

Nuance and Tension:
A study of Bergson's idea of
intensity

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A thesis submitted for the degree of PhD
Center for Research in
Modern European Philosophy
Kingston University

March 2015

Acknowledgments

I would like to express my gratitude to the Foundation for Education and European Culture (IPEP) for giving me the opportunity to complete my research in Bergson's philosophy, through its financial support for the years 2011-2013. Without this substantial aid the completion of this thesis would have been absolutely impossible. I would also like to thank Alexander S. Onassis Public Benefit Foundation for funding research in philosophy that contributed to the current thesis.

My warmest thanks to the Center for Research in Modern European Philosophy for giving me the opportunity to study in one of the leading research centers in Europe and to have provided a stimulating and intellectually challenging environment for the completion of my research.

I would like to thank my director of studies, Professor Howard Caygill for his rigorously academic support, his encouragement throughout my successive attempts to carry through and complete the thesis and for the rare patience that he has shown during the whole process.

Without the moral support of my friends it would have been impossible to endure the difficulties and hardship I had to face while re-writing and completing the thesis. I want to thank especially George Tzamaloukas, Kostas Karkagiannis, Stamatios Schizakis, Vasilis Chountas, Maria Kairi, Paul Wynter, and Professor Simon Clarke, for their moral support and care and their invaluable help with academic and practical matters. My greatest thanks and deepest gratitude are for my father Antonis Karkagiannis, my mother Lena Doukides and my daughter Aimée Rochette, who has been the greatest source of inspiration all the way through.

This thesis is dedicated to Aimée.

Abstract

The thesis examines the theory of intensity and affectivity which is presented in Bergson's first work, *Time and Free Will*, in conjunction with the major topics and problems that arise from Bergson's study of sensibility and mark the transition from his first to his second major work, *Matter and Memory*. The main problems that are examined comprise the critique of the measurement of sensations, the relationship between intensity and multiplicity, the problem of nuance and degree, the relationship between psychic tension and effort in the experience of freedom and finally the relationship between representative and affective sensation. The thesis aims to provide an account of the transition between TFW and MM through a thorough study of the problem of intensity. This aim is pursued in a twofold direction: the conceptual transformation that led to the genesis of the concept of tension and the emergence of the psycho-physiological problem out of the investigation of the intensity of psychic states.

List of abbreviations

TFW H.Bergson, *Time and Free Will: An Essay on the Immediate Data of Consciousness*, trans. F.L. Pogson, Kessinger Publishing Company, Montana, U.S.A, 1910

MM H.Bergson, *Matter and Memory*, trans. N.M. Paul & W.S. Palmer, Zone Books, New York: 1991

CE H.Bergson, *The Creative Evolution*, trans. A. Mitchell, Harvard University Press, Harvard 1910

ME H.Bergson, *Mind-Energy*, trans. H. Wildon Carr, New York, Henry Holt, 1920

DS H.Bergson, *Duration and Simultaneity*, ed. & introd. R. Durie, trans. Leon Jakobson, trans. of additional material, M. Lewis, Clinamen Press, 1999

TSMR H.Bergson, *The Two Sources of Morality and Religion*, trans. R. Ashley Audra & Cloudesley Bereton, University of Notre Dame Press, Notre Dame, Indiana: 1977

CM H.Bergson, *The Creative Mind*, trans. M.L. Andison, First Carol Publishing Group, 1992

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Introduction

The thesis investigates the notion of intensity as it is presented in Bergson's first major work, TFW, in relation to the main topics and problems that are addressed in this work and mark the transition to his second work, MM. Intensity is examined in relation to the problem of sensation, the distinction between quality and quantity and the apprehension of difference, the distinction between the two kinds of multiplicity and the problem of freedom. The thesis attempts to formulate the problem of intensity on the brink of TFW and MM.

As we will try to show, intensity plays a pivotal role in this transition and sheds a new light on the Bergsonian conception of psychological experience and its position in his cosmology and philosophy of life. The links between our understanding of pure or psychic intensity, which is termed *nuance* and Bergson's later theory of the creative effort of life and the creative emotion that produces new forms of life are intimated rather than explicitly explored. Bergson's later formulation of the problem of intensity (i.e. in the CE and the TSMR in view of the creative effort (tension) of life and the creative emotion) is approached rather through the examination of the relationship between *nuance* and *tension*, or else, the idea of pure quality and qualitative change and the concept of tension that overcomes the duality of quantity and quality. As we shall try to show, the idea of nuance stands paradoxically at the origins of the concept of tension that presides over Bergson's theory of memory in MM and his proposed solution to the problem of matter and spirit advanced in the same work. This task is pursued by means of four directions or lines of inquiry: 1) the investigation of the relationship between the two aspects of intensity, that is, the intensity of the complex and simple states 2) the dynamic account of the concept of *nuance* in the unity and distinction of the immediate *feeling* and the *creation* of qualitative and intensive differences that it involves 3) the inquiry in the different lines of facts that lead to the genesis of the concept of tension and 4) the emergence of the psycho-physiological problem in Bergson's first account of sensibility.

The problem of intensity has not attracted much the attention of Bergson's readers. Overshadowed by the analysis of duration, memory and the *élan vital*, intensity does not seem to occupy a central position in the Bergsonian oeuvre, or to provide one of the most original concepts of his philosophy. In addition, Bergson's first inquiry into the

problem of intensity, in TFW, appears to be bound to a merely negative task: the dissipation of an illusory form that coincides with the most widely accepted idea of intensity; notably, the idea of intensive magnitudes. Finally, the problem of quality and quantity which is addressed through the examination of intensity seems to be investigated in a much more profound way in the analysis of duration and the distinction between the two kinds of multiplicity that take place in the second chapter of TFW.

