first "general metaphysics, or ontology", and the second "psychical or religious metaphysics". Physical metaphysics concern the nature of time and space, mind and matter, laws of nature (Brioschi 2016: 55-56). More importantly, as Brioschi brings to light through Peirce's *Century Dictionary* definition, the American philosopher's reflections and writings that I will now analyse are more properly part of *Cosmogony*, and not of Cosmology in general, the former

[42] The Peircean scholar Bonfantini, in the introduction to the Italian edition that thematically collects a large number of Perce's texts, states that six fundamental principles for the development of Peircean thought can be isolated. Two of them are represented by the doctrine of the categories as ordering principles of the universe of experience and by the properties that define Peirce's metaphysics. He argues that they are unsatisfactory, and that both the doctrine of categories and Peirce's metaphysics are not conceptually acceptable constructions (Peirce, 2003: 979).

being “the way in which the world or the universe came to be”, while the latter consists “of its general theory, of its structure and parts, as it is found existing” (CD: 1289).[43]

Despite what Short (2010) regards as a failed programme of cosmological inquiry that seeks to demonstrate how the laws of nature evolve from chaos, it is actually Peirce’s intuition of a certain order in the development of the laws accounting for the origin and development of the universe that provides habit with its vital and pivotal principle. It is the writings from what may be called Peirce’s “cosmogonic” period,[44] as he himself states in “The Architecture of Theories”, that constitute a comprehensive and detailed account of the elements that “build up” the universe and of their internal and mutual relationship. Furthermore, it is also thanks to Cosmogony, that is, the study of the origins and subsequent development of the cosmos, that I believe Peirce can move from the categories as ontological elements to the categories as ‘phases’, allowing for a possible sequencing of them, as Fabbrichesi states in the introduction of Peirce’s book on categories (Peirce, 1992). From these initial insights, a number of questions arise. Given that there are only three active elements in the world, corresponding to the categories, how can they account for its development? Is it possible to establish an ‘order’ between them? Are they really phases of

[43] And this is crucial for Peirce’s overall discussion of the topic: “As a consequence, this also means that we are at least legitimated to seek other traces of Peirce’s cosmological thought beyond his *cosmogonic* period, that is later than 1898. On the other hand, the fact cosmology appears in Peirce’s classifications of the sciences testifies not only to the relevance it had for Peirce, but especially the *speculative* nature of cosmology in his view. In fact, cosmology is not a part of general physics, but pertains to metaphysics, to the branch of “physical metaphysics,” that has the same generality of a metaphysical investigation and has the universe its proper subject of investigation” (Brioschi 2016: 56).

[44] I will consider texts ranging from the early reflections in “Design and Chance” (1883-84) to the eight *Cambridge Lectures* delivered of 1898 under the title “Reasoning and the Logic of Things”. In between we find many other fundamental papers, like those on the “trichotomic art” written in 1885-86 and then brought together in “A Guess at the Riddle” (1887-88) and “Trichotomic” (1888), not to mention “The *Monist* Metaphysical Project”, which includes: “The Architecture of Theories” (1891), “The Doctrine of Necessity Examined” (1892), “The Law of Mind” (1892), “Man's Glassy Essence” (1892), and “Evolutionary Love” (1893).

a general principle? And, consequently, what is the relationship between chance, habit, and law, which is made more complex still by the fact that habit is of the same nature of law?

I will start with an analysis of this new trichotomy, by examining what the relationship between its elements implies. I will then move on to a detailed examination of the meaning of each element, including their connections with other concepts, starting from 'chance' and then discussing 'habit' and 'law', which require a direct comparison (in the next section). The third element takes on the name of habit-taking in Peirce's cosmogonic project, instead of simply habit. But we would obtain a perfect equivalence if we replaced it with development, or evolution; as we shall see, thanks to the universal principle of habit, everything tends towards growth and generalisation, which is the same thing. The Peircean project may have been sparked again by Darwin, as Houser puts it in his introduction to the fourth volume of *Writings*:

> But Peirce was also driven by the desire of the scientific philosopher to find things out and to bring whatever he could within the scope of explanatory hypotheses, and he was committed to the economy of explanation—he was a wielder of Ockham's razor—and always sought theories that represented the universe as parsimoniously as its richness would allow. In evolutionism he saw the prospect for a theory he could generalize and develop into a cosmological principle of the highest order (W4: lxix).

So evolution is the best and simplest explanation for the complex state of things that make up the cosmos. In the same way, building a cosmology means finding explanations for the laws of nature that are developed on a different and clearer level, by referring to elements that are pre-existent with respect to those specific laws (Brioschi 2016: 59). Cosmology must therefore be seen to comprise simple elements (the triad derived from the categories) held together by simple principles. How, then, did Peirce's project come into being and evolve? To begin our point-by-point analysis, we can turn to a letter which Peirce addressed to Christine Lead-Franklin, and which summarises his effort, what elements he introduced, and the structure he gave them:

> I may mention that my chief avocation in the last ten years has been to develop my cosmology. This theory is that the evolution of the world is *hyperbolic*, that is, proceeds from one state of things in the infinite past, to a different state of things in the infinite future. The state of things in the infinite past is chaos, tohu bohu, the nothingness of which consists in the total absence of regularity. The state of things in the infinite future is death, the nothingness of which consists in the complete triumph of law and absence of all spontaneity. Between these, we have on *our* side a state of things in which there is some absolute spontaneity counter to all law, and some degree of conformity to law, which is constantly on the increase owing to the growth of *habit.* The tendency to form habits or tendency to generalize, is something which grows by its own action, by the habit of taking habits itself growing. Its first germs arose from pure chance. There were slight tendencies to obey rules that had been followed, and these tendencies were rules which were more and more obeyed by their own action". (W8: 386-87)

Thus, for Peirce, the regulating principle that cannot be disregarded is that of evolution: "philosophy requires thorough going evolutionism or none" (W8: 102). Through the principle of habit or generalisation, evolution transcends the physical world and also regulates the psychic world and that of ideas.[45] The state of the world in the past was the opposite of the state of the world in the indefinite future: it was pure chaos, with no law and regularity, insofar as the principle governing it, chance, was the opposite of law. On the other hand, the state of the world in the indefinite future will be absolute law, with no room for variations of any kind and no spontaneity; and this will mean perfect order, but also death. However, in which 'phase' are we? Or, to put it differently, what are we made of? What do we have "on our side" – to quote Peirce – that sustains the world? What has the capacity to carry the world, like Charon, from the *chaos* of chance to the *inertia* of law?

[45] And this evolution of the world is *hyperbolic*, as opposed to other rival cosmologies that Peirce identifies in the history of thought and calls elliptical and parabolic. For a more detailed discussion of this topic, see Reynolds, 2002: 124-137.

In the intermediate state there is only one law, that of habit, which on the one hand looks to spontaneity, from which it originated, and on the other to the rigidity of the law, towards which it is oriented by virtue of its tendency to strengthen itself over time. This law is self-correcting, in the sense that it regulates its own principle of development. It is actually beyond the concept of law itself, which only exists on the basis of a regularity that amounts to things becoming structured and rigid. What I am interested in demonstrating is not so much the presence of a precise categorial order, which cannot be shown to exist in Peirce's phenomenology, but which is instead widely acknowledged in relation to his cosmogonic project (Brioschi 2016; Feodorov 2017; Reynolds 2002; Sørensen and Thellefsen 2018): "The origin of things, considered not as leading to anything, but in itself, contains the idea of First, the end of things that of Second, the process mediating between them that of Third" (W8: 109). The next step I intend to take is to show not only that this instance of mediation triggers the process of development of things, and thus also places them in chronological order, but also that without it there is no possibility of this process taking place at all. What I mean is that only through this process of mediation are the other elements put into place (i.e., in relation to each other); and this applies to the cosmos but in an even more immediate way to us (as I will show in the second part of the thesis).

For the time being, we must continue to investigate how this process occurs and develops. So Peircean evolutionary cosmology assigns specific characteristics to states of being in the infinite past and future. What he calls chaos is nothing but a state of pure vagueness, in which there are no established connections of any kind between elements; and as this state coincides with sheer possibility, without any tendency, it is not possible to determine any subsequent state of being. On the contrary, in the infinite future everything will be completely determined, meaning that a complete definition of all elements and being will be reached, amounting to death.[46] Indeed, "[t]he existence of things consists in their

[46] This is a crucial element, as we will see. It is inherent in the nature of symbols, which perfectly represent the law of growth and generalisation (EP2: 324), insofar as symbols must be interpreted and defined in increasingly

regular ·behaviour" (W6: 209). Only in this sense can things be said to be real and not merely existent.

As we have seen, tendency to form habits scaffolds this process of determination, and its power covers every temporal state, since it was present in the germinal being (to give life to the law of generalisation) and will continue to endure until it "supersedes itself" in the completely determined world of law:

> Uniformities in the modes of action of things have come about by their taking habits. At present, the course of events is approximately determined by law. In the past that approximation was less perfect; in the future it will be more perfect. The tendency to obey laws has always been and always will be growing. We look back toward a point in the infinitely distant past when there was no law but mere indeterminacy; we look forward to a point in the infinitely distant future when there will be no indeterminacy or chance but a complete reign of law. But at any assignable date in the past, however early, there was already some tendency toward uniformity; and at any assignable date in the future there will be some slight aberrancy from law. Moreover, all things have a tendency to take habits. For atoms and their parts, molecules and groups of molecules, and in short every conceivable real object, there is a greater probability of acting as on a former like occasion than otherwise. This tendency itself constitutes a regularity, and is continually on the increase. In looking back into the past we are looking towards periods when it was a less and less decided tendency. But its own essential nature is to grow. It is a generalizing tendency; it causes actions in the future to follow some generalization of past actions; and this tendency is itself something capable of similar generalization; and thus, it is self-generative. We have therefore only to suppose the smallest spur of it in the past, and that germ would have been bound to develop into a mighty and over-ruling

specific ways as they progress from an indeterminate to a more general state, i.e. one that is determined, precise, and applicable to all circumstances.

> principle, until it supersedes itself by strengthening habits into absolute laws regulating the action of all things in every respect in the indefinite future (W6:208).

Here, in "Guess at the Riddle of the Sphinx", which addresses the question "What is the world made of?" (W5: 295), we discover not only that the world is made up of these three elements, but above all that such elements exist in a complex mutual relationship which allows things to develop. If the development of the universe follows this order of increasing determination, it is because this tendency of taking habits allow "things to acquire determinate properties". Again, Peirce makes the connections between the order of the cosmos and his categories quite clear. The first element produces "original events" by chance, the second "sequences" them by law, and the third, mediating element is the only one capable of bridging the gap and establishing a connection (W5:293): "[I]t is clear that nothing but a principle of habit, itself due to the growth by habit of an infinitesimal chance tendency toward habit-taking, is the only bridge that can span the chasm between the chance medley of chaos and the cosmos of order and law" (W8: 179).

We have seen, therefore, this generalising tendency at work, which tends to grow over time and increasingly regulates the relationships existing between things. The future is determined by the generalisation of past events: we must remember that in any single past action there is no law at work that guarantees the probability that this same action will be repeated in the future, if not precisely the tendency expressed in the process of habit-taking. In the seventh of his 1898 *Cambridge Lectures*, entitled "Habit", Peirce returns to the relationship between laws, the principle of evolution, and the generalising process of acquiring habits. The laws of nature are the result of an evolutionary process that must obey some principle. This principle must be able to evolve and develop (Nöth 2014), but – most importantly – it must be *in actu*, as it is the product of a still evolving state of being. According to Peirce, evolution advances from a completely indeterminate state of affairs, in which probability and indeterminacy are at their highest levels and law is at its lowest, to a reality that is entirely governed by law. However, the law that governs the current, changing

situation cannot be an inflexible, completely predetermined one. It has to be a 'plastic', evolving law:

> But if the laws of nature are results of evolution, this evolution must proceed according to some principle; and this principle will itself be of the nature of a law. But it must be such a law that it can evolve or develop itself. Not that if absolutely absent it would create itself perhaps, but such that it would strengthen itself, and looking back into the past we should be looking back [to] times in which its strength was less than any given strength, and so that at the limit of the infinitely distant past it should vanish altogether. Then the problem was to imagine any kind of a law or tendency which would thus have a tendency to strengthen itself. Evidently it must be a tendency toward generalization, — a generalizing tendency. But any fundamental universal tendency ought to manifest itself in nature. Where shall we look for it? We could not expect to find it in such phenomena as gravitation where the evolution has so nearly approached its ultimate limit, that nothing even simulating irregularity can be found in it (RLT: 241).

The answer that Peirce provides to the question "Where shall we look for the manifestation in nature of the generalizing tendency?" is simple: we must look in the most plastic of all things, the human mind. However, proof of this constitutes the argument I will develop in the second part of my work, and which will hopefully be my own "guess at the riddle", namely why humans can be described as 'creatures of habit'.

Needless to say, I fully agree with Kilpinen's definition of what he calls "cosmic habits" in relation to this seventh *Cambridge Lecture*, that is, "a mediation between strict mechanical causation on the one hand, and objective chance, on the other" (Kilpinen, 2016: 207). However, this opens up a number of questions concerning the relationship with chance and law, above all because – as we have seen in the previous quotation – the correlation between habit and law is not immediately understandable. Hookway states that "[h]abit-taking does not introduce something which is categorially distinct from law. This tendency is itself a law which explains the evolution of laws, including itself" (Hookway, 2000: 175).

Since the question of whether habits are categorically distinct from laws or not is the focus of much of my theory, it is now necessary to analyse the double link between the general principle of habit and chance, on the one hand, and laws, on the other. Following the cosmological order "from chance to law" that is given by Peirce, I shall begin with the former.

2.4 Habits and chance

Peirce's system always operates on several levels, as I have shown from the outset in relation to the principle of habit, for at its core lies the fundamental assumption that there are correspondences between the various domains of enquiry, that concepts are applicable across different levels.[47] Peirce's cosmology can thus be interpreted as a specific expression of his general metaphysical framework, a mirror of the categories that pervade all the other scientific spheres. To put it in another way, within this system correspondences can be found between the psychic world – in which feelings come first, reaction and effort second, and habit and general concepts third – and the physical world, in which "Chance is First, Law is Second, the tendency to take habits is Third, Mind is First, Matter is Second, Evolution is Third". Peirce built his philosophical edifice on these three elements, asserting that a cosmogonic philosophy could only result from them:

> Such are the materials out of which chiefly a philosophical theory ought to be built, in order to represent the state of knowledge to which the XIXth century has brought us. Without going into other important questions of philosophical architectonic, we can readily foresee what sort of a metaphysics would appropriately be constructed from those conceptions. Like some of the most ancient and some of the most recent speculations it would be a Cosmogonic Philosophy (W8: 110).

Where Peirce shows us chance and spontaneity at work in the world, we find feelings in the inner world: in his cosmological project they are translated into the 'non-laws' at work in the

[47] This is a basic trait derived from his entire philosophy based on continuity, i.e. the principle of *synechism*, which I will introduce shortly.

primordial chaos of the beginnings from which the idea of regularity – of a tendency to act in given ways – slowly emerged. Hence the idea of chance as a metaphysical principle really at work in the world, even in the present day, which led Peirce to formulate his principle of *tychism*: chance as the only force at work in the beginnings of the cosmos. I will again set out from the philosopher's reflections in his cosmogonic writings and then broaden the picture to show some interesting new developments in Peirce's reflections on habit. A first significant question for Peirce is: what does a world without regularity consist in?

> It would suppose that in the beginning, —infinitely remote, —there was a chaos of unpersonalized feeling, which being without connection or regularity would properly be without existence. This feeling, sporting here and there in pure arbitrariness, would have started the germ of a generalizing tendency. Its other sportings would be evanescent, but this would have a growing virtue. Thus, the tendency to habit would be started; and from this with the other principles of evolution all the regularities of the universe would be evolved. At any time, however, an element of pure chance survives and will remain until the world becomes an absolutely perfect, rational, and symmetrical system in which mind is at last crystallized in the infinitely distant future (W8: 110).

Now, at the beginning we only have "unpersonalized feelings", and in such a world there is no existence, because – as I have already shown – the existence of things consists in, or rather is based on, their regularity, their stability (W6: 209). The very idea of development proceeds from pure possibility towards a gradually increasing order in conjunction with the stabilisation of habits (Sørensen et al., 2018: 16). While this may seem contradictory, for Peirce it is essential to understand what this 'nothingness' consists in and what it correlates with.

> If we are to explain the universe, we must assume that there was in the beginning a state of things in which there was nothing, no reaction and no quality, no matter, no consciousness, no space and no time, but just nothing at all. Not determinately nothing.

> For that which is determinately not *A* supposes the being of *A* in some mode. Utter indetermination (EP2: 322).
>
> But this pure zero is the nothing of not having been born. There is no individual thing, no compulsion, outward or inward, no law. It is the germinal nothing, in which the whole universe is involved or foreshadowed. As such, it is absolutely undefined and unlimited possibility-boundless possibility. So of *potential* being there was in that initial state no lack. (CP 6.217, 1898).

This nothingness is what Peirce calls "a pure zero", that is total indeterminacy and, more importantly, pure *potentiality*.[48] The pure zero was before every first, it was the only 'real' unlimited possibility. Why is this crucial? Because in 'our' world pure possibility is nothing, in the sense that it is no longer at work. This option is simply not given, and this has important consequences on the other level, the psychological one, for human beings. That is, we are living in a world (or a stage of development) in which pure potentiality is beyond our power and understanding. On the contrary, we dwell in a habitual world, at a metaphysical stage somewhere between chance and law, which epistemologically means that we can never get rid of the habitual ground that shapes our identity and our ability to reason.[49] Therefore, even assuming the hypothesis of pure potentiality can only be considered a conceptual attempt emerging from the background of habituality.

Now, in order to complete the first stage in the Peircean process of evolution, it is also necessary to assess how something could have arisen from nothing. In other words, it seems far from easy to explain how diversity can emerge from pure potentiality, pure indeterminacy, by chance – just as it is far from simple to explain the evolution of habit by chance. "Although

[48] Peirce also refers to this original potential as "the Aristotelian matter or indeterminacy from which the universe is formed" (CP 6.206). The Aristotelian idea of primal matter as potentiality or possibility will also be found in a crucial simile that I will draw upon in my analysis of habits and their ontological status.

[49] This does not mean that this background, which constitutes our horizon of possibility, is not open to criticism. I will soon show that Peirce's position conflicts with other modern approaches to potentiality.

nothing *necessarily*, that is, according to the deductive logic of reason, resulted from the Nothing of boundless freedom, something did" (Sheriff, 1994: 5).

While – as we shall see – the generalising principle of habit is certainly not binding or necessary, in the sense of blindly mechanistic, law begins to emerge from absolute chance, as being can only define itself as being in contrast to nothingness (Fabbrichesi, 1986: 157). Peirce is really proposing a strict and original version of *creatio ex nihilo* (Fernández, 2014: 81):

> The initial condition, before the universe existed, was not a state of pure abstract being. On the contrary it was a state of just nothing at all, not even a state of emptiness, for even emptiness is something. (CP 6. 216, 1898)
>
> It is the germinal nothing, in which the whole universe is involved or foreshadowed. As such it is absolutely undefined and unlimited possibility—boundless possibility. There is no compulsion and no law. It is boundless freedom. So of *potential* being there was in that initial state no lack. (CP 6: 217, 1898)
>
> In the beginning was nullity, or absolute indetermination, which, considered as the possibility of all determination, is being. (CP 1.447, 1896)

According to Peirce, potentiality cannot immediately result in actuality (it can be mediated, of course, by the force of habit), but in the beginning the unlimited, "unbounded potentiality became potentiality of this or that sort—that is, of some *quality*" (CP 6.219).

So the logic of evolution proceeds from a state of vagueness to a definite one, from homogeneity to heterogeneity, from the abstract to the particular (Sheriff, 1994:6). The germinal being of nothingness is firstly contracted into the potentialities "of something", into qualities, thanks to a "flash" which is made possible by firstness: "Out of the womb of indeterminacy we must say that there would have come something, by the principle of firstness, which we may call a flash" (W6: 209). This is the first movement of the cosmos, from totally undetermined potentiality to 'some' potentialities of 'something'; and "chance

is the only agent here at work" (Brioschi, 2016: 66): "The very first and most fundamental element that we have to assume is a Freedom, or chance, or Spontaneity, by virtue of which the general vague nothing-in-particular-ness that preceded the chaos took a thousand definite qualities" (RLT: 260).

As already mentioned, chance is not only the spark that lights the evolution of things, but a force that is still active in the world. Let us see what this means within the Peircean perspective. In a text from 1886, he states:

> We must therefore suppose an element of absolute chance, sporting, spontaneity, originality, freedom, in nature. We must further suppose that this element in the ages of the past was indefinitely more prominent than now, and that the present almost exact conformity of nature to law is something that has been gradually brought about. (W5: 293)

The present is *almost* in conformity with law, and this leads to a reversible statement: the fact that nature is almost entirely explainable by law means that laws cannot explains all nature. In other words, insofar as it assigns a significant role to the power of spontaneity, Peirce's philosophy of habit may be regarded as anti-deterministic and anti-mechanistic (Cosculluela 1992; Hookway 1997; Viola 2020a). By 1884 Peirce was already conscious of the role of chance, the importance of tychism, and the consequences of this for his philosophy. In his analysis of "Design and Chance" Hookway points out that Peirce "admitted the existence of absolute chance, and questioned the absolute truth of the logical or metaphysical principle that every event must have a cause" (Hookway, 1997:15).

Ahead of his time, Peirce was aware that there are some exceptions to the laws of nature. Some laws have reached such a high degree of fixity that they cannot be noticed. While the laws of physics are regularities stabilised to the highest degree (although today we know that this does not apply to the world of the infinitesimally small), this is not true for most law acquisition processes, which are mostly related to statistical regularities and the calculus of probability. The connection between chance and probability or statistics (Viola,

2020: 12-13) constitutes another crucial element in Peirce's philosophy of habit and in his personal development of evolutionary theses (Wiener 1946). As Peirce's cosmogonic ideas show, from the homogeneity of nothingness, heterogeneity and diversity emerge by chance, and "wherever diversity is increasing, there chance must be operative" (W8: 181). Peirce therefore rejected the possibility of a completely uniform nature and, with it, mechanism and determinism. Cosculluela notes:

> Against the suggestion that the observation of nature proves that determinism is true, Peirce claims, correctly it seems, that observation merely shows that there is an element of uniformity in nature; it does not show that such regularity is 'exact and universal' (6.46, also 1.55). No observation or set of observations which human beings are physically capable of making can prove that every fact is precisely determined by law. (Cosculluela, 1992: 743)

The role given to chance by Peirce, and to its relationship with habit, places it in contrast with other philosophies of habit. For example, although in Peirce's view final causation is strictly linked to the unfolding and development of habits, his philosophy is not Hegelianism in disguise: "He differentiates himself from Hegel by pointing out his own conviction that freshness (under the category of Firstness) and resistance (under the category of Secondness) will not be overcome in some final end. The universe will always have some irregularity—will inevitably bear the mark of freshness and brute fact" (Hausman, 1993:17). Moreover, the fact that the principles of tychism and synechism are conjoined in the world – or, in other words, that habits and chance work together in a way that makes Peirce's habits a unique concept – is in contrast with other simpler views. For example, James, following Renouvier, struggled to embrace continuity, as his empiricist metaphysics was a sort of tychism without synechism (Dunham 2020).

The most interesting comparison is undoubtedly with Ravaisson, who, as Viola rightly notes, is much closer to Peirce than one might think (I will analyse the cumbersome 'Aristotelianism' of both thinkers). However, the point under discussion brings out the

substantial difference between the two philosophers: "While Ravaisson insists on a single mode of being, which is both the principle of life and the result of habit-taking, Peirce distinguishes between two distinct, if interrelated, categories: spontaneity and habit; chance and final cause; immediacy and mediation; Firstness and Thirdness" (Viola 2020: 11). Spontaneity works in two different ways in the double law of habit formulated by the two philosophers. For Peirce, "while habits grow, spontaneity and feeling decrease"; for Ravaisson, things are the other way round. For Peirce when a habit is broken, spontaneity (and feeling) regains their original strength, while for Ravaisson it is the way in which habits work that produces inclination, freedom, and spontaneity. However, what is more important is that a certain degree of spontaneity and freedom is present in their concepts of habit. Moreover, spontaneity and chance need to be present in habit development (W6: 191), as well as in the laws of nature (W8: 207). This is the fundamental element allowing us to distinguish between the principle of habit, the laws of nature that follow from it, and the very concept of law, which I will now deal with.

2.5 Habits and Law

For Peirce, then, habit is indeed a law. Not only that, but we have seen that habit is *the* law that explains the development of laws, and the process of law acquisition and reinforcement. Laws result from habit, as I will soon show. According to Peirce's doctrine of objective idealism and his principle of synechism, rigid laws result from inveterate habits. But what differentiates habits and law is precisely the fact that the law of habit is not absolute (W4: 39). Why? Certainly, as has just been shown, because an element of chance/firstness remains in habits, but also because it is in the very nature of habit to *mediate* between indeterminacy and rigidness; and the only property that lies between these two poles – the μετριότης with respect to these two extremes – is plasticity:

> No mental action seems to be necessary or invariable in its character. In whatever manner the mind has reacted under a given sensation, in that manner it is the more likely to react

> again; were this, however, an absolute necessity, habits would become wooden and ineradicable and, no room being left for the formation of new habits, intellectual life would come to a speedy close. Thus, the uncertainty of the mental law is no mere defect of it, but is on the contrary of its essence. The truth is, the mind is not subject to "law" in the same rigid sense that matter is. It only experiences gentle forces which merely render it more likely to act in a given way than it otherwise would be. There always remains a certain amount of arbitrary spontaneity in its action, without which it would be dead (W8: 152-53).
>
> This law of habit seems to be quite radically different in its general form from mechanical law, inasmuch as it would at once cease to operate if it were rigidly obeyed: since in that case all habits would at once become so fixed as to give room for no further formation of habits. In this point of view, then, growth seems to indicate a positive violation of law (CP 6.613, 1891).

Here, in "Law of Mind", Peirce defends the instability of mental actions, due to the plasticity of habit, against the rigid "law" that governs matter. However, it is well known that, against mechanism and necessitarianism, Peirce upholds the view that physical laws too are the result of evolution from a less rigid state (Pickering, 2016: 92): for Peirce "the universe is not a mechanical result of the operation of blind law" (CP 1.162, 1897). Moreover, we know that the law of habit does not govern the mind alone, but unfolds throughout the universe. As he states in the above-quoted letter to Lead-Franklin, Peirce initially believed that his law of habit was "purely psychical", but then realised that matter is "merely mind deadened by the development of habit" (W8: 387).[50] This is consistent with his doctrine of chance and with his strong opposition to any mechanical reading of the laws of the universe. The universe is not regulated in every small detail, and anyone who thinks that laws absolutely determine nature is committed to a thought "marked by secondness" (CP 1.325).

[50] This represents the core of his objective idealism, which I will present in the following pages.

Yet, as Nöth (2016: 53) rightly points out, this argument can lead to contradiction. Peirce states – in the passages quoted at the beginning of this section – that mechanical laws are different from the law of habit. In what respect? For example, as Nöth observes, since the laws of physics are "absolute", they require "an exact relation", so "[l]aw is second" (W8: 110). Moreover, "[w]hile every physical process can be reversed without violation of the law of mechanics, the law of habit forbids such reversal" (W8 387).[51] Both in "A Guess at the Riddle" and in "The Architecture of Theories", published a few years later, Peirce quite clearly establishes this "crude opposition" (Stjernfelt, 2016: 250):

> This is the central principle of habit: and the striking contrast of its modality to that of any mechanical law is most significant. The laws of physics know nothing of tendencies or probabilities: whatever they require at all they require absolutely and without fail, and they are never disobeyed. Were the tendency to take habits replaced by an absolute requirement that the cell should discharge itself always in the same way, or according to any rigidly fixed condition whatever, all possibility of habit developing into intelligence would be cut off at the outset; the virtue of Thirdness would be absent. (W6: 191).

> The law of habit exhibits a striking contrast to all physical laws in the character of its commands. A physical law is absolute. What it requires is an exact relation. […] On the other hand, no exact conformity is required by the mental law. Nay, exact conformity would be in downright conflict with the law; since it would instantly crystallize thought and prevent all further formation of habit. The law of mind only makes a given feeling *more likely* to arise. It thus resembles the "non-conservative" forces of physics, such as viscosity and the like, which are due to statistical uniformities in the chance encounters of trillions of molecules (W8: 105).

These statements are much more in line with the mainstream view in the history of habit, and far more intuitive, compared to the perspective Peirce presents in most of his other writings

[51] The irreversibility of habit's law is another important principle: on this topic see Reynolds (2002), especially chapters 3 ("Irreversibility in Psychics") and 4 ("Irreversibility in Physiology and Evolution").

on the topic. In fact, they reflect the perspective of the first thinker to develop this concept, Aristotle, as well as that of the 'Aristotelian' Ravaisson, who "illustrates this idea with an example taken from Aristotle's *Eudemian Ethics*: a stone, however many times it is thrown into the air, will not acquire a habit of ascending" (Carlisle, 2014: 18). From the Peircean perspective I am analysing here, the only law that governs a stone – matter *par excellence* – is that of gravity, which pertains to the sphere of the most rigid and absolute laws. It was Aristotle who first distinguished between habits and laws of nature, establishing a crucial connection between habits and the "often" (πολλάκις) – translated into Peirce's language, this means that something habit-governed is "more likely to arise". For Aristotle, the *often* is close to the *always*, but nature pertains to the *always*, while habit pertains to the *often* (*Rhetoric, I. 11, 1370 a 8-9*).

For Peirce, the law of evolution of habits follows neither the sheer criterion of chance (what he calls the "tychastic" criterion), which is far from the idea of habitual connection, nor a necessary criterion (what he calls the "anancastic" criterion), which does not take into account tendencies and is imposed by external causes. By emphasising once again the median position of habits, Peirce argues that their evolutionary law follows the criterion of "agapasm" (which consequently influences the law of mind):

> The agapastic development of thought is the adoption of certain mental tendencies, not altogether heedlessly, as in tychasm, nor quite blindly by the mere force of circumstances or of logic, as in anancasm, but by an immediate attraction for the idea itself, whose nature is divined before the mind possesses it, by the power of sympathy, that is, by virtue of the continuity of mind. (CP 6.307)

Are we therefore faced with a contradiction in Peircean theory which may also afflict his principle of habit? It is important to address this issue, because it reveals the centrality of habit and its connection to the two fundamental principles of synechism and objective idealism. The former places the primacy of thirdness and habit at the centre of all Peircean philosophy, the latter states the well-known assumption that "matter is effete mind, inveterate

habits becoming physical laws" (W8: 106). Scholars have addressed this issue from different perspectives, offering different interpretations (Kull 2014; Lane 2011b; Nöth 2016; Santaella 2001a; 2016; Stjernfelt 2016; Wilson 2016).

In order to analyse this question in detail, it is necessary to complete the overview of Peirce's metaphysical-cosmological framework. The two notions appear to be conjoined in "The Law of Mind". The philosopher was later to define synechism not as "an ultimate and absolute metaphysical doctrine" but as "a regulative principle of logic, prescribing what sort of hypothesis is fit to be entertained and examined" (DPP: 657). However, as has been widely remarked (Brioschi 2022; Esposito 2005; Fabbrichesi and Leoni 2005; Santaella 2016), synechism stands for a theory of continuity in metaphysics and a taxonomy of sciences that represents the "keystone of the arch" (CP 8.257, 1900) in Peirce's system.

As Brioschi recalls, tychism is the perfect counterpart to Peirce's 'continuity', to which it is subordinated, while constituting a fundamental element against determinism, as has been shown. Hence, 'continuity' expresses "the view that the universe exists as a continuous whole of all of its parts, with no part being fully separate, determined or determinate, and continues to increase in complexity and connectedness through semiosis and the operation of an irreducible and ubiquitous power of relational generality to mediate and unify substrates" (see Esposito 2005, Lane 2017: 77).

It is on the basis of his principle of continuity and synechism[52] that Peirce can draw his important metaphysical conclusions about the law of habit that underlies the adoption of a particular type of monism,[53] named after Schelling's idea of 'objective idealism'.[54] This

[52] "Thus, *materialism* is the doctrine that matter is everything, *idealism* the doctrine that ideas are everything, *dualism* the philosophy which splits everything in two. In like manner, I have proposed to make *synechism* mean the tendency to regard everything as continuous" (EP2: 1).

[53] "It is certainly a desideratum in philosophy to unify the phenomena of mind and matter. The logic of retroduction directs us to adopt Monism as a provisional hypothesis of philosophy, whether we think it likely or not; and not to abandon it till the position is stormed and we are forced out of it" (CP 6.73, 1898).

[54] Peirce speaks of the "Schelling-fashioned idealism which holds matter to be mere specialized and partially deadened mind" (W8: 135).

constitutes an answer to the question of whether psychic and physical laws are to be regarded as independent (as in what Peirce calls *neutralism*), or whether psychical laws are merely a derivative and special instance of physical ones, as in *materialism*, or the reverse, as in *idealism* (W8: 105). Here the centrality of the principle of continuity and the general principle of habit is evident:

> We ought to assume things to be continuous as far as we can, it has been urged that we ought to suppose a continuity between the characters of mind and matter, so that matter would be nothing but mind that had such indurated habits as to cause it to act with a peculiarly high degree of mechanical regularity, or routine. (CP 6.277, 1893)
>
> In view of the principle of continuity, the supreme guide in framing philosophical hypotheses, we must, under this theory, regard matter as mind whose habits have become fixed so as to lose the powers of forming them and losing them, while mind is to be regarded as a chemical genus of extreme complexity and instability. It has acquired in a remarkable degree a habit of taking and laying aside habits. The fundamental divergences from law must here be most extraordinarily high, although probably very far indeed from attaining any directly observable magnitude. But their effect is to cause the laws of mind to be themselves of so fluid a character as to simulate divergences from law. (DPP: 731)

It is therefore quite understandable that thanks to the law of habit there is continuity between mind and matter, whereby the latter results from the permanent stabilisation of the former's habits[55]. However, and this is the crucial point to underline, this does not mean that everything there is, is mind, in the substantial sense; rather, everything there is, is governed

[55] The general framework of this Peircean idea was actually quite shared, at least within the pragmatist milieu. Thus, for example, in his *Principles of Psychology* James writes: "The moment one tries to define what habit is, one is led to the fundamental properties of matter. The laws of Nature are nothing but the immutable habits which the different sorts of elementary matter follow in their actions and reactions upon each other" (James, 1890: 104).

by the law of mind/habit. Peirce, therefore, does not employ the term 'mind' in a narrow sense, but to describe everything that exhibits the property of behaving to a certain degree according to the law of habit. Yet, as I have shown above, most physical laws do not seem to work in this way – or rather, in Peirce's view they have also evolved from a state of higher indeterminacy, but in their present state they behave as pure secondness, without the mediation of habit: "mind is not subject to 'law', in the same rigid sense that matter is" (W8: 153). As I previously noted, this broadly acceptable statement conflicts with Peirce's view that "matter never does obey its ideal laws with absolute precision" (W8: 180), because departures from regularity occur even in matter.