Yet, the role of intensity in the solution of the problem of freedom in TFW, the contribution of the theory of tensions (i.e. the various degrees of tension) for the statement and solution of the problem of spirit and matter in MM and finally, the theory of creative effort (tension) in the CE and the TSMR, attest that intensity might hold a much more crucial position in Bergson's philosophy than what it would seem at first. Certainly the studies of the Bergsonian notion of intensity are not as numerous or extensive as the ones that are devoted in the examination of the other cardinal concepts of his philosophy. However, this should not lead us to the conclusion that intensity has not been explored at all. The problem of intensity occupies a central, although often unacknowledged, position in Deleuze's reading of Bergson (G. Deleuze, 1991, 1997, 1999) it informs some of the most original analyses of Bergson's thought by Worms in his *Bergson ou les deux sens de la vie* (F. Worms, 2004) and it has been discussed in several other studies that explore problems that are closely related to the problem of intensity, such as François' reading of Bergson's theory of the will and the predominant position of the idea of tension that he traces therein (A. François, 2008); Fedi's essay on Boutroux and Bergson and the implications of the Bergsonian critique of psychophysics for the strong and weak models of determinism, i.e. determinism in nature and psychological determinism (L. Fedi, 2001); Philonenko's study of the relationship between the critique of mathematical psychology and Bergson's theory of knowledge (A. Philonenko, 1994) and finally, Miquel's examination of the critique of the methods for the measurement of sensation in relation to the novel conception of sensibility, which is advanced in Bergson's theory of freedom (P-A Miquel, 2000).

However, in most of the aforementioned studies of Bergson's philosophy, intensity is not examined as a problem in its own right. Even Deleuze, who discerns in Bergson's account of intensity, the first statement of the problem of difference, does not really devote a separate analysis for the problem of intensity in Bergson. Probably, the only consistent study of intensity in Bergson has to be sought in Pradines' critical analysis presented in his essay *La vraie signification de la loi de Weber* (M. Pradines 1920), in *La*

philosophie de la sensation (M. Pradines, 1928) and finally in his late essay, *Spiritualisme et psychologie chez Henri Bergson* (M. Pradines, 1941). But even Pradines takes into consideration only Bergson's first inquiry into the problem of intensity and neglects almost entirely the theory of the various degrees of tension, which is presented in MM and elaborated further in the CE and TSMR.

Initially, the idea to explore the problem of intensity in Bergson was motivated by the diagnosis of this ellipsis. It soon became apparent, however, that the problem of intensity is far more intriguing. This is so, because Bergson advances two considerations of intensity that seem at first to oppose each other. In TFW Bergson proceeds to a radical critique of the most commonly accepted significance of intensity which is that of intensive magnitudes. This critique aims to dissipate a contradiction, which is inherent in the idea of intensive magnitudes and 'corrupts' inner perception: namely, the confusion between quality and quantity. According to this analysis, within the psyche there are only qualitative changes; the idea of magnitude or quantity is formed in space and presupposes something extended. Thus, in TFW the analysis of intensity is irremediably bound with a rigorously dualist thesis that finds its culminating point in the distinction between duration and space. In his second work, MM, Bergson advances the view that between matter and fully developed spirit there are infinite *degrees of tension*. With the concept of tension and intensive degrees he aims to account for the union of spirit and matter. In the same analysis he shows how the idea of tension with its various rhythms of contraction and expansion, allows us to bridge the dichotomy between heterogeneity and homogeneity, quality and quantity.

The inconsistency between these two views of intensity has been noted quite a few times in the history of Bergsonism. Probably one of the most significant references to this problem has to be sought in the objection raised by Halévy during the discussion that followed Bergson's presentation to the *Société de Philosophie, Le parallélisme psychophysique et la métaphysique positive* (H. Bergson, 1972, 490-491). Halévy observes that in TFW Bergson had deemed the notion of intensity as illusory because it was seen to derive out of a compromise between quality and quantity that demarcated the 'intrusion' of space and spatial forms within consciousness. In MM, nevertheless, Bergson not only embraces the concepts of tension and extension, but in addition, as Halévy notes, these two ideas are presented as the key that resolves the enigma of the universe because they constitute the synthesis of the pure quality and quantity, the unextended and the extended (H. Bergson, 1972, 491).

Halévy's formulation of the problem holds a primary significance for our inquiry. Unlike most accounts of the problem of consistency and continuity between Bergson's first two works that focus almost exclusively to the two opposed views of quality and quantity, the unextended and the extended, Halévy traces the source of the problem in Bergson's analysis of intensity. Even more significant for the direction and purposes of our study has been Bergson's response to Halévy. According to Bergson, the alleged discrepancy between the two treatments of intensity springs from an inadequate understanding of his first account of intensity in TFW; of the object of the critique and the positive significance of intensity which is set forth.