Among the interpretations put forward to address this dilemma, and which I will be briefly presenting, the idea of continuity certainly plays a predominant role, as it suggests a possible solution. Not only that, But I also think it is important to understand what is meant by the *actuality* of a law and, above all, by the circumstances in which it is applied.

One idea is to distinguish between a broad and a narrow meaning of habit, a solution that I also adopt in this thesis to separate the principle of habit from its instantiations into several regulatory processes. Wilson differentiates between habits that can be acquired and ones that are constitutional. The habit of smoking can be acquired and reinforced by repetition, the brittleness of glass cannot. Of course, in Peircean terms, the brittleness of glass has also undergone a process that has enabled it, in its present state, to express itself in a certain way, i.e. glass can be shattered by applying force, but obviously not in the same way as the habit of smoking is acquired. Only the latter can be weakened or strengthened, whereas the brittleness of glass expresses in its present state an immutability that refers to a rigid law. Living organisms would therefore be subject to a different principle of habit, and the term 'law' would refer to those habits that are 'more general' or more fixed (in the fundamental sense of general, i.e. extending to an entire class under all circumstances) (Wilson, 2016: 128-129). This differentiation only circumvents the problem of the relationship between law and habit.

The principle of continuity, on the other hand, seems to allow us to paint a more adequate picture, which places these concepts within a gradient. So, a first shift in perspective is achieved by the abandoning a synchronic vision of laws in order to embrace an evolutionary one. From this point of view, rigid laws – unlike flexible laws, which are the result of historical evolution, acting in the here and now – represent a specific instance of the general principle of law, a second in the third in Peircean terms (Nöth, 2016: 52-55). I do not think that Nöth's interpretation can really explain Peirce's ambiguity regarding the property of matter and how it is subject to laws. But insofar as it assimilates the dialectic between law and habit to that between the second and third categories, it introduces a question of central importance to my research as a whole, a question which falls between the generality of thirdness and the actuality of secondness, perfectly exemplified by the dichotomy *actualiter*/*habitualiter*.

Santaella (2001b) and Stjernfelt (2016) fit better with what I have called the gradient, or range, associated with the idea of continuity and habit.[56] For Santaella, mind and matter are simply two extremes in a highly nuanced and complex range of differentiations within nature's continuous time-arrow. These mind principles located along this time-arrow were seen by Peirce as emblematic of any evolutionary process, whether in the mind or in nature. For Stjernfelt, even more specifically, we can establish a "large, generalised continuum of "would-be's", in which we can find differences only in complexity and plasticity. He thus proposes a diagram of the continuum of the law of habit:[57]

[56] Lane expounds a similar argumentation: "With this qualification Peirce makes the difference between the two sorts of law one of degree, with physical laws being those that admit of relatively few exceptions and the law of mind one that admits of relatively more" (Lane, 2011b: 241). Lane further adds that this interpretation is in line with what Peirce says in the 1893 text "Immortality in the Light of synechism" about the way in which the synechist must view regularity: "Thoroughgoing synechism will not permit us to say […] that phenomena are perfectly regular, but *only that the degree of their regularity is very high indeed*" (EP 2:2).

[57] This idea of a spectrum, of a range of degrees of habit, is already present in the work of Ravaisson, who does not acknowledge the role of habits outside of life activities, but admits a residue of habits, establishing a precise range from absolute freedom to total necessity, "even down to crystals". The affinity is astonishing, and we shall see later on why habit can be said to be at work even in the most rigid extremes: "The whole series of

> conservative physical laws -> non-conservative physical laws -> innate biological patterns of behavior -> acquired biological patterns of behavior -> deliberately acquired human patterns of behavior -> deliberately acquired human patterns of thought (beliefs). (Stjernfelt, 2016: 250)

As we follow the arrows in this diagram, the plasticity of law increases, while its generality and rigidness decrease.[58] Stjernfelt also adds a "seminal difference" that still remains between the physical and the biological phase. In the latter we have *semiosis*, because habits describe certain possible actualisations of them in certain possible environmental conditions. The semiotic function is prominently missing from the operating process of physical laws. We can surely transform the law of gravity, says Stjernfelt (2016: 251), into a conditional proposition, so that it assumes the form of a triadic habit-process, a necessary condition for semiosis. If this condition arises, then the particular object we are focusing on will act in such way/will acquire this property. However, the law (e.g. gravity) which governs this object (e.g. a stone) *never* changes, because the conditions never change. It can work 'as a habit', but it lacks growth, plasticity, and the other properties made possible by unstable conditions and circumstances. This is the central point that I wish to add to the present discussion – a point crucial for my interpretation of the broad concept of habit that Peircean philosophy can bring to light.

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beings is therefore only the continuous progression of the successive powers of one and the same principle, powers enveloping one another in the hierarchy of the forms of life, powers which develop in the opposite direction within the progression of habit. The lower limit is necessity – Destiny, as might be said, but in the spontaneity of Nature; the higher limit is the Freedom of the understanding. Habit descends from the one to the other; it brings these contraries together, and in doing so reveals their intimate essence and their necessary connection" (Ravaisson, 2008: 67).

[58] To support a contemporary view of Peirce's theory, it is worth adding that even in the physical world we can experience various degrees of rigidity in relation to laws: "Moreover, the habits that nature does display always appear in varying degrees of entrenchment or 'congealing'. At one end of the spectrum, we have the nearly law-like behavior of larger physical objects like boulders and planets; but at the other end of the spectrum, we see in human processes of imagination and thought an almost pure freedom and spontaneity; and in the quantum world of the very small we see the results of almost pure chance" (Burch 2014).

Like all habit-laws, the laws of physics can work exactly like habits, behaving in the same general ways each time circumstances of a certain general kind appear (Fernández & Campbell, 2019: 158). But since the circumstances do not change in this case, there is no triadicity. This allows us to explain Peirce's apparent contradiction. Laws, like the 'concept of law/habit', are a matter of thirdness: they work in the same way as habits, but due to their immutable conditions, they are a matter of "brute reactions of forces"; therefore, they pertain to secondness. In a manuscript from 1904, Peirce comes to our aid by clarifying, once and for all, the relationship between laws, conditions, and the idea of 'expectation', which is crucial for his philosophy as a whole:

> The essence of law consists in its being a conditional truth about the indefinite future, and never can become matter of actual fact. Or we may say it is such a truth that upon the knowledge of it a perpetual or indefinitely lasting conditional expectation may be founded. We say "indefinitely lasting" because as a general rule our laws are vaguely understood to endure only so long as "the present state of things" continues; but that state of things may endure forever, or if it ceases, may return some day (R1476: 10).

In this sense, all laws are habits, but laws that exert their force on the present state of things endure forever: they are "indefinitely lasting", because they always fulfil any expectations we have with regard to them.[59]

[59] This idea is coupled with the definition of reality as something that is fulfilled in the future, to the extent that something happens 'always' in the long run, which Peirce calls 'mellonization' (Fabbrichesi 2018): "By mellonization (Gr. {mellön} the being about to do, to be, or to suffer) I mean that operation of logic by which what is conceived as having been (which I call conceived as *parelelythose*) is conceived as repeated or extended indefinitely into what always will be (or what will some day be, that is, its absence will *not* always be, which equally involves mellonization, which does not *assert* anything but is merely a mode of *conceiving*). The conception of the *real* is derived by a mellonization of the constraint-side of double-sided consciousness. Therefore to say that it is the world of thought that is real is, when properly understood, to assert emphatically the reality of the public world of the indefinite future as against our past opinions of what it was to be" (CP 8.284).

Peirce here also connects this argument to another concept, perhaps the most important one for my study; it is a concept he will emphasise throughout his work, and which will influence every area of his philosophy. Lane (2011b: 241) defines it as the concept of a precise hierarchy of laws, which Santaella perfectly describes by stating that "actual events cannot escape the governance of laws" (Santaella 2016: 158). In other words, an actuality will never be able to fulfil the essence of a law-habit, which mediates between the possibility, the chance operating in firstness, and the 'operative-law', the actuality, of secondness. As will become clear in the next sections, only the thirdness of law-habit is 'real', and the actuality of facts and existence is not the most important element in the world, nor – *a fortiori* – the most important element in relation to the mind or human beings, given the idea of continuity presented above. Now that I have collected all the necessary elements, I can directly address the question of the mode of being of the Peircean habit, by showing its continuity with respect to the original concept of habit. Since in the previous section many innovative aspects emerged, of which Peirce is only one of the theorists, I will first embark on an in-depth examination of the relationship between habit and nature, which reached a crucial turning point in that historical period.

2.6 Habits in nature

The years in which Peirce was at work, and particularly the period analysed in this chapter, namely the last decades of the nineteenth century, represent the end of a fruitful reflection on habit, which was eventually directed into the more specialist channels of psychology. Nevertheless, these years marked the culmination of almost an entire century of reflections on habit: a decisive development that also coincides with the maximum breadth acquired by this concept.

What emerges from the Peircean themes we have just discussed is the abandonment of a number of clear-cut distinctions and dichotomies that had endured for much of the history of philosophy. We have seen, in particular, how complex the relationship between the organic

and inorganic worlds became and, within the organic world, how this new conception of habit undermined the predominance of the human sphere with respect to other intelligent species. Not only that, but in the wake of evolutionary thinking, a debate opened up on the opposition between phylogeny and ontogeny.[60] Habits, which had always been considered pertinent only to the ontogenetic sphere of human evolution, entered the phylogenetic dimension through the ideas of development and heredity. It is therefore worth recalling the main elements and ideas in this debate, by focusing in particular on a few key authors.

> À mesure que la théorie de l'évolution et l'explication positive des phénomènes de la nature gagnent du terrain dans les sciences et la philosophie, l'habitude, […] doit acquérir nécessairement une plus grande importance non-seulement en psychologie et en physiologie, mais encore en métaphysique. (Dumont, 2019: 49)

This is how Dumont began his 1876 essay on habit, stating that it was precisely thanks to scientific progress and the vast discoveries recently made that the concept of habit could be extended. The positive explanation of natural phenomena obliges us to abandon the substantive approach to the nature of habit, and to move – with Peirce – towards a relational one. But this renewed approach has important repercussions on the metaphysical field, the most obvious being the extension of the domain of habit to the inorganic world, which Dumont – even more so than Peirce – considers an established fact. Indeed, he ascribes to the properties of matter the possibility of bending to habits, because by virtue of them the external causality to be imprinted on matter gradually diminishes (for, evidently, it is easier to fold a sheet of paper along an existing crease) (Dumont, 2019: 79-80).

[60] Following the idea of evolution, the need to reformulate the continuity between body and mind, or between cerebral processes and external stimuli, arose, adding a third crucial element, that of heredity. This sparked the great debate on the dichotomy between instincts and habits, with which could no longer be ignored – as witnessed by Dumont himself. The debate on the dialectic between instincts and habits – already opened by Darwin and Lamarck – accompanies all the decades we are analysing here, up to the publication of the aforementioned work by Lloyd Morgan (1896) entirely dedicated to the subject.

James also moved in the same direction, as I have already briefly shown. In his view, it "appears that habit covers a very large part of life, and that one engaged in studying the objective manifestations of mind is bound at the very outset to define clearly just what its limits are" (James, 1890: 104). Indeed, habit is so broad a category that for Dumont it is a universal fact, one of the attributes of force, considered from the most general point of view (Dumont, 2019:49). This allows James and Dumont to include habit among the fundamental properties of matter, inscribing the philosophy of habit in the first instance in physics, as James states, and holding together the organic and inorganic worlds, which differ on the basis of this property only by degrees of 'complication' and 'variability', not by any qualitative differences.

So – James states, echoing the quote in the previous section – the "[t]he laws of Nature are nothing but the immutable habits which the different elementary sorts of matter follow in their actions and reactions upon each other" (James 1877: 433), while habit "is nothing in living beings but what it already is in the inorganic world". The difference in degree between the two domains thus consists in what James calls the immutability of the laws of nature, or what, by reversing the perspective, we might call the greater plasticity of the organic world. Secondly, it can be observed that plasticity facilitates the reproduction of the same act in the future under similar circumstances, and with a certain difference in degree, this property pertains to both the organic and the inorganic world. This is quite similar to Peirce's interpretation, although it is somewhat simpler. At one extreme there are the laws of nature, which have reached a degree of immutable fixity; at the other extreme is the greater plasticity of organic matter: "*the phenomena of habit in living beings are due to the plasticity of the organic materials of which their bodies are composed"* (James 1877: 434).

The proximity to the thesis expounded by Peirce is more than evident, since according to him laws are crystallised habits, in which the degree of probability of repetition of event x in circumstance y has reached the maximum degree of invariability, while on the contrary the plastic matter par excellence is represented by the human mind. This notion is perhaps

the point of greatest contact between the two philosophers. It is what allowed James to develop his own conception of plasticity,[61] which is still considered his most important idea today. As I will show, the reflections on habit put forward by these two great American philosophers, and friends, in relation to the epistemological sphere instead diverge in some crucial points.

By bringing together the considerations made in these initial sections, we have sufficient evidence to deal directly with the question of the mode of being of habits, which will guide us through the very history of the concept, starting from its first formulation. The history of the relation between the principle of habit and being is the very history of ἕξις (*hexis*), whose core Peirce inherited.

2.7 A history of ἕξις, or a history of the third mode of being

Peirce's indebtedness to Aristotle and Greek philosophy is considerable and concerns many aspects of his thought, so much so that the American philosopher described himself as "an Aristotelian of the Scholastic wing" (EP2: 180). From the 1880s onwards, Peirce showed increasing interest in the Aristotelian corpus. In 1883 he read the *Nicomachean Ethics*; at the end of that decade, among the many entries he wrote for the *Century Dictionary,* we find the crucial term "Entelechy". In 1906 Peirce reviewed a book by Thomas Marshall entitled *Aristotle's Theory of Conduct*, in which he underlined the key role Aristotle assigned to the habitual process of the acquisition of virtue and knowledge. In this review he added that both real habits and imaginary ones (as I showed in ch.1) can lead to the establishment of a particular course of action (CN3: 3279), an argument later clearly laid out in the essays on pragmatism of 1905-1906.

[61] Certainly, we must not overlook the evolutionist influence in this case: "'Plasticity' was a term that James took from Darwin, who used it in reference to the modifiability of the *entire* physical organism (Darwin, *On the Origin of Species*, 12, 31, 80). This is relevant to note, given the evolutionary perspective from which James approached habit formation" (Leary, 2013: 203n64).

Peirce's proximity to Aristotle's theory increases more and more in his mature writings, as evidenced by an explicit reference – also quoted by Nöth (2016) – to Aristotelian terminology and works in a 1913 manuscript, "A Study of How to Reason Safely and Efficiently", in which he underlines his affinity with the Greek philosopher as regards the concept of habit:

> We now come to that third mode of consciousness that I consider to be utterly unlike either of the two already considered. I may add that I hold it to be the only other undecomposeble mode; but this will not be a matter of any particular moment to us in the course of this essay. If you ask me what mode of consciousness is, I shall reply, in brief, that it is that of being aware of acquiring a habit. I had better explain that I use this word habit in a *broader sense* than it conveys in the vernacular of today. The latin habitus (having or possessing) in the middle ages from the XII century, was so familiar in the mouths or ears at any rate of every educated man, as a term of philosophy, owing to the corresponding Greek words ἔχειν and ἕξις, being favorite expressions with Aristotle, in that I shall be quite within the bounds of propriety as long as *Aristotle sanctions my use of the word*. (R681, 20-21)

In this first passage Peirce affirms the exact correspondence between his own use of the term and the boundaries drawn by Aristotle, in a broader sense with respect to the common use of the term 'habit' attested in his time. Moreover, as already stated by Viola (2014), it emerges that he had become familiar (or more familiar) with the concept of *habitus* through its reformulation by Scholastic philosophers, realising that this was already an established term in the philosophical vocabulary of the twelfth century. The transition which the concept underwent through the filter of scholasticism deserves further study: Thomas Aquinas translates the term from the Greek using the Latin *habitus*, as does Duns Scotus, whose work was certainly known to Peirce (Nöth 2016). To confirm the correspondence between Greek, Latin, and English terminology, Peirce provides many examples of occurrences that attest to his wide-ranging knowledge. Aquinas and Scotus are crucial for both the metaphysical and

the cognitive aspect of Peirce's habit: as I will show, Peirce's understanding of the mode of being of habits and of the way in which concepts 'lie in the mind' is in line with these two thinkers' theories (deriving from Aristotle).

> If we could call [...] any eminent English prose writer, down to sir Thomas Browne, and were to ask him what was meant by a habit, without a shadow of doubt he would refer me to the 20th chapter of Aristotle's 4th book of metaphysics; and there we find it applied to any predicate of an object, to which it remains attached as much as wine remains in a pitcher, which is one of the instances given at the end of his Predicaments. It would therefore be quite contrary to good philosophical usage to make the distinction between Habit and Disposition to be that the former is acquired as an effect of repetition; for both are Aristotelian terms, disposition being equivalent to διάθεσις which is said by the Stagirite to be a habit that is good or bad. (R681, 21)

I will start by analysing the commonalities between the Aristotelian notion of potentiality/actuality, the scholastic distinction between *virtualiter*, *actualiter*, and *habitualiter*, and the three modes of being provided by Peirce. By doing so, I aim to show that the structure of habits and their relationship with the other kinds of being provides a key to understand the threefold distinction drawn by Peirce.

Peirce did not credit Aristotle with having explicitly identified a third condition in addition to potentiality and actuality, or matter and form. Nevertheless, he knew the following passage of *De anima* well enough to quote it, as we shall see:

> Now the word actuality has two senses corresponding respectively to possession of knowledge and the actual exercise of knowledge. It is obvious that the soul is actuality in the first sense, viz. that of knowledge as possessed, […] We can speak of something as " a knower" either (*a*) as when we say that man is a knower, meaning that man falls within the class of beings that know or have knowledge, or (*b*) as when we are speaking of a man who possesses a knowledge of grammar, each of these is so called as having in him a certain potentiality, but there is a difference between their respective potentiality,

> the one (*a*) being a potential knower, because his kind or matter is such and such, the other (*b*), because he can in the absence of any external counteracting cause realize his knowledge in actual knowing at will. This implies a third meaning of "a knower" (*c*), one who is already realizing his knowledge- he is a knower in actuality and in the most proper sense is knowing, e.g. this A. both the former are potential knowers, who realize their respective potentialities, the one (*a*) by change of quality, i.e. repeated transitions from one state to its opposite under instruction, the other (*b*) by the transition from the inactive possession of sense of grammar to their active exercise. (*De anima*, II, 1, 412a22-417b2)

Aristotle identifies three stages: potentiality, first actuality/or second potentiality, and actuality. We will see that *b* corresponds to the modality of habits, specifically an acquired habit. Furthermore, the process of passing from *a* to *b* is nothing but habit-taking. Indeed, *a* is a state of potentiality in which we can shift to an opposite condition. On the contrary, as Aristotle says very clear says in the *Nicomachean Ethics*, habits, *b*, only include and give rise to those actualities (actions) that are compatible with the structure of the habit itself, the structure in which the habit was formed.

Many scholars like Rodrigo (2011) have already detected this idea in the Aristotelian concept of habit and Peircean scholars (Feodorov 2017; Nöth 2016; Romanini and Fernández 2014; Santaella 2016; Viola 2014) have connected it to the American philosopher's work. All of them acknowledge these features of Aristotelian and Peircean habits: a tendency which is not momentary, cannot be reduced to actuality, for it also involves the subject and a general rule, a "phenomenon of generality" as Feodorov states. Aristotle does not explicitly identify his first actuality (ἐντελέχεια ἡ πρώτη) with *hexis*, but based on the example of the soul and knowledge we can clearly see the overlap between the two. Moreover, the Latin translation of Aristotle and the commentary on *De anima* provided by Aquinas remove all doubt:

> We speak, he says, in one sense of potency when we say that man is a knower, referring to his natural capacity for knowledge. Man, we say, is one of that class of beings that

> know or have knowledge, meaning that his nature can know and form habits of knowing. In another sense, however, we say of someone that he knows, meaning that he knows certain definite things; thus we say of one who has the habit of some science—e.g. Grammar—that he is now one who knows. Now, obviously, in both cases the man's capacities are implied by calling him a knower; but not in the same way in both cases. In the first case man is said to be 'able' through belonging to a certain genus or 'matter', i.e. his nature has a certain capacity that puts him in this genus, and he is in potency to knowledge as matter to its form. But the second man, with his acquired habit of knowing, is called 'able' because when he wishes he can reflect on his knowledge—unless, of course, he is accidentally prevented, e.g. by exterior preoccupations or by some bodily indisposition. A third case would be that of a man who 'was actually thinking about something here and now. He it is who most properly and perfectly is a knower in any field; e.g. knowing the letter A, which belongs to the above-mentioned science of Grammar. Of the three, then, the third is simply in act; the first is simply in potency; while the second is in act as compared with the first and in potency as compared with the third. Clearly, then, potentiality is taken in two senses (the first and second man); and actuality also in two senses (the second and third man). (*Sententia*, II, *lectio* 11)

Aquinas thus clarifies Aristotle's insight about ἐντελέχεια ἡ πρώτη. Habits are second potentiality compared to actuality, and first actuality compared to potentiality, a third mode of being between potentiality and actuality. Of course, this reflects the triad established by Scotus concerning in what manner a thing can be in a mind: *virtualiter, actualiter, or habitualiter*. From this point of view, the concept of knowledge is the habit 'par excellence', for knowledge is present in the mind *habitualiter* (as I will show in 4.1); it comes to our consciousness when the occasion arises: as Raposa says, "the Scotistic form or essence functions in precisely the same manner that Peirce's habit does; it determines how a thing 'would be' disposed to behave under certain specifiable conditions" (Raposa, 1984: 157). And it is not by chance that Stjernfelt uses the same example of a foreign language to explain

this idea: "The triad of actual, habitual, and virtual may be resumed as follows: *Actualiter* are the Greek words or sentences I may be processing at any moment; *habitualiter* is my general knowledge of Greek and *virtualiter* is the whole of the Greek language, including those parts I never learnt" (Stjernfelt 2016: 253).[62]

In 1902 Peirce wrote several entries for Baldwin's *Dictionary of Philosophy and Psychology*, including "Matter and Form" (DPP: 55). It in this text that he refers to the previously quoted *De anima* passage. According to Peirce, for Aristotle, who has a 'naturalistic' point of view on the matter, the determined form develops from indeterminate matter. Form cannot be antecedent to matter, just as soul is form with respect to the body. Moreover, Peirce says: "his dunamis is germinal being, not amounting to existence; while his entelechy is the perfect thing that ought to grow out of that germ" (DPP: 51). Peirce also follows the Aristotelian distinction between matter and form, which is equivalent to that between δύναμις and ἐντελέχεια. We will see that Aristotle understands *entelecheia* not as actuality, but as full growth directed towards an end. As anticipated, in his account Peirce mentions the second book of *De anima*: "For Aristotle there could not be any such question, because he did not conceive of a form taking on individuality, but of an undifferentiated matter taking on, or rather developing, form, and individuality, perhaps, with it (412a, 7)" (DPP: 51).

A year later, in 1903, Peirce gave a series of lectures at Harvard. In the third lecture, entitled "The Three Universal Categories and their Utility", he gives an account of the well-known debate between nominalism and realism that runs throughout the history of philosophy. What is at stake, according to Peirce, is again the different modes of being that philosophers have identified in their systems: as I have shown in this chapter, in modern times most philosophers have identified only one mode of being, which consists in the

[62] I do not agree with Stjernfelt's understanding of *virtualiter*, for – as we have seen in Aristotle – it is the general capacity of man to acquire knowledge, not the "whole Greek language".

‘individual fact’, what Peirce calls ‘existence’. However, certain philosophers have proposed more than one mode; and this is most prominently the case, of course, with Aristotle:

> Aristotle, on the other hand, whose system, like all the greatest systems, was evolutionary, recognized besides an embryonic kind of being, like the being of a tree in its seed, or like the being of a future contingent event, depending on how a man shall decide to act. In a few passages Aristotle seems to have a dim *aperçue* of a third mode of being in the *entelechy*. The embryonic being for Aristotle was the being he called matter, which is alike in all things, and which in the course of its development took on form. Form is an element having a different mode of being. (CP 1.22, 1903)

Aristotle recognises another kind of being beyond mere existence, namely potentiality: this is the mode of existence of the tree when it is still a seed; or, says Peirce, the mode of existence of a “future contingent event, depending on how a man shall decide to act”. This embryonic kind of being is matter, which, being potentiality, is obviously opposed to actuality.

Aristotle, says Peirce, seems to have had a “weak intuition” of a third kind of being: entelechy. What Peirce here calls entelechy (which is in fact an actuality towards an end), mediating between potentiality and actuality, could more accurately be identified as the first entelechy, in accordance with a perspective we have already analysed in relation to Aristotle’s *De anima* and Aquinas.

Furthermore, Peirce is aware of the specific terminology used for this kind of being, which corresponds to first actuality or second potentiality. Among the entries that he wrote for the *Century Dictionary* there is the one for “energy”, whose meanings of course include “actuality”. In describing energy, Peirce refers precisely to first energy, which corresponds to an acquired habit, and to second energy, the actualisation of that habit: “Actuality; opposed to power or potentiality. First energy, the state of an acquired habit. Second energy, the exercise of a habit. Hermogenes when he has learned to sing is a singer in first energy, when he is singing he is a singer in second energy” (CD: 1926-1927). This distinction resembles

the Aristotelian one, and through the scholastic filter we can establish a correspondence between the two triads. Here, in openly counting himself among the small class of philosophers who have realised the existence of three modes of being, Peirce adds a decisive nuance to the third one, the mode of acquiring a habit. As I have shown above, it constitutes a 'law' in its own particular way, a mode that is projected into the future, that governs future occurrences. It is from this decisive statement that I must set out in order to describe the further metaphysical properties of habits to be found in Peirce's work.

> My view is that there are three modes of being. I hold that we can directly observe them in elements of whatever is at any time before the mind in any way. They are the being of positive qualitative possibility, the being of actual fact, and the being of law that will govern facts in the future. (CP 1.23, 1903)

On the basis of the convergences between the Peircean theory of habits and the Aristotelian one, and of the role habits play in the two philosophers' definitions of the kinds of being, we can therefore affirm that there exists a correspondence between the third Peircean category, "the awareness of the possession of a habit", "the law that regulates future facts", and the mediating element of the Aristotelian triad, second potentiality or first actuality, which is also based on the idea of *hexis*. Peirce's reading of Aristotle and his attempt to broaden the latter's theory and incorporate it into a comprehensive and complex metaphysical framework demonstrate that he was ahead of his time. Contemporary literature uses the same examples as the American philosopher to clarify the modal articulation of habit:

> Potentiality and actuality are relative terms. Relative to action, a tendency is something potential rather than actual. But it is also true to say that something may or may not have the potential to acquire a certain kind of habit – so that, for example, a young child has the potential to ride a bike and to do maths, but a kitten does not have this potential. In this respect, a habit that has been acquired is something actual, in relation to the mere potentiality to acquire it. So habit is an actuality in one sense, but a potentiality in another (Carlisle, 2014: 11).

To return to the Peircean formulation, we can assume that there is an overlap between the first category, "the being of positive qualitative possibility", and δύναμις (potentiality); and between the second category, "the being of actual fact", and ενέργεια (actuality). This is consistent with the general theory of Peircean habits. The crucial question that begins to emerge from Peirce's metaphysical reflections concerns the way in which he manages to link the categories, the modalities, and the central role attributed to habits.

The statement that habits cannot be reduced to actuality, or to the action to which they give rise, holds together – according to the axis of continuity – the metaphysical reflections analysed in this chapter and the founding principles of semiotics and pragmatism. Not only that, but they also help to define the primary characteristic of both habits and the human being as a creature of habit, describing the ontological priority of each. Habits are a general law that consists in a 'would be' in the future; as stated by Nöth, with regard to the Scotistic tripartition, "only the habitual, not the actual, has continuity. Only habits have the power of evoking ideas" (Nöth 2016: 39). In the second part of his *Harvard lecture,* Peirce provides examples of the articulation of all three categories, which helps us to understand even better the dialectic between the third and the second category, by reflecting on the one between the mode of habits and actuality, which will now become the pivot of my discussion:

> Now for Thirdness. Five minutes of our waking life will hardly pass without our making some kind of prediction; and in the majority of cases these predictions are fulfilled in the event. Yet a prediction is essentially of a general nature and cannot ever be completely fulfilled. […] If the prediction has a tendency to be fulfilled, it must be that future events have a tendency to conform to a general rule. […] A rule to which future events have a tendency to conform is *ipso facto* an important thing, an important element in the happening of those events. This mode of being which *consists*, mind my word if you please, the mode of being which *consists* in the fact that future facts of Secondness will take on a determinate general character, I call a Thirdness. (CP 1.26, 1903)

Thirdness has the feature of an *esse in futuro*, for it consists in the possibility that future occurrences may happen or not according to a general rule. What is general takes the form of a general sign, a symbol, which is in fact based on habit. This is another relevant topic related to Peircean habit – and more broadly to his semiotics and pragmatism – which I will discuss in the next chapter. We also know that this tendency or general regularity cannot be completely fulfilled by actual occurrences. If we can make predictions about future events, this is not due to past single occurrences, but to a general rule which may be satisfied only in the future. In his later years, Peirce worked on this idea a lot, and closely examined the properties of thirdness, and consequently the features of habits seen as the third mode of being. This evolutionary thought runs throughout Peirce's work, and certainly the ideas he developed by comparing his own views with Aristotle's are core ones. What has been seen by scholars as an affinity between Peirce and Aristotle with regard to the categorial definition of habits and the mode of being they represent (Nöth 2016:40), constitutes for the present work the ground on which to base a Peircean reflection on habits and their properties, and consequently on the prototypical way of behaving of the human being.

The dialectic between modalities, specifically between the three modes of being that Peirce assimilates to the modalities of potentiality, actuality, and that which allows one to pass from one to the other, i.e. habit, arguably lies at the heart of the philosophy of habit, understood as the point of convergence from which all other discussions spring. Whereas the ethical component of habit arises together with the very concept, the epistemological one, which is so important nowadays, derives from the principles we can draw from the *prima philosophia*, i.e. from the ontological position of habit and its external relation to the other modalities, as well as the internal relation between its properties.

The history of the mode of being of habits is the history of *hexis* itself: to demonstrate the centrality of the category of habit in general – and for human beings in particular – is to prove the priority of the mode of being of habits over other modes of being, or rather to show why habit is the most adequate way to describe the present state of affairs in the world

(including ourselves as inhabitants of this world). I believe that the stratified Peircean position raises some fundamental questions and can suggest new points of view on the topic, related to other contemporary perspectives.

The history of *hexis* encapsulates the tensions and potentialities of the principle of habit in its most general sense, as an attribute of being, and it is a history that primarily involves Aristotle and the scholastic filter, as has often been the case in the history of the most important concepts of the Western thought. Consequently, it is clear that the authors sharing this perspective all draw upon the legacy of Aristotle and medieval philosophy. Peirce is a case in point. But the same degree of attention to the topic can be found in contemporary scholarship: in the first great contributions to a history of habit, such as the pioneering works of Funke and Pareyson (Funke 1958; Pareyson 2005); more recently, in scrupulous works that thoroughly investigate the emergence of the Aristotelian concept (Chiaradonna and Farina 2020; Jansen 2009; Malikail 2003; Rodrigo 2011) and its contemporary applications (Bernacer and Murillo 2014), along with Aquinas' great work of exegesis and reception (B. Kent 2002; Miner 2013); and, finally, in purely theoretical works, which cannot fail to engage with the Aristotelian and medieval ontological foundation (Agamben, 2014; Sloterdijk, 2010).

There is no doubt that the tension, or even dichotomy, which runs through habit in its most general and fundamental conception is precisely that between having and being, and between potency and act. The purpose of this section was to analyse the 'mode of being' of habits in detail on the basis of Peirce's proposal, so in conclusion it is their 'being' and their 'mode' that should be directly investigated. Indeed, the temporality of habit, its spatiality, its very 'reality' and effectiveness depend on and emerge from the articulations between these pairs, and from their possible overcoming.

Following the guiding thread of this work, I will start from the most general question of all, namely the relationship between habit and being. Agamben states that in the concept of *hexis*, and its Latin translation into *habitus*, all Western philosophy has identified the

constitutive connection between having and being, which for the Italian philosopher still remains an under-investigated chapter in the history of ontology (Agamben, 2014: 90). Agamben's starting point is what he sees as an *aporia* of Aristotelian thought that has influenced and spoiled all subsequent Western thought, namely an erroneous idea of subjectivity that emerges from Aristotle's conception of habit.

My aim is not to reject this position, although other authors have already shown that at least on this point the accusation levelled against Aristotle is not fully consistent, but rather to show that a certain continuity with the leading principle of *hexis* is to be found in modern philosophy, and that in my opinion it does not entail the harmful consequences that Agamben detects. In particular, through the metaphysical framework that I have described, Peirce comes very close to grasping the essence and potentiality of *hexis*: indeed, although Agamben never mentions him, Peirce succeeds in the very goal which the Italian philosopher has set himself, namely to unhinge the subject/object nexus through habit. Agamben's aim is achieved through the notion of (habitual) use:

> L'azione d'uso non è compiuta transitivamente su un oggetto, ma affeziona il soggetto stesso, il quale, viceversa, non trascende sovranamente l'azione, ma la accoglie. Questo riconduce alla dimensione della *hexis*, che Agamben salva dalle aporie della lettura aristotelica e dall'interpretazione successiva, con l'idea di disattivare la distinzione fra potenza-abito e uso-atto: una potenza sviluppata attraverso processi in cui il soggetto è luogo di formazione, agente e paziente. Non una potenza che può attuarsi o meno, ma che è in atto in sé, nella forma dell''uso abituale', un abito che non deve essere messo all'opera da un soggetto sovrano, ma che genera il soggetto attraverso l'uso di sé. (Crosato, 2020: 312)

We will see that, according to Agamben, the error lies in the constitution of an ontology of actuality, which shifts the emphasis entirely to the second term in the dichotomy, i.e. the act, and has the constitution of a 'sovereign' subject as its direct consequence. Agamben himself, however, admits that there is a text in which a different conception of habit may be found.

Of course, what he is referring to is the famous passage from Book *Delta* of the *Metaphysics* in which Aristotle defines the relation of having, between the one who possesses and the one who is possessed, by stating that this is not the way to think of a habitual relation: "it is impossible to have a 'having' in this sense; for there will be an infinite series if we can have the having of what we have" (*Met. 1022b 7-10*).

According to Agamben, the great error of modern thought is to have situated the idea of the subject in this relationship, which is constitutively unattainable, and consequently to have thought it possible to fashion a sovereign and master subject out of something that cannot be possessed, but only used, or rather which predisposes us to behave in certain ways. In this erroneous interpretation of the interweaving of being and having lies the error caused by the ambiguity already present in Aristotle's thought. Agamben observes:

> Against the scholastic doctrine according to which "the use of potential belongs to the one to whom habit belongs," it is necessary to affirm that use does not belong to any subject, that it is situated beyond both being and having. That is to say, use breaks the ambiguous implication of being and having that defines Aristotelian ontology. Glenn Gould, to whom we attribute the habit of playing the piano, does nothing but make use-of himself insofar as he plays and knows habitually how to play the piano. He is not the title holder and master of the potential to play, which he can put to work or not, but constitutes-himself as having use of the piano, independently of his playing it or not playing it in actuality. *Use, as habit, is a form-of-life and not the knowledge or faculty of a subject.*[63] This implies that we must completely redraw the map of the space in which modernity has situated the subject and its faculties (Agamben, 2016: 61-62)

Agamben brings up the issue again by examining the relationship between having and being in relation to the subject in his recent *La follia di Hölderlin. Cronache di una vita abitante*. What mode of being and acting is brought into play by a complex term such as habit? Agamben often considers linguistic issues, of course, as he envisages categories as a logical-

[63] This idea is analogous to that of 'practice' as proposed by the Italian philosopher Carlo Sini (see Sini, 2016).

grammatical structure. Agamben borrows the Latin grammarians' idea of the middle voice, *habitivum*, which is neither active nor passive and exemplifies the idea of something that happens by itself, *per se quid fieri aut esse* (Agamben, 2021: 193). Like *hexis*, it denotes a process or state that is the result neither of an act of decision-making imposed on an external object nor of an action that is undergone. Rather, the subject, Agamben argues, is internal to the process, it is the very place of the event indicated by the verb; therefore, it is neither agent nor patient. In order to show the general idea of existence that he has described in his volume and which he defines as "inhabiting life", Agamben recalls Maine de Biran, who in his *Mémoire sur la décomposition de la pensée* postulates the existence of a purely impersonal mode of existence (Agamben 2021: 195). At this point, Agamben presents the idea he wishes to draw from the concept of *hexis*, namely: the idea that we cannot really possess what is proper to us, but can only experience it in the "inhabiting" form of a habit, which we can adapt to, yet not possess. In the final analysis, for Agamben "[t]o have a having is only a mode of being" (*ivi*, 203).

As I have anticipated, there is only one crucial remark I wish to make about the Italian philosopher's interpretation. I do not think it is necessary to go beyond Aristotle in order to re-establish the relationship between having and being. On the other hand, as Piazza's accurate reconstruction shows (Piazza 2018: 151-155), the idea of "having a being" can already be found with the same meaning in Aristotle. In fact, it does not mean possession at all. Like Agamben before him, Piazza draws upon Benveniste and the analysis of the middle voice. Compared to Agamben's analysis, the idea of *hexis* is already clearly expressed in Aristotle in the form, of course, of a mode of being or a disposition to be in a certain way. And the subject is indeed the possessor, but of something that 'takes place' and 'is fulfilled' – something, in short, that happens in an ontologically *a priori* way with respect to the intervention of the subject. Indeed, the latter – as already argued by Agamben – acquires its meaning 'on the basis of' what takes place.

Below I quote the conclusion of Piazza's reasoning, because he also detects the same shortcoming in modern philosophical thought as Agamben, but without identifying *hexis* as the 'original sin': on the contrary, in Piazza's view *hexis* already embodies this 'revolutionary' idea of the subject. There is indeed a subject, but it is formed *ex post* through the enactment of *hexis* in the mode of being of habit, which has been proven to be that which surrounds us. Therefore, the subject can only reflect on its own habits *a posteriori*, thanks to reason. Piazza's statement is thus equally radical but more plausible than Agamben's one, whose stance on the other dualism, that between potentiality and actuality, is in my opinion untenable. In Piazza's account,

> L'*hexis*/abitudine sarebbe dunque quel movimento in cui l'avere, che deriva dall'essere, si appropria di quest'ultimo, annullandone o per così dire sospendendone la soggettività attiva. Ma questa modalità sui generis, propria dell'«uso abituale», in quanto sfugge al controllo del soggetto, che può riappropriarsene sempre e solo ex post e attraverso l'esercizio della riflessione, è stata oggetto di scarsa attenzione da parte del pensiero filosofico moderno, che ha concepito l'*hexis* nei termini di un possesso e dunque ha sostanzialmente schiacciato l'abito come principio d'azione sull'abito come attitudine. (Piazza 2018: 155)

This represents the crucial issue for Peirce, the point of conjunction between metaphysical reflection and reflection on reasoning and subjectivity. Indeed, the aim of my work is to show how the lack of attention towards this fundamental aspect of *hexis* in modern thought, which Agamben and Piazza criticise, is partially counterbalanced by Peirce's work. As Crosato affirms, between act and potency, post-Aristotelian thought has placed the subject who, by dominating *hexis*, regulates their relationship. In a genealogical perspective, Agamben affirms that it is not the subject that is dominant, but the relation that puts the subject in charge (Crosato 2021: 325). By focusing precisely on habit, in its most original meaning, as the mean between potency and act, Peirce succeeds in bringing out an idea of subjectivity that fully inherits the idea of *hexis* I have just described, as what lies between having and being.

Peirce's self has specific characteristics and is brought into being by the same habitual relation, as will become clear in the last chapter.

Especially owing to the 'revolutionary' pragmatist idea, Peircean habits can easily be connected in propositional terms to the idea of the predicate. It is the predicate which plays a central role, as what brings out the subject in habitual use – or the conditional proposition, to use a Peircean expression – as *hexis* does with its median role. As Fabbrichesi notes,[64] we can see in Peirce's theory of habit the *emergence* of a relation in which the terms themselves are assumed through the imposition of a predicative/habitual nexus. It is from habits, in short, that certain subjects and objects spring; it is not the subjects that take habits. That is, it is what 'would be' in a specific situation that defines the subject of what happens. It is the conditional behaviour in a certain situation that makes a person suitable for a certain context. This fits very well with the importance given to external and environmental conditions, as I have already shown with respect to contingent situations. As we will see in greater detail towards the end of the present study, this does not 'delete' the subject, but certainly places it in a relationship within which it is only an emerging element. To keep to the middle position between having and being, if as Peirce says, "a habit is a rule active in us" (W3: 337), then evidently rules are not possessed, rules are conformed to – or, better, our mode of being is adapted to them.

This central attention, which perhaps in contemporary terms could also be called externalist, or linked to environmental circumstances, perfectly links the principles of Peircean habit with the fundamental elements of his epistemology. The reversal of perspective that Peirce accomplishes with respect to habit is also what allows him to make his epistemological shift (see ch.4).

At the beginning of his philosophical career, Peirce had already come to the conclusion that "we are in thought, and not that thoughts are in us" (W2: 227); but since "thought is of the nature of the habit" (EP2: 269), it clearly follows – as Anderson (2016:2) states – that we

[64] Personal communication (02/12/2020).

"dwell in and through habits". What is important, however, is that these statements lose their consistency without all the work I have discussed on why habits consist in this specific mode of being, especially if we do not show that this conception can already be found in the very history of the idea of *hexis*, which Peirce, in my opinion, inherits and powerfully reveals. Moreover, this position is so clear in Peirce that it can be reasonably assumed that if any theory has ever succeeded in bridging the gap first revealed by Aristotle's *hexis* and affecting modern philosophy, it must be Peirce's philosophy of habit. The same can be argued with regard to the discussion of the modality of habits, which I will now analyse.

We have already examined what habit's median position between potency and act consists in, and how it accompanies the whole history of the concept, at least in the most general and deepest understanding of it. We have also seen that this position is highly unstable yet crucial: a sort of two-faced Janus staring simultaneously at the other two modes of being. Indeed, the dialectic between potency and act involves other questions, concerning what it means to give attention or ontological priority to one of the two poles of the opposition. Moreover, regarding habit itself, what is its specific modality? To be even clearer: does habit make the movement from potency to act necessary? Are the modality of the tendency, inclination, and persistence of being and the other structures usually used to describe habit deterministic?

Let us return to Agamben's critique of Aristotle's *hexis*. Criticism goes hand in hand with the distinction between having and being. For Agamben, Aristotle's error consists in having split being into potency and act, and to have then used *hexis* as a unifying feature, to ensure that potency too has "some reality". The principle of habit makes the passage from a generic power to an actual one possible, as we have seen: a habit is a second power; it is, in short, "the form in which potential exists and is given reality as such" (Agamben, 2016: 59). However, for Agamben, Aristotle's solution presents some evident flaws. In order to make *hexis* something more than just a blind deterministic principle that always results in an act, "it is in fact necessary that the one who has the habit of a technique or of a knowledge be

able not to exercise it, be able not to pass to the act" (Agamben 2016: 59). For Agamben, if one believes that the purpose of a potentiality is its actualisation, one will never find a way out of this error, which he instead remedies through the idea of habitual use, the only real way in which habit is given and destroys the opposition potency/act.[65] This is where the 'necessary' nature of habit is played out. The key points are what priority we are to assign the two extremes and whether or not it is necessary to move from one to the other through habit.

The problem for Agamben, consistently with his background and philosophy, clearly lies in prioritising *energeia* over *dunamys*. But he captures a key aspect here. Carlisle shows that for Thomas Reid habits have the power to flow directly into act if they are not prevented from doing so: "Reid thinks that habits only have a *causal* force when they involve a tendency or 'proneness' to perform the action in question, so that some effort is needed *not to act* thus" (Carlisle, 2014:9). In his work on Ravaisson, Sinclair goes further and shows that the category of necessity is not appropriate according to the French philosopher. He follows – with some nuances – the argument made by Mumford and Anjum (Mumford and Anjum 2011), that the modal status inherent to tendency and inclination is neither necessity nor possibility, but rather a "dispositional modality". Sinclair describes the issue from Ravaisson's perspective:

[65] Agamben comes back to the topic with similar arguments in his recent volume on Holderlin: "Si comprende allora perché Aristotele, che cerca di pensare col termine *hexis* (che, come nome in *-sis*, esprime un'azione effettuata) un medio fra la potenza e l'atto, si scontri con difficoltà difficilmente superabili. La potenza, pensata secondo il modo in cui la lingua ce la presenta, non è qualcosa di non reale che precede l'atto in cui si realizza: essa è, al contrario, il solo modo in cui possiamo avere ciò che facciamo. Possiamo, cioè, «avere» delle azioni, in quanto le consideriamo come realmente possibili per noi: una volta concepita nella sua effettuazione, l'azione si separa a tal punto dal soggetto che deve essergli imputata suo malgrado (è la colpa, su cui si fondano il diritto e la tragedia). L'abito o l'abitudine – la vita abitante che cerchiamo di definire – neutralizzano e rendono inoperosa l'opposizione dynamis/energeia – cioè, secondo l'intenzione hölderliniana che dovrebbe esserci ormai familiare, pensano i due opposti nella loro inseparabile coincidenza" (Agamben, 2021: 204).

> What Hume described as the 'gentle force' of habit, which for Ravaisson is animated by desire and love, does not 'force' its manifestations to occur, at least not if by the verb 'to force' we mean 'to necessitate'. The realization of habitual tendencies and inclinations […], is in no sense a necessity, and not even a conditional necessity. Tendencies and inclinations do not have to realize themselves even if there is nothing beyond them preventing their realization. It is not by accident, we argued, that Ravaisson never endorses the classic early modern description of tendency as a force that will come to its realization unless something else stops it doing so. Tendency, from the perspectives opened by *Of Habit*, is not a conditional necessity, but a primitive, sui generis modal category. (Sinclair, 2019: 213)

The ontological priority that Peirce assigns to the mode of being of habit, also through the category of thirdness, allows him to describe a mode that consists in conditional necessity while falling neither into blind determinism nor into an ontology exclusively focused on effects and actuality – the kind of ontology which Agamben criticises in relation to Aristotle and modern philosophy. In this respect, Peirce is quite a traditional thinker, and a deeply Aristotelian one.

Pure possibility or potentiality, as we have already seen, is nothing if it is not actualised, and we can know nothing about it until it comes into existence, i.e. into actuality (CP 1.25, 1903). Nevertheless, priority does not go to actuality at all. Moreover, what becomes *energeia* from a *dynamis* is its *entelecheia*, what can also be called its "destiny". Peirce was aware of this important passage that the structure of the *hexis* encompasses, and therefore the realisation of the act is not considered – as in Agamben – an obstacle to the potentiality of being, but its realisation,[66] although it is partially determined, of course, because in the process of shaping a *hexis* some possibilities are opened up and others closed off.

[66] "The mode of being of the composition of thought, which is always of the nature of the attribution of a predicate to a subject, is the living intelligence which is the creator of all intelligible reality, as well as of the knowledge of such reality. It is the *entelechy,* or perfection of being" (CP 6.341, 1909).

However, for Peirce the fact that things have gone exactly the way they have does not represent an obstacle or a pessimistic development perspective, because his entire philosophical system is aimed at the "development of concrete reasonableness" (EP2: 343). The mode of habit is indeed also defined as destiny, or freedom from it: "Actuality, Possibility, Destiny (or Freedom from Destiny)" (CP 4.549, 1903). Peirce seeks to hold together both aspects of habit: destiny is necessary, but habit contains the possibility of change within itself, the habit of habit-change; and it is up to evolutionary reason to build adaptive and flexible habits. Peirce shows us that the modality of habit is a destiny, a conditional necessity located in the future. This pertains to its generality, its mediating position, and its most important feature, as the history of *hexis* clearly illustrates. Peirce sums up the whole issue in a key passage in which he tried to explain what a fact, or mere actuality, is. As always in Peirce's method, one must start from what a fact is not:

> It is first requisite to point out something which must be excluded from the category of fact. This is the general, and with it the permanent or eternal (for permanence is a species of generality), and the conditional (which equally involves generality). Generality is either of that negative sort which belongs to the merely potential, as such, and this is peculiar to the category of quality; or it is of that positive kind which belongs to conditional necessity, and this is peculiar to the category of law. These exclusions leave for the category of fact, first, that which the logicians call the *contingent*, that is, the accidentally actual, and second, whatever involves an unconditional necessity, that is, force without law or reason, *brute* force. (CP 1.427, 1896)

Pure potentiality is general, of course, but in a negative sense. The mode of being of fact is the accidentally actual, the contingent. A positive generality is peculiar to law, in its most general sense, and equal to the habit principle; and the modality is that of conditional necessity, "which is rational necessity and necessitation" (CP 6.342, 1909), that is the third mode of being, "the being of law that will govern facts in the future" (CP 1.23, 1903). So

being a destiny, a conditional necessity, is Peircean habit's mode of being deterministic? Does it necessarily result in "brute" actuality?

The mechanism by which the principle of habit relates objects and circumstances that result in acts is in a certain sense deterministic – and certainly dispositional. The relationship that habit triggers works in this way, and in every circumstance in which a certain habit is present, a certain effect in accordance with it will be obtained, but the outcome is by no means totally determined.

Firstly, this is the case for all the reasons that I have outlined in this chapter: a habit – as we have seen – differs from an exact law by a difference of degree. Moreover, it remains possible to exercise some control over this mode of being. But how can it by up to it to mould us and predispose us to behave in a certain way? This certainly depends on the different degrees of formation of individual habits, which are never the result of a monolithic process but intersect and clash with other habits and especially with the contingency of external circumstances. Not only that, but a certain degree of control has to do with the specifically human mode of being (I will focus on our mode of being as creatures of habit in the last part of my work), which consists in the possibility of critically engaging with our own process of habituation, both as it occurs and after its completion. In other words, what matters is the overall structure, the process of habituation that forms a character, and not the individual instances or effects – and this is another great insight of Peirce's, resulting from the significance of the category of habit-thirdness.

Through this discussion, I have introduced some new elements, such as generality and the reference to the future, without which the Peircean theoretical framework would be incomplete. In order to conclude this first part of my work, therefore, after having topologically identified a particular position and modality, it will be necessary to complete the outline of the Peircean diagram that constitutes his theory of habit. I will do so by presenting those features that are associated with its mode of being, linking this concept to

other aspects of Peircean thought, especially his pragmatism and cognitive semiotics, an analysis that I will conduct in the next chapters.

3. Habit’s Metaphysical Properties

This chapter considers certain properties of the concept of habit that act as a link between the first part of the thesis, concerning the metaphysical structure of the principle of habit, its mode of being, and the second part, where the architecture of the concept that is being created will find profound implications for human reasoning and selfhood.

The starting point for the analysis of these properties is the general structure of habit that I have just described, the question of modality and ontological status, derived from the Aristotelian nuclear framework.

The first two characteristics I will analyse are those of generality and reality, which directly face the corresponding oppositional concepts of individuality and existence. Through the constitution of the habit's mode of being, it becomes clear why habits are general, real (and efficient), while existence and individuality pertain to the mode of actuality. The scaffolding of the conceptual outline of habit, its boundaries and edges, rests on the categorical framework and the reciprocal relations between them that I described in the previous chapter.

The purpose of the section is to show the theoretical centrality of the mode of being of habit, at the expense of the individual actual events, of which generality and reality are necessary cornerstones. In the analysis that delves more deeply into the modality of habit, the direct connection with the metaphysical structure of the Aristotelian *hexis* also arises clearly: embodied in generality and the temporally mediating aspect, directed towards future occurrences, this aspect fully takes up the second part of this chapter.

Through the study of the temporal dimension of habit, which is expressed through expectation, anticipation and prediction, habit as a 'would be', a structure of mediation between categories, of anticipation of future occurrences, is realised. This conditional tendency possesses a direction, as a vector, and is projected into the actuality of individual occurrences, originated and governed by general regularities. This Peircean view of habit

offers, I believe, an interesting account for the increasingly advanced study of philosophies of habit. Moreover, it provides the groundwork on which I can build my argumentation that shows the extreme influence of habit thus designed on our reasoning and personality.

3.1 Reality

The characteristics of the general principle of habit are embodied by a number of specific concepts and properties that make it possible to clarify why habit's mode of being consists in the triadic and mediating structure described in the previous chapter. They also point to some areas of application of this principle within Peircean theory, which can then be discussed and compared with different approaches. Only after having understood what the generality of habit consists in can one comprehend why symbols are a general sign within Peircean semiotics.

Only after having grasped that the triadic structure of habit works as a future-oriented and causally efficient conditional proposition can one understand why beliefs are a particular kind of habit. From this and from the crucial affirmation of the reality of generals comes the indissoluble intertwining between Peirce's pragmatic maxim, semiotics, and realism. The analysis conducted on the relationship between categories and modes of being now leads me to examine the first issue, namely the relationship between existence and reality (which mirrors in full that between the general and the individual, from which it cannot be separated – I will examine both in these first sections).

Peirce's position can be expressed in a simplified way as follows: habits do not exist, in a restricted sense, but they are real and physically efficient. That is, the principle of habit is not ascribable to the category of existence, which belongs to the domain of the second category, but is governed and organised by the third, in which habit is expressed in its most complete and general sense. As one would imagined, the relationship is much more complex, starting from the definition of the concept of 'existence', and requires in-depth investigation.

The topic of Peirce's realism, or better, of his 'scholastic realism', is among the most extensive and most debated in Peircean scholarship. The philosopher's own approach is rather peculiar, as he interprets the question in accordance with the centuries-old medieval debate, in which realism is opposed to nominalism and not idealism. The issue has sometimes been blown out of proportion, to the point of interpreting the succession of many philosophical positions as attempts to take a definitive stance on this problem (De Waal 2010).

Such a broad interpretation naturally falls beyond the scope of my thesis, and it does not reflect my approach, which is to focus on the generality of habit as the unifying principle of reality. Nor will it be possible to provide a detailed summary of Peirce's position, for which I will refer to the abundant literature on the subject (Boler 1963; Lane 2017; Mayorga 2007; Roberts 1970; Skagestad 1981; Tiercelin 1992). Instead, my aim here is to show that individuals alone exist, in Peirce's terms, but habits are nevertheless general, real, and physically efficient. But above all, as will become clear by the end of my work, without habit it would be impossibly to properly conceive of the mode of being of individuality.

The same oppositional concepts of generality and reality, and of individuality and existence, form an intricate conceptual knot in Peirce's thought that is not easy to unravel. My reading starts from the fundamental role of habit, or rather, it aims to show how these concepts are articulated in the light of habit's mode of being.

The style of negation-based definition that has accompanied me so far can continue to serve as a useful starting point for handling difficult problems. Although it may appear counter-intuitive, the easiest approach to grasp the underlying power of the habit principle is to demonstrate why habits do not 'exist' and are not 'individual,' which according to Peirce simply means that habits can never be reduced to their actualisation. Habits do not really exist because they are general and real. Indeed, existence is a mode of being that is proper to individuals.

The debate about what exactly is individual is quite complex, and I will return to it shortly. Here I will simply note that Peirce is clear in showing the direct relationship between what is individual and all the main features of what constitutes secondness, starting from 'mere' existence, reaction, and especially actuality. So, for Peirce, "it must be admitted that individuals alone exist" (EP2: 341) and, furthermore, that existence consists only in reaction, in brute force, with no reason, no mediation in it (CP 1.322, 5.503). Moreover, after the work done on what an actual mode of being is, it is possible to show now that for Peirce "actuality and existence are words expressing the same idea in different applications" (CP 1.532, 1903).

Showing each time how the main characteristics of categories reflect each other's in different contexts helps to demonstrate the continuity between them. This is something that Peirce himself teaches, and which supports my argument that there are clear 'spillovers' from general areas of application to more specific ones through certain constants. Habits, in Peirce's thought, are the best example.

The relationship between these concepts, which reflects the one between categories, is directly related to the structure of habit and is that on which much of my explanation is played out. So existence is only reaction, brute facts, but of course these have a mutual bond with everything that concerns the third category: "The world of fact contains only what is, and not everything that is possible of any description. Hence, the world of fact cannot contain a genuine triad. But though it cannot contain a genuine triad, it may be governed by genuine triads" (CP 1.478, 1896). The necessity is reciprocal, because in order to govern something, there must be something on which to exercise such power:

> the third category—the category of thought, representation, triadic reality, mediation, genuine thirdness, thirdness as such—is an essential ingredient of reality, yet does not by itself constitute reality, since this category (which is that cosmology appears as the element of habit) can have no concrete being without acting, as a separate object on which to work its government, just as action cannot exist without the immediate being of feeling on which to act. (EP2: 345)

This reciprocity will reveal a lot about the relationship between habits and their manifestations.[67] Lane (Lane, 2017: 110-11) gives us a sense of the sum of features that define existence according to Peirce. Existence only implies that something has the capacity to react to a force; existence is thus a dynamic and – I would add – dyadic condition. What exists is only what is given in one place and in one time. An action/reaction, according to Peirce, is therefore what happens in a given moment and in a given place and does not contain any generality, and his reasoning leads him to the conclusion that only concrete individuals and brute facts possess these characteristics. So, again, to put it more clearly, for Peirce existence is tied to the structure of the second category, and the only thing that can be predicated is what is individual. As a result, the individual is what is actual, and it can only react to something else: "the category of Secondness is the mode of being of 'brute' existence, which involves the mode of being of individuals" (Mayorga, 2007: 124).

I have just introduced a first hint with regard to the relation between secondness and thirdness, and the main characteristic of the predicate of existence, but the issue requires more in-depth consideration. In my examination, it will be seen that the ideas of existence and the individual are difficult to embrace, as Peirce appears to contradict himself in regard to the categories and their related notions of reality and generality. However, a careful examination of the role of habit can both highlight a specific point of view on Peircean thought and, more importantly, help us comprehend the fundamental relationship between the general principle of habit, on the one hand, and experience, brute facts, singular and concrete actions, on the other, as the only 'medium' we can use in order to fully grasp this elusive yet fundamental concept.

[67] With regard to this topic, which is so important for the philosophy of habit, I will provide an interpretation towards the conclusion of my study. I believe that the way in which Peirce approaches the problem of habitual generality vs the particular manifestations of experience is critical, because it affects the possibility of change. He lays out the situation quite clearly, when he states: "The habits must be known by experience which however exhibits singulars only" (EP2: 550).

The issue stems from what we might call a 'hierarchical' distinction between what truly constitutes entities. Peirce makes two seemingly conflicting claims: that existence is a singular matter, an 'absolutely determinate' reaction, and that to exist implies to persist in time in a regular and stable pattern – in other words, that an entity exists only if it exhibits habitual behaviour. This appears to be in direct conflict with belonging to the second category. In many places Peirce's view seems quite clear-cut: the mode of being of existence has nothing to do with law (as a structure that regulates entities) or with generality (because it is completely determinate and singular):

> That mode of being which we call existence, the reaction of everything in the universe against every other, the crowding out of a place for itself, acting most on things near, less on things far, but brutally insisting on a place is Secundan. I say "brutally", because no law, so far as we know, makes any single object to exist. Law only determines in what way things shall behave, once they do exist. (R L67, 1905)

> The stone's actually falling is purely the affair of the stone and the earth at the time. This is a case of *reaction*. So is *existence* which is the mode of being of that which reacts with other things. (CP 8.330, 1904)

> Existence […] is a special mode of reality, which, whatever other characteristics it possesses, has that of being absolutely determinate. (CP 6.349, 1902)

> Whatever exists is individual, since existence (not reality) and individuality are essentially the same thing. (CP 3.613, 1901)

Something completely determined does not entail change, but above all it does not entail mediation or thirdness, for any external regulatory principle. Laws determine how entities can behave; they certainly do not enable them to exist. As a result, despite the fact that I previously demonstrated that there is a strong interdependence between thirdness and secondness, the most widely accepted view is that according to Peirce not only is existence unambiguously the predicate of the second mode of being, but the two modes of being,

existence and reality, are separate and distinct: "Existence, however, is a predicate reserved to the category of Secondness, where the actuality and resistance of facts comes to matter" (Cárdenas, 2018: 101). As some scholars have stated, the very 'existence' of the two modes of being is as crucial as their formal distinction:

> Reality and existence are not coextensive and, thus, they should not be identified. This is a crucial distinction for understanding what Peirce's realism is about. (Cárdenas, 2018: 100)

> Peirce thought that the recognition of both existence and reality was essential to a healthy metaphysics, and that the existent is (logically) particular and the real is (logically) general. […] Peirce however, treats them as different *modes of being*. (Legg, 2001: 133)

To paraphrase Cárdenas, this distinction is vital since it is one of the assertions that allows Peirce to defend his extreme scholastic realism against the perils and fallacies of individualism and nominalism: "the sectators of individualism, the essence of whose doctrine is that reality and existence are coextensive, [hold] that 'real' and 'existent' have the same meaning" (CP 5.503, 1905).

While this is fairly well established, it remains to be understood why Peirce also uses the case of the falling stone, just mentioned as an example of brute reaction, to exemplify the idea of what is real in his famous "Cambridge experiment" [68]. That is, the relation between the existent and the real remains to be better investigated, not least in order to grasp how things receive individual existence from a general reality. A solution to this problem can be found – and it is Peirce who suggests it to us – if we dwell on the fundamental distinction that underlies the whole of my work, namely that between what is actual and what is habitual. I will argue that some of the literature on Peirce's realism points in this direction, and that this viewpoint helps to explain the American philosopher's rejection of the Scotist solution

[68] I will shortly focus on this to show what the reality of generals consists in.

of *haecceitas*. The two philosophers part views with regard to this point, as Peirce considers Scotus to be "separated from nominalism only by the division of a hair" (W2: 467).

Having shown what forms the structure of what exists, it is time to illustrate what constitutes the structure of what is real, or, to put it another way, why habits do not exist and yet are real. With reference to our theory, Peirce explains his realism – based on the belief that habits are real generals – as follows: "A habit is the *general* way in which one *would* act *if* such and such a *general* kind of occasion *were to* occur. To say it really explains anything is to make a general real and knock the pins from under every nominalistic philosophy" (R 939: 22, 1905). Expressing the same concept in simpler terms, the philosopher states: "For a 'habit' is nothing but the reality of a *general fact* concerning the conduct of any subject" (R 671:7, 1911). But in what way, through what process, are habits real, if "[a] real thing is something whose characters are independent of how any representation represents it to be"? (W2: 439). To find an answer to this question, we should first consider Peirce's definition:

> For what is it for a thing to be Real? [—] To say that a thing is Real is merely to say that such predicates as are true of it, or some of them, are true of it regardless of whatever any actual person or persons might think concerning that truth. Unconditionality in that single respect constitutes what we call Reality. Consequently, any habit, or lasting state that consists in the fact that the subject of it *would*, under certain conditions, behave in a certain way, is *Real*, provided this be true whether actual persons think so or not; and it must be admitted to be a *Real Habit*, even if those conditions never actually do get fulfilled. (EP2: 457-58)

As is often the case, Peirce's definition is rather obscure, unless all the terms involved are first clarified. Some examples he provides come to my aid here.

Let us return to the previous example of the falling stone, which Peirce presents in a different way in the third *Cambridge Lecture* of 1903 (EP2: 181-183). A stone in the actuality of its fall – after having been let go by my hand – is certainly a matter of existence; not only that, but it is *ipso facto* real, because I experience it at that moment. A falling stone, however,

communicates little or nothing about the properties of stones, or movement; in short, it does not allow me to know anything more than what I experience, it does not allow me to draw general conclusions. What, on the other hand, allows me to make predictions about whether – in a similar particular circumstance in the future – a stone let go of my hand will fall to the ground is none other than the predicate of the stone substance, its heaviness,[69] which can be formulated in a general proposition such as "heavy bodies fall in the presence of gravity". Although the law of gravity is the prototypical example of an inveterate habit, the structure by which I am led to the reality of my prediction is that of the general principle of habit. If we admit the existence of this principle, we admit the reality of generals; not only that, but we also admit its efficacy, as I shall shortly show. What is true for the extremely stable laws of nature is also true for human beings' habits. For Peirce there is no doubt that there exists a real active principle of this kind.

> if I see a man who is very regular in his habits and am led to offer to wager that that man will not miss winding his watch for the next month, you have your choice between two alternative hypotheses only: first, you may suppose that *some principle* or *cause* is *really* operative to *make* him wind his watch daily, which *active principle* may have more or less strength; or, second, you may suppose that it is mere chance that his actions have hitherto been regular; and in that case, that regularity in the past affords you not the slightest reason for expecting its continuance in the future […]. It is the same with the operations of nature. With overwhelming uniformity, in our past experience, direct and indirect, stones left free to fall have fallen. Thereupon two hypotheses only are open to us. Either: first, the uniformity with which those stones have fallen has been due to mere chance and affords no ground whatever, not the slightest, for any expectation that the

[69] Properties as predicates connected to habits are the perfect example of what Peirce had in mind when he argues for realism: "if he thinks that, whether the word "hard" itself be real or not, the property, character, the predicate, *hardness* is not invented by men, as the word is, but is really and truly in the hard things and is one in them all, as a description of habit, disposition, or behaviour, *then* he *is* a realist" (CP 1.27, n. 1, 1903).

> next stone that shall be let go will fall; or, second, the uniformity with which stones have fallen has been due to *some active general principle,* in which case it would be a strange coincidence that it should cease to act at the moment my prediction was based upon it. (EP2: 182-83)

So the principle of habit is active – in Peircean terms, it is real – and, I should add, this is essential for the theory of habit. The efficiency of habits regulates the relation between the general and real principle, on the one hand, and the particular instances of it, on the other. Habits do not exist, but they are a really active force operating in the world. At the beginning of her introductory book, Carlisle raises a question about the existence of habits: "Does this 'disposition' or 'tendency' continue to exist when the habit is not being exercised? How might it be detected? In what sense does a 'path of least resistance' *exist*, when it is not being taken?" (Carlisle 2014: 10). She answers by pointing to the median ontological position of habit, which I explored in depth in the previous chapter, but in my view the Peircean thesis just presented provides a more adequate way of addressing the issue. Individual actions and occurrences exist, but habits do not, although they are a general force that is really active in the world. Another of Peirce's examples clarifies this point:

> Not only may generals be real, but they may also be physically efficient, not in every metaphysical sense, but in the commonsense acception in which human purposes are physically efficient. Aside from metaphysical nonsense, no sane man doubts that if I feel the air in my study to be stuffy, that thought may cause the window to be opened. My thought, be it granted, was an individual event. But what determined it to take the particular determination it did was in part the general fact that stuffy air is unwholesome. (EP2: 343).

The behaviour actualised in this example is predicated on the assumption that "stuffy air is unwholesome", which I believe to be true. Thus, an action, physical effort or individual occurrence has been brought into existence – has been brought to 'actualisation' – by the effectiveness of a general, non-existent truth. Why should belief in such a proposition be

regarded as a habit? Because it works triadically and mediates as the principle of habit. It leads to the actualisation of a symbol (i.e. a general proposition) whenever analogous circumstances which enhance its activation arise in the future. I realise that it is far from intuitive to view the principle of habit in such terms, so I will proceed with my argument in order to better explain its overall structure.