It was Bergson's insistence on the positive sense(s) of intensity in his first work that led us to undertake a minute study of the inquiry into the intensity of psychic states in TFW, in conjunction with the problem of difference, the distinction between the two kinds of multiplicity and the problem of freedom. His emphasis on the importance of psychic intensity or nuance for the understanding of his later theory of tension, led us to seek the various threads that connect nuance and tension in the analysis of the two meanings of intensity in TFW, in conjunction with a minute study of the role of intensity in the analysis of duration and freedom. The main task of our inquiry is to show that the idea of nuance stands at the foundation of the theory of tension which is elaborated in MM and endows the idea of *intensive degree* or *degree of tension* with a new sense. As we shall see, the idea of pure qualitative intensity or nuance, which is elaborated in TFW, prepares the way for the overcoming of the dichotomy between quality and quantity, the psychic and the physical realms, by positing a more profound and at the same time more fecund distinction between the *experience* of a certain feeling, sensation, or idea and the *process of creation* of the same feeling, sensation or idea that occurs *by means* of this experience. At the same time in TFW, Bergson advances a second conception of intensity – the intensity of the simple states – that introduces new ways of understanding the distinction between quality and quantity and its relation to psycho-physiology. Ultimately, the origins of the concept of tension will be sought in the relation between the two aforementioned meanings of intensity.

This interpretation of the theory of intensity and its role for the evolution of Bergson's thought, was bound to confront one of the most original and influential readings of Bergson's philosophy: notably, Deleuze's account of the stakes of the transition between TFW and MM and the role of intensive degrees therein. Deleuze wrests the problem of the alleged discrepancy or inconsistency between Bergson's first

two works –concerning the distinction between duration and space and the relationship between consciousness and matter- from a merely philological matter and raises it to the status of one of the most decisive problems in Bergson's philosophy. According to Deleuze, what really takes place between these two analyses is the transition from a conception of duration that was understood primarily as *lived time* and consequently an idea of time that belongs to the *psychological experience* of duration, towards a new type of ontology; the virtual ontology that stems from duration and realizes its intrinsic character as virtual multiplicity, or internal difference. Although Deleuze's interpretation has been widely discussed, the crucial role of intensity in this transition between the psychological analysis of time and the ontology of duration often passes unnoticed.

Deleuze approaches the problem of intensity in Bergson from various different angles. The aspect which is most widely known is the distinction of the two kinds of difference: the differences in kind and differences in degree. Notwithstanding its fundamental importance for the understanding of Bergson's method – the method of intuition – or for Deleuze's own work on difference, we do not think that it represents his most significant contribution to the apprehension of intensity. In our view, the most intriguing aspect of Deleuze's analysis has to be sought in his critique of psychic intensity and the notion of pure quality that derives from it.

As Deleuze argues, the concept of intensive degrees represents one of the most important features of duration: i.e. that which enables duration to differentiate itself and evolve in divergent lines when it divides. Pure quality presents an obstacle against the apprehension of the true meaning of intensity –which, for Deleuze is that of intensive degrees. In response to these two points, we tried to see what form the problem of quality and quantity assumes when it is viewed from the perspective of the relationship between psychic and psycho-physical intensity. This transposition of the problem aims to wrest the distinction of quality and quantity from a superficial and rigid dichotomy between two ready-made and static entities and retrieve what we consider to be the most profound sense of the problem. As we shall try to show, when it is viewed from the perspective of nuance or pure psychic intensity, quality ceases to be just an attribute of inner perception. The examination of the intensity of complex feelings, which is essentially what pure intensity denotes, gives rise to the idea of a feeling that *creates itself* while it is *felt (experienced)*. At the same time the problem of quantity assumes a much more intriguing form when it is examined in relation to psycho-physical intensity. This is so because the intensity of the representative and affective states consists to a

large extend to a *feeling* of quantity or magnitude, rather than an 'extraneous' representation that intrudes and corrupts our psychic life. Consequently, in the intensity of the simple states, the confusion, or rather, the *fusion* of quality and quantity does not represent really an illusory form, or even if it does, we have to do with an illusion which is deeply rooted within experience –i.e. the twofold experience of sensation.

However, although Deleuze's interpretation and statement of the problem of intensity in Bergson represents one of the main motivations for the re-examination of the problem of quality and quantity in relation to intensity, the analysis that led us to the idea to displace the stakes of the distinction from the static apprehension of quality and quantity to the two aspects of intensity was Pradines' critique of Bergson on the issue of the latter's failure to see the true significance of Weber's psychophysical law. Pradines' critique and Guendouz's parallel reading and approach to Bergson and Pradines on the problem of intensity, inform the analysis that takes place in the first chapter of the thesis. As we shall see, the most profound and fecund aspect of Pradines' critique resides in the internal contradiction that he uncovers. According to Pradines, by reducing the problem of intensity into that of quality and quantity Bergson ends up adopting the same position that he criticizes; that is, the thesis of psycho-physical parallelism. This particular formulation of the problem of psycho-physical parallelism in Bergson's first work represents our point of departure. At the same time, Pradines' observation on the truly positive character of Bergson's explanation of the intensity of the simple states –i.e. the psycho-physical aspect of intensity – contributed to the idea to pursue these two lines of inquiry concurrently: the critique of psycho-physical parallelism that derives as an exigency from Bergson's apprehension of statement of the problem of freedom and the relationship between the two aspects of intensity: the intensity of the complex states and that of the simple states, or else, psychic and psycho-physical intensity.

In the second chapter of the thesis we will explore further these two meaning(s) of intensity in view of the problem of difference; that is, the distinction between two types of difference, qualitative and quantitative differences; differences in kind and differences in degree. In this analysis we are going to address Worms' and Deleuze's statements of the problem and their respective apprehension of the two meanings of intensity. Through the examination of these three perspectives we shall try to find out whether the idea of nuance can give rise to a new concept of intensity. Moreover, we will discuss the difficulties that emerge from the attempt to think intensity beyond the ideas of magnitude and quantity. In this last respect Pradines' and Jaurès' critiques of Bergson

on the subject of intensity and the relationship between quantity and sensation, acquire crucial importance because they indicate in two respective ways that the absence of quantity and magnitude from the consideration of intensity annuls the very concept of intensity and together with it all positive idea of action.