What it is important to state here is that habits do not exist – in the sense of existence just described – because only their instantiations exist, and this confirms the difference between generals and individuals that I will be discussing in the next section. We do not see habits at work and cannot perceive their presence; what we see are instances of habits, their actualisation,[70] and this is crucial to explain how reason can analyse the functioning of habits in a critical way. This is a crucial aspect of Peirce's philosophy of habit, and a widely acknowledged one: "If habits did not have the potential to really determine events then, on Peircean principles, they would not be truly real. In other words, the habit does not simply mark the connection, it makes the connection" (Black, 2013: 11). New concepts, like prediction and the above-mentioned generality are brought into play by the reality of habit, which leads me directly to the next points I wish to make. Määttänen nicely sums up what I will be arguing:

> Habits are real in the sense that they have a real effect on how we behave, and their somewhat peculiar mode of existence is the anticipated potential future. They are general in the sense that similar behaviour is repeated in similar circumstances, and the "laws or habitudes of nature" are general in the same sense. The relatively stable and general features of action are accommodated to the relatively stable and general features of environment that form the objective conditions of action. (Määttänen, 2015: 33)

This means that habits are physically efficient and give meaning to the triadic relationship between action, circumstance, and subject/object, which would be merely a correlation – due to no law other than chance/contingency – were it not for the 'active rule' of habits. The law

[70] "Habits are actualised as individual acts, as physical processes in the physical world" (Määttänen, 2015: 32).

of habit is in force as soon as a minimal principle of probability is established. On the other hand, in order to attribute a habit to something, there must be a correlation between this thing, the action, and the relevant circumstance: in a given situation, a certain subject/object must tend to behave/feel/think/respond in a certain way, rather than in any other way within the spectrum of possibility. Once all the conceptual tools I need have been brought into play, I will return to the analysis of the general and efficient structure of the principle of habit.

Lastly, the opposition between existence and reality that I have examined in this section will help me to continue the analysis of modes of being that I have been developing so far; an analysis the goal of which is to demonstrate the predominance in our world of the habitual mode of being that the centrality of thirdness in Peirce's thought exemplifies so well.

For Peirce, drawing a boundary between existence and reality, while maintaining a very close connection between the two, means distancing oneself from much of modern philosophy, as I have already shown in my analysis of his categories. What really matters in this world are the regularities that govern individual events. As Mayorga states, "[w]hat grounds reality for Peirce, then, is synechism, which has the mode of being of a law, or Third. What grounds reality, then, is a Third. Compare that to Scotus, who grounds reality in the individual, with the mode of being of a Second. Peirce's is an extreme scholastic realism indeed!" (Mayorga, 2007: 147).

Existence and regularity coexist in our world, of course, but privileging one over the other alters our perception of the world, our philosophical approach, and has repercussions that are hard to imagine in areas that are at first sight much closer to us than metaphysics. Using highly evocative images, Fabbrichesi clearly summarises this idea that I will further explore in the next pages:

> We could say that Peirce distinguishes brute *existence hic et nunc* from the *persistence* of the habits – but both these experiences live together, are *insistent*, in one and the same *phaneron* or crystal of apparent visibility. […] As Peirce explains, in this light, *acts*, and not *facts* (opposed to interpretations), would appear as real; not the facts, but the habits,

> the practices connoting the power to act of every being in the universe, as Spinoza would put it. (Fabbrichesi, 2018: 10-11)

3.2 Generality

We just saw "that whatever exists is individual, since existence (not reality) and individuality are essentially the same thing" (DPP: 538). Habits are real, so they do not exist, and consequently they are not individuals, meaning that they are generals. The issue of generality of habits involves many others.

The question of the generality of habits involves, first of all, the relationship between what is individual and what is general. This requires us to investigate the relationship between categories, which acquires a new and important term of comparison. The opposition between individuality and generality explains many of the characteristics of Peircean habit. A predicate cannot be individual, just as a collection of actualities can never satisfy the idea of generality. Moreover, the question of generality also raises the question of whether and, if so, in what way we can proceed from the general principle of habit to individual instantiations, which mirrors the opposition between reality and existence just analysed: for we experience individual actions and events, not general habits (but as we will see, for Peirce, from the background of thirdness).

To proceed step by step, we must first clarify what exactly is meant by individual and general. The issue of individuality has often been a source of disagreement among Peircean scholars (Rondon 1997). In particular, Riley (Riley 1974) defended the possibility of a theory of individuals in Peirce, opposing other scholars – most notably Boler (Boler, 1963) – who had denied the very presence of the concept of individuality in the American philosopher's work years later, Michael took up and commented on Riley's thesis (Michael 1976).

At the root of the problem of individuality lie some of Peirce's problematic definitions, which affirm the impossibility of the existence of something totally individual. This is the whole point: in fact, Secondness is never perceived *per se*. Logically, this would contradict

the whole conceptual framework I have just described. It is not necessary here to enumerate all the passages that justify these claims, for which I will refer to the works just cited; it is sufficient to show that Peirce claims not to be in contradiction:

> The absolute individual can not only not be realized in sense or thought, but cannot exist, properly speaking. For whatever lasts for any time, however short, is capable of logical division, because in that time it will undergo some change in its relations. But what does not exist for any time, however short, does not exist at all. All, therefore, that we perceive or think, or that exists, is general. So far there is truth in the doctrine of scholastic realism. But all that exists is infinitely determinate, and the infinitely determinate is the absolutely individual. This seems paradoxical, but the contradiction is easily resolved. That which exists is the object of a true conception. This conception may be made more determinate than any assignable conception; and therefore it is never so determinate that it is capable of no further determination. (W2: 390-91n8)

What Peirce has in mind is a logical notion of generality and individuality, set in the context of his scholastic realism (that – as I have shown – deals with the problem of universals). We must further highlight the major aspects of this realism in relation to habits; and the first step is to define what Peirce means by generality.

Peirce takes up Aristotle's classical definition in several places, quoting both the Greek (EP2: 208) and the Latin ("*Generale est quod natum aptum est diet de multis*", EP2: 183) versions of the passage. Aristotle's original text reads as follows: "λέγω δὲ καθόλου μὲν ὃ ἐπὶ πλειόνων πέφυκε κατηγορεῖσθαι, καθ' ἕκαστον δὲ ὃ μή, οἷον ἄνθρωπος μὲν τῶν καθόλου Καλλίας δὲ τῶν καθ' ἕκαστον" (17a39-17b1).[71] It means that both universal and individual or singular things exist, and whether a thing is such that it can or cannot be predicated of numerous subjects depends on its nature (thus 'man,' for example, is general, while 'Callias'

[71] From the critical edition: Aristoteles et Corpus Aristotelicum Phil., De interpretatione (0086: 017), "Aristotelis categoriae et liber de interpretatione", Ed. Minio–Paluello, L. Oxford: Clarendon Press, 1949, Repr. 1966.

is singular). Generals, are, in short, what can be 'predicated of' (in Greek, the middle form of the verb meaning 'to categorise') a number of different things. Of course, for Peirce, "this recognizes that the general is essentially predicative and therefore of the nature of a representamen" (EP2: 183).[72] Peirce's Aristotelianism, which came to our aid in relation to the modality of habits, makes vividly clear in what sense habits are general. As a third mode of being could be detected in *hexis*, generality was also part of the Aristotelian conception of habit:

> Aristotle's conception of habit then is of a universal principle or better – a phenomenon of generality. A single act is not equivalent to a habit, but only an actualized instant, which belongs to a class or type. The reason is that the action-rules of a habit encompass all conceivable states (i.e. potential as well as actual). Habit, however, remains as a guiding matrix, which activates and translates into action, directed at a certain goal in accordance to some norm. (Feodorov, 2017: 12)

This point entails the connection between the generality of habits and the singularity of their instantiations, which again evokes the relationship between categories. So as I have already shown with regard to the Peircean ontology of habit, predication/category is the core term. As Legg states, "[t]he key to identifying Peircean generals is that the term includes anything *projectible in the way that predicates are*", which means that the "Peircean 'general' is a blanket term which covers properties, laws of nature, patterns, habits, thoughts and more, insofar as they are projectible in the way that predicates are" (Legg, 2001: 129-30).[73]

Legg is aware that it seems like a philosophical hazard to put together 'external' entities like properties and 'internal' concepts like thought, as well laws of nature and habits and predicates. This is not a real problem for Peirce, whose conceptual axis goes beyond

[72] The general sign *par excellence* is the symbol, which, indeed, is based on habit.

[73] As a point of comparison she uses Wittgenstein concept of rule. What is really interesting for us is that Peirce's habit and Wittgenstein's rule are generals in the same way, because no collection of individuals can fulfil their meaning: "Consider the later Wittgenstein's rule-following argument. Wittgenstein argued that no amount of enumeration of a rule's particular applications can exhaust the rule" (Legg 2001: 129).

Cartesian dichotomies; above all, “to understand ‘white’ and to understand the law of gravity is equally to grasp future instantiations of the property and of the law. He also treats the difference between properties and laws of nature as a difference of degree rather than kind” (Legg 2001: 130). The idea of a different degree between concepts is the same as the idea of a different degree between the law of nature and the law of habit that I presented in the previous chapter.

However, is structure of the meanings of “man”, “whiteness”, and “heavy bodies fall” really compatible with habits? Based on Legg’s suggestion, I can show that the key here lies in the idea of grasping future instantiations, or, as Peirce would say, predictions. Habits are generals in the same way as predicates, insofar as they allow us to make predictions or have expectations about certain hypothetical similar situations in the future, or – which is the same – to apply them to certain similar things. Habits are not generals because they are always the same for everyone, or for every possible situation, but because they enable us to draw the same conclusions whenever similar circumstances arise, i.e. whenever the same habit is at work. They have a relational value that applies to various objects across time, to which they bring meaning, or rather, ‘reality’, because an individual object that offers no chance of predicting it, no persistence of its own attributes enabling it to respond in a regular way, is nothing.

Habits, like predicates, are general because they are called into action by a multitude of similar circumstances, that are necessary to complete their structure. When applied to different circumstances and objects, “whiteness” evokes varied expectations; also, it is not applicable to ‘all’ potential situations, similarly to habits. Habits’ generality enables them to “predicate about a class of objects” when the same conclusions are reached under similar circumstances. Peircean theory indeed suggests us to draw a strong connection between habits and predicates, which also guides us towards the next essential dimension, the

temporal one.[74] Dumont uses strikingly similar words, even in relation to Peirce's categorical division. He establishes a link between habit and the concept of property, whereas excitation and reaction fall outside the domain of habit (Dumont, 2019: 66) (indeed in Peirce's terms, reaction is pure secondness).

Peirce is much more detailed with regard to this issue than he is about generality. His subdivision helps us approach the relationship between the general and the individual, that is, between what is third and what is second. In particular, habit's generality pertains to a specific kind. It is worth quoting again the manuscript written in 1896, the one in which Peirce explains the difference between facts, secondness, and thirdness:

> This is the general, and with it the permanent or eternal (for permanence is a species of generality), and the conditional (which equally involves generality). Generality is either of that negative sort which belongs to the merely potential, as such, and this is peculiar to the category of quality; or it is of that positive kind which belongs to conditional necessity, and this is peculiar to the category of law. These exclusions leave for the category of fact, first, that which the logicians call the *contingent,* that is, the accidentally actual, and second, whatever involves an unconditional necessity, that is, force without law or reason, *brute* force. (CP 1 .427)

[74] With regard to the intertwining of predicates and expectations, also Husserl's perspective is interesting, expressing this generality with the idea of type: "it becomes apparent that we have acquired habits of expectation concerning the properties of certain things and kinds of things. For example if we see a lemon, we expect a fruity smell, etc. These expectations reflect a kind of pre-knowledge or familiarity we already have before we are able to perceive the respective object in a full sensible way and it turns out to be a pre-knowledge that usually does not concern, for instance, this individual lemon alone, but rather concerns, as we say, 'objects of this kind', e.g., all lemons. Such habits of expectation, entailing and expressing a pre-knowledge about the kind of object we have in front of us, arise out of experiences we have had either of this individual object or other members of the class of similar objects (objects of this kind). In his genetic phenomenology, Husserl names this pre-knowledge of an object or class of objects (or events) its 'type' (*Typus*)" (Lohmar, 2014: 41).

Habit's generality is a 'conditional' generality, like the modality of habits, which can also be expressed through the formula 'conditional' necessity. Why conditional? Because habit is a 'would be' and its modality is an *esse in futuro*, I will return to this point below.

The idea that habit's generality is conditional is widely stressed in literature. Mayorga insists on what marks the real difference between thirdness and secondness in this respect, and her argumentation is in line with my earlier remarks: "Positive generality, which is Thirdness, is described as conditional necessity because a law, if it is a law, controls the behavior of its subjects as long as certain conditions are present, whereas Secondness, or the 'brute force' of existence, imposes itself unconditionally. Firstness, on the other hand, is not necessary, but rather only a possibility or potentiality" (Mayorga, 2007: 120). Black, on the other hand, focuses on the opposition between positive and negative generality, which recalls that between thirdness and firstness:

> A thing has positive generality if the fact that it applies to multiple cases is part of its nature. Habits have positive generality because it is part of their nature that they apply to an inexhaustible range of potential circumstances. On the other hand, a thing has negative generality if it can be instantiated multiple times in experience, but does not in itself refer to anything outside of itself. (Black, 2013: 10)

My perspective, by contrast, is to look at the phenomenon from a slightly different angle. The generality of habit consists in the possibility of drawing the same conclusions from a potential number of similar occasions, even if they never occur, thereby inducing an expectation. That is, we are in the presence of the principle of habit, or of a habit actually at work, when on a potential number of occasions of the same kind a subject behaves in a similar way, i.e. when we obtain a series of similar outcomes. It is logically from the consequences that we must start in order to go back to the analysis of the structure of the habit. As we will see, Peirce is fairly explicit (and he openly affirms the idea of a connection between habit and action, which can never be separated):

> But how otherwise can a habit be described than by a description of the kind of action to which it gives rise, with the specification of the conditions and of the motive? (EP2: 418)

> To get back, then, to the die and its habit—its "would-be"—I really know no other way of defining a habit than by describing the kind of behavior in which the habit becomes actualized. (CP 2.666, 1903)

> Of such a habit one may be conscious of a symptom; but to speak of being directly conscious of a habit, as such, is nonsense. (EP2: 269)

My position revolves around the necessity of habit generality, and I shall defend my choice at the end of this section. My analysis, however, would be unsatisfactory if it did not address and attempt to resolve the relationship between this general principle and concrete manifestations of experience, as Peirce indicates in the above quote. The issue is inextricably tied to how the general is contracted within the individual. If one adopts a thesis that argues for the generality of the habit principle, this is a problem that must be addressed. How do we recognise the general principle that underpins particular instantiations if they are not habits?

Individual actions are, after all, the only thing that affects our senses. The centrality of thirdness, linked to Peirce's realism and backed by his pragmatism, is the most influential aspect in reality, but it does not constitute existence on its whole, as Peirce maintains. A substance's attributes and predicates define it completely, giving it meaning and intelligibility, but they do not cause and have an impact on its existence. Better still, lifeless, inert, dead matter is a thing that lacks regularity, habits that gradually improve its prediction and comprehension, and is completely determined. However, its sheer existence in actuality is a matter of reaction and spatiotemporal singularity.

As Stjernfelt succinctly puts it, the link between the generality of habit and the individuality of its manifestations can also be clarified by using a propositional structure, which, being a symbol, is general:

> This structure, connecting some general rule with its possible instantiations in single cases mirrors that of propositions – consisting of indices pointing out objects referred to, on the one hand, and of general predicates on the other hand. Another way of expressing said realism is that some of those general predicates describe real patterns – habits – of reality; and their presence in the mind can never exhaust them but must, by the same token, be one of a habitual disposition, different from any here-and-now content of the mind. (Stjernfelt, 2016: 245)

In the next chapter it will be shown why concepts can be in the mind only habitually, as Scotus stated centuries before Peirce. So again a comparison is drawn between the structure of predicates and rules, along with a new crucial comparison between indices – which in Peirce's theory are the subjects of a proposition – and instantiations. The logic of relatives, Peirce's greatest logical discovery, reinforces the centrality and generality of the predicate by altering the classic propositional structure by reducing subjects to indices and predicates to open, relational structures, which can then be completed by one or more indices depending on their value (for the direct comparison is with the chemical structure of elements). Then Stjernfelt links propositional and inferential structure with the design of habits:

> Habits thus share the predicate/subject structure with propositions – general propositions due to the inherent generality of habits. The particular occasion that calls into action the general habit acts like the object of the proposition, the ensuing volitional act appearing as an inference from that proposition […]. (Stjernfelt, 2016: 245)

I have already mentioned Peirce's proclivity for conceptual correspondences, and logic plays a central role in all of his reflections. If an act takes the shape of an inference drawn from a proposition, the habit associated with it will take the form of the guiding principle from which it can be deduced. The logical framework is the key to access the innermost recesses of Peircean thought.

In Peirce's previous example, the general assertion that "stuffy air is unwholesome" might serve as the implicit major premise of an inference whose conclusion leads to the

opening of a window in a particular case. And because such a conclusion can only be reached from that general proposition, not from a particular occurrence (in this case, the proposition "I feel the air in my study to be stuffy"), it acts as a general guiding principle for all conceivable similar instances, i.e. it can 'govern' future instances.

After establishing this point, it is necessary to address the question that connects all properties examined so far, namely, what ontological or causal relationship exists between the reality of generals and the existence of the individuals, and whether one can talk of a cause. For numerous reasons, the relationship between habits and instantiations resembles – but cannot completely be reduced to – the generals/individuals dispute, although the medieval origin and evolution of this dispute is very important for Peirce.

The starting point consists in the fact that Peirce's extreme realism "denied the Scotistic theory of contraction in individuality" (Cárdenas 2018: 102): "Even Duns Scotus is too nominalistic when he says that universals are contracted to the mode of individuality in singulars, meaning, as he does, by singulars ordinary existing things. The pragmatist cannot admit that" (CP 8.208; 1905). In challenging Boler's position, Riley dwells on the idea of concretion. Boler rejects it totally, saying that concretion is even less intelligible that Scotus' contraction. However, for Riley concretion is the key to understanding why thirdness 'governs' secondness, and why without it there is nothing with respect to which it can express its power. The connection between them also reflects the one between final and efficient causation.[75] What is of interest for my argument here, is that Riley avoids the reductionist thesis about concretion and contraction by appealing to habit's mode of functioning. In his

[75] Indeed, the connection between final causation and habit is a point that is widely repeated in the literature (Andacht 2016; Salthe 2016), starting from the comparison with the thirdness-secondness relation, which Peirce himself makes in the famous example of the court: "The court cannot be imagined without a sheriff. Final causality cannot be imagined without efficient causality; but no whit the less on that account are their modes of action polar contraries. The sheriff would still have his fist, even if there were no court; but an efficient cause, detached from a final cause in the form of a law, would not even possess efficiency: it might exert itself, and something might follow *post hoc,* but not *propter hoc;* for *propter* implies potential regularity. Now without law there is no regularity" (CP 1.213, 1902).

view there is a way in which the general could be ‘part’ of the individual without involving Scotus’ idea of contraction:

> In this sense ‘the general’ would represent a body of rules, regularities, or norms, not the Common Nature of Scotus' metaphysics. An ‘individual’ would be any entity or event about which such claims as the following could be made: ‘in doing x, y (some person) followed such-and-such rules’; ‘x (some object) is classifiable as a so-and-so because of such-and-such regularities’; or ‘x (some action) was successful because it satisfied such-and-such norms.’ And to say that the general is a ‘part’ of the individual would be a quaint way of saying that certain rules justify a given interpretation of a person’s behavior or that an appeal to certain regularities and norms constitute the determination of an object’s classification or an action’s success. It should be clear that Peirce could reject contraction but affirm the relation between the general and the individual just suggested. (Riley, 1974: 156)

Looking at the argumentation backwards might make it clearer and does not lead to mystification, in my opinion. That is, we can start from individual instances, as Peirce advises, and then analyse which general principle they ‘appeal’ to from there. As a result, the close relationship between the two concepts may be grasped. There are many cases in which Peirce shows us that the relationship between general and individual consists in concretion and embodiment. Whatever ‘governs’ and ‘determines’ something does so through the possibility of embodying it, without being reduced to it, in the same way in which thirdness is not reducible to secondness (CP 1.345, CP 5.467). For Peirce, this is how meaning works: “By thought is meant something like the meaning of a word, which may be ‘embodied in,’ that is, may govern, this or that, but is not confined to any existent” (EP 2: 269). In accordance with the same idea, habits ‘determine’ conduct (EP2: 347, CP 5.367). Embodiment is a key concept in Peircean thought, because it easily allows us to account for the process by which signs (especially symbols) acquire meaning, grow, and govern individual instances. As Viola perfectly points out:

> To say that signs are embodied is to say that they must find expression, they must govern individual instances. If this process of embodiment does not take place, Peirce says with a Shakespearean phrase, the meaning of a sign evaporates into 'airy nothingness.' That is, it turns into something private and ineffable: a purely qualitative experience (a pure Firstness). This idea can be traced back to the delicate balance between particularity and generality that I have already dealt with when speaking of habits. Since no finite collection of individual events exhausts the purport of a Thirdness, we can only define the latter as a general rule that constantly produces the very individual events in which it is embodied (Viola, 2020: 93-94)

He rightly connects the "delicate balance" between particular and general that I have discussed to the proper function of "embodiment". In certain respects, embodiment may, however, lead down a wrong road that weakens the primacy of generality. Therefore, with reference to the general principle of habit, I would suggest a different structure for the interaction between habits and conducts, as we will see shortly.

The generality of habit is still a rather neglected issue, or better: the claim that habits are general could totally change the meaning of this concept, by bringing about a shift from the idea of a 'single habit' that emerges and manifests itself via repetition – as I showed in the first chapter – to a general, triadic, and mediating principle that encompasses subjects, circumstances, and actions. This becomes clear if we look at the way in which habits are still characterized in Peircean literature, which often brings the concept of embodiment into play.

Massecar, for example, in his extensive account of Peircean habit from an ethical perspective, introduces the metaphysical question of generality and individuality with the following words: "The next part of habits that needs to be explained is the status of the universal/general element in the particular/individual habit: how are general laws embodied in habits?" (Massecar, 2016: 63).

It is true that Peirce once states that "[a] law can never be embodied in its character as a law except by determining a habit" (CP 1.356, 1903). Regarding this expression Nöth

speaks of a hierarchy within thirdness phenomena: “The expression ‘embodiment of a law in a habit’ can thus only mean that a more general mode of Thirdness, a law, is embodied in a less general one, a habit. There is apparently a hierarchy of phenomena of Thirdness, according to which habits are less general than laws” (Nöth, 2016: 49). According to my main thesis, I will provide a different solution to this dilemma, by arguing that law determines conduct by appealing to the conditional habit structure. The law of gravitation can be embodied in its character only by determining a future instance on the basis of the structure of habit, as in the statement “if I dropped a stone on a given occasion (in this case, in every place on earth), it would hit the ground”.

While the concept of embodiment perfectly encapsulates the complex relationship between general concepts and their instantiations by appealing precisely to the structure of habit, in the specific case of what I am attempting to highlight in this thesis, I prefer to move on a different conceptual plane. I will not focus exclusively on the dyadic relationship examined here (or, indeed, favour the individual-general direction, i.e. from secondness to thirdness); rather, I will take into account the entire scaffolding that supports the general principle of habit. In other words, the generality of habit can be strongly affirmed only if it is viewed as a triadic and mediating relationship that habit ‘brings into being,’ and which involves individual action, the subject, and the circumstances, which together constitute only one of the axes. Finally, a critical question emerges: why am I so categorically orienting my position on the centrality of the generality of habits?

I am doing so because this centrality, along with the other features of habit, holds together the discussion about *hexis* and Peircean realism, which expresses the question of the modality and ontological status of habit. In particular, the relation between the generality of habit and actuality, combined with Peirce’s rejection of the nominalist approach, better defines the structure of the modalities he provides:

> In the beginning of the 20th century Peirce was considering the reality of three logical universes or modalities: the objects belonging to each he names ‘Ideas’ or ‘Possibles’

> (referring to Firstness, spontaneity, potentiality), 'Things' or 'Existents' (referring to Secondness, determination, actuality) and 'Necessitants' (referring to Thirdness, habit-taking, continuity) (EP 2: 479). The mistake of nominalism and the psychologization of the term *habit* is thus the attempt to limit it to the 'universe' of Secondness, actuality, the 'mechanical' sum of singular actions. (Feodorov, 2017: 8-9)

Many scholars that I have taken into consideration agree on these points. Again, generality makes habits a real power that affects existence. As Stjernfelt states, "habits form a central example of general patterns referred to by Peirce's realism of universals: habits are not themselves sums of individual existents or events,[76] rather, they constitute patterns which possess the real power to make such existences incarnate—even in the extreme case of never once becoming so actualized" (Stjernfelt, 2016: 245). Peirce's distinction between habits and empirical instantiations implies the acceptance of his ontological realism (Kilpinen 2016: 208). The peculiar ontological status of habits as a 'would-be', a real possibility, a relation that mediates between categories, makes them intertwined with their actualisations, the only things that properly 'exist', and on the basis of which we can trace the habits' presence.[77]

In the end, where does a general principle of habit 'exist'? Or better, where does its modality really affect existence? Peirce's answer is 'in the future', or rather in an 'indefinite' future – as we will see in greater detail inf the next section. To sum up, my point of view can

[76] I wholeheartedly agree with the following words that Peirce repeats over and over: "I need not repeat that I do not say that it is the single deeds that constitute the habit. It is the single 'ways,' which are conditional propositions, each general, —that constitute the habit" (CP 5.510; 1905).

[77] As Määttänen says from a contemporary perspective, "they are cannot be reduced to bodily states or defined in anatomical terms. But these objects of thought do not reside in a specific mental substance. Habits are not independent of our bodily existence. Habits are actualised as individual acts, as physical processes in the physical world. The fundamental error of classical philosophy is the doctrine that entities, which are real and can only be objects of thought, are given an independent ontological status as if they could exist by themselves, think by themselves and be seriously sceptical about the existence of the material world" (Määttänen, 2015: 32).

be expressed as follows: according to the Peircean theory of habits, what exists is certainly individual, but what really matters is generality. What exactly does it mean to 'matter'?

It means that objects and subjects acquire meaning (that is, 'reality') only when they provide expectations, when they acquire regularities that allow them to be 'projected' into future situations, and that mere existence is meaningless from this perspective. These insights found in Peirce have profound implications, particularly for what is considered to be the very essence of reasoning and what characterises our individuality as living beings, which will be the focus of the last two chapters of my work.

3.3 Temporality

Temporality is not a habit's *facet*. However, in this section, by discussing the temporal 'position' of habit, I have the opportunity to connect what I have argued thus far to the concluding concepts I wish to examine, which derive directly from the temporality of habits. The temporality of habits is a very challenging issue, firstly because it implies a non-linear idea of time. In the working structure of habit, past, present, and future are all simultaneously interconnected. It is necessary to demonstrate here that the generality and mediation of the principle of habit contradicts the notion that future actions are determined by past ones, or that habit is not defined by the repetition of what has been done in the past in possible future actions. Furthermore, does this position erase the importance of the present?

Some scholars, like Rosenthal, defend the thesis of the importance of the present in the 'would-be'. She does so by stating that the past and the future involve not only actualities, but the possibilities and continuities that intertwine with the present time. Just as present time selects certain traits that were real possibilities in the past, so future time defines the very texture of the present, understood as that set of real possibilities, 'would-be's, that will carve out the structure of future actions in a certain way:

> If only past and future actuality were involved, then the passing present would be merely a deterministic push from the past or pull from the future. However, past and future are

> conditions involved in the present not in their aspect of actuality but in their aspect of continuity or possibility. Furthermore, the past and the future, even in their aspect of possibility do not denote settled entities that have been or will be, for just as past and future enter into the total character of the passing present as present possibilities, so the hereness and nowness of present actuality enters into the character of the past and the future, changing the possibilities inherent in them as real possibilities. (Rosenthal, 1968: 161)

My attention shifts to the idea of the future that is inherent in the 'would-be' of habit. This is an indefinite future, in the sense that the actual possibilities contained in the would-be's present will be chosen in future circumstances by the principle of habit (which actually limits the 'range' of possibilities in the future). However, in the future that will become present, what we see will only be actuality, making it difficult to tell with certainty when the traces of this process will be found. Reiterating the concept of positive generality expressed above, the structure of habit, unlike pure possibility (firstness, negative generality), not only limits the horizon of future possibilities, but is also dependent on future occurrences, without which – as we saw in the previous section – it is ineffective. Peirce states: "This mode of being which *consists*, mind my word if you please, the mode of being which *consists* in the fact that future facts of Secondness will take on a determinate general character, I call a Thirdness" (CP 1.26, 1903). Thirdness takes the form of an *esse in futuro*, for it consists in the possibility that future occurrences may happen or not according to a general rule.

This *esse in futuro* implies two main arguments already familiar to us. Firstly, it entails that the would-be of habits is an ingredient of reality, and that actuality, either in past, present or future, does not cover it fully: "I must show that the *will be's,* the actually *is's,* and the *have beens* are not the sum of the reals. They only cover actuality. There are besides *would be's* and *can be's* that are real" (CP 8.216, 1910). Secondly, since no actual occurrences can cover the reality of generals in any way, the "future facts of secondness" are not determined

by past occurrences, but rather by the *tendency*, by virtue of which they will accord with – and be 'governed' by – a general rule.[78]

This is of particular interest because it relates to a specific dispute that surrounds the concept of habit, and Peirce's position is distinctive. We can highlight potential conceptual levels. The first, which consists in viewing habit as the mere repetition of what has been done previously, refers to the overly simplistic notion typical of psychology that we discussed in the first chapter (Ouellette and Wood 1998).

More relevant to the scope of this work is Sinclair's presentation of Ravaisson's and Lemoine's account, in which the dispositional structure that makes habit something other than a mental state or a 'thing', casts the concept of temporality in a new light:

> If a habitual disposition were only a material or psychological state, then it would be possible to think of it both as having been caused by repetition or continuity in the past and as causally determining the future in some kind of mechanical sense. Yet in reflecting on the temporal sense of habit, Lemoine evidently wants to say more than this. His claim is that in a *hexis* there is a kind of presence of the past in the present; that the past is, indeed, contracted within the present. On the idea of contraction, Lemoine writes: '[n]o other word of our French language expresses better what it has to say than the vulgar expression: contracter une habitude. By habit, indeed, the past is really contracted in the present and perpetuates itself within it' (Lemoine, *L'habitude et l'instinct*, 26). We

[78] In the articles in which Peirce connects the concepts of probability and habit, he clarifies the temporal scheme I have described in a few short sentences: "Whatever is truly general refers to the indefinite future; for the past contains only a certain collection of such cases that have occurred. The past is actual fact. But a general (fact) cannot be fully realized. It is a potentiality; and its mode of being is *esse in futuro.* The future is potential, not actual" (CP 2.148). Especially regarding the role of past actions in the future, he states: "It is true that physiological and some other habits are determined by what has been done; but not by those occurrences *of themselves*, but only because there is a *special Tendency* by virtue of which what has been done *will be* done oftener than what has not been done. In general, it is of the essence of a Real Tendency that no Actual Occurrence can of itself determine it in any way" (EP2 487-88).

> contract habits not merely in the general sense of acquiring them, and not merely because we often acquire them despite ourselves, as we might contract an illness, but, most profoundly, because in acquiring a habit we synthesize the past in the present with a view to the future. (Sinclair, 2018: 14)

Sinclair thus shows that dispositions contract the past into the present, thereby working as a matrix that shapes the future. In this way the present of habits includes both elements from past and future (Sinclair 2018: 16). This strong imprint of the past's contraction into the principle of habit runs through much of the French history of habit, as can also be seen in Bourdieu's famous claim, in which dispositions "integrating past experiences, functions at every moment as a *matrix of perceptions, appreciations, and actions* (Bourdieu, 1977: 83). Bourdieu's *habitus* is constituted within a temporal dimension based on past experiences and projected onto forthcoming possibilities. Within it a (historicized) stratification of events takes shape which becomes the crystallized part of ourselves, no longer subject to judgment and revision: "The *habitus*—embodied history, internalized as a second nature and so forgotten as history—is the active presence of the whole past of which it is the product. As such, it is what gives practices their relative autonomy with respect to external determinations of the immediate present" (Bourdieu, 1990: 56). This account, as in Peirce, allows one not to focus on the actualities of the immediate present.

What I wish to emphasize here is that Peirce intends to overcome this idea of the contraction of the past into habit not because it is baseless, but because habit regulates general future behaviour without relying on past occurrences. And so Peirce shows us that the real is not the mere presence here in front of me, but the tendency toward the future, an expectation.

Thus, in Peirce, there is continuity between the past and the future, in accordance with the general tendency of habit. In Peirce, all habit is envisioned in relation to the future because its conditional mode, the 'would-be,' regulates potential scenarios in the indefinite future.

In the same paper Sinclair (2018: 16) quotes an interesting passage from Malabou, which states that *hexis* "is a kind of virtuality engaged in three exstases of time at once,

without one dominating the others: the past (habit is prior to its being put to work), the present (habit is itself a modality of presence), and the future (habit takes the form of a task which must be fulfilled, of an expectation that rules the direction of what is to come".[79] The temporality of habit encompasses a non-linear idea of time, but especially the Peircean concept takes on an interesting temporal position of anticipation which is not entirely based on past occasions. As in Malabou's quote, the future aspect of habit takes the form of a future task which must be fulfilled, an expectation that governs what is going to come next. Based on Malabou's suggestion, I must now concentrate on this aspect, which becomes a central feature of the theory I wish to derive from Peirce's thought.

3.4 Expectation, prediction, and anticipation

In his 1892 article for *Philosophical Review*, "A Plea for Psychology as a 'Natural Science'", William James states that prediction, - as the study of individuals' conduct and dispositions – has become one of the main concerns for psychology:

> All natural sciences aim at practical prediction and control, and in none of them is this more the case than in psychology to-day. We live surrounded by an enormous body of persons who are most definitely interested in the control of states of mind, and incessantly craving for a sort of psychological science which will teach them how to act. What every educator, every jail-warden, every doctor, every clergy- man, every asylum-superintendent, asks of psychology is practical rules. Such men care little or nothing about the ultimate philosophic grounds of mental phenomena, but they do care immensely about improving the ideas, dispositions, and conduct of the particular individuals in their charge.(James, 1892: 148)

I assume I do not need to explain how important this Jamesian intuition has been over the last century, and not just in psychology. What is most relevant is James' notion of habit as a

[79] Quoted in Malabou's book, *The Future of Hegel* (2004: 56).

key unifying element for the ideas of prediction, expectation, and anticipation in a wide range of research disciplines. Indeed, pragmatist intuitions have proven to be particularly 'predictive'. Behaviour prediction and cognitive psychology cannot fail to consider habit as one of the pivotal elements of predictive functioning (Verplanken 2018) and in the twentieth century economic theory was one of the first disciplines to become aware of the importance of expectations (but nowadays Peircean ideas crept into a wide range of other disciplines) (Wible 2020).

Contemporary neuroscience and cognitive science agree on the fact that many cerebral systems are anticipatory and that prediction is coupled with expectancies (Clark 2015). Those researchers who adopt a pragmatist perspective in neuroscience recognise the 'prescient' character of Peirce's theories (Schulkin 2020). The highest point regarding prediction theory in the contemporary world has been reached through the construction and perfecting of the predictive machines *par excellence*, namely algorithms, which, as a recent publication shows, can be defined as genuine *Machine Habitus* from a sociological perspective (Airoldi 2021).

Towards the end of my thesis I will return to the intertwining of the philosophical concept of habit and reflections on the predictive character of the structure of our reasoning and personality. In this section I seek to demonstrate what the inherently 'anticipatory' temporal position of habits consists in through the connections that Peirce draws with the concepts of expectation and prediction. In the history of habit, the anticipatory dimension present in the temporality of habit is widely acknowledged, in different ways. Carlisle summarises some points from Locke, Hume, Ravaisson, and Spinoza:

> Temporality of habit reaches out towards the future as well as back into the past. Regarded simply as an ability or capacity, habit constitutes a potentiality to act in a certain way in the future. But considered as a tendency, habit is, as Locke observed, 'forward': it *anticipates* the future. Habits of association create an expectation that future events will follow a similar course, while habits of action, as we have seen, have a momentum of their own that propels a person along her well-travelled path. Ravaisson,

> drawing on Hume's analysis of habit, emphasizes this orientation to the future: an action that is repeated 'becomes more of a tendency, an inclination that no longer awaits the commandments of the will but rather anticipates them. Habit's anticipation of the future differs from imagination, just as its appropriation of the past differs from memory. (Carlisle, 2014: 25-26)
>
> Spinoza develops this idea by describing how habitual associations are projected into the future, forming expectations based on what has happened in the past. (*Ivi*: 43)

We are now able to bring out an overall picture through what I have shown about Peircean theory in the previous sections. There are two points to be addressed here: the anticipatory and predictive nature of Peircean habits arises from the two specific properties of mediation and generality already mentioned. Firstly, in accordance with the passage just quoted, Peirce's concept of habit is strictly anticipatory, due to its mediating position between potency and act – a point which I have argued at length. Habit is not a mere potentiality which has no connection with actualisation: its mediating aspect is temporally directed towards future occurrences. This is a central issue in my theory because it combines the ontological and temporal dimensions of habit and foreshadows the fundamental similarity that allows human beings to be defined as creatures of habit.

To recall the stone experiment again, the second point is the fact that future expectation is not formed from past occurrences, which, like future expectations, are the 'sign' of a general principle at work. In a logic of scientific discovery, which is what Peirce is concerned with, it becomes clear that it is generalisation that allows prediction and the creation of expectations of a certain kind. With reference to the passage quoted above:

> With overwhelming uniformity, in our past experience, direct and indirect, stones left free to fall have fallen. Thereupon two hypotheses only are open to us. Either: first, the uniformity with which those stones have fallen has been due to mere chance and affords no ground whatever, not the slightest, for any expectation that the next stone that shall be let go will fall; or, second, the uniformity with which stones have fallen has been due

> to *some active general principle,* in which case it would be a strange coincidence that it should cease to act at the moment my prediction was based upon it. (EP2: 183)

The reality of generals is the means by which Peirce states that future events are governed by thirdness, or, which is the same, that "an expectation is, in every case, founded upon some regularity" (EP2: 89). If we are often able to make predictions that come true, it is because laws and regularities are indeed at work in the cosmos (as shown in the previous chapter), thirdness is real, and we are able to draw certain conclusions because we are guided by the same general principle of habit. "If the prediction has a tendency to be fulfilled, it must be that future events have a tendency to conform to a general rule" (CP 1.26, 1903). Cosmology and realism are bound together by the temporal dimension of habit. Generalisation and regularity are the foundations of predictive reasoning, and consequently expectation is the basis for experimental logic, for no scientist would ever practice any kind of experiment without expecting some kind of result (EP2: 154). An habit of expectation is the end of the scientific process of explanation, since irregularity and surprise are the main elements involved in disrupting the habitual process (Atã, 2020: 44-52):

> What, then, is the end of an explanatory hypothesis? Its end is, through subjection to the test of experiment, to lead to the avoidance of all surprise and to the establishment of a habit of positive expectation that shall not be disappointed. (EP2: 235)

The anticipatory temporal structure emerges from the connections that my research aims to draw between various areas of Peircean philosophy. I would argue that the concept of would-be, which is primarily stretched-out as the assigning of meaning to future events and which arises from a general principle, offers a fascinating account for philosophies of habit. Expectation is the key element in this concept, and Peirce offers a clear (and curious) example that connect expectation and habit:

> An expectation is a habit of imagining. A habit is not an affection of consciousness; it is a general law of action, such that on a certain general kind of occasion a man will be

> more or less apt to act in a certain general way. An imagination is an affection of consciousness which can be directly compared with a percept in some special feature, and be pronounced to accord or disaccord with it. Suppose for example that I slip a cent into a slot, and expect on pulling a knob to see a little cake of chocolate appear. My expectation consists in, or at least involves, such a habit that when I think of pulling the knob, I imagine I see a chocolate coming into view. When the perceptual chocolate comes into view, my imagination of it is a feeling of such a nature that the percept can be compared with it as to size, shape, the nature of the wrapper, the color, taste, flavor, hardness and grain of what is within. Of course, every expectation is a matter of inference. What an inference is we shall soon see more exactly than we need just now to consider. For our present purpose it is sufficient to say that the inferential process involves the formation of a habit. For it produces a belief, or opinion; and a genuine belief, or opinion, is something on which a man is prepared to act, and is therefore, in a general sense, a habit. (CP 2.148, 1902).

In this example Peirce introduces many topics that will feature prominently in the next chapter of my thesis, devoted to reasoning. It is quite evident that the ontological and temporal dimension of habit has direct effects on reasoning (epistemology is a word that Peirce, who was quite fanatical about his choice of words, did not appreciate). In reasoning, which for Peirce is an inferential process, the structure of habit comes into play and guides us through fundamental concepts that possess the nature of habits, such as beliefs.

To wrap up this first part of my thesis, I would like to offer some preliminary conclusions that tie together what we have discovered so far about the general structure of habit and that may serve as the foundation for the arguments I will be presenting in the next two chapters. Habit is a general structure of mediation[80] and anticipation. Its mode of being

[80] After all, Thirdness is the category of generality and mediation: "Now Thirdness is nothing but the character of an object which embodies Betweenness or Mediation in its simplest and most rudimentary form; and I use it as the name of that element of the phenomenon which is predominant wherever Mediation is predominant, and which reaches its fullness in Representation" (EP2:183).

is the best demonstration of this. As has been shown for the mediating position between potency and act, the core idea can be found in the origin of the concept, in *hexis*. As Rodrigo states, the tendency towards an act is what characterizes the "habituality of being", it is what defines the attitude of *hexis*, "a stable inclination towards that act; a second *dunamis*". The conception of being that habit implies is *vectorial* and *dynamic*, since habitual being is something "towards", something incomplete, which awaits "to be fulfilled", as Peirce says.

> *Hexis*, such as Aristotle presents it to us, involves a *vectorial, dynamic conception of being*. We should understand by this a conception of being as tension towards, and as intending, this quite determinate fulfilment that is represented, in each situation, by the conjoined *energeia* (or second entelechy) of subject and object. (Rodrigo, 2011:14)

Would-be explains this idea temporally, while on the logical level it is perfectly exemplified by the predicate or, better, by the Peircean idea of Rhema. The latter indeed evokes this idea of waiting for a fulfilment, inviting us "to do something" (Fabbrichesi, 1992: 160), exactly as habit is stretched to its fulfilment, on which it must exercise its power.

One begins to understand the core of my argument. Habit's mode of being certainly pertains to thirdness, because it shares its main characteristics. Habits are general, they are a mediating construct primarily between potency and act. However, what is most crucial to note is that habits *enable* the passage between the two: they are not only a 'state', as a first interpretation of *hexis* might suggest, but as a tendency, or better a 'function or matrix' – they are projected, they possess a direction.

This direction arises from the fact that they are directed towards future occurrences, according to a predictive and anticipatory principle that expresses the law of habit, the regularity that discriminates habits from chance as firstness and law as secondness. I wish to stress that habits are not merely the mediating force, but the very conditions on which this process is based, that is: they bring into existence what is generic and potential to the highest degree.

This becomes clear if we look at certain areas in which the general structure of habit has been carefully analysed, such as the cultural and social spheres, and their concretisation in everyday life as given actions and gestures (the focus of Bourdieu's work). Habits carve out the potential continuum that constitutes reality, affecting certain things and excluding others, because they are not a mere potentiality: their purpose is fulfilled in actuality, which is not general.

I believe it is important to 'use' the Peircean account (which provides an argument without which the structure of habit cannot be understood) to demonstrate what I regard as the defining character of habit. Habits are general, but their mediating position constitutes their very structure. In other words, they 'oscillate' between the general and the individual, putting into action what is only potential, 'cutting it out' according to certain general criteria. They can be better understood as a function with a specific direction, always oriented towards implementation, towards concretisation. It is easier to grasp this concept by thinking about it in a diagrammatic way, as Peirce teaches us. We can thus envisage habit as the above-mentioned *vector* (even though we cannot think of it as a simple line, since it arises from a triadic relationship) whose origins certainly lie in the third Peircean category (and what it implies), but whose arrow leads to the second category (and what it implies). In my opinion, this multidimensionality represents the essence of habit and accounts for its influence on reasoning and on our identity as human beings. In the last two chapters of my work, I will demonstrate how.

4. Habit and Intelligence

In the last two chapters of my work, I focus on the two main aspects that flow directly from the analysis of the metaphysical status of the general principle of habit carried out in the first part, which in a respect concern the epistemological and anthropological framework. In particular, I analyse the relationship between such a concept of habit as I have previously described it and cognition and the self.

In this chapter, I focus on the characteristics that the idea of intelligence assumes in Peirce, specifically centred on the idea of habit, and how accordingly key concepts such as knowledge, meaning and reasoning are structured. The cognitive aspect of habit is handled by Peirce and the secondary literature even more extensively than the metaphysical one, but my point is to demonstrate that the properties and metaphysical structure of the concept can better illustrate the role that habit plays in fundamental cognitive processes.

The analysis of Peirce's main epistemological concepts has always been present in scholarship on the author, among the aspects of his thought that are certainly the most in-depth. Also widely recognised is the central role of habit in the constitution of concepts such as belief and meaning. What is missing, and this is a first contribution of this section, is an attempt to explain why the main cognitive concepts of Peircean philosophy are 'of the nature of a habit'. My solution is wholly based on the first part of my work, i.e. the general structure of the habit principle that I have been building. In fact, these concepts 'operate' like habit, in the sense that they share some of its fundamental properties and have a similar structure.

In particular, I will show how for Peirce, knowledge, meaning, belief and reasoning take on operational aspects of the structure of habit, making the interaction between the philosophy of habit and Peircean epistemology clearer. The key to this is drawn from the main thesis of my work: that habit is a mediating structure between categories oriented towards certain outcomes in future circumstances.

Thus, knowledge as for Aristotle is a habit that disposes us to act and think in a certain way differently to how we would act in the absence of such knowledge. Moreover, it cannot

be reduced to one's present occurrences, which, on the contrary, as a habit, it always anticipates in view of future circumstances. Similarly, beliefs mediate for Peirce between general regularities and subsequent specific situations and actualities. The temporality of habit emerges clearly when Peirce states that the rational essence of thought consists in always referring to a possible future. Moreover, habit is the only concept that is able to cover the generality of the meaning.

The second contribution of this section that arises simultaneously with my argumentation is to show that the habit principle is a fundamental prerequisite of reasoning. It has a twofold meaning, if on the one hand it lightens and makes our cognitive processes efficient by relieving us from the state of doubt, on the other hand it prevents us from critically analysing the steps of our reasoning. In this way, it is conceived from a Peircean perspective as an unavoidable ground of our thinking, the functioning of which, however, needs to be understood in order to have the greatest possible awareness of the process that shapes our thoughts.

4.1 Knowledge

In the last part of a paper devoted to a defence of the pragmatic maxim, and its connect to habits and interpretants, Hookway asserts:

> The concept of habit was used extensively in Peirce's writings from the 1860s until his final writings after 1900. It was used both to describe the nature of laws of nature and related metaphysical aspects of reality and as a tool for explaining cognition. We shall concentrate upon the latter, but the metaphysical use of *habit* will also be relevant to our discussions. (Hookway, 2011: 99)

Hookway is right to point out that Peirce uses the notion of habit extensively throughout his work, and that it primarily covers the two categories into which I have divided my work, the metaphysical and the cognitive.

For the title of the present chapter I have drawn upon Murphy's renowned book (Murphy 1869), not only because of its strong influence on Peirce's physiological and psychological insights on habits, but also because my goal is to demonstrate the deep connection between the principle of habit and the intellect in general. This profound connection is actually twofold: on the one hand, I wish to show that the concept of intelligence and reason is very broad and general precisely because of the role that habit plays in it; on the other hand, I wish to show that the idea of an opposition between intelligent behaviour, reasoning, and habits that I mentioned in the first chapter is actually unfounded, because from a Peircean perspective where there are habits, there are forms of intelligent behaviuor and reasoning at work.

Logically, it is now necessary for me to justify this claim. Like Hookway, it is by focusing on the properties and general (metaphysical) structure of Peirce's thought – traced in the first part of this thesis – that I will be able to illustrate the role played by habit in some fundamental cognitive processes. In addition to structuring the theory of habit that I am developing, this analysis will also allow me to draw attention to some thorny issues within Peircean theory.

For numerous, partly understandable reasons, much has been written about the significance of habit in Peircean cognitive theory, far more than about the general structure and metaphysical dimension of his thought. That is, several of Peirce's central topics are 'of the nature of a habit' by definition: beliefs, the ultimate meaning of concepts, and the principle on which inferences are based – in Peirce's words, reasoning.

There is not much more left to say about the subject, because the analysis that has been carried out has shed light on an extensive corpus of texts, which includes many manuscripts yet to be published. It has done so primarily from a semiotic and pragmatist perspective (yet without forgetting analyses focusing on logic in the strict sense, or contemporary readings of Peirce's epistemology, down to the moral and social implications that can be drawn from it).

What is missing – and what I aim to contribute – is an analysis of why most of Peirce's cognitive concepts are of the nature of a habit. Charitable readings of his works concentrate on specific parts in order to reach fascinating conclusions and demonstrate this philosopher's visionary quality. But after illustrating the general structure of habit, I believe it is necessary to demonstrate why reasoning itself 'functions' as a habit.

Habit is certainly connected to meaning; it defines that in virtue of which symbols acquire meaning (Bellucci 2017; 2021), just as icons acquire meaning by their resemblance to their object. Habit sets the conditions for the functioning of a belief, and allows certain conclusions to be drawn from certain premises; but if these concepts are connected, or even assimilated to the principle of habit in the general scheme of Peircean theory, it is because they 'work' like habit, because they share the structure or certain fundamental properties of the principle of habit.

In accordance with the pattern I have established from the outset of this research, I would like to start with the most general and 'foundational' notion, that which establishes the conditions for the study of the following concepts.

For Peirce, "knowledge is habit" (CP 4.531, 1906). Or, to put it in another way, habit is the essence of knowledge. The American philosopher reached this conclusion in his youthful writings, and remained true to it throughout his philosophical career. However, it is neither a radical nor a unique proposal in the context of his philosophy. As previously stated, Peirce draws on Kant and Aristotle, and according to the latter knowledge is a habit as much as it is for Peirce. This view rests on the backbone of my thesis: the notion that habit is a mediating structure between potency and act that allows us to put the process of enactment in motion in a given triggering circumstance. This is my starting point and it deserves to be argued further.

I will begin with an example made by Peirce, the first of its sort in his writings. I will then examine his mature perspective, as well as the extensive conceptual background on which his idea is based. Not only that, but the example in question serves to demonstrate that

Peirce intended exactly the same thing as Aristotle suggested (and Aquinas asserted centuries later, in commenting on the Greek philosopher's words). Possessing a language is a prototypical example of knowledge as habit, in which knowledge mirrors habit's pragmatic structure. The example occurs in a passage from his *Logic Notebook*, a notebook in which Peirce wrote down his entire life. A year before his famous 'anti-Cartesian' writings, in particular "Questions Concerning Certain Faculties Claimed for Man", in which the idea is further defined, Peirce considers the (impossible) concept of 'absolutely unknowable':

> *I know Greek. Greek is not present to my reminiscence, but occasion will call it up. This then is the essence of knowledge and what no occasion will call up is not known or conceived*. […] Every quality which we know of is of course either experienced or inferred from experience. We admit that things may have qualities which we do not know but that is because we may conceive of a state of knowledge in which something more is predicable of them. But do we mean anything if we say that a thing has a quality which cannot be predicated of it; that is which is unknowable and inconceivable? What can we mean by such a statement? […] Can we have any general or relative notion of it? *To have a general notion appears to be, having a habit according to which a certain sort of images will arise on occasion, that is having a capacity of imaging the particulars and the sense of this habit*. But here such a thing is impossible. […] To say that a word has meaning is to say that a conception corresponds to it. To say that we have a general conception of a triangle for instance is to say that *upon the occasion of a triangle being presented to the imagination or in experience a certain feeling complicated in a certain way arises*. We have no conception therefore of that of which no determination can be presented in the imagination.[81] (W2: 5-6)

The presence of the occasion, one of the elements on which habitual scaffolding rests, is already visible here. Peirce also sets the groundwork for one of the best-known theories of

[81] My italics, to underline how this early text already reflects Peirce's reasoning on the structure of habit, with which we are now so familiar.

meaning in the history of thought, namely his 'maxim of logic,' which underpins Pragmatism and is built on the 'simple' observation that the meaning of a general notion lies in the habits it develops. The fact that Peirce takes up Duns Scotus' idea in its entirety is the essence of the matter here (Aliseda 2016; Reyes Cárdenas 2018; Houser 1983; Stjernfelt 2016; Viola 2014), and it allows me to get back to Aristotle's thoughts.

> I adopt the admirable distinction of Scotus between actual, habitual, and virtual cognition (W2: 75).
>
> There are two ways in which a thing may be in the mind, —habitualiter and actualiter. A notion is in the mind actualiter when it is actually conceived; it is in the mind habitualiter when it can directly produce a conception. (W2: 472-473)

For Peirce, the essence of knowledge is its *habitualiter* 'possession.' Concepts can only inhabit the mind through the holding of a corresponding habit. But thanks to the analysis carried out in the first part of this thesis, we now understand what it is 'to have' a habit, which is virtually a contradiction in terms. There are at least two considerations to keep in mind. As knowledge is habitually located in the mind, the definition of the proposition "I know" must be reconsidered. That is, if I am presented with a scenario y in which habit x is questioned, I will be compelled to react in a certain way z, which would not be the case if I did not 'possess' habit x.

This is clearly not a psychologist's definition, because in the intricate process of reasoning, a plethora of elements come into play, such as memory/forgetting and unexpected conditions that disrupt the process. We are examining the logical framework[82] that supports

[82] This also coincides with the semiotic level, for all thought according to Peirce is thought by signs: "thought is of the nature of a sign. In that case, then, if we can find out the right method of thinking and can follow it out – the *right method* of transforming signs – then truth can be nothing more nor less than the last result to which the following out of this method would ultimately carry us" (CP 5.553: 1906). Semiotics, from this perspective, is a theory of cognition, which could be impossible to realize without the aid of semiotics: "a theory of cognition was inseparable from a phenomenological semiotics that studied everything that is present to the mind" (Paolucci, 2021: 2).

the cognitive process of habitual knowledge, not the psychological level. The pragmatist perspective that emerges from this idea, on the other hand, aids the clarification of the concept, and I will return to it shortly.

The second point to explore is the concept of 'possession'. While knowledge habitually resides in the mind, we do not hold it in the strictest sense. If habit is the mode of being that brings the subject into interaction with attributes, circumstances, and potential outcomes from time to time, then the word possession – as it is commonly understood – is not a proper and suitable term. We are in thought, and in habits, in the sense that we are 'shaped' by them. The pragmatist reversal of habits is comparable to the pragmatist reversal of emotions.[83] We have knowledge in the habitual sense insofar as the relationship that habit generates will dispose us to act/feel/reason in a certain manner, differently from how we would act if we were devoid of them. But there is another factor we need to take into account, as it is relevant to the main focus of my thesis. Knowledge cannot be reduced to actual thoughts, because habit – as we know well – cannot be reduced to actual instances. The Scotistic distinction is directly involved in this general conception of habit, to which it provides support: "habits are not thoughts in the sense of actual instances of thinking. In accordance with the *habitualiter-actualiter* dichotomy, actual thoughts are neither habits nor phenomena of Thirdness. Acts or instances of thinking are only manifestation of habits, in other words, determined by habits" (Nöth, 2016: 54). Acts of thinking are merely manifestations of habit, and the example of knowledge also helps to illustrate Peirce's ontological framework, which I reconstructed above with the help of a quote from an early text of his, since it is not as clear in other passages. How can the essence of knowledge be exhausted in its current

[83] As William James states in "What is an Emotion?", "[o]ur natural way of thinking about these standard emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter -state of mind gives rise to the bodily expression. My thesis on the contrary is that *the bodily changes follow directly the* PERCEPTION *of the exciting fact, and that our feeling of the same changes as they occur* IS *the emotion*" (Caruana et al. 2020; James 1884).

manifestation? How can the essence of something essentially general be resolved in a succession of current thoughts?

As Stjernfelt states, “Peirce’s conception of how a habit inhabits the mind is derived from the Scotic theory of universals: the habit simply is the way that a universal is in the mind, for the universal, just like its counterpart in reality, is not exhausted by any actual occurrence in the mind of conscious tokens of it” (Stjernfelt, 2016: 253).

This approach leads us directly to the close relationship between habitual knowledge and the cardinal principles of pragmatism. Before I delve into the details of this issue, I think it is important to emphasise that Peirce’s understanding of the history of thought is an inseparable part of his theory, which he reworks from within his system. As an “Aristotelian of the scholastic wing”, Peirce is indebted not just to Scotus’ “admirable distinction”, but also to Aristotle. For the latter too, knowledge is a habit or – to put it in the correct terms – *epistème* is a *hexis*. Knowledge is a habit because, on the one hand, they share a fundamental property, while, on the other hand, knowledge is the prototypical example of habit, as Peirce will clearly show. Regarding the former aspect, knowledge and habit are related, as Aristotle states in part *VII* of *Categories*:

> There are, moreover, other relatives, e.g. habit, disposition, perception, knowledge, and attitude. The significance of all these is explained by a reference to something else and in no other way. Thus, a habit is a habit of something, knowledge is knowledge of something, attitude is the attitude of something. So it is with all other relatives that have been mentioned. *(Cat., VII, 6b, 1-7)*

Another important point of continuity is that the relational aspect of habit is not a Peircean novelty. He takes it as the basic property of habit, develops it through the notion of triadicity, and reworks it in an original way by adapting it to the various contexts of his theory, from metaphysics to semiotics. Regarding the latter aspect, for Aristotle knowledge is habit because – according to the broadly accepted conception of it – it is a “stable disposition”. Habit is stable because – as I mentioned with regard to Peirce – it is a permanent relation in

time, for otherwise it would be ineffective, as it would not be possible to bring it to our attention on certain occasions.

> The various kinds of knowledge and of virtue are habits, for knowledge, even when acquired only in a moderate degree, is, it is agreed, abiding in its character and difficult to displace, unless some great mental upheaval takes place, through disease or any such cause. (*Cat., VIII, 8a, 29-34*)

Regarding more specifically the topic I am dealing with, knowledge is a habit because it operates as second potentiality – for it shares its same function. There exists a profound bond of continuity that extends far beyond the best-known conceptions of habit. Rodrigo clearly discusses the important conceptual step taken by Aristotle.

Rodrigo starts with an example from Plato's *Theatetus* which helps to understand in what sense knowledge is habit. From a specific example made by Socrates,[84] Rodrigo deduces that: "knowledge would be either an act, or a power focused in a specific sense; that is to say, an actual aptitude, which Aristotle will later categorise as *second potentiality* and, equally, as *first actuality* [*entelechie*] – for example, that of an educated man who is sleeping, but who completely retains his ability, on waking, to exercise his knowledge in a very specific domain and in a very specific sense" (Rodrigo, 2011: 10-11). Therefore, compared to Plato, Aristotle works in a different and more subtle way on the opposition between potency and act and on the twofold role that *hexis* plays on both sides. In this way, he "recognises 'second potentiality' as that modality of *hexis* which *dynamically predisposes* to the act by means of

[84] This example "concerns a hunter who has captured some doves, and has then 'taken' them and kept them, literally, 'under the hand' in a dovecote. Although the hunter has certainly captured the doves, one cannot truly claim, says Socrates, that he *has* them in the sense of having-in-hand. In truth, one can only say this: what he actually *has* is, and only is, 'the possibility of taking hold of them and of having them when he wants to'. Here, again by analogy, it will be said that knowing is something other than a vague capacity, and thus something other than a purely indeterminate *dunamis*. Knowing is either *having in hand* knowledge that one has acquired and making real use of it, or having the *actual power* of taking hold of this knowledge because one already has it *under the hand*, exactly as the owner of the doves in the dovecote has the *determinate* possibility to take hold of them" (Rodrigo 2011: 10).

what we might call a temporal retention of acquisitions or, more simply, an aptitude" (*ivi*, 11).

According to Rodrigo, this also explains the complex and contentious passage (*Nic. Eth., V, 1, 1129a, 14-17*) in which Aristotle claims that no action contrary to a habit can arise from it. *Dunamis* is always a potentiality of two contraries because it is still undetermined, while "a *hexis* that produces a certain effect cannot also produce contrary effects: for example, on the basis of health one cannot produce things contrary to health, but only healthy things" (*Nic. Eth., V, 1, 1129 a 14-17*). What Peirce has made very clear, is that habit is not a pure possibility: it does not fall within the domain of firstness in the least. For possibility cannot determine the character of the action to which it may give rise. We are in the presence of two different sorts of generality here, as Peirce grasps so clearly. At this stage we can examine the question even more precisely. While a potentiality may be a potentiality of two contraries, a habit cannot. Peirce succeeds in defining the negative generality inherent in firstness by having recourse to the concept of vagueness, to which the principle of contradiction indeed does not apply. On the contrary, habit is general insofar as the principle of excluded middle does not apply: "The *general* might be defined as that to which the principle of excluded middle does not apply. […] The *vague* might be defined as that to which the principle of contradiction does not apply" (CP 5.505, 1905). So second potentiality suitably captures the feature which knowledge shares with habit. Why? With Peirce one can understand the argument even more fully. Because knowledge interacts with its object in a habitual way, i.e. as a second potentiality that can be actualised in a specific given condition. For Peirce, knowledge and habit work in the same way, and this perspective is so important to the pragmatist approach that it may go undetected.

Peirce uses an example to define the habitual possession of knowledge that is so reminiscent of Aristotle and Aquinas, who had used the example of the knowledge of grammar in his commentary on *De Anima* (*Sententia, II, lectio 1*), that it cannot go unnoticed.

Moreover, he takes up his own example of the knowledge of Greek, which I have already referred to, this time changing the language:

> When I say that I know the French language, I do not mean that as long as I know it I have all the words which compose it in my mind, or a single one of them. But only that when I think of an object, the French word for it will occur to me, and that when a French word is brought to my attention I shall think of the object it signifies. (W3: 75)

The approach Peirce takes links knowledge and habit even more clearly, because he places this relationship at the basis of his pragmatic maxim. What, then, is the difference between the *habitualiter* possession of knowledge and its opposite? Knowledge, like habit, sets up a relation that is structured in a certain way and produces effects that are different from those of not possessing such knowledge. Indeed, for Peirce, the process of learning means acquire habit which will make one acts in a certain way: "[t]o learn is to acquire habit" (NEM4: 142). Let us keep to Peirce's example. Knowing or not knowing a language is a very simple example of what this idea of knowledge entails. If I am on the metro in Paris and I am approaching a stop and I hear the message "*attention à la marche en descendant du train, prochaine sortie à gauche*", I have a much better chance that my knowledge of French will lead me to approach the left side of the train in advance and not stumble as soon as I get off.[85] Beliefs work in a similar way and analysing them will lead me to much broader conclusions.

4.2 Meaning and Belief

The essential notions in Peirce's pragmatism, which also link his thought to semiotics, are meaning and belief. It is hard work to gather all of the literature on this topic, since it is so

[85] This approach is really a common sense one, but it also underlies semiotic interpretation, for example. The fact of possessing a certain set of previous notions will lead me to interpret a certain phenomenon (say, a complex one such as a film) in a different – and in this case more complex – way by noticing more relations than I would if I did not possess such notions (say, knowledge of other films by the same author; allowing me to notice intertextual references). It is what Eco is semiotically referring to with his concept of encyclopaedic competence (see especially *The Role of the Reader*, Eco, 1979).

vast (Aliseda 2016; Fisch 1954; Kilpinen 2015; Queiroz and Merrell 2006; Rosenthal 1982; Shapiro 1973; Tiercelin 1989).[86] Nonetheless, I have decided to deal with these issues at this stage of my research for a variety of reasons.

The connection between meaning, belief and habits has been investigated to such an extent that, although there are still many interesting passages in Peirce's work to be analysed, it is difficult to find arguments in the literature which could disprove the claim that habit is the grounding principle for meaning and belief. However, having examined an extensive body of writing, what interests me is the partiality of scholars' points of view. Since these are the most widely investigated concepts, in the articles in which they are referenced they are used to demonstrate other aspects of Peircean thought or to draw comparisons with contemporary theories. Usually, it is taken for granted that the concepts pertaining to mental life are of the nature of habit. For this reason, I address some of these questions concerning cognition now, as a consequence of the main thesis developed in the first part of my work, in order to shed new light on the relation between habit and the concepts that make up our mental life. Within this context, some contemporary problems involving the same concepts will be examined. Peircean literature – especially the more recent one that can rely on a more systematic body of texts and on the scholarly work carried out over the last century – has made a lot of progress in connecting Peircean ideas to the main contemporary debates in the field of cognition. In this way, of course, a broader theoretical perspective can be achieved, at the expense of an in-depth analysis of the American philosopher's complex arguments.

The importance given to habit is so evident that we can encounter some particularly broad definitions, in which the relationship between habit and cognition is considered the starting point for subsequent analyses. Thus, for example, in light of the fundamental role that belief plays in the pragmatic maxim, Legg and Black state that "habit is the *ur-ingredient* of mental life. This derives from the origins of pragmatism in discussions of Alexander

[86] I will refer specifically to Aliseda and Tiercelin for some interesting insights into habits and beliefs, Fisch's unsurpassed work on the genealogy of Pragmatism, Queiroz for his work on the semiotic perspective, and the pioneering work on meaning by Rosenthal and Shapiro.

Bain's naturalistic claim that a belief may be understood solely as a habit, from which, Peirce remarked, all pragmatism follows as a mere corollary" (Legg & Black, 2020: 6).[87] Similarly, Määttänen, who interestingly defines habit as a vehicle of cognition (Määttänen, 2009), states that "[t]hinking is anticipation of action, beliefs are habits of action, and also meanings are habits of action" (Määttänen, 2015: 35). He uses two well-known definitions by Peirce: on the one hand, "a deliberate, or self-controlled habit is precisely a belief" (CP 5.480, 1907); on the other, "what a thing means is simply what habits it involves" (W3: 265). Given my aim of drawing from Peirce's considerations some elements for a wide-ranging and original theory of habit, my task is – in the first instance – to deepen what is taken for granted in Peircean literature, but which in the extensive debate on the concept of habit appears to constitute an intricate framework.

Let us return to Peirce's argument about knowledge and the example of a language, where he establishes a connection with the concept of belief. For Peirce, the thinking process is inferential. Indeed, "an inference is the process by which one belief determines another. But a belief is itself a habit of the mind by virtue of which one idea gives rise to another" (W3: 75). Following this, Peirce uses the case of knowledge of a language as an explanatory illustration: knowledge is not always present in the mind; rather, when it is recalled by some circumstance, its function is to prompt a future thought (the thought – this time singular – of a specific word, the meaning of which can in turn give rise to an action or subsequent thoughts). On this premise, Peirce then establishes an equation between knowledge and belief:

[87] I am quoting Peirce's definition from a passage in which he recalls the discussions that took place in the Metaphysical Club in Cambridge in the 1870s – and from which he drew the inspiration for the first formulation of his pragmatic maxim – and especially the importance that the members of the club assigned to Bain's definition of belief: "he often urged the importance of applying Bain's definition of belief, as 'that upon which a man is prepared to act'. From this definition, pragmatism is scarce more then a corollary; so that I am disposed to think of him as the grandfather of pragmatism" (EP2: 399).

> What is true of knowledge is equally true of belief, since the truth or falsehood of the cognition does not alter its character in this respect. I believe that prussic acid is poison, and always have believed it. This does not mean that I have always had the idea of prussic acid in my mind, but only that on the proper occasion, on thinking of drinking it, for example, the idea of poison and all the other ideas that that idea would bring up, would arise in my mind. (W3: 75)

By appealing to the structure of habit, Peirce aims to merge the working pattern of belief with that of knowledge. As I have illustrated with regard to knowledge, the substantial premise is that these cognitive structures reside in the mind *habitualiter,* and Peirce makes it clear that a belief cannot be 'present to the mind' – phenomenologically – at all times. I have also already shown why a habit never presents itself phenomenologically, and indeed its centrality for human cognition – but also more broadly, as a general principle for living entities – consists precisely in the fact that it establishes a relation which leads to certain conclusions when called upon by a certain situation. Habit is a fundamental principle of energy conservation – a point I will return to in the next sections – but without the triadic relation established by habit, i.e. if habit were not a 'real' and efficient principle, it would be very difficult to imagine what the meaning of the proposition "I believe that prussic acid is poison", or "I know French", might be. Obviously, the argument intertwines with and supports the acceptance of the pragmatic maxim, which would otherwise be flawed.