The third chapter of the thesis approaches the problem of intensity from the perspective of the distinction between the two kinds of multiplicity: the qualitative and quantitative multiplicities. We shall explore the role of intensity in the distinction between the subjective and objective aspects of number and its relation to the spatial mode of differentiation, which is that of analysis and division. This inquiry is in a certain sense introductory. Ultimately, it seeks to examine Deleuze's formulation of the problem of intensity in conjunction to the genetic division of duration and the problematic character that Deleuze traces in the idea of pure quality. There are two insights that will guide us to the central part of our argument. The first consists in the idea that probably the most intriguing and profound relation between intensity and multiplicity is disclosed as soon as we inquire on the *role* of intensity within multiplicity and more specifically, the qualitative multiplicity of duration. The second comes down to the view that there is room for a more profound apprehension of pure quality and affectivity beyond the self-referential idea of a representative feeling. Viewed in the light of the feeling as creative process -that arises from the examination of the relationship between the purely psychic intensity of the complex feelings and the qualitative multiplicity of duration- intensive degrees do not have to be separated from the idea of pure intensity as nuance.

These two insights inform the inquiry into the mixed experience of intensity and the problem of nuance and tension that takes place in the fourth chapter of the thesis. In this final part of the thesis, the theme of multiplicities is pursued further in the direction of the mixed experience of intensity that involves the meeting of the two kinds of multiplicity and the positive apprehension of the relationship between the two aspects of intensity in a 'third' term, which is the body with its affective sensations and movements. As we shall show, with the introduction of the body the mixed phenomenon of intensity acquires a status which is hard to place on the side of illusion, while at the same time it presents a new direction for the apprehension of the distinction and relationship between the two multiplicities.

The main focus of the fourth chapter lies on the problem of 'distinction' and the significance of the distinction between the different types of psychic states when the latter are considered as mixed states -i.e. all presenting a psychic and physical or psychic

and physiological aspects. In response to Worms' interpretation of the intensive degrees of differentiation between the mixed forms of intensity, we shall show that the problem of distinction acquires a tenacious character with the distinction between the deep-seated emotions and the feelings of psychic tension. As we shall see, the latter finds its most adequate expression in the distinction between two *psychic dispositions*: the disposition of a feeling that spreads its nuance and forms a qualitative synthesis between a mass of elementary states that it attracts and the disposition of psychic tension that posits elliptically Bergson's later notion of tension, since it represents only one of the three lines of inquiry that lead to the concept of tension in the versatile and fluid form in which it is used in MM. The second line of inquiry that leads to the concept of tension resides in the idea of nuance, when the latter is viewed from the perspective of its role within duration –that is, the creation of qualitative syntheses that take place in different levels or regions of psychic life. In short, what is unleashed through the dynamic apprehension of the role of nuance in duration is the idea of the different *tones*; different tonalities of synthesis according to the predominant nuance. In the last part of the inquiry we shall pursue further the directions opened up with the introduction of the two main dispositions of psychic life –i.e. that of the deep-seated feeling that synthesizes a variety of heterogeneous states under a common tonality – and that of psychic tension, in the relation to the problem of freedom and the will and more particularly in relation to Bergson's concept of free force (psychic cause). The third line of inquiry that leads towards the concept of tension is presented by the feelings of effort and the idea of spontaneous effort that inform Bergson's concept of free force. As we shall see, through the investigation of this third line of inquiry and more particularly through the examination of the concept of force from the perspective of the feelings of effort that it involves emerges a new consideration of freedom: one which is inseparable from the psycho-physiological processes that carry through the act and challenge the superficial idea of extensity that has been diagnosed by Jaurès as the greatest obstacle against Bergson's idea of freedom.

Chapter One

The psychophysical problem of Intensity and the critique of Fechner's psychophysics

1) Introduction

In this chapter we will examine Bergson's critique of psychophysics in relation to two main problems. The first maintains a prominent position in the inquiry; namely, the illusion which is entailed in the idea of intensive magnitudes. The second is a problem which is rarely discussed, if at all, in the various commentaries of Bergson's theory of intensity and it could be termed as the 'psychophysical problem of intensity'.

The methods of psychophysics are discussed and criticized at the last part of Bergson's inquiry into the intensity of psychic states. The discipline of psychophysics was founded by Gustav Fechner (1801-1887). Its main representatives, besides Fechner, are Joseph Delboeuf (1831-1896) and Wilhelm Wundt (1832-1920). Bergson discusses mainly Fechner's logarithmic law of sensation, but devotes some substantial remarks on Delboeuf's experiments and methods. His critique of psychophysics is motivated by a more comprehensive critique that occupies the main corpus of the inquiry and consists in a detailed examination of the idea of intensive magnitudes and the various problems that it presents.¹ According to this analysis, intensive magnitude is a confused and

¹The inquiry begins by exposing the contradiction which is entailed in the idea of intensive magnitude, proceeds to a positive examination of the genesis of the illusory conception of intensity and ends by a rigorous criticism of the methods of the measurement of sensation advanced by psychophysics. The exposition of the problem of intensive magnitudes takes place in the first part of the inquiry into the intensity of psychic states (TFW, 1-7). The account of the sources and genesis of the illusion takes place in the main part of the discussion (TFW, 7-60). The explanation of the genesis of the illusion is not explicitly stated by Bergson, but it can be derived indirectly from the course of the analysis. We shall examine this aspect of the inquiry thoroughly in the third chapter of the thesis

contradictory concept: it entails the contradictory representation of the extended within the unextended and is formed through a previous confusion between pure quality and quantity. As Bergson tries to show, it is only pure quality that represents an immediate given of consciousness in inner perception. The quantitative representation, which is inherent to the idea of intensive magnitudes, is a superadded and extraneous form that involves necessarily the representation of space.