Besides being triadic, beliefs of course are also general. A belief does not consist in a specific occurrence, but appeals to a general rule that governs the subsequent, singular reaction – its actualisation. A belief therefore 'mediates' between a general regularity leading to a subsequent belief concerning a specific situation (that particular glass containing the acid), until it resolves itself into an actuality (e.g., taking the glass away from my mouth), which does not exhaust its generality of course, but from which it is possible to go back to the 'original' belief. Peirce concludes: "I have no belief that prussic acid is poisonous unless when the particular occasion comes up, I am led to the further belief that that particular acid

is poisonous; and unless I am further led to the belief that it is a thing to avoid drinking" (W3: 76).

Another important topic, which I touched on earlier when discussing the process that develops from knowledge, is how distinct beliefs differ – or, better still, what implications may be drawn from having or not having a particular belief. To emphasise the significance of this relationship, Peirce explains why the distinction between one belief and another can be established through the very definitions by which he makes the belief-habit overlap explicit. Diverse modes of action result from different beliefs (Peirce, it is now clear, wishes to avoid reducing the difference in meaning to individual instances). This is what he refers to as "the conceivably practical bearings" in the initial formulation of the maxim, as we will see in a moment.[88] Peirce discusses this topic for the first time in "How to Make Our Ideas Clear", one of the famous 1877-78 series of essays for the *Popular Science Monthly*, named *Illustrations of the Logic of Science*. He returns to it in a manuscript on reasoning written twenty years later:

> The essence of belief is the establishment of a habit, and different beliefs are distinguished by the different modes of action to which they give rise. If beliefs do not differ in this respect, if they appease the same doubt by producing the same rule of action, then no mere differences in the manner of consciousness of them can make them different beliefs, any more than playing a tune in different keys is playing different tunes. (W3: 264)
>
> A *Belief is* a state of mind of the nature of a habit, of which the person is aware, and which, if he acts deliberately on a suitable occasion, would induce him to act in a way different from what he might act in the absence of such habit. Thus, if a man *believes* a straight line to be the shortest distance between two points, then in case he wishes to proceed by the shortest way from one point to another, and thinks he can move in a

[88] In his mature writings Peirce will consider this early formulation inadequate, precisely because it might lead his theory to be misinterpreted: it might be taken to suggest that the meaning of a belief can be found in the practical action to which it has given rise (R873: 35).

> straight line, he will endeavor to do so. If a man really believes that alcohol is injurious to him, and does not choose to injure himself, but still drinks for the sake of the momentary satisfaction, then he is not acting deliberately. But a habit of which we are not aware, or with which we are not deliberately satisfied, is not a belief. An act of consciousness in which a person thinks he recognizes a belief is called a *judgment.* The expression of a judgment is called in logic a *proposition.* (EP2: 12)

Within the horizon of Peircean theory, habit's conceptual mediating role between belief and meaning succeeds in explaining, from a pragmatist perspective, why there is no difference between two beliefs that imply the same habit, and thus – in given circumstances – also the same effects. Nevertheless, further investigation is required. For when I shared the first drafts of this part of my work, I was repeatedly posed the question – mainly, but not exclusively, by scholars with an analytical background – of how, in my view, Peircean theory can explain the problem of acting contrary to one's beliefs, as in Schwitzgebel's paper (2010), "Acting Contrary to Our Professed Beliefs, or The Gulf Between Occurrent Judgment and Dispositional Belief". In these scholars' opinion, the Peircean example is simplistic and reductive: it is not enough to say that we are dealing with two different beliefs when we observe two different behaviours. The problem is actually a central one, and indeed Paolucci too, in his book *Cognitive Semiotics*, engages with Schwitzgebel's paper to uphold his position.

The issue arises from a very common scenario in which a person is assigned a belief *p*, which is expressed in a single judgment, yet his general behaviour (dispositional) in certain situations betrays beliefs that are opposed to those declared. For Paolucci the question is misplaced, in the sense that it is considered a problem only if one understands beliefs as propositional attitudes:

> All of these cases are problematic from the standpoint of a theory that conceives beliefs in terms of propositional attitudes, like analytical philosophy does, but they are quite unsurprising and unchallenging for a pragmatist approach grounded on cognitive

> semiotics. Since the meaning of a belief depends on how it might lead us to act, its meaning is not thought as content conceived in truth conditions nor in terms of an attitude towards a propositional content. On the contrary, the meaning of a belief lies in the habit that it produces, and all the rest is only the way you try to represent yourself by bringing forth a world that can be used in order to lie during participatory sense-making (Paolucci, 2021: 73).

I agree with Paolucci's solution, and I agree with his method and attitude, but I will try to respond to further arguments that can be made against Peirce's theory, involving the habit model that I am working on. This point will lead me straight to developing a model of habit's relational structure, particularly in regard to actions, which I will offer as one of the outcomes of my thesis. An unequivocal rejection of the Peircean proposal betrays certain beliefs that are neatly summarized by Ryle: "The world does not contain, over and above what exists and happens, some other things which are mere would-be things and could-be happenings" (Ryle, 2009: 103). If we focus on actual behaviour and propositional beliefs, it is hard to find a solution to this problem.

In his defence of a dispositional theory of action (Bourdieu, 1998: 60-64), Bourdieu makes a few interesting points. One solution might be to separate beliefs and knowledge as dispositions from the concept of law, since they admit counterexamples. Peirce had already anticipated this idea to some extent, by showing the difference between habits and rigid laws. Another solution is to soften the idea by admitting that beliefs function under generically normal conditions and circumstances: that is, for there to be a disposition to actualise, a circumstance must occur that actually brings that precise disposition into play under normal conditions, i.e. without too many divergences and impediments. Of course, in this case too the centrality that Peirce assigns to the circumstance and which I have emphasised in my work helps to envisage this possible solution.

A Peircean solution, however, is to reverse this perspective altogether. The starting point is not to assign a belief to a subject. A habit as 'would-be' – if we admit its efficacy –

does not need to be actualised in order to be justified. Certain conditions leading to actualisation may never occur. The general relation brought into being by the principle of habit depends neither on the subject nor on the circumstance nor on the 'response', on its actualisation. For this reason, we cannot ascribe a belief to a subject if it does not refer to a general conduct of action on the basis of which the subject is ready to act. In Ryle's perspective, it is a serious mistake to refer to an "occult nature" behind the meaning of actuality, because such occult entities do not exist. But, thanks to the distinction we have examined between existence and reality, it is precisely this occult nature that is the principle we must seek in actual occurrences, which of course represent the original source. In Peirce's words: "a man does not necessarily believe what he thinks he believes. He only believes what he deliberately adopts and is ready to make a habit of conducts" (R4: 43); "[w]e have an occult nature of which and of its contents we can only judge by the conduct that it determines, and by phenomena of that conduct" (EP 2: 347).

This establishes the framework for the prospect of employing the structure of habit as a vital instrument to analyse and reconstruct the 'genealogy' of certain beliefs and attitudes. Taking Peirce's definition as a starting point, the notion of belief, as noted above, leads us to the pragmatic maxim's basic principle, and therefore to an examination of what 'the meaning of concepts' represents for Peirce. After having shown which properties of habit imply belief, we will briefly analyse on what basis meaning implies habit. In 1873, some years before the first formulation of the pragmatic maxim, Peirce already maintained that the meaning of beliefs lies in the conclusions, in their reference to future:

> The intellectual significance of beliefs lies wholly in the conclusions which may be drawn from them, and ultimately in their effects upon our conduct. […] It appears then that the intellectual significance of all thought ultimately lies in its effect upon our actions. […] Or in other words the rationality of thought lies in its reference to a possible future. (W3: 108)

In the 1878 article "How to Make Our Ideas Clear", Peirce newly expresses his view through what is considered to be the first original variant of the maxim, which consists in a "rule for attaining the third grade of clearness of apprehension": "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object" (W 3:266).

Evidently, this maxim, which seeks to clarify the meaning of concepts, is inextricably linked to the structure of beliefs. It is on this notion that the main critique formulated by pragmatism and Peirce's strenuous defence rest, as an accurate reconstruction of all the forms of the pragmatic maxim clearly reveals (Schmidt 2020). The first formulation may have seemed overly focused on practical effects (hence James' and other scholars' incorrect interpretations, as well as the accusations of behaviourism that I discussed in the first chapter); but this criticism is easily refuted in light of the structure of the principle of habit that supports Peirce's cognitive theory. As Schmidt reports (2020: 583), Peirce returned to his youthful considerations many times, and his remarks are all more or less underlined by the same notion, i.e. that while the meaning of beliefs was the starting point, the formulation focused too much on practical effects:

> In the ardor of youth, I thought that that was all there is in Belief; which led to the doctrine that the meaning of a conception consists in its possible practical consequences, — a doctrine called *pragmatism*, which has found not a few strong and able defenders.… But at present, while I still insist that the meaning of anything lies in what it may bring to pass, I can no longer admit that practical action is a final end. (R873: 35)

The doctrine aspires to clarify the meanings of concepts, which are general. Peirce, depending on the context, dwells on the meaning of beliefs, symbols (for Peirce, words, propositions, and arguments are symbols, general signs that can be interpreted on the basis of habit), and intellectual conceptions. The *trait d'union* consists in their generality, and consequently in the fact that habit is the only structure that possesses these characteristics and can explain their meaning and functioning:

> The *meaning* of a proposition is what the conscious habit of the man will be who believes in that proposition. Consequently, when a man sees prediction after prediction of a given hypothesis turning out true, he irresistibly begins to take a habit of expecting that sort of thing; and he not only takes the habit but approves of it; for he sees no objection to regarding those predictions as constituting a sample of all the consequences that ever could be deduced from the hypothesis. (R 873:24–25, 1901)

That is why he admits that the "rationality of thought lies in its reference to a possible future". The generality and temporality of habit (its reference to possible future situations, through the idea of expectations) help us to analyse this crucial aspect. For the elaborate argument that Peirce develops in defence of his realism (of his particular kind of realism) is perfectly consistent with his acceptance of the pragmatist principle. Not only that, but what I have sketched out in the sections on the properties of the habit principle completes this theoretical framework.

One cannot consider oneself a pragmatist, in the sense understood and formulated by Peirce, without accepting certain non-negotiable conditions. One of these is the twofold relationship that habits have with reality and with generality. Habit represents – constitutively, as we know well – the middle term connecting the two variables of generality and reality, establishing and enabling the relationship that supports the effectiveness of the pragmatic maxim:

> There are, in a Pragmaticistical sense, Real habits (which really *would* produce effects), under circumstances that may not happen to get actualized, and are thus Real generals); and their insistence upon interpreting all hypostatic abstractions in terms of what they *would* or *might* (not actually *will*) come to in the concrete (EP2: 450)

Moreover, the literature on which every Peircean scholar relies does not fail to emphasise and analyse the role of habit as the full accomplishment of the meaning of a concept

(semiotically referred to by Peirce as the *Ultimate Logical Interpretant*),[89] but, as shown so far, this is only a specific methodological juncture in a much broader theory which must be taken into account. Kilpinen (Kilpinen, 2015: 157-173) strongly insists on Peirce's efforts to reject with every possible argument the claim that meaning can fit or otherwise flow into existential facts. Only an idea of habit in the dispositional sense[90] can be derived from – and at the same time support – Peirce's words. Despite certain inaccuracies that Peirce identified in the interpretation provided by his youthful theory, the main features of his foundational principles were already clear, e.g. in "How to Make Our Ideas Clear":

> To develop its meaning, we have, therefore, simply to determine what habits it produces, for what a thing means is simply what habits it involves. Now, the identity of a habit depends on how it might lead us to act, not merely under such circumstances as are likely to arise, but under such as might possibly occur, no matter how improbable they may be. (W3: 265)

Peirce clearly insists that the generality and conditionality – the 'would be' – of habit is neither affected nor conditioned by actual circumstances, which may be purely hypothetical. Nevertheless, this does not alter the fact that what will happen 'will be' the product of a conjunction between certain specific circumstances and specific individuals (see quote 2 below). Furthermore, Peirce reviewed his article fifteen years later in the hope of including it as a chapter in his *Grand Logic* of 1893 (which was never brought into print) and added

[89] "I have now outlined my own form of pragmatism; but there are other slightly different ways of regarding what is practically the same method of attaining vitally distinct conceptions, from which I should protest from the depths of my soul against being separated. In the first place, there is the pragmatism of James, whose definition differs from mine only in that he does not restrict the 'meaning,' that is, the ultimate logical interpretant, as I do, to a habit, but allows percepts, that is, complex feelings endowed with compulsiveness, to be such. If he is willing to do this, I do not quite see how he need give any room at all to habit" (EP2: 419). The topic is extensively discussed in Bergman, 2016; Hookway, 2011; Nöth, 2016; Santaella, 2016.

[90] And we add in the light of this work: at least dispositional, since the structure of habit is broader and multifaceted.

immediately afterwards “no matter how improbable they may be”: “No matter if contrary to all previous experience” (CP 5.400).

In this way Peirce was already clearly approaching the twofold direction I have outlined. On the one hand, as I argue in the first chapter, he noted that repetition, while fundamental to the acquisition of a habit, is not the principle on which the habit bases its future applicability. On the other hand, he stressed that the past is only a collection of actualities on which it is not possible to fully rely in order to build expectations, but above all that the instances that have occurred can in no way exhaust the meaning of what is general. In his mature writings, Peirce returns to the concept so many times that I will only add the few examples which, in my opinion, most explicitly illustrate the points I have emphasised:

> 1) Intellectual concepts, however, – the only sign-burdens that are properly denominated “concepts,” – essentially carry some implication concerning the general behavior either of some conscious being or of some inanimate object, and so convey more, not merely than any feeling, but more, too, than any existential fact, namely, the “would-acts” of habitual behavior; and no agglomeration of actual happenings can ever completely fill up the meaning of a “would be.” (EP2: 401-402)

> 2) But that the *total* meaning of the predication of an intellectual concept consists in affirming that, under all conceivable circumstances of a given kind, the subject of the predication would (or would not) behave in a certain way, – that is, that it either would, or would not, be true that under given experiential circumstances (or under a given proportion of them, taken *as they would occur* in experience) certain facts would exist, – *that* proposition I take to be the kernel of pragmatism. More simply stated, the whole meaning of an intellectual predicate is that certain kinds of events would happen, once in so often, in the course of experience, under certain kinds of existential circumstances. (EP2: 402)

> 3)Now after an examination of all variants of mental phenomena, the only ones I have been able to find that possess the requisite generality to interpret concepts and which fulfill the other conditions [of definition] are habits. (EP2: 431)

I will only add a few remarks because all the facets that I have tried to isolate and analyse converge in pragmatism (which is why they are not easy to unravel). In 1), in particular, we find that it is not every single action, taken in isolation, that is conditioned by the 'would-be', but the tendencies of behaviour, the 'would-acts'. In 2) we find all the attention that Peirce devotes to explaining the role of circumstances as one of the cornerstones of habit, and in 3), as is already evident in the other passages, that no other concept apart from habit can entail the generality he needs to construct his idea of meaning. In the same period (1905-07), in which Peirce returns again and again to his idea of Pragmatism and its developments[91], he adds an interesting reference to the idea of previous conditions: "The full meaning of a conceptually grounded predicate implies certain types of events that would likely occur during the course of experience, according to a certain set of antecedent conditions" (R318). This provides a foothold allowing me to introduce my last section, where I wish to draw some conclusions that go beyond the proposal of Peircean cognitive theory, in order to directly engage with the central role that the concept of habit plays in cognition. For Peirce, reasoning

[91] In keeping with his terminological ethics, in order to move away from the misinterpretations of his pragmatic maxim, Peirce resumed his reflections of thirty years earlier by coining the term Pragmaticism: "Since I have employed the word *Pragmaticism,* and shall have occasion to use it once more, it may perhaps be well to explain it. About forty years ago, my studies of Berkeley, Kant, and others led me, after convincing myself that all thinking is performed in Signs, and that meditation takes the form of a dialogue, so that it is proper to speak of the "meaning" of a concept, to conclude that to acquire full mastery of that meaning it is requisite, in the first place, to learn to recognize the concept under every disguise, through extensive familiarity with instances of it. But this, after all, does not imply any true understanding of it; so that it is further requisite that we should make an abstract logical analysis of it into its ultimate elements, or as complete an analysis as we can compass. But, even so, we may still be without any living comprehension of it; and the only way to complete our knowledge of its nature is to discover and recognize just what general habits of conduct a belief in the truth of the concept (of any conceivable subject, and under any conceivable circumstances) would reasonably develop; that is to say, what habits would ultimately result from a sufficient consideration of such truth" (EP2: 447-48).

is processual and based on previous beliefs: "the process of acquiring a belief, and that consciously as a consequence from a previous belief, is what, in this essay, will be meant by Reasoning" (R681:28). I will show that the process of reasoning and the idea of previous knowledge are not only a key point in Peirce's cognitive theory, but encompass the deep implications of the principle of habit which I am outlining.

4.3 Thought and Reasoning

Reasoning is based on an inquiry process, which is concluded once a belief has been reached. on the basis of that belief further arguments will be developed. Every inquiry, aiming to establish a belief arises from the irritation produced by the state of doubt, without which there would be no inquiry at all. The establishment of a belief is the only end of all processes of inquiry, and doubt is the only trigger that gives rise to it. When we attain a belief, in relation to a given object, which we hold to be true (for there is no difference between a true belief and one we hold to be true), we are fully satisfied and have no need to establish a new belief and give rise to inquiry again.

From the Peircean structure of inquiry and reasoning, one can draw an interesting perspective that places habit at the centre of the law of thought. I would judge this significance of habits neither negatively, as an obstacle to rationality, nor positively, as a tool on which to rely to develop higher-order reasoning. More simply, it is the basic prerequisite for reasoning, a fundamental element without which we are unable to become aware of the origin of our own thoughts.[92] In the last part of this chapter, I will compare what can be drawn from Peirce's theory to some other views that will help me to complete the conceptual framework, on the basis of which a new principle can be hypothesised. We must therefore analyse and highlight certain aspects of the mechanism of reasoning for Peirce. The first step

[92] For an in-depth analysis of the issue, focusing on the implications of the idea of belief and certainty, enriched by a comparison with other authors such as Wittgenstein, I will refer to Fabbrichesi (2014: 81-92).

to analyse is the concept that triggers the thought process, which we know for Peirce consists in attaining a belief:

> We have there found that the action of thought is excited by the irritation of doubt, and ceases when belief is attained; so that the production of belief is the sole function of thought. (W3: 261)
>
> The only justification for reasoning is that it settles doubts, and when doubt finally ceases, no matter how, the end of reasoning is attained. (W3: 15)

So inquiry is the precondition of thought, and it has a single linear structure, from doubt to belief, consisting of a single pattern that starts with an appeasing of the irritation caused by doubt and ends with the attainment of quiet through to the acquisition of a belief. Doubt and belief represent two distinct phases of thought with opposing outcomes. A genuine doubt is a spring that activates the thought process; a belief, on the other hand, sets it in rest.[93] Therefore, a belief represents a pause in the thinking process. It is feasible to set new reasoning in motion from a belief that has been achieved, making it a point of arrival and departure, a time of rest within the process of thought (W3: 263). As a result, it is impossible to 'put aside' an established belief in order to begin a new inquiry for a deeper and more genuine belief, because thought ends with the establishment of a belief, regardless of whether it is true or whether it only seems true to us.

Our analysis of belief and habit suggests some initial remarks. It will come as no surprise, first of all, that the distinction between doubt and belief represents a reproduction – in Peirce's cognitive model – of the relationship between habit and privation. Doubt is that state of absence which produces irritation and triggers the process in which belief-habit is obtained. Moreover, Peirce himself makes it clear that privation consists in the opposite of habit and that doubt represents a state of privation. As Pareyson (2005: 158) correctly notes,

[93] A belief "[f]irst, it is something that we are aware of; second, it appeases the irritation of doubt; and, third, it involves the establishment in our nature of a rule of action, or, say for short, a habit" (W3: 263).

this opposition is encapsulated in the very structure of the concept, codified by Aristotle who states in the *Metaphysics* (*1055a33*) that habit and privation are distinct opposites. Peirce is aware of the distinction: "Every privation is a certain negation of the opposite habit, which we designate by the word *absence*" (W2: 109). He leads the distinction back to the cognitive level: "Doubt is of an altogether contrary genus. It is not a habit, but the privation of a habit. Now a privation of a habit, in order to be anything at all, must be a condition of erratic activity that in some way must get superseded by a habit" (EP2: 337).

The second point and more crucial point, which will lead me to the next section, is that reasoning always starts from previous knowledge. As Peirce states, "to accept propositions which seem perfectly evident to us is a thing which, whether it be logical or illogical, we cannot help doing" (W3: 259). That is, reasoning and the inferential chain of thought rest on acquired habits. Where there is no habit, there is a state of doubt and privation, which does not lead to the formation of habits of action (and indeed is not capable of leading to action at all), but corresponds to the contrary state of indecision. This has great implications which involve habit and cognition *tout court*.

The first point to consider is the pervasive nature of this dichotomy between doubt and belief, which for Peirce underlies every step in human agency. If the decision-making process is not called into question, this means that there is an established habit. This applies both to the expression of value judgements that are always based on previous assumptions (which therefore betray a habit at work) and to every small decision in everyday life. Peirce is aware that his view – that a belief is present every time a decision is made without any questioning driven by doubt – is a strong one to argue, but the centrality of habit makes this process evident and functional. In "How to Make Our Ideas Clear" he gives a particularly effective example on which I wish to base the development of my argument:

> Doubt and Belief, as the words are commonly employed, relate to religious or other grave discussions. But here I use them to designate the starting of any question, no matter how small or how great, and the resolution of it. If, for instance, in a horse-car, I pull out

> my purse and find a five-cent nickel and five coppers, I decide, while my hand is going to the purse, in which way I will pay my fare. To call such a question Doubt, and my decision Belief, is certainly to use words very disproportionate to the occasion. To speak of such a doubt as causing an irritation which needs to be appeased, suggests a temper which is uncomfortable to the verge of insanity. Yet, looking at the matter minutely, it must be admitted that, if there is the least hesitation as to whether I shall pay the five coppers or the nickel (as there will be sure to be, unless I act from some previously contracted habit in the matter), though irritation is too strong a word, yet I am excited to such small mental activity as may be necessary to deciding how I shall act. (W3: 261-62)

Therefore, if we feel the slightest hesitation when faced even with a simple decision such as what coin we should use to make a payment, this means that we have set up a short process to establish a belief. On the contrary, and this is perhaps even more important, whenever this process does not take place and we pay without the slightest doubt, it means that we are faced with an established belief – that is, with the structure of the habit that makes us act in that way and not in any other possible way. It may not seem like it, but this particular case actually raises some central questions. For James, with whom we will deal in the next section, "[t]here is no more miserable human being than one in whom nothing is habitual but indecision" (James 1877: 447).

Reasoning therefore begins where we have some previous knowledge on which we rely and which we do not question. The functioning of the doubt-belief model puts forward some new elements. We have seen that at every moment of the process reasoning rests on certain assumptions that cannot be doubted (they are neither a limit nor an aid, they are present and necessary). The function of habit at this stage is therefore to remove the irritation produced by doubt, which represents the very precondition for reasoning and the formulation of a judgement. This would not be possible if we questioned every step in our mental activity.

On the other hand, the argumentation we are putting forward derives from certain principles that Peirce had already identified in his famous early essays, the well-known 'anti-Cartesian' essays, in which he had identified certain incapacities peculiar to the human being. In these essays published in 1868, Peirce had already shown that it is impossible to begin an investigation of the principles of knowing with universal doubt, by setting aside all our previous knowledge:

> We cannot begin with complete doubt. We must begin with all the prejudices which we actually have when we enter upon the study of philosophy. These prejudices are not to be dispelled by a maxim, for they are things which it does not occur to us *can* be questioned. Hence this initial scepticism will be a mere self-deception, and not real doubt; and no one who follows the Cartesian method will ever be satisfied until he has formally recovered all those beliefs which in form he has given up. (W2: 212)

All reasoning is based on certain implicit propositions which we have no reason to doubt. This is coupled with the incapacity that characterises Peirce's anti-intuitionism: "We have no power of Intuition, but every cognition is determined logically by previous cognitions" (W2: 213). This incapacity, combined with the fact that each step in our reasoning is based on previous knowledge, makes it difficult for us to recognise which are the premises and which the conclusions in our sequence of thought. This is a pivotal point which shows the enormous influence of the principle of habit on thinking, to which I shall return in the next section:

> This certainly seems to show that it is not always very easy to distinguish between a premise and a conclusion, that we have no infallible power of doing so, and that in fact our only security in difficult cases is in some signs from which we can infer that a given fact must have been seen or must have been inferred. (W2: 196)

To support my argument, I must add one further 'difficulty' that our thinking faces on a regular basis. We know that the "[r]easoning is a process in which the reasoner is aware that one judgement, the conclusion, is determined by another judgement or judgements, the

premises" (DPP2: 426). This is the definition of conscious and rational reasoning, in which we critically recognise the structure of our premises and the origin of our assumptions. But Peirce himself acknowledges that very often this is not how our thinking works:

> *Reasoning* is the process by which we attain a belief which we regard as the result of previous knowledge. Some beliefs are results of other knowledge without the believer suspecting it. (EP2: 11)
>
> But while there is no independent instinctive sense of logicality, it is impossible to deny that there are instinctive ways of forming opinions, especially if we continue to take instinct in that broad sense in which it will include all habits of which we are not prepared to render an account, or in one word all that goes by the name of the rule of thumb. In applying such instincts, such habits of unknown parentage, we do reason a little. But that little reasoning is based on some axiom or impression of opinion which we adopt uncritically, without any assurance that it is rational. (CP 2.175, 1902)

For Peirce "we do reason a little" when there is no rational critic of our habits of thought. It is quite usual for many of our beliefs to result from previously acquired knowledge of which we have lost all trace, or which has passed below the level of our critical consciousness. This applies to common knowledge as well as to our own personal beliefs. That is, on the one hand we rely without realising it on the vast range of knowledge found across our community, of which we do not know how to explain the origin and functioning but which we regard as the cognitive basis of much of our daily reasoning – as some contemporary research in cognitive science shows (Sloman and Fernbach 2017). On the other hand, in the formation of what we believe to be our inner personal beliefs, we often fail to reconstruct the steps by which they have taken root in our minds and on which we are ready to act in future circumstances.[94]

[94] From our analysis of the correlation between habit and expectation, it is also easy to bring together the two extremes of the cognitive process. If on the one hand we have a set of beliefs-habits on which we base our reasoning, on the other hand we will have as the conclusion of the process a habit-expectation that we accept unconditionally, because on it we will be ready to act in certain circumstances: "What is a conclusion of

Therefore, two fundamental points emerge from this analysis, which deserve to be further investigated. The first is that in the process of reasoning it is very difficult to recognise what is a premise and what is a conclusion (starting from the fact that we do not have the capacity for intuition, and therefore find it difficult to recognise what comes from previous knowledge and what from an object in itself).

Secondly, every individual judgement/action starts from a specific stage of reasoning,[95] in which it is impossible to "think otherwise" (EP2: 337) (indeed, at any given moment only one possibility is given, not all the possibilities that existed in the past, as can also be seen from the discussion concerning the modality and the ontological position of habit). Hence, at every moment in our intellectual life there are only two conditions, either we are in a state of doubt, which requires a critical examination in search for a belief, or we are in a stage of our mental life in which we rely on a whole series of habits that we take for granted. Moreover, it is just as difficult to distinguish whether or not we have subjected to criticism a certain process that has led us to establish a certain belief. Building upon these remarks, I will formulate a hypothesis about a new 'double law of habit' within a cognitive framework.

reasoning? It is a general idea to which at the suggestion of certain facts a certain general habit of reason has induced us to believe that a realization belongs. How slight is the difference between this and the description of an expectation! Yet, if we look closer, we can discern that the resemblance is nearer yet. For when we reason, we deliberately approve our conclusion. We look upon it as subject to criticism. We say to it: 'Good! You will stand the fire, and come out of it with honour.' Thus more than half an expectation enters into it as of its essence" (CP 2.146, 1902).

[95] Notwithstanding the many differences when it comes to the role assigned to habit, the influence of empiricism is detectable throughout Peirce's thought (Wilson 2016). As Carlisle notes with regard to this point, "[i]n Hume's philosophy, 'prejudice' can no longer be a derogatory term: all judgement rests on pre-judgment or presumption, and it is habit that provides the 'before' from which we infer an 'after'. This inference might not be rational, but it is simply the way we naturally think about the world" (Carlisle, 2014: 52).

4.4 A new double law of habit?

Peirce's perspective on the critical importance of habit in cognition might have a number of implications. We have seen how habit is embedded in certain structures in his cognitive theory; by combining some complementary points of view, we can now hypothesise a new law that ties habit and our cognitive processes together. I have briefly mentioned William James's position, which I will return to at length, together with Leon Dumont's insights, which make for interesting comparative reading. The starting point for James is to emphasise the positive aspect of what has been referred to as "the double law of habit"[96] and which the French philosopher and psychologist Dumont summarises using Ravaisson's famous definition: "la spontanéité augmente, la réceptivité diminue" (Dumont, 2019: 85).

Habit simplifies the process of achieving a purpose and diminishes the effort involved. For James, this ability is the main tool that allows human beings to achieve complete fulfilment, to avoid the miserable condition of indecision, to develop the faculties with which they are originally endowed:

> Man is born with a tendency to do more things than he has ready-made arrangements for in his nerve-centers. Most of the performances of other animals are automatic. In him, most of them must be the fruit of painful study. If practice did not make perfect, nor habit economize the expense of nervous and muscular energy, he would therefore be in a sorry plight (James 1887: 440)
>
> The more of the details of our daily life we can hand over to the infallible and effortless custody of automatism, the more our higher powers of mind will be set free for their own proper work. There is no more miserable human being than one in whom nothing is habitual but indecision, and for whom the lighting of every cigar, the drinking of every cup, the time of rising and going to bed every day, and the beginning of every bit of work, are subjects of express volitional deliberation. (James 1887: 447)

[96] I will refer to Piazza (2018: 171-183) and Sinclair (2019: 25-37) for an in-depth analysis of the origin and development of the "double law of habit".

This quote captures a fundamental and vulnerable point in James' thought. A first 'Peircean' critique that could be made of this argument is that it is not really possible to exploit the automatisms of thought to release 'higher functions', because habit is actually involved in every stage of thought, being the necessary condition behind our actual thoughts (as I showed previously starting from the very same quote): "In every stage of your excogitations, there is something of which you can only say, 'I cannot think otherwise'" (EP2: 337).

James himself demonstrates the ambiguous outcome that the habit leads to: it "*diminishes the conscious attention with which our actions are performed*" (James 1887: 441). Both James and Dumont clearly explain what the mechanism that constitutes the process giving rise to habitual action consists in. In a habitual action all the intermediate states leading from state A to state B act below the level of consciousness, so that "the whole chain rattles itself off as soon as A occurs, just as if A and the rest of the chain were fused into a continuous stream" (James 1887: 441). As Dumont puts it, the intermediate facts are thereby realized in us, from the standpoint of consciousness, as though they were realized in another person (Dumont 2019: 56). But what does this imply?

First and foremost, this mechanism offers a unique explanation for the concept of the unconscious, which is defined by habit's ability to suppress associative chains of thinking and the ego's faculty of self-inspection, which is only possible a posteriori. But what is most essential to note is that these same occurrences, even if they are habitual, can become conscious again if we give them enough deliberate attention.

Furthermore, the latter consequence leads to the formulation of a new 'double law of habit', pertaining to the 'suppression of intermediate states'. According to Dumont (2019: 93), "[C]'est à cause de cette suppression des faits intermédiaires que nous perdons si facilement de vue le procédé suivant lequel nous avons acquis nos connaissances, et la manière dont se sont formées nos associations d'idées, c'est- à-dire nos habitudes de pensée". Quoting Maine de Biran, Dumont acknowledges the benefits of this faculty in the same manner as James, but overcomes his naive perspective, which sees only the positive side of

acquiring habits in order to make place for 'higher' thoughts. Dumont maintains that this is also "une source fréquente d'erreurs et d'inexactitudes" (Dumont 2019: 93), as Maine de Biran had previously stated. As a result, the law of habit also entails replacing the result of an action with the process that led to that result. Again quoting Maine de Biran, Dumont says:

> Lorsqu'un raisonnement nous est devenu très-familier par une fréquente répétition, nous négligeons les opérations qui l'ont motivé dans l'origine, et, à force de les négliger ou de les traverser rapidement, nous finissons par les oublier, les méconnaître ou les considerer comme absolument inutiles. C'est là ce qui autorise tant d'*ellipses* dans les formes du raisonnement comme dans celles des discours usuel et familiar. (Dumont, 2019: 95)[97]

This is the typical mechanism that leads to much negligence in our reasoning, and which has always been, and still is, the main challenge that habit presents to our mind. The solution offered by Dumont is perhaps simplistic, yet very clear in its argumentation, and contains an obvious pragmatist echo:[98]

> Cependant quand il ne s'agit que d'habitudes et d'adaptations contractées par un individu dans le courant de son existence personnelle et depuis un temps peu éloigné, il est possible, avec un effort d'attention, de retrouver les termes intermédiaires, et de rétablir

[97] As Moran states regarding Husserl's concept of habit, habits operate "at the level of judgments and what Husserl calls 'convictions' (Überzeugungen). When I make a decision, this is not just an *atomic element* of my knowledge, but it actually affects my whole self. I become, as Husserl puts it, abidingly thus-and-so decided. For Husserl, these convictions attach themselves to the ego […]. Furthermore, what was decided can be returned to and *reactivated without having to run through the associated judgments of evidence*" (italics mine) (Moran 2011: 61).

[98] Peirce himself states: "According to the maxim of Pragmaticism, to say that determination affects our occult nature is to say that it is capable of affecting deliberate conduct; and since we are conscious of what we do deliberately, we are conscious *habitualiter* of whatever hides in the depths of our nature; and it is presumable (and *only* presumable, although curious instances are on record) that a sufficiently energetic effort of attention would bring it out" (EP2: 347-48).

> volontairement une série d'opérations dans toutes leurs complications primitives. (Dumont 2019: 95)

It is for this reason that the most difficult beliefs to undermine are those that circulate in a given culture and are culturally inherited. At this point, I can therefore try to formulate a 'second' and new double law of habit, according to which habit leads us to draw conclusions by proceeding directly and automatically from a thought A to a thought B, because we tend to lose track of all the intermediate steps. But this at the same time implies that, in order to bring intermediate facts to the surface of consciousness and critically investigate the premises that have led us to the conclusion of such an argument, it is necessary to apply a certain effort in terms of attention, which is inversely proportional to the degree of automatism of our inference.

The hypothesis presented in this section significantly echoes Peirce's stance, and a comparison of the two could reveal some essential elements for a theory of habitual cognition. The aspects I would like to highlight all revolve around the thorny issue, extensively discussed among habit theorists, regarding the relationship between habit and reasoning, and if habit has a positive or negative impact on rational thought. As I showed in the first chapter of my work, this is an aspect that divides the history of the philosophy of habit into two opposing trends. Certainly, the Peircean perspective from which I am drawing my hypotheses is not part of the tradition that considers habit to be a mere automatism that hinders rational thinking. At the same time, my work in this section focuses on a very specific point: in the wake of the rejection of dichotomies typical of pragmatist thought, I believe that a reversal of perspective can be made with respect to Peircean theory. From the work I am doing, it emerges that habit is a prerequisite for reasoning, a structure that we cannot dismiss. I therefore focus on the capacity and modalities of habit to influence thinking in various ways rather than on its positive or negative role.

The influence of habit on our mental processes can be broken down into the following points. The first concerns the basic conditions for reasoning. We always start from a certain

situation in which we find ourselves, in which we are 'immersed': a situation in which we accept (whether consciously or not) given prerequisites as necessary conditions for the development and growth of our thoughts. These cannot be questioned, at least at that given moment in time, all the more so because – as Peirce reminds us – no mental process can begin by universally questioning our previous knowledge. This leads us to recognise and admit that each stage of thought is influenced by certain previously acquired knowledge (as premises), and that therefore our mind is not given 'all possibilities', as if reasoning began from a *tabula rasa* to be filled in by choosing from an indefinite range of possibilities.

This structure also makes it particularly difficult for us to recognise what in our reasoning constitutes a premise and what a conclusion, all the more so if we analyse the role of habit in the "suppression of intermediate facts" of which Dumont and James speak. The premises on which reasoning is based are often left in the background, almost forgotten, and the chain of thought that has led us to such a belief is often abandoned, like Wittgenstein's ladder (*Tractatus*, 6.54). What we are left with are certain conclusions that we inappropriately mistake for premises.[99] However – and here I come to my last point – this does not rule out the possibility of tracing back the process with some effort and critically investigating the genealogy of our thoughts. Naturally, those thoughts that are more deeply rooted in us – because they are strongly present in our community, in our traditions – will be more difficult to investigate.

The question I was asking above directly pertains to the role of habit in human reasonableness. *Are habits a tool, then, or do they make us slaves? Are we the masters of our habits or are we governed by them?*

[99] As Viola (2020b: 23) perfectly points out, quoting a passage from Peirce from the very period in which he was discussing our "incapacities": "What is more, the mind is conceivable in processual terms, as a 'train of thought,' a continuous flux of signs. The continuous character of this process may cause a sort of optical illusion in us and deceive us into thinking that this or that concept rests on indubitable assumptions. But in truth, 'each age pushes back the boundary of reasoning and shows that what had been taken to be premises were in reality conclusions' (W2: 166)".

Commenting on the statement by Noë, "a habit-free existence would be robotic existence" (Noë, 2009: 118), Kilpinen (2015: 167) argues that we are not slaves to habit, but masters, and that it is through habit that our rationality is expressed. My position is somewhat different. I support Noë's position, because habits are a necessary condition to express our ability to reason, but I believe that the slave-master or ally-enemy dichotomy is untenable.

What I would like to emphasise from Peirce's standpoint is that the answer is that we are neither slaves nor masters. Peirce's position is a realist one[100], in the sense that in his view habits are an essential and unavoidable component of our reasoning and conduct, and attempting to eliminate or disclaim them is what truly enslaves us. We are neither masters – possessors – nor slaves; we must grasp how habits function in order to control them and gain a greater understanding of ourselves. We can regulate somehow habits by exercising self-control, as we will see in the final section. Both the principle of habit and the plasticity that characterises the human mind are anything but strict laws; instead, they are subject to change because of their structure, which is not entirely defined.

Nonetheless, the double law of habit concerning human cognition allows us to argue for an asymmetrical position. Habit plays a fundamental role in decision-making, as James argues, and relying on certain pre-established beliefs, even the most specific ones (as in Peirce's nickel example), facilitates many tasks in our daily lives. Peirce, however, makes a really sharp argument here: if we do not have the slightest hesitation in our reasoning process, this means that we are in the presence of a belief which we have not subjected to critical examination. And the more certainties of this kind we possess, the less energy we will need to spend in our decision-making process. At the same time, this condition inevitably reduces our ability to subject our own behaviour to criticism. I am not suggesting that Peirce praises a 'doubting' mind, or a life free of habits, but we must acknowledge the existence and influence of this structure on our thinking, this other 'double law of habit' if we wish to

[100] If we take realism both in the sense of its realism, something that has real effect in the world, and realist in the common sense.

understand both the functioning of the principle of habit and the process that gives rise to our actions and beliefs.

5. The human mode of being

The last part of my work aims at flashing out a workable theory on selfhood, extending the themes carried out in chapter four on cognition. That is, to examine what consequences the theory of habit set out in the first part of the thesis entails for the idea of the self. The work I am presenting does not aim at drawing a theory of subjectivity out of Peircean thought, nor at investigating whether the formulation of the human being as a creature of habit is the most appropriate anthropologic description in general. Rather, it aims at investigating, in the footsteps of the work already done in the contemporary habit and pragmatist literature, the relationship between the ontological dimension of habit described in the first part of my thesis, its generality and temporality - understood not only as the persistence of being in time but as a mediating position between potency and act – and the question of individuality and the self.

Starting therefore from the description of the structure of the general principle of habit, and investigating its relation to the self, I advance the hypothesis that this leads to a partial devaluation of a certain idea of the selfhood firmly established in the modern tradition, in favour of other more suitable characteristics, such as mediation and conditionality. Starting, moreover, from the formula that Peirce and other authors have assumed as their theoretical baseline, the human being as a creature of habit, I will attempt to analyse in which sense this may be a definition that appropriately represents the idea of self here proposed. The structure of habit indeed illuminate, in some peculiar way, the idea we have of selfhood, without denying it in its entirety, but certainly forcing it to undergo a reversal of perspective. The self is no longer seen as the sole stable centre of our individuality, but rather as a *medium* (covering in English the double meaning of mean and mediation): the mean by which the generality of habit is realised in individual acts, and a mediating structure between these extremes. What emerges is therefore a conditional and mediating idea of self, in a certain sense ‘conditioned’ by the triadic structure represented by circumstances, contingent situations and by the outputs it produces, of which the subject represents one of the parts, not

the centre. What Peirce calls the real self therefore resides in this structure that governs our conditional acting under certain circumstances, pressures, purposes and intentions, which I propose to describe as follows.

5.1 Habit and the self. Pars destruens

In his renowned book, *Out of Our Heads*, Alva Noë states clearly that habits and human beings are intrinsically inseparable:

> Human beings are creatures of habit. Habits are central to human nature. Roboticists should take heed; they've directed their energies to making clever robots—robots that can make chess moves or avoid obstacles. A better goal would be to make robots with habits. My hypothesis: Only a being with habits could have a mind like ours. (Noë, 2009: 97-98)

This idea is revolutionary from the point of view of contemporary studies on the mind, insofar as it overturns the Cartesian intellectualist paradigm, approach that prevailed since the early days of the subject. What, however, represents the core of the last part of my work stems from Noë's formulation, 'creatures of habit', which is not a novelty in the history of philosophy. In particular, as I show below, the pragmatist tradition to which we refer in the general outline of this work had already gone in the same direction. Contemporary scholars (especially in the cognitive field) who base their theories on the pragmatist tradition assume that we are creatures of habit (Northoff 2020: 59). Despite this, the relationship between self and habit still needs to be extensively investigated, as Northoff argues. This is because basing the idea of the individual self on such a multifaceted as habit, as I have shown in my work, leads us, as Menary (2011) argues, to design a different view of the self. Against the Cartesian idea of a permanent, disembodied and substantial self emerges what Menary calls a fallible self, starting precisely from Peirce's proposal. Starting with the classical pragmatists' definition of man as a creature of habit, I then set out to analyse a Peircean proposal that investigates the relationship between habit and self, in particular, how the theory on the mode

of being of habit that I advanced earlier has specific implications for the idea of self and individual. If, as many authors argue, we can be generically defined as creatures of habit, it will then be necessary to investigate which could be the traits of habit that identify and structure our agency and how does our individual self relate to the general mode of being of habit.

Among the classical pragmatists, Dewey, in *Human Nature and Conduct*, is the one who provides the same definition that we are creatures of habit, not of reason (MW14: 88); and among their many definitions of habit, James and Peirce also offer two well-known and identical ones, speaking of man as a "bundle of habits":

> When we look at living creatures from an outward point of view, one of the first things that strike us is that they are bundles of habits. (James, 1887: 443)
>
> Of course, each personality is based upon a 'bundle of habits', as the saying is that a man is a bundle of habits (CP 6.228, 1898)

The various positions of the classical pragmatists have already been extensively debated, particularly by emphasising that their idea of habits overturns some deep-rooted beliefs in cognitive and action theory (Kilpinen 2012) (which I dealt with in chapter one).

The pragmatist theory of the self and analysis of the principle of habit falls beyond the scope of this section, although I consider the debate underlying it to reflect one of the most interesting debates and most original positions that can be developed from a pragmatist theory, even from a contemporary perspective. Indeed, I believe that it will be most fruitful to pursue this direction in future research. What it is important to highlight and discuss in this section are some consequences for the idea of self that my previous description of habit entails. In particular, I intend to show that if we can be defined – in a rather common and unspecific way – as "creatures of habit", this is because we share the same mode of being as habit, which can be expressed through some properties that also define human beings. I will then return to the ontological position that distinguishes us, and to certain issues related to temporality and generality.

As far as Peirce is concerned, his theory (or non-theory) of subjectivity, the self and the individual is widely debated (Colapietro 1989; De Tienne 2009; Fabbrichesi 2014a; Lane 2009; Midtgarden 2002; Muoio 1984; Riley 1974). More modestly, I will try to highlight some aspects in line with my aim of showing that, thanks to the structure of the principle of habit that I have described in the first chapters, its temporal and ontological position, one understands more clearly the uncommon proposal that Peirce puts forward concerning the characteristics of the self, in particular about the devaluation of individuality and actual actions as a place to locate the proper meaning, the 'essence' of our mode of being.

There are many concepts involved, so it will be necessary to draw on Peircean texts and scholarly literature to clarify the meaning of terms such as person, individual, identity, and selfhood. Obviously, I will take into account the general structure of the Peircean hypothesis and the ensuing debate, but I will thematically advance my thesis by focusing on the key points that constitute the basic conditions to define human beings as "creatures of habit".

Peirce's theory of subjectivity is frequently defined as a denial of subjectivity, because the overall chronology of his work, beginning with the anti-Cartesian essays of 1968-69, reveals a decisive devaluation of individuality, besides a strong "aversion to any notion of substantial selfhood or individualism" (Hamner, 2003: 117). Colapietro summarises the features of the self according to Peirce, who describes "man as only a negation; the personal self as mainly an illusory phenomenon; personal identity as a barbaric conception; personal existence as not only an illusory phenomenon but also a practical joke; and the individual person as a mere cell of the social organism" (Colapietro, 1989: 65).

Despite this general view, Colapietro analyses Peirce's work by identifying three different moments in which conflicting versions emerge. The first coincides with the writings of 1868-69 (in which a totally negative vision of the semiotic-cognitive origin of the self emerges); the second with the cosmological and metaphysical writings of the 1890s (in which a more positive view of the individual person emerges, formulated from a mentalist

perspective); and the third with the late writings in which Peirce revised the pragmatic maxim, namely his texts on pragmaticism. According to Colapietro – and this is the basis of his theory regarding Peirce's account of the self – in the last phase one can trace a positive account of personal identity, from a semiotic perspective (Colapietro: 1989: 68).

I will review some of the most important passages we find in Peirce, but through a different lens. I will do so not so much to reaffirm a positive account of the self, as to show how habit illuminates our 'innermost' individuality according to a different perspective, by establishing a reversal of the very idea of subjectivity, which must be neither denied nor reaffirmed. This is an anti-dichotomous perspective, in accordance with Peirce's philosophy as a whole: by redefining the factors that make up oppositions, these can be broken down and rethought from a different angle. I believe that the contemporary debate, in which there is a tendency to polarise arguments, can also benefit from this perspective. With Peirce, I will argue, we are not witnessing a total denial of the self (as, for example, some original philosophical contributions have claimed in recent decades (Metzinger 2003), but rather a reversal of the gaze allowing us to question many assumptions we take for granted.

The observations Peirce made in his early years, in the *Lowell Lectures* of 1866, concern the reversal of the Cartesian assumption about subjectivity, as Menary and other underlined. The philosopher was to reiterate his ideas with similar words (using a famous Shakespeare line) two years later, in "Some Consequences of Four Incapacities":

> The question which I shall select is 'what is man?' I think I may state the prevalent conception thus: Man is essentially a soul, that is, a thing occupying a mathematical point of space, not thought itself but the subject of inhesion of thought, without parts, and exerting a certain material force called volition. I presume that most people consider this belief as *intuitive*, or, at least, as planted in man's nature and more or less distinctly held by all men, always and everywhere.
>
> Most ignorant of what he's most assured,
>
> His glassy essence.

> On the contrary, the doctrine is a very modern one. […] We derive the notion of the soul's being single from Descartes (W1: 491)
>
> The individual man, since his separate existence is manifested only by ignorance and error, so far as he is anything apart from his
>
> fellows, and from what he and they are to be, is only a negation. This is man,
>
> proud man,
>
> Most ignorant of what he's most assured,
>
> His glassy essence. (W2: 241: 242)

In the *Lowell Lectures* Peirce is criticising the idea of the individual soul, based on volition. Later he adds the idea that, taken as isolated individuals, we only manifest ourselves by negation. The main conclusions that Peirce reached in his early writings were to accompany him for much of his mature thinking. While it is true – as I will show – that he reached far more precise conclusions about the idea of personality and the individual, the general devaluation of selfhood remained one of the most important features of Peircean theory. He continued to regard selfhood as defined by limitations, and all our beliefs about an independent, volitional self as vulgar vanities. Another very interesting insight concerns the role of external circumstances, external signs, and interpersonal communication, which in Peirce's view play an important role in what is usually considered to be a private and largely inaccessible dimension. His repeated emphasis on this point in different contexts and over an extended period of time is evidence that this is a solid belief which structures the boundaries and foundations of his theory of the self, as we can see from many passages, such as:

> Our deepest sentiment pronounces the verdict of our own insignificance. Psychological analysis shows that there is nothing which distinguishes my personal identity except my faults and my limitations. (CP 1.673, 1898)
>
> Nor must any synechist say, 'I am altogether myself, and not at all you.' If you embrace synechism, you must abjure this metaphysics of wickedness. In the first place, your neighbors are, in a measure, yourself, and in far greater measure than, without deep

> studies in psychology, you would believe. Really, the selfhood you like to attribute to yourself is, for the most part, the vulgarest delusion of vanity. In the second place, all men who resemble you and are in analogous circumstances are, in a measure, yourself, though not quite in the same way in which your neighbors are you. (CP 7.571, 1892)
>
> There are those who believe in their own existence, because its opposite is inconceivable; yet the most balsamic of all the sweets of sweet philosophy is the lesson that personal existence is an illusion and a practical joke. (CP 4.68, 1893)
>
> The first is that a person is not absolutely an individual. His thoughts are what he is 'saying to himself,' that is, is saying to that other self that is just coming into life in the flow of time. […] The second thing to remember is that the man's circle of society (however widely or narrowly this phrase may be understood) is a sort of loosely compacted person, in some respects of higher rank than the person of an individual organism. (EP2: 338)

However, if negation were the only defining characteristic of the self, we would encounter a series of aporias in Peirce's thought. As Colapietro rightly points out, how could self-control be possible in a horizon of total negation of the self? On 'what' could one then exercise control? (And by who?) I will directly deal with this question in the last section, where I will show that self-control is understood as consciousness of our conduct in general, of the structure and 'material' of our habits. But the problem remains: the self cannot be reduced to mere negation – and indeed, as mentioned earlier, this is not what Peirce is doing. A self that can neither be totally denied nor totally affirmed, which is the reason why I put forward in this section the hypothesis of a 'conditional' and 'conditioned' self, conditional because it emerges as a would-be, one of the elements of a relationship beneath certain conditions and situations, the structure of which it is 'conditioned' by (whether determined is too restrictive a concept given the plasticity that accompanies the idea of habit).

In a very narrow and simplistic sense, we are by necessity individual beings, because we react, we have an extension and all the other properties that Peirce attributes to the category

of existence. When Peirce argues that we are not mere things, that we are like words whose essence is spiritual and can be in several places at once[101], I believe that he is not denying any of the substantial properties of matter, but simply that our 'real self' or 'true nature' cannot be reduced to the actual manifestations of our existence. That is, Peirce here is shifting the focus from our individual being to what he thinks really distinguishes us as human being. I will shortly show what Peirce considers our real self to be. Of course, this essential part is not the whole of a person, but represents the "core which carries with it all the information which constitutes the development of the man, his total feelings, intentions, thoughts" (W1: 499).

I am interested in trying to unravel the skein of this core part of our self, which is largely determined, or – if the word 'determined' is too strong, as I said – largely influenced and conditioned, by the principle of habit. I will try to show why this is the case by tracing a parallel path which recalls the main characteristics of habit which I have developed in previous chapters. Even though the notion of self appears to be dissolved, porous, relativised, and downplayed in terms of its importance in Peirce's writings, through this negation he is still making some fundamental points. The first is that the human being is analogous to a symbol (words); the second is that the human being is not merely an individual: man does not exist in a merely private sphere, but is shaped by relationships with other selves in space and time.

For the first time, my order of explanation does not proceed from the most general to the most specific arguments, or indeed precisely follow the order in which I brought out the main features of habit. Since the ultimate goal in this section is to describe what 'the human mode of being' may entail, I will begin from Peirce's initial remarks, which focus on the structure of the self, and gradually broaden my view to include all of the properties that my

[101] "There is a miserable material and barbarian notion according to which a man cannot be in two places at once; as though he were a *thing!* A word may be in several places at once, *six six,* because its essence is spiritual; and I believe that a man is no whit inferior to the word in this respect" (W1: 498).

thesis has highlighted and defined, step by step. Once this first goal is fulfilled, I will open a window at the end of the chapter to which I will return in the conclusion: what are the possibilities that are given to our habitual mode of being, and what do they consist of? What are our options in terms of being able to "think otherwise" like Peirce stated and subject ourselves to self-criticism?

5.2 "Man: sign or algorithm?" The conditional self

We have seen that from his early writings, along with a negative definition of the boundaries of the self, Peirce proposes a hypothesis derived from his semiotic-cognitive theories. There is no difference between human beings and the words they use, an argument that will lead to Peirce's famous hypothesis that man is a sign.

In the above-quoted Lowell Lecture of 1866, Peirce states: "we have already seen that every state of consciousness is an inference; so that life is but a sequence of inferences or a train of thought" (W1: 494). In a text published two years later, "Some Consequences of Four Incapacities" (1868), Peirce draws some consequences from his previous statement. Claiming that all thought is sign-based thought, he reaches the following conclusion regarding the "nature" of human beings: "For, as the fact that every thought is a sign, taken in conjunction with the fact that life is a train of thought, proves that man is a sign" (W2: 241).

In particular, Peirce specifies that man is not just any sign, but a symbol (as can already be guessed from the analogy he made with words, since almost all words are symbols for Peirce). This equivalence with the symbol is already established in his anti-Cartesian essays, and is maintained throughout all his subsequent texts, as can be seen from the following excerpts from some texts written in the 1890s ("Man's Glassy Essence") and the early twentieth century (R517: 1904):

> Life is but a sequence of inferences or a train of thought. At any instant then man is a thought, and as thought is a species of symbol, the general answer to the question what is man? is that he is a symbol (W1: 494)

> Long ago, in the Journal of Speculative Philosophy (Vol. II, p. 156), I pointed out that a person is nothing but a symbol involving a general idea; but my views were, then, too nominalistic to enable me to see that every general idea has the unified living feeling of a person. (W8: 182)

> The man is a symbol. Different men, so far as they can have any ideas in common, are the same symbol. (EP2: 324)

If a person is a symbol, he or she will share certain properties of symbols, as has been illustrated by De Tienne's (De Tienne 2009) excellent analysis (which I will return to shortly). However, there is a further – and all to often neglected – step that needs to be taken, in order to complete the equation. That is, we must consider the fact that the idea of man as a symbol is what leads Peirce to focus on generality, to the detriment of individuality, and on the importance of the future, to the detriment of the instant and present time. We can appreciate this point by bearing in mind that a symbol is a general sign (Bellucci 2017; 2021; Nöth 2010) which is based on a habit:

> The word "man" has the meaning it has simply by virtue of there being a general law, or habit, among English speaking interpreters, to which the interpretations of it will conform. Not only is "man" a "general sign" *formaliter*, or in its signification, but it is also general *materialiter*, in its mode of being as a sign (R 491: 6-7).

> A sign to which a general idea is attached by virtue of a habit, which may have been deliberately instituted, or may have grown up in a natural way. (R797, 1894)

> Every symbol is an ens rationis, because it consists in a habit, in a regularity; now every regularity consists in the future conditional occurrence of facts not themselves that regularity. (CP 4.464, 1903)

The analogy between human beings and symbols necessarily brings habit into play, as this gives an identity and meaning to both. But what does an identity being based on habit entail? It entails all those characteristics that make up a human being/symbol and define him/it, and which we will now examine. So, as we know well, "every regularity consists in the future conditional occurrence of facts not themselves that regularity" and indeed symbols, and the self as a symbol, require future developments, and express their meaning in the conditional future. As Colapietro states, "if the self is a sign and if it is cut off from its future developments, it has been denied the possibility of actualizing its essence" (Colapietro, 1989: 77). A symbol, as a general sign, cannot be reduced to individual instances, but always refers to a conditional future, just as the generality of habit requires. The very *ratio* of a symbol consists in governing future occasions, in which individual instances and individual acts represent a form that gives the process a singular coherence, boundaries that surround and select only one of the possible outputs, but which are in no way able to restore the symbol's generality and continuity. A symbol is based on habit because through this principle future instantiations are selected and governed, and through Peirce's analogy the relationship between our personality and habit is expressed as well. We can thus appreciate Peirce's negation of the importance of the present moment. The American philosopher defines the general meaning to our personality with the following words:

> "Personality, like any general idea, is not a thing to be apprehended in an instant. It has to be lived in time; nor can any finite time embrace it in all its fullness. Yet in each infinitesimal interval it is present and living, though specially colored by the immediate feelings of that moment. Personality, so far as it is apprehended in a moment, is immediate self-consciousness. But the word coördination implies somewhat more than this; it implies a teleological harmony in ideas, and in the case of personality this teleology is more than a mere purposive pursuit of a predeterminate end; it is a developmental teleology. This is personal character. A general idea, living and conscious

> now, it is already determinative of acts in the future to an extent to which it is not now conscious. This reference to the future is an essential element of personality" (W8: 155).

The reference to the future is the place to look for the proper meaning of the man-symbol (based on habit). The structure of the habit principle that I outlined in the first part of my work shows that it consists in the mediation and transit/anticipation towards future acts. A symbol constantly seeks further interpretations that will make it more determinate: "A symbol is essentially a purpose, that is to say, is a representation that seeks to make itself definite" (EP2: 323). As the course of the law of habit clearly shows, the process of acquisition and development proceeds from the greatest degree of indeterminateness to more complete stages of determination. As De Tienne argues, personhood lies in this conditional law that clearly expresses a 'would be', which awaits further determination:

> What now appears more clearly is that, in so far as personhood is this aspect according to which an organism behaves as a symbol, in so far the notion of person is tantamount to that of a law as has just been defined. Now there is nothing categorical about such a law. On the contrary, it is entirely conditional, and it has two characters that deserve our attention. On the one hand, it expresses a *would be*, that is, an indeterminate project awaiting determination. (De Tienne, 2009:21-22)

This 'would be' – and it alone – represents the core of the human being as a symbol. It explains why our personhood is expressed in the future: for what really defines us is our 'conditional self', which like habit – as we will now see – anticipates and predicts future determinations. Without this general approach, such a condition might seem counter-intuitive and difficult to accept. This special condition makes us, as symbols, constantly search for future predications that define us, the 'would be' of future circumstances. The mechanism on which our development is based is irrevocably habitual.

None of this, of course, means that the awareness of the self does not, on the contrary, emerge in the concreteness of actuality. The example Peirce always presents in the so-called anti-Cartesian essays is explanatory: a child who has heard that a stove is hot only realises

this when he touches it, and in that act becomes aware of his 'ignorance', and consequently a self, an *ego* is assumed in which it can inhere (W2: 168; W2: 202). An 'I' emerges each time a thought is materialized, a symbol is actualized, giving limits and an expression to the eminently symbolic continuity of our personality, our identity (De Tienne, 2005: 99).

It is not, however, what Peirce has in mind when he defines a man's "real self" the form, the would-be of our conduct. Peirce could not be clearer in identifying our true nature as the *way* we would behave in a given situation, that is, as the structure of the habit principle: "When I speak of a man's Real Self, or True Nature, I mean the Very Springs of Action in him, which means how he would *act*" (R649: 26). Obviously, Colapietro can only confirm that these "springs of action" are nothing more than habits, which constitute the "innermost core of the individual self" (Colapietro 1989: 90). This drive towards the future that habits affirm, and which therefore constitutes the human being in his most intimate essence, is one of the most defining aspects of the habit-self relation.

As I have already shown, it is because prediction and anticipation, insofar as they are directed towards the near future, are inescapable features of the concept in all its manifestations (metaphysical as well as cognitive). Not only that, but we can now see that they lie at the core of the definition of the human being as a creature of habit. This idea is also central for another reason, because it is widely shared by the pragmatist perspective as a whole, so much so that it can be considered a key feature of this tradition. We find it even in Dewey: "All habits are demands for certain kinds of activity; and they constitute the self" (MW14: 21), "For they are active demands forcertain ways of acting. Every habit creates an unconscious expectation" (MW:14: 54).

Already extensively analysed in the previous chapters, the possibility of making predictions and creating expectations is the key element of the temporality of habit as a 'would be'. As habitual signs, the being of a symbol can only be constituted and unravelled from this structure:

> The being of a symbol consists in the real fact that something will be experienced if certain conditions be satisfied. Namely, it will influence the thought and conduct of its interpreter. The value of a symbol is that it serves to make thought and conduct rational and enables us to predict the future. (CP 4.447-48, 1893)

De Tienne succeeds in picking up the traces scattered by all these issues and describes the way in which personhood is directed towards the conditional future. It is clear now that the structure of the functioning of the explication of a symbol is that of habit, to which De Tienne adds some further insights (such as the notion of programme he introduces) that I will draw upon to continue my argument:

> Given that every symbol is essentially preoccupied with its own development into new interpretant symbols, every symbol is directed toward the future, not the indicative future, but the conditional future. Every symbol is a program, that is, a general and vague representation of what could happen in the future given certain conditions that it behooves that symbol to spell out. It is in the nature of a program to predict an outcome in the form of a general result, without however describing precisely either the actual turn of intermediary events leading to the production of the outcome, or the detail of the individual outcome itself. […] It is also in this sense that a person is a symbol—a program turned toward the conditional future. (De Tienne, 2009: 24-26)

The notion of programme as something that "predict an outcome in the form of a general result" goes in the direction of the proposal I would like to formulate, and which takes a step further, by departing from the Peircean analogy with the symbol. My proposal stems from a remarkable insight by Arthur Burks. He makes a double analogy that allows me to suggest a hypothesis:

> In interaction with his environment, a man's genetic program has guided the development of the specific programs or habits by which he processes the information he receives from the environment and by which he responds to that information. Man is

> an adaptive algorithm evolving in an environment along with other such algorithms. Thus there is an analogy between man and algorithm similar to Peirce's analogy between man and sign. Moreover, my 'man is an algorithm' formula subsumes Peirce's 'man is a sign' formula, because signs are used to express the algorithms and the information processed by them. Man as sign user is a sign processor. (Burks, 1980: 284)

While De Tienne had juxtaposed the notion of programme with that of symbol, Burks identifies habits and programmes; furthermore, he suggests a different and encompassing hypothesis with respect to the Peircean notion of man-sign, namely that of algorithm. The fact that man can be defined as a creature of habit perfectly fits with the hypothesis that, more than as a sign, man can be regarded an algorithm or, rather, that he behaves in someway trough similar patterns and strucutres, and is influenced by predictive processes. The contemporary notion of algorithm can be approached and conceived of only starting from the 'predictive instrument' that has always accompanied us in our evolution, namely the principle of habit.

An in-depth comparison between habits and algorithms falls well beyond the scope of this work (although recent studies shows that the hypothesis deserves careful consideration: see Airoldi, 2021; Romele & Rodighiero, 2020), but if certain "predictions of a general outcome" are an essential part of our way of behaving, the notion of algorithm as a habitual machine lends itself to be further investigated and better understood. Most notably, from a critical point of view, if a crucial part of our personhood functions in this way, it means that it is susceptible to certain external inputs that combine with our habit-based conditional self.

We can draw a first definition from the aspect just analysed, regarding our being a 'would be', our conditional self. What we have drawn from Peirce's proposal will also have repercussions on human beings' ontological-temporal position, which can be regarded as being encapsulated by this relentless flow of expectations and demands, this back and forth between the present moment and the near future always oriented towards new predications and determinations. According to the properties that define them, the position they occupy,

as symbols (or algorithms?) – as signs that are based on habit – in this respect human beings as creatures of habit can therefore be defined as *a flow of expectations waiting to be fulfilled*.

Indeed, in this waiting, this expectation, this temporal gap awaiting be bridged, this need to lean forward, to anticipate possible outcomes, an important component of our identity is played out. This is just one of the aspects involved in the hypothesis of the human being as a creature of habit, but it brings into play other characteristics that I will analyse below.

5.3 "Individuality and falsity are one and the same"

By combining the analyses I carried out earlier on the generality of habit with those on man as a symbol, a general sign based on habits, one achieves the affirmation of the generality of the human being – or, more precisely, that the deep meaning of our personhood is general. Why, and what kind of generality we are able to incorporate, is a question that needs to be analysed in detail. It goes hand in hand with the devaluation of individuality described in the first section. Not only that, but it also involves the relationship between generality and individuality described in chapter three. The basic assumption from which to begin drawing together the threads of the argument is, as far as Peirce is concerned, always the same: his strenuous battle against nominalism. Anti-individualism consists in, or at least presupposes, anti-nominalism.[102] The denial of individual being that I described in the first section partly derives from the denial of the principle of nominalism, which can be summarised as follows:

> For the Nominalists Peirce typically targets, reality is exhausted by an indefinite number of distinct, spatio-temporal individuals. The existence and character of these individuals is neither dependent upon, nor altered by, their being perceived. Reality is, in principle,

[102] "Everybody will admit a personal self exists in the same sense in which a snark exists; that is, there is a phenomenon to which that name is given. It is an illusory phenomenon; but still it is a phenomenon. It is not quite *purely* illusory, but only *mainly* so. It is true, for instance, that men are *selfish*, that is, that they are really deluded into supposing themselves to have some isolated existence; and in so far, they *have* it. To deny the reality of personality is not anti-spiritualistic; it is only anti-nominalistic" (CP 8.82, 1891).

> capable of complete description by enumerating these individuals and their unique, particular traits, without the use of general concepts. (Forster, 1992: 692)

I have already shown that existence is predicated of individuals, but reality is general, and above all, cannot be 'exhausted by an indefinite number of distinct, spatio-temporal individuals' – that is, no collections of individual instances can fill up the meaning of a general. This is an important point to bear in mind if we wish to grasp the pragmatic meaning of concepts such as 'real', but it is no less important if we are talking about the meaning of personhood. As a 'would be', we cannot be to any extent or in any respect the total collection of our predications, let alone our current instances of behaviour. Our meaning is general and lies in the future. Among the many definitions of pragmatism (especially the ones mentioned above), there are a few in particular which capture these words perfectly, and which, by describing what the meaning of concepts consists in, only describe a general structure of our identity, our patterns of behaviour:

> Intellectual concepts, however,—the only sign-burdens that are properly denominated 'concepts,'—essentially carry some implication concerning the general behavior either of some conscious being or of some inanimate object, and so convey more, not merely than any feeling, but more, too, than any existential fact, namely, the 'would-acts' of habitual behavior; and no agglomeration of actual happenings can ever completely fill up the meaning of a 'would be.' But that the *total* meaning of the predication of an intellectual concept consists in affirming that, under all conceivable circumstances of a given kind, the subject of the predication would (or would not) behave in a certain way,—that is, that it either would, or would not, be true that under given experiential circumstances (or under a given proportion of them, taken *as they would occur* in experience) certain facts would exist,—*that* proposition I take to be the kernel of pragmatism. (EP2: 401-02)

To call oneself a true pragmatist, for Peirce, is to deny that the meaning of concepts, and of our general conduct, lies in individual actions. To affirm the pragmatic maxim, it is

necessarily to deny individuality in its ontological bearing, that is, as a category. At the same time, this implies affirming the centrality of the category that pertains to generality. What Peirce is doing, in short, is not annihilating individual being, but denying the individual as pure existence and secondness.