The discussion of psychophysics holds a central position in Bergson's critique of intensive magnitudes. It would not be an exaggeration to say that without it, the critique of intensive magnitudes and the two sets of distinctions that inform it would remain unfounded. At the same time, the engagement with the methods for the measurement of sensation presented by psychophysics represents Bergson's first encounter with scientific psychology, to be followed by the critical exposition of the empiricist and nativist theories of space in the second chapter of TFW and the critique of associationist psychology in the third. Bergson's relation to scientific psychology and his views on the relationship between metaphysics and science that are first pronounced in the discussion of psychophysics, represent this dimension of the inquiry that has been most extensively discussed by his readers and more particularly, the contemporary readings of TFW.

Philonenko discerns in Bergson's critique of Fechner's psychophysics a radical point of rupture with Kant's edifice in the *Critique of Pure Reason* (A. Philonenko, 1994, 24). This point of rupture occurs right at the heart of the *Analytic of Principles* and it is informed by the radical distinction, which is introduced by Bergson, between the *experience* of difference and the mathematical apprehension of the *differential*. 'Difference' stands for the irrepressible experience of qualitative alteration – i.e. sensation as it is experienced by consciousness – and the attempt to suppress it under the mathematical ideality of a quantitative or numerical difference, which is as much conventional as it is practical. In this way, the failure of psychophysics to explain how the discontinuous and qualitative change can be expressed under the continuous variation (augmentation or diminution) of intensive magnitude is indicative of a much more significant failure; one that sets into question the validity of mathematics as the universal

which is centered in the analysis of the mixed experience of intensity and the genesis of the illusion. The positive account of the illusion and the conditions of its production has been noted by Philonenko (A. Philonenko, 1994, 24-25), Fedi (L. Fedi, 2001, 101-102) and indirectly by Worms (F. Worms, 2004, 56-57). The critique of psychophysics takes place in the last part of the inquiry (TFW, 60-72) and is followed from a small notice on the relationship between intensity and multiplicity. (TFW, 72-75) This last part is very significant because it introduces for the first time the distinction between the two kinds of multiplicity, which is the cardinal idea of TFW as a whole. The relationship between intensity and multiplicity will be investigated in the second chapter of the thesis.

language of knowledge (scientific and philosophical) (C.f. Philonenko, 1994, 27).

However, the stakes of Bergson's critique of psychophysics are not merely negative. Stated positively, the critique of mathematical psychology, if it is regarded from the perspective of its highest aspirations, introduces the possibility of another type of knowledge: one that claims to 'dispense with symbols' and coincides, according to Philonenko's interpretation, with Bergson's ideal of metaphysical knowledge; that is to say, intuition, as a type of knowledge that aspires to raise metaphysics into a rigorous science (A. Philonenko, 1994, 27).

Fedi examines the Bergsonian theory of intensity in relation to a twofold problem: the application of the model of physicalism in psychology and the thesis of psychophysical parallelism that represents the theoretical foundation of this 'extension' of physicalism within psychology. In Fedi's view, the highest stakes of the Bergsonian critique of psychophysics have to be sought in the challenge against the 'strong' deterministic model of causality that consists in the application of the law of the conservation of energy to psychology. In this remarkable article, that aims to reveal Bergson's indebtedness to Boutroux and in particular the latter's work, *De la contingence de lois de la nature*, Fedi indicates the ways in which Boutroux's critique of the determinist model of explanation in nature has influenced Bergson, while at the same time he shows the ways in which the 'methodological dualism' of *TFW* (Fedi, p.100), is attenuated at this crucial part where dualism seems to reach its peak –i.e. the distinction between physical and psychological causality. As it is shown, it is impossible to preserve the intactness of psychological causality unless physical determinism is relativised.

Miquel also considers the epistemological implications of the Bergsonian critique of psychophysics, in parallel to the philosophical problem of freedom. As he argues, Bergson combats psychophysics in two levels: first, on its own terrain, when he shows the inadequacy of the traditional psychophysical methods of measurement – i.e. the dependence of Fechner's and Delboeuf's methods upon extensive magnitudes (P.A. Miquel, 2007, 26) – and second, when he exposes the metaphysical foundation of the psychophysical edifice; namely, the theory of psycho-physiological parallelism. (P. A. Miquel, 2007, 25)

In the analysis that follows the relationship between science and metaphysics and the epistemological repercussions of Bergson's critique of psychophysics are examined only indirectly. The problem that will preoccupy us in this chapter is intimately related to the Bergsonian theory of knowledge, since it questions the validity of Bergson's

critique of psycho-physical parallelism. At the same time it engages with a difficulty that has preoccupied Bergson's readers to a great extent: namely, the problem of dualism.

What we aim to address is the 'psychophysical problem of intensity' as an *internal* problem of Bergson's first work; one that emerges right at the heart of the inquiry into intensity and freedom and puts into question the relationship between the inquiry and its task; the distinction between quality and quantity that derives as an exigency of the inquiry into the problem of intensity and the experience of freedom that Bergson envisages to recover by means of this distinction. This internal aspect of the problem of intensity is going to be pursued indirectly, through a parallel reading of Pradines' critique of Bergson and Guendouz's attempt to show the positive repercussions of this critique for our understanding of Bergson's thought; of its limitations and possible extension.