If we were to admit that meaning lies in doing and that the purpose of our existence lies in action, we would easily arrive at both the death of pragmatism and the death of the human being (at least as a rational being, as a habitual being):

> It must be admitted, in the first place, that if pragmaticism really made Doing to be the Be-all and the End-all of life, that would be its death. For to say that we live for the mere sake of action, as action, regardless of the thought it carries out, would be to say that there is no such thing as rational purport. (EP2: 341)

However, in what respect can we call ourselves generals? (If it is permissible to speak of generality in relation to human beings). A simple counterargument would be to show that the characteristics that best describe us are those of existence and secondness. We are compelled, as bodies for example, to be individual beings, despite Peirce's strong rhetorical claims that it would be limiting and miserable to think of us as something that cannot be in two places at once. In Colapietro's words, in a certain respect we are individual beings, even if this is not what defines our deepest nature. The categorial level (whose analysis I shall complete in the next section) I believe can come to our rescue.

On the one hand, our generality is supported by the pragmatist view described above and the importance of the temporal factor. The instant, like action, cannot remotely encompass the fullness of meaning of concepts, as well as of our personality: "This personality, like any general idea, is not a thing to be apprehended in an instant. It has to be lived in time; nor can any finite time embrace it in all its fullness" (W8: 154). The ontological primacy of thirdness over secondness reverberates on the level regarding our subjectivity (as I will show in the last section), showing that it is our general conduct and not individual actions that define us in the most appropriate way.

On the other hand, complete individuality would imply asserting that secondness is what defines the human being, and this would lead to utterly inadmissible implications, for both the idea of self and that of habit. In the former case, we would be witnessing the negation of pragmatism, or at least a strong misinterpretation of it, like the Jamesian one, which reduces the meaning of our actions to their perceivable consequences. Not only that, but something that is entirely governed by secondness is inert matter, pure reaction, with no understanding and intelligibility. Muoio argues:

> According to Peirce's categoreal scheme, anything which is pure second exists only in terms of oppositions. It is what it is solely in immediate relations to what it is not. It is defined by nots, and thus, in a very real sense, is only a negation. However, one can legitimately claim that no human individual is a pure second. Hence, Peirce is not claiming that all human individuals are mere negations, but rather that if individuals were pure seconds, if we were to deny them the potentiality and meaning that are theirs as firsts and thirds, they would be mere negations. (Muoio, 1984: 181)

This view, moreover, would become compatible with the idea of habit as a purely unintelligent stereotypical reaction, which is precisely what the entire argumentation of this work seeks to dismantle.

A theory that supports the idea of 'habitual individuality' could therefore place our deep identity in an intermediate position, i.e. in the very position occupied by the principle of habit (and I will come back to this shortly). We cannot fully deny the existence of our actual manifestations, and I do not even think that this was Peirce's aim; rather such manifestations acquire meaning from the general background of our personality – that is, those regularities, that tendency to act in general, which constitute the foundations of what we can call a *character*: "It is like the character of a man which consists in the ideas that he will conceive and in the efforts that he will make, and which only develops as the occasions actually arise" (CP 1.615, 1903).

Before I move on to my conclusions about this topic, I should note two other important consequences entailed by a habitual notion of self. Firstly, the devaluation of individuality implies a different idea of accessibility to the self, which is not considered primarily as private, impervious to external gaze. The fact that we are habitual individuals means that, like habits, we could be made the object of a mode of analysis and interpretation, albeit one based on our external manifestations. Secondly, if the meaning of our true self is general, it will reside precisely in something that is outside us, that is valid in every similar circumstance, that is projected into the future, that cannot be resolved within our own bodies and thought.

In addition to some important contributions that elucidate the main points in the debate (Fabbrichesi 2010; 2012; Houser 2013; Sini 1979), I will recall some of Peirce's most brilliant passages, which clearly state how the negation of nominalism and individualism goes hand in hand with the construction of a strong idea of community:

> When we come to study the great principle of continuity and see how all is fluid and every point directly partakes the being of every other, it will appear that individualism and falsity are one and the same. Meantime, we know that man is not whole as long as he is single, that he is essentially a possible member of society. Especially, one man's experience is nothing, if it stands alone. If he sees what others cannot, we call it hallucination. It is not "my" experience, but "our" experience that has to be thought of; and this "us" has indefinite possibilities. Neither must we understand the practical in any low and sordid sense. Individual action is a means and not our end. Individual pleasure is not our end; we are all putting our shoulders to the wheel for an end that none of us can catch more than a glimpse at — that which the generations are working out. But we can see that the development of embodied ideas is what it will consist in. (CP 5.402 n2, 1878)

> The question whether the *genus homo* has any existence except as individuals, is the question whether there is anything of any more dignity, worth, and importance than

> individual happiness, individual aspirations, and individual life. Whether men really have anything in common, so that the *community* is to be considered as an end in itself, and if so, what the relative value of the two factors is, is the most fundamental practical question in regard to every public institution the constitution of which we have it in our power to influence. (W2: 487)

The generality that pragmatism expresses is encapsulated by this idea, which devalues the notion of the self in order to build a strong collective identity, which cannot be reduced to individual actions or individuality. A mind for Peirce cannot take a step without the help of other minds (CP 2.220, 1903), and research cannot acquire significance within the boundaries of one's individual interests, but must necessarily embrace one's whole community. This position necessarily implies the abandonment of a strong idea of individuality – indeed, of the idea that the validity of our thoughts and actions can only be framed within a common horizon.[103] However, a self that is based on habit and whose meaning is general, can only have a marginal place, as one of the elements of a wider intersubjective relationship.

The other point concerns an equally interesting aspect, especially for our interweaving of self and habit. Among the negations of the self that Peirce brings forth there is a particularly revolutionary one, which eradicates another strong belief. I am referring to the idea that the self is eminently private, and hence that the mind constitutes an element inaccessible from the outside. Already in his anti-Cartesian essays Peirce had declared that

[103] As Muoio perfectly summarizes: "Thus, the notion of a real community of consciousness is a necessary consequence of Peirce's synechism. It can be argued, however, that the reality of this community undermines the status of the person. Destroyed is the notion of the ego as the 'I think.' The 'I' is subsumed in a 'we,' the individual is absorbed in the community. A person's thought and consciousness are not uniquely his, they cannot serve as his defining characteristics. In asserting his law of mind, Peirce is not merely saying that individual thoughts blend together to form a vaguely connected group mind or common opinion. His point is much stronger than this: the individual's thought can only be valid if he thinks as a member of the community, if his interest is not a purely private one. Logic and certainty of knowledge are impossible if interest is seen as limited to the individual. It is only in the community that there is any truly valid inference or certainty of knowledge. The individual cannot find truth on his own" (Muoio, 1984: 171).

we possess no privileged access to our consciousness, since we have no power of introspection, and that all knowledge of our internal world derives from assumptions made on the basis of external facts (W2: 213). The Peircean inversion involves a different idea of communication and accessibility of the self. The latter is seen as neither private nor closely stored within us, but rather as public, accessible and analysable – as are habits, on the basis of their external manifestations. This theory which downplays subjectivity does not affirm that whatever we mean by mind, or 'I', is entirely accessible, but – more simply – that our habitual self is accessible through external signs, without any privileged access by means of a supposed introspective capacity.

In line with my general argument, I would contend that Peirce displays a strong tendency to oppose the idea of a personal mind and of the ownership of thoughts. From this point of view, he stands in antithesis to James. As Colapietro points out, according to James, our innermost nature, the essence of our self, remains hidden in a region where only our will, hopes, and fears reside. By contrast, for Peirce, none of these things represent our innermost self. Whatever this self is, it is communicable in some way, and is realized through relationship with others (Colapietro, 1989: 74).

Relationships are all that matter, and subjectivity is only one of the elements they involve, as the structure of habit clearly exemplifies. This reversal of perspective has subjectivity as its most suitable target, as nothing expresses the American philosopher's perfect ability to reason and modify concepts more than his total inversion of the self. This topic lends itself to meta-considerations about my work, which introduce its final part. Our modern conception of the self can be said to lie in the habit of referring to something as an 'I', so the reversal of perspective that Peirce operates is possible starting not only from an awareness of our habits, but also from the meta-functioning of how they develop, assert themselves, and ultimately constitute the sediment of our own common beliefs.

In conclusion, this point can be elucidated through an example. It perfectly illustrates Peirce's ability to observe habits themselves from a different, external perspective, one that

is difficult – if not impossible, in my opinion – to achieve, so as to handle and modify the basic assumptions of our common life, which usually we do not question. I have chosen this example because it is one of those that lie at the basis of the most familiar notion of the self, the idea of subjectivity and way of seeing the world typical of Western culture. It is the saying inscribed on Apollo's temple in Delphi, which Peirce manages to overturn in a remarkably effective way:

> I would not advise a man to devote much time to observations of oneself. The great [thing] is to become emancipated from oneself. γνῶθι σεαυτόν [know thyself], make your own acquaintance, does not mean Introspect your soul. It means See yourself as others would see you if they were intimate enough with you. Introspection, I mean a certain kind of fascinated introspection, on the contrary, is looking at yourself as nobody else will ever look at you, from a narrow, detached, and illusory point of view. Of course, a man must search his heart somewhat. It is highly needful. Only don't make a pursuit of it. (RLT:186)

5.4 The mediating self

The analysis of the relationship between habit and self leads me in a circular fashion back to the core of my work. It is necessary to re-examine carefully the mode of being of habit, at the centre of which lies the ontological structure of the *hexis* that I analysed in chapter two, in order to clarify, in conclusion, in what this mediating position between general and individual, between present and future, which according to Peirce may represent the *true nature* of ourselves as creatures of habit, consists.

Peirce's pragmatism, his theory of habit, leads in the direction of the rejection of a self with stable core and fixed borders. As Carlisle perfectly points out, in her analysis of habit and selfhood, also starting from the premise of human as creature of habit, "there is no need to posit a distinct self within or underneath the layers of habit, and indeed it does not make

sense to do so. What habits conceal, then, is precisely this emptiness, this lack of a fixed, permanent, substantial core" (Carlisle 2006: 29).

Peirce denies its temporal stability through the idea of a conditional, forward-looking self, and its spatial stability, placing the meaning of our personality within a general dimension, in which Peirce's community-organism supersedes all the single selves into which it cannot be resolved (Hamner: 2003, 119).

On the other hand, time and space are the two Cartesian axes along which this subjectivity unfolds, since it cannot be confined – like pure individuality – to any precise and isolated spatio-temporal spot (the primary characteristic of secondness).[104] On the contrary, it possesses a character of generality, which makes it applicable to similar circumstances in the future, and it is not easily framed within precise spatial boundaries. In spite of this, we still need to assign a definite place to this (topological and ontological) configuration of the self; and we can do so by identifying certain specific properties it has. These properties, I believe, are triadicity and the mediation of the principle of habit. That is, the metaphysical structure of habit implies (i) that the self is not primarily defined in actuality, and (ii) that the subject emerges from a relation enabled by the principle of habit. I will now further examine these two points, starting from the latter.

I have already investigated both the triadic structure of habit, in relation to subjectivity, and the relationship between individual being and the generality that characterises the symbol and habit. In chapter two, based on a comparison with Agamben's reflections, I have also

[104] In fact, for Peirce the essence of a 'thing' cannot be located at a given point in space-time (taking up the argument that what is merely individual is 'nothing'). Things express their force where they act, not where they are, i.e. where they have pragmatic effects. This supports the thesis of a non-individual subjectivity: "[t]he proposition that we can immediately perceive only what is present seems to me parallel to that other vulgar prejudice that 'a thing cannot act where it is not.' An opinion which can only defend itself by such a sounding phrase is pretty sure to be wrong. That a thing cannot act where it is not, is plainly an induction from ordinary experience which shows no forces except such as act through the resistance of materials, with the exception of gravity which, owing to its being the same for all bodies, does not appear in ordinary experience like a force. But further experience shows that attractions and repulsions are the universal types of forces. A thing may be said to be wherever it acts" (W8: 78).

discussed how, the structure of habit suggests a different idea of subjectivity. This emerges from systems of habits and the triadic relation they bring into being, overturning the role between subjects and properties. There is no longer a sovereign subject who must possess and manage habits, as the subject is brought into being by the habitual relation. This approach can only downplay individuality and actuality (another element defined by the habitual triadic relation). Nevertheless, my proposal is to identify a 'habitual self' that is a mediating self. Selfhood does not lie exactly in generality (on which symbols and habits are based – and into which they can be resolved); rather, selfhood more specifically resides in a vectorial process of determination which, as we have seen, habit itself constructs: a process in which we can see the very essence of the power of habit.

Taken as one of the elements of the triadic relation, each person is an *x* (an individual subject) which, however, constantly needs to be predicated, and which only acquires meaning when put into operation (*fx*). Our identity is not contained in anything except the relational functions that are predicated of it. That is, selfhood is defined on the basis of the hypothesis of how we would behave (and feel and think) in a given circumstance, combined with certain motivations/aims. Moreover, the relational sum of these conditional behaviours is always incomplete, and it is impossible to exhaust the meaning of all possible conditional behaviours/thoughts/feelings.

A characteristic of this process is certainly that it becomes increasingly defined – precisely like symbols. From this point of view, taking up my cosmological analysis, there is a movement in our lives that tends towards 'fixedness', towards 'being secondness', which the establishment and the fossilizing of habits perfectly exemplifies. Our main capacity, the capacity that a habitual self can employ, does not lie in the possibility of 'not passing into the act', as Agamben claims. This possibility is not given, since possibilities are always given *a posteriori*. On the contrary, as I will show in the conclusions I derive from this view, our capacity resides in an *a posteriori* critique of the self and of the process of habituation.

The other issue has more directly to do with the question of the human mode of being. Recalling my analysis of habit's mode of being in chapter two, I can summarise the relationship between habit and categories as follows. Thirdness, as far as the aspect of habit is concerned, "determines the suchness of that which may come into existence, when it does come into existence" (EP2: 269). Possibility, actuality, and the habitual modality reflect Peirce's triadic division of categories. The modality of habits as thirdness can be conceived of as a conditional necessity, bearing in mind all the clarifications I have provided in my analysis. My argument is that the self cannot be actual. The general hypothesis is that humans' mode of being reflects that of habit: what defines human life in its fullness is not actuality, and the self is placed in this median and vectorial position that enables the passage between different modalities. The self cannot be located in the 'here and now', in actuality, as its identity is projected towards future occurrences, it lies 'in between', in a mediating position, in the passage from what might be possible and the concreteness of the actual. If the self were entirely defined by the category of actuality, we would run up against a whole series of problems that Peirce wishes to tackle through his pragmatism, his realism, and – I would add – his theory of habit.

This aspect represents a chapter in the history of habit that would deserve to be further explored, not least by comparing two currents of thought that offer distinct views of the self and of habit, namely pragmatism and phenomenology. I will reserve such an analysis for possible future developments of the present work. Here I will only quote two examples from the literature concerning the particular attention paid to the habitual self by Husserl, and later by Heidegger. Firstly, Moran recalls two statements that Husserl made regarding the *ego*:

> As Husserl puts it in Intersubjectivity volume XIV: 'I am not only an actual but I am also a *habitual ego*, and habituality signifies a certain egoic possibility, an 'I can' or 'I could', or 'I would have been able to', and this ability become actual refers to ego-actualities, to actual ego-experiences, that is, as *actualization of ability*. In a word, I am (and without this would not be an I, I can not think of myself otherwise), an ego of

> capacities'. Husserl occasionally talks as if the ego were an empty 'I-pole' (*Ichpol*) that simply guarantees continuities in my experience (in the manner of the Kantian transcendental ego), but in fact, in Cartesian Meditations and elsewhere, he speaks of the fully concrete ego which is always laden with 'habitualities' and world-engaging acts. Husserl talks about a "style" (*Lebensstil*) and indeed an "overall style" (*Gesamtstil*). Thus, in Cartesian Meditations § 32, Husserl introduces the term habitus as an *enduring "state" whereby I can be said to "abide" by my decisio*n. The decision informs me. Through these acquired decisions as convictions I constitute myself as a stable and abiding ego, someone with, Husserl says, "a personal character". (Moran, 2011: 61)

In reconstructing Heidegger's analysis of the notion of *hexis*, Pelgreffi instead recalls some crucial passages in which the German philosopher maintains that human life cannot all be constantly present, actual. In other words, the possibilities we have are not present in the extension of being, in the actuality of our existence. However, Heidegger sees in this a failure of our habitual being, which is unable to adequately respond to all individual circumstances. Being ready for each and every moment is a condition that the habitual self cannot fully satisfy (Pelgreffi, 2018: 68-69).

The ego is therefore loaded with *habitualities*, informed by them, or – better still – conditionally predisposed by them, and subjectivity emerges from the habitual relationship. Without this supporting structure, the 'I' is effectively an empty 'I': an individual as negation, to put it in Peirce's words. As Hamner (2003: 119) argues, if we strenuously cling to the self in the belief of the uniqueness of its constitution, we will only see it dissolve before our helpless eyes. Moreover, only the idea of a habitual self can account for the central importance of the generality of our behaviours, which constitutes our 'character,' on which we can really have some sort of influence, as we will see in the last section.

In conclusion, if our self shares in the mode of being of habits, like habits it will turn out to be a mediating concept, a mediating self that moves between different possibilities and actualities. Indeed, like habits, it will turn out to be the means by which this transition can

take place. Like other Peirce scholars including Colapietro (yet on the basis of a different argument), I do not consider Peircean theory to be empty or totally negative. A theory of the self that sees us as a means of incorporating possibility and generality is a theory that, on the one hand, dismisses any claim to a strong, stable individual self or undivided and solid personality, but on the other makes us responsible for the highest task assigned to our species.

There is another metaphor that encapsulates the meaning of my words even better. Colapietro borrows it from DeWitt Parker, who speaks of a 'matrix self'. The matrix self is a deep layer of signification that proceeds from one current activity to another and coincides with the range of our habits (Colapietro 1989: 94). This metaphor lends itself well to being used for the conception of self and habit that I am developing – and which I came to independently, from my very first works on the subject (Bernardi della Rosa, 2020). Our habitual self, as a medium, or – even better – a matrix, perfectly expresses the mode of being of habits. We incorporate and enable the passage from the most general possibilities to individual actualities, so our self is indeed a form of mediation between categories, and it is through this mediation that it unfolds.

This position of the self perfectly represents our mode of being; not only that, but it also points to the highest task to which our species is 'called'. Indeed, in a late text ("A Neglected Argument for the Reality of God", 1906), Peirce asks himself: "What is man's proper function if it be not to embody general ideas in art creations, in utilities, and above all in theoretical cognition?" (EP2: 443)

5.5 Self-control as criticism of the self

I will finally present one last issue entailed by the analysis of the self that I have developed in this chapter. My goal is not to present an exhaustive theory of self-control in relation to Peirce, something which has already been done from different perspectives (Acosta López de Mesa 2020; Massecar 2014; 2016; Petry 1992), but rather to show that through certain

aspects of the idea of self-control we can begin to develop a criticism of the self and of that habitual background in which we are constantly immersed.

I will not draw any ethical considerations from Peirce's words, nor will I address specific moral issues. The ethical component of Peirce's habit theory could give rise to an entirely different and interesting kind of work (which Massecar's (2016) recent volume partly covers). What I will focus on, instead, are the consequences which can be drawn from my analysis of Peirce's discussion on habit and the self. In particular, the aspect of Peirce's theory of self-control which I will deal with, entails that general conduct should be valued over single acts.

Moreover, my observations will take their cue from the idea of the mediating-self which I have traced from the Peirce's theory of habit. After all, as Anderson states, "understanding 'self' as a manifestation of a bundle of habits, implicates 'self-control' as a player" (Anderson, 2016: 9). Colapietro (1989:11) confirms Anderson's claim by quoting a clarifying passage from a manuscript in which Peirce, in accordance with the crucial role of habits in his philosophy, states: "you are well aware that the exercise of control over your own habits, if not the most important business of life, is at least very near to being so" (R614:3).

The question of whether habits can be analysed is more complex than it might seem at first sight, and I will try to provide a hypothesis in my conclusions. For Peirce, we can exercise control over our habits, and he states this in many passages. To reason is to be aware of our habits by drawing conclusions from some premise of which we are aware. But as I have shown in the previous chapter, a *residuum* remains that it is difficult to analyse, something on which we must necessarily base our conduct and our reasoning.

Peirce, however, is very clear in explaining the role of self-control, and what the 'control over the self' consists in. The role of self-control is to deviate the course of our actions from the norm, to influence our conduct, to make future actions and "any other than normal" thoughts possible.

> In my opinion, it is self-control which makes any other than the normal course of thought possible, just as nothing else makes any other than the normal course of action possible; and just as it is precisely that that gives room for an ought-to-be of conduct, I mean Morality, so it equally gives room for an ought-to-be of thought, which is Right Reason; and where there is no self-control, nothing but the normal is possible. (CP 4.540, 1906)

But how can it do this? What can be addressed? What is open to criticism? If self is a bundle of habits on what is self-control exercised over? The short answer would be to focus on the only thing we have power over, on building the generality of our character, which habit contributes to shape, by pragmatically emphasising general conduct rather than individual actions. Peirce provides an example:

> Every action of Napoleon was such as a treatise on physiology ought to describe. He walked, ate, slept, worked in his study, rode his horse, talked to his fellows, just as every other man does. But he combined those elements into shapes that have not been matched in modern times. Those who dispute about Free-Will and Necessity commit a similar oversight [as do those who treat Napoleon one action at a time]. Our power of self-control certainly does not reside in the smallest bits of our conduct, but is an effect of building up a character. (CP 4.611, 1908)

What is fundamental to Peirce, consistently with the thesis I have been developing throughout this work, is that our power does not lie in control over individual actions. These neither represent nor exhaust the generality of the self. Self-control is exercised in the generality of the construction of a character, not in the actual individual actions that result from our behaviour:

> The power of self-control is certainly not a power over what one is doing at the very instant the operation of self-control is commenced. It consists (to mention only the leading constituents) first, in comparing one's past deeds with standards, second, in rational deliberation concerning how one will act in the future, in itself a highly

> complicated operation, third, in the formation of a resolve, fourth, in the creation, on the basis of the resolve, of a strong determination, or modification of habit. (CP 8.320, 1906)

In a very late text (a 1913 manuscript, R930), Peirce provides a term to describe awareness of the process of taking, holding or modifying a habit: "habituescence". Here, too, Peirce seeks to overturn the dominant frame of philosophy. As Kilpinen accurately points out, a common philosophical mistake has been to search for self-control (or character formation, or any other exemplification of rationality) in the individual details of our behaviour, in the individual actions that represent a symptom of our personality. Peirce wishes to rephrase the question by arguing that, as in the example of Napoleon, rationality must be examined from top to bottom. When viewed normatively, our actions or smallest fragments of behaviour are simply exemplifications of our general habits or character (Kilpinen, 2016: 210).[105]

For this reason, self-control can and should be directed towards the generality of our conduct. It can fulfil the fundamental task of gaining awareness of the status of our habits, in order to eventually modify or abandon them. Self-control, therefore, is itself general:

> Self-control is a constituent of conduct, not an attribute of individual actions. For this reason Peirce does not emphasize action in the sense of a series of acts, but suggests rather that generals are embodied through the development of conduct, that is, through self-control, which itself is a general. (Hamner 2003: 122)

Starting from this analysis, one last point remains to be investigated, which falls beyond the scope of this work, but to which I would like to devote some food for thought in my

[105] Kilpinen also draws some 'revolutionary' consequences for the theory of action, which usually focuses on the intentionality of the individual action: "This action-conception, which gives a foundational role to habit, does not, after all inflict any harm on those notions that traditionally have been taken as the most burning issues in the treatment of action. Instead, it begins to dawn on us that their job-descriptions are considerably enlarged, when action is understood as a habitual process. They now have to see the entire performance through, over its vicissitudes, not just send the acting subject on his or her way, as was the understanding in the traditional conception which set out from the "one intention-one action" premise. This is what gives us the right to call Peirce's habit-oriented upheaval in action theory "revolutionary" in the full sense of the term" (Kilpinen 2016: 211).

conclusions. In Peirce's writings on pragmatism, where he returns to the fundamental questions from which his pragmatic maxim first came into being, he points out that the role of self-control is central to his theory:

> Now the theory of Pragmaticism was originally based, as anybody will see who examines the papers of November 1877 and January 1878, upon a study of that experience of the phenomena of self-control which is common to all grown men and women; and it seems evident that to some extent, at least, it must always be so based. For it is to conceptions of deliberate conduct that Pragmaticism would trace the intellectual purport of symbols; and deliberate conduct is self-controlled conduct. Now control may itself be controlled, criticism itself subjected to criticism; and ideally there is no obvious definite limit to the sequence. But if one seriously inquires whether it is possible that a completed series of actual efforts should have been endless or beginningless (I will spare the reader the discussion), I think he can only conclude that (with some vagueness as to what constitutes an effort) this must be regarded as impossible. It will be found to follow that there are, besides perceptual judgments, original (i.e., indubitable because uncriticized) beliefs of a general and recurrent kind, as well as indubitable acritical inferences. (EP2: 348)

Peirce clearly reiterates the fundamental role of self-control, highlighting its close relationship with his pragmatic maxim. However, he follows the same backward analysis that I presented in the previous chapter regarding the original beliefs on which we rely, or at any rate those which at a given stage of our reasoning, of our conduct, we cannot doubt or bracket (through the formulation "I cannot think otherwise"). Out of the many obstacles which the principle of habit presents us with, this is perhaps one of the most difficult to overcome.

My question, therefore, stemming from Peirce's proposal, is: given our inability to bracket certain unquestionable beliefs, do we possess an ability at least to analyse the path that has formed certain habits to the detriment of others? Or, reversing the perspective, are

habits somehow analysable and assessable from external signs? In the conclusions to this study, I will try to suggest a path that we might follow.

Conclusions

Starting from Peirce's complex and broad-ranging proposal, in this thesis I have examined the concept of habit in its most general form, in its mode of being. On the one hand, I have considered the hypotheses presented by Peirce from a contemporary perspective, by viewing them in relation to the recently renewed debate on habit. On the other hand, I have put forward some theoretical hypotheses that may highlight some fundamental characteristics of the concept. This project led me to take several factors into account. Firstly, I had to pay specific attention to the theses proposed by Peirce, isolating some thematic cores on which to base my proposal; secondly, in the development of the project, it was necessary to highlight various differences, affinities, and peculiarities with respect to the history of the concept of habit and the contemporary debate on the topic.

To develop this analysis, I divided the structure of my work into two main parts. The first chapter was aimed at showing what idea of habit underlies the whole argument, distancing my perspective itself from some contemporary views. The second chapter, constituting the theoretical focus of the thesis, analysed the habit's mode of being, and the properties that define it are addressed in the third one. I had to work with different areas of Peirce's thought, so as to bring out a proposal that could be compared with other ontological views of habit, which run through the entire history of the concept, albeit in a subtle way. Finally, in the second part, after constructing the general architecture and the properties that define the mode of being of habit, I sought to highlight what effects it may have on human cognition and the self. I pointed out that the concept of habit, as I envisage it, shapes a different way of interpreting our idea of intelligence and subjectivity.

By analysing in detail how we are influenced by habit's mode of being, I have therefore tried to provide a hypothesis regarding some reasons why we can be called creatures of habit. Habit not only influences us and plays a fundamental role in different aspects of our lives, but Peirce shows us that the perspective must be completely reversed: it is we who navigate a world structured by habit, and with habit we share the same mode of being, the very essence

of our being in the world. In addition, in these conclusions I would like to focus briefly on some consequences which can be derived from my work.

Some consequences of certain (in)capacities

In this section I would like to develop further theoretical reflections based on certain points of my thesis, yet extending beyond the argumentation and the logical thread that I have followed in the course of my work.

I have shown that, as a consequence of the general structure of habit, the idea of selfhood emerges from a habitual background, just as the act and the very idea of possibility acquire meaning from the fundamental and mediating role of thirdness, and of habit as the mode of being that connects them.

Taking up the fruitful metaphor of inhabiting suggested by Agamben ("inhabiting life") and by Anderson ("we dwell in and through habits"), I believe that the best way to describe our relationship with habits is not to describe us as masters governing them (since the relationship of possession is ill suited both to my approach and to the concept itself). Instead, a better way to express this relationship is through the idea of inhabiting a world shaped by the principle of habit. As 'dwellers' we have the ability to know how to move at ease, to know the directions and the most appropriate paths to take, aware that, on the one hand, there may always be contingencies beyond our control and, on the other hand, we cannot 'navigate' all possibilities, since some have already been selected and directed by the principle of habit.

This capacity, or incapacity, derives in my opinion from the ontological position of habit and the mode of being we assign to it. Our mode of being is situated in the same intermediate position as habit, which enables a regular passage from indefinite possibilities to single actualities. It is part of our habit-based 'symbolic' nature to navigate this middle ground, searching for subsequent interpretations – as though these were symbols – through expectations, anticipations, and predictions.

On this basis, I have defined the human being as a flow of expectations awaiting to be fulfilled. From this tendency we can derive the following observations. In the regularity of this process, in the incessant flow of our expectations, of the actualisation of certain general rules, the process of habit often hides from us what could have been different possibilities, which have not been actualised. The 'otherwise', totally denied in the actuality of our thinking and behaving, is given only a posteriori. So what is our true capacity? Perhaps it is to review, to critically retrace the trajectories of habit in order to continually rethink ourselves and thus – by projecting ourselves into the future, as a 'would be' – to construct the 'generality' of our character, the only structure that we really have the power to influence, unlike contingent actions. However, as we have seen, possibilities are not given: even the mere fact of being able to think about them, to consider alternatives 'that could have been given', is a process that emerges from thirdness, from a habitual background.

Consequently, if we assume the general definition of our species as 'creatures of habit' and the consequences that I have presented in this work, we must acknowledge that our position in the world, which mirrors that of habit, and our 'trade' with the external environment reside in the complex and perhaps ineffable gap between present, unchanging conditions and future possibilities. So is this really our only (in)capacity?

Habits in action

In a fine introduction to a volume on the application of Peirce's thought, Nathan Houser quotes a few verses that over time have been attributed to various authors, including James and Emerson:

> Sow a thought, and you reap an act;
>
> Sow an act, and you reap a habit;
>
> Sow a habit, and you reap a character;
>
> Sow a character, and you reap a destiny. (Bergman, et al., 2010: 13)

These verses poetically summarise some of the main features I have presented in this thesis, and suggest some concluding remarks that might point to further developments in this work. In addition to taking care of the process of character building, the true destiny of our lives, do we also have the capacity to 'achieve' habits? To critically explore the path that leads from external signs into the depths of our habitual essence? Are habits in some way assessable? Readable? In chapter four, I demonstrated what form a path of habit formation – through the beliefs on which we base our reasoning – can take. Is it possible to go in the opposite direction, that of criticism?

We know well that external structures are the only elements to which we have access, and which we can analyse. With different nuances, this idea has been expressed by many authors. Peirce describes the structure trough which we can try to describe habits in action, and Ravaisson (quoted by Sinclair) holds a similar, albeit more pessimistic, view:

> How otherwise can a habit be described than by a description of the kind of action to which it gives rise, with the specification of the conditions and of the motive? (EP2: 418)
>
> Since only these effects, and not the power itself, are accessible to us in the objects of experience; '[w]e see only the exteriority of the actuality of things; we do not see their dispositions or powers'. (Sinclair 2019: 13)

Only from external circumstances and actual instances can one try to trace the process emanating from habits, and in this way question them, doubt them.[106] At the same time, as

[106] On the other hand, as we have seen thanks to the triadic structure of habit, without circumstances that actualise the conditional process of habit, pragmatistically we would be faced with mere nothingness: "if a conditional proposition is calculated to produce any state of mind, in a person who trusts in it, it must be that it establishes a habit in that mind, using the word "habit" in the original sense, as meaning only that the person or thing that has the habit, would behave (or usually behave) in a certain way whenever a certain occasion should arise. But if this occasion did in actuality not arise, such habit of thought as the conditional proposition might produce would be a nullity pragmatistically and practically. A historian simply talks nonsense when he says 'If Napoleon had not done as he did before the battle of Leipzig (specifying in what respect his behaviour is supposed different from what it was) he would have won that battle.' Such historian may have meant something; but he utterly fails to express any meaning" (CP 8.380, 1913).

Bergman states, "[w]hile any habit – or at least any acquired habit – may be doubted, all-out doubt would entail total paralysis. It is not pragmatically feasible" (Bergman, 2009: 16). Indeed, I have already analysed how an 'in-habitual' life is absolutely impossible to achieve. On the other hand, as Peirce maintains, theoretically we can be conscious of the deep structure of our selves. As Kilpinen states, "in order to perform its critical function, conscious thought first needs to have something to be criticized. That emerges from our sub-consciousness, as we twenty-first century people might say" (Kilpinen 2016: 204). It would thus be possible to somehow bring to the surface – out of the depths of our (sub)consciousness – those deep structures that habit has deposited: "And since we are conscious of what we do deliberately, we are conscious *habitualiter* of whatever hides in the depths of our nature; and it is presumable that a sufficiently energetic effort of attention would bring it out" (EP2: 347). In other words, the aim would be to trace a path from the superficial expressions of our consciousness, a path that could lead us to reveal the real force that lies at the origin of our true self, which really influences our conduct.

In his extensive analysis of habit, Camic quotes a stunning passage from Durkheim (from "The Evolution and the Role of Secondary Education in France"), in which the French sociologist pursues exactly the same goal:

> It is not enough to direct our attention to the superficial portion of our consciousness; for the sentiments, the ideas which come to the surface are not, by far, those which have the most influence on our conduct. What must be reached are the habits—these are the real forces which govern us (Camic, 1986: 1052)

This goal represents an urgency in the philosophy of habit, felt by all authors who have made this concept central to their thinking, as Peirce has extensively shown. The question that arises, then, is: how can habits be achieved, if all we have at our disposal are sequences of actions and a collection of professed beliefs? This path is still a long one, and there are still many stages to be investigated. By showing the emergence of the deep and general structure of the habit principle, the present thesis has implicitly suggested that this structure can be

analysed *à rebours*, by starting from the few external signs at our disposal in an effort to go back to the principles that support them, the deep structures they betray. While this path, in my view, is more impervious than Peirce suggested – for it is far from certain that habits are easily graspable – the aim of my thesis has been to lay some groundwork. I have done so by formulating a hypothesis about the structure and the mode of being of this 'general principle' – a pervasive and apparently ineffable principle that accompanies our lives as well as the history of thought: the principle of habit.

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