As we shall see, Pradines' critique finds its most rigorous articulation in the discrepancy that it reveals between the Bergsonian conception of freedom – a conception which is not really attributed to Bergson, but it *is*, nevertheless informed by Bergson's consideration of freedom in terms of creative sensibility – and the distinction which is introduced through the analysis of intensity in order to dissipate the false problem of freedom: notably, the distinction between quality and quantity. According to Pradines, by reducing the problem of intensity into that of quality and quantity, Bergson, shuns the possibility of accounting for the active participation of consciousness in the creation of its own givens, whereas at the same time, he partakes of the same illusion that he depicts in his opponents: that is, the idea that sensation represents a mere reflection of the activity of the stimulus, or else, the idea of psycho-physical parallelism. In this way, Pradines points out a radical inconsistency in Bergson's analysis of intensity: the latter not only fails to carry through its ultimate task – i.e. the recovery of the experience of freedom as creative sensibility – but contradicts also its 'immediate' goal which is the critique of psycho-physical parallelism.

Yet, despite its expressed negative character, Pradines critical analysis can enable us to trace the direction in which the problem of intensity becomes a truly fertile problem for Bergson. This route is opened by Pradines' analysis of the intensity of the simple states in Bergson. The latter analysis gives rise, as we shall see, to the psycho-physical idea of intensity.

2) Fechner's psychophysics and the critiques that were raised against it

The discipline of psychophysics was founded by Gustav Fechner (1801-1887), a versatile spirit, who delved into the study of physics, physiology and aesthetics, expressed the most controversial metaphysical views on the life of the universe, wrote several works on all of these subjects and regarded himself a philosopher.² As Fechner himself attests, the project of psychophysics – defined at first as the study of mental intensity by means of the increase of bodily energy – occurred to him while he was preoccupied with the metaphysical problem of the mind and the body. As he reveals, psychophysics seemed to him to offer an empirical and scientific foundation for his idea that everything in the universe can be regarded as matter or spirit; a foundation that would enable him, as he says, to complete the materialistic 'night view' with the 'spiritualist day view'.³ This aspiration was not meant to be fulfilled and Fechner became notorious for the means that he used in order to attain it rather than the metaphysical aspiration itself. If the greatness of a theory is to be measured, as Ribot proposes, by the discussion and criticisms that it ignites, Fechner's psychophysical inquiry is certainly a great theory in this respect. Inciting one of the most animated discussions that lasted for more than twenty years – from 1860, the date of publication of Fechner's *Elements of Psychophysics* up to the end of the 1880's where Bergson's critique was first published–

²W. James in the *Hibbert Lectures at Manchester College on the Present Situation in Philosophy*, offers a comprehensive account of Fechner's main views and interests, and a critical examination of his work on physiology, physics, philosophy, aesthetics and his satirical essays written under the name Dr. Mises. (W. James, 1909, 131-174). Th. Ribot devotes a chapter to Fechner's psychophysics and the critiques that were raised against it in *La psychologie allemande contemporaine*, (Th. Ribot, 1879, 155-214), but deems Fechner's metaphysical views as inconsequential. In the same work, Ribot provides a bibliography of Fechner's major works. (Cf. Th. Ribot, 1879, 155-156.) The most detailed account of Fechner's metaphysics, physics, physiology, psychology and aesthetics is to be found in E.G. Boring's *Introduction to Fechner's Elements of Psychophysics* (G. Fechner, 1966, ix-xxvi) Freud also cites Fechner in his famous essay *Beyond the Pleasure Principle*.

³ Fechner affirms the identity of spirit and matter and advances the idea that the universe can be regarded from the point of view of its consciousness that he terms the 'day view', or from the point of view of inert matter which is the 'night view.' His metaphysical theses on the 'day view' are expounded in *Nanna oder über das Seelenleben der Pflanzen* (1848) and *Zend-Avesta, oder über die Dinge des Himmels und des Jenseits. Vom Standpunkt der naturbetrachtung*, Leipzig 1851. The latter work contains the first reference to the program of psychophysics.

Fechner's psychophysics presents the first serious attempt to introduce rigorous experimental methods in psychology.⁴

At the centre of this discussion stands Fechner's law for the measurement of sensation. Departing from a law that he credits to Weber – a pre-eminent German physiologist – Fechner thought that the most satisfactory approach to the psychophysical problem would be to examine the effects of the physical stimulus on the intensity of mental phenomena and, more specifically, phenomena that appear to be directly dependent on the action of a physical cause. Fechner termed these as relations of 'functional dependence'.

Weber had performed a series of experiments on the feeling of pressure and weight, the perception of length and musical tones, whereby he sought to define the *amount* of stimulus required in order to produce a *noticeable change* (difference) within consciousness. These experiments offered the most privileged point of departure for Fechner's psychophysical inquiries. This is so because they fulfilled the two necessary pre-requisites of the psychophysical study: the introduction of a mathematical relationship between the quantity of the stimulus and the intensity of sensation and the possibility of a direct study of the effect of the physical cause upon the mental phenomenon which is thereby produced. Out of these experiments and reports, Fechner extracted a law that he named after his predecessor – i.e. 'Weber's law' – and formulated it in the following way:

A difference between two stimuli (or an addition to or subtraction from one or the other stimulus) is always perceived as equal, or produces the same difference or increment of sensation, if its ratio to the stimuli (or in the case the difference is expressed as an increment, its ratio to the stimulus to which it is added) remains the same regardless of how the absolute size changes. (G. Fechner, 1966, 112)

So if we add to a weight of 1 kg, 100 more grams, the difference that the subject feels will be the same as that of 200 grams added upon an initial weight of 2 kg and so on.

However, Fechner observes that although Weber's law 'forms the basis of the most numerous and important applications of psychological measurement' (G. Fechner, 1966, 55), it does not provide the general and necessary foundation of such measurement. In order to obtain the latter, sensation has to be turned into a *function* of the stimulus and

⁴This view is advanced by Ribot (C.f. Th. Ribot, 1879, 157).

Weber's law has to be completed with another law that examines the relation between stimulus augmentation and infinitely small augmentations of sensation. It is through the integration of these two laws – i.e. Weber's law that relates the augmentation of the stimulus to the just perceptible differences of sensation and the second law that relates the infinitely small augmentations to the increase of the stimulus – that Fechner finally derives the law for the measurement of sensation. The latter is stated in the equation,

$$\gamma = K \log \beta$$

(Where γ stands for sensation, β for stimulus and K = constant)

From this formula it transpires that sensation does not grow proportionally to the stimulus, but to its logarithm. The stimulus has to increase according to a geometric progression in order to produce an arithmetical increase in sensation. This disproportional relation between the increase of stimulus and sensation became one of the most controversial points of Fechner's psychophysics and it is remembered as Fechner's paradox. Thus, it is not surprising that most critiques and objections to Fechner's psychophysics either depart from this paradoxical relation in order to shun his system as a whole (e.g. Hering), or try to find ways to reformulate the psychophysical law (e.g. Delboeuf) by introducing new methods of measurement and new experiments.

Fechner, nevertheless, was not demoralized by the controversial conclusion of his law. Quite on the contrary, he tried to explain this disproportional relation between the increase of the stimulus and the augmentation of sensation by bringing in the very hypothesis he had excluded from his psychophysical study; i.e. the psychophysical processes or movements.⁵ He argues that the phenomenon of retardation between the stimulus increase and the increase of sensation, and the fact that we do not perceive the entire amount of the stimulus, are due to the intervention of the psychophysical processes – i.e. the physiological and anatomical facts that constitute the physical carrier of psychic phenomena and mediate the relation between stimulus and sensation.

⁵ These are the neuro-physiological movements of the body that pertain to the domain of 'inner psychophysics' and are immediately connected to our mental state. According to Fechner, these relations that pertain to the domain of inner psychophysics cannot become the basis for empirical evidence on the relationship between the psychic and the physical due to the insufficient knowledge about these processes and because they cannot be easily expressed in quantitative relations. (G. Fechner, 1966, 9)

According to Fechner, the psychophysical processes do not only work as carriers of the activity of the stimulus within the mind, but also as a power of inhibition; a protective mechanism that allows the transmission of a certain amount of physical energy.

In the years that followed the publication of Fechner's *Elements of Psychophysics* in the 1860's and up to 1889, when Bergson published his own critique (*TFW*), Fechner's psychophysics was exhaustively criticized and discussed: there was not a single facet of his theory that did not provoke some objections, improvements and modifications. The most famous of these critiques was advanced by Hering, who did not leave a single aspect of Fechner's theory intact. He raised objections to the extension of Weber's law in acoustics (perception of pitch), accepting only, and still with some reservations, its validity in the perception of lengths and the feeling of pressure. He accused Fechner of assimilating sensations that differ in kind between one another, such as the perception of extensive magnitudes (lengths), qualities and intensities, and argued that Fechner's law was ultimately based on too meagre empirical evidence to support any claim to generality. Finally, he thought that the disproportional relation between the stimulus growth and the augmentation of sensation led to an absurdity that was counter-evidenced by everyday experience.

Complementing Hering's comprehensive critique were several others, objecting to specific aspects of Fechner's theory, such as Helmholtz's and Auber's critiques of the limitations of Weber's law – limitations that Fechner had not clearly set out – Langer's and Tannery's mathematical objections, Wundt's reservations as to the validity of Fechner's law for absolute values in the stimulus, Merkel's counter-experiments and, of course, Delboeuf's 'positive critique' that aspired to the reformation of Fechner's law rather than its rejection.

Delboeuf's psychophysics, which is also discussed and criticized by Bergson, takes into account Helmholtz's and Auber's critiques, responds to Hering's objections and is informed to a large extent by Wundt's observation that consciousness is able to perceive accurately only relations, but not absolute values. Taking into account this latter observation, as well as Tannery's mathematical critique, Delboeuf proceeded to examine simultaneous contrasts in photometric experiments and advanced his own psychophysical method and law that claimed to measure sensation by units of sensation – and not as a function of the stimulus. In general, Delboeuf claimed to have introduced a much more accurate method for the measurement of sensation than Fechner's own.

Fechner responded to his critics with another work, *In Sachen der Psychophysik* (1877), where he tried to defend his previous thesis on psychophysics and psychophysical measurement (G. Fechner, 1966). By the time that Bergson advanced his critique, in 1889, psychophysics had already been examined from all possible angles. As Pradines notes, psychophysics had disappointed all the hopes that were previously placed in it and by this time the possibility of extracting something new out of it seemed to be entirely out of the question (M. Pradines, 1920, 394). Yet Bergson did not think that psychophysics had become obsolete and did not believe that it had been exhaustively criticized. To be more precise, he thought that the critiques that were raised against Fechner's theory, as well as Delboeuf's attempt to reform it, had missed the essential point altogether. It is to the examination of the latter that we shall now turn.

3) Bergson's critique of Fechner and the problem of psycho-physical parallelism

As we mentioned at the end of the preceding section, Bergson does not only criticize Fechner's psychophysics, but also its critics and Delboeuf's 'new' method for the measurement of sensation. The idea that is in question is that of intensive magnitudes—i.e. the conviction that our psychic states grow and diminish in intensity. This view seeks its philosophical justification in Kant's *Anticipations of Perception*, it informs the psychophysical project for the measurement of sensations (i.e. in its different variants), it is endorsed by commonsense and in general it is so widely used and accepted that it 'surprises nobody'. We read accordingly in the opening statement of the first chapter of TFW:

It is *usually* admitted that states of consciousness, sensations, feelings, passions, efforts, are capable of growth and diminution...*people say* they are more or less warm, or more or less sad, and this distinction of more and less, even when it is carried over to the region of subjective facts and unextended objects, *surprises nobody*. (TFW, 1, emphasis added).

We can derive from the above statement the claim that the problem of intensity is not limited to Fechner's psychophysics or to the discussion that followed it. The quantitative consideration of psychic life imbues everyday language and expression, it is endorsed by common sense, in the same way that it is embraced by the philosophers and it is so widely used that it 'surprises nobody' (TFW, 1). As Bergson shows towards the end of his inquiry, ultimately, the philosophical concept of intensive magnitudes, the general admittance of quantity and quantitative comparisons in the description of psychic phenomena and the concept of intensive magnitudes which is used by psychophysics, rest upon the common sense conception of intensity. Bergson thus insists that the illusion of intensive magnitudes is fundamental and *common*: it is used by psychophysics, it is endorsed by the opponents of psychophysics and common sense. The second target

– i.e. the ‘opponents of psychophysics’ – designates primarily the empirical psychologists that criticized psychophysics but failed to criticize the notion of intensive magnitudes that forms the basis of psychophysics. In Bergson’s view the critics effectively prepared the ground for the measurement of sensation (C.f. TFW, 71-72).

Together with the critique of empirical psychology and its unreflective application of the illusory idea of intensive magnitudes, Bergson addresses the philosophical consideration of the problem of intensive magnitudes that finds its most rigorous expression in Kant’s *Critique of Pure Reason* (*Anticipations of Perception*). Thus, most commentators agree that the implicit target of Bergson’s critique of intensive magnitudes is Kant and his distinction between extensive and intensive magnitudes. The Kantian formulation of the problem of intensity was adopted by most empirical psychologists at the time⁶ and represents the confused concept that enables psychophysics to introduce within psychic life the methods of measurement of the positive sciences.

In Bergson’s view, Fechner’s psychophysics and the prospect of mathematical psychology that it advances are implicitly entailed in the idea of intensive magnitudes. This close dependence between the belief in intensive magnitudes and the psychophysical measurement of sensation stands at the basis of Bergson’s critique. In fact, he ‘uses’ psychophysics in order to render explicit and dissipate the illusion which is entailed in a latent form in the concept of intensive magnitudes. The illusion comes down to the contradictory representation of extensity within the unextended and quantity within quality. Yet, this problem can only come to the fore once we attempt to measure intensive quantities and render in this way explicit what remains implicit. For this reason, Bergson insists that *as soon as* we introduce the idea of magnitude to intensity we have also introduced the idea of number. But this relation works also inversely: psychophysics is used as a means for the demonstration of the interdependence between quantity and space that Bergson postulates from the beginning of the inquiry, but does not really analyze before his critique of psychophysics.

⁶According to Robinet, the distinction between extensive and intensive magnitudes, which Bergson attributes to ‘the philosophers’ is encountered in the work of associationist psychologists like Bain (A. Bain, *Les Sens et l’intelligence*, I, III, 2). (C.f. H. Bergson, 2001, 1543). Moreover, as is indicated in the analysis of aesthetic feelings, Bergson depicts also Spencer’s interpretation of the feeling of grace, which is presented in the latter’s *Essays: Scientific, Political and Speculative*, Williams and Norgate, 1891, vol. II, p. 381, *On Gracefulness*, Wundt’s theory of ‘nervous energy’ and Bain’s theory of ‘nervous force’ (C.f. W. Wundt, *Principles of Physiological Psychology*, vol. 1, NY Macmillan Co, London, 1904, chapter IX, *Quality of sensation* and A. Bain, *The Senses and the Intellect*, 1894, p. 79.) In short, through the general concept of intensive magnitude Bergson criticizes all quantitative consideration of psychic life.

Psychophysics now, which 'formulates with precision and pushes to its extreme consequences' (TFW, 70) the commonsensical conception of intensity, succeeds in revealing the confusion entailed by this idea, and exposes inadvertently the contribution of extensity in the usual apprehension of intensity. This takes place through the 'ingenious procedure' that was applied by Fechner in order to overcome a difficulty that was previously considered insurmountable; namely that,

measurement could not be introduced into psychology without first defining what is meant by the equality and addition of two simple states, e.g. two sensations. But, unless they are identical, we do not at first see how two sensations can be equal. (TFW, 63-64)

While in the physical world 'equality is not synonymous with identity' (TFW, 63), in the realm of inextensive and purely subjective phenomena equality can only be synonymous with identity. This is so, because in physical objects that which is measured or, more correctly, that which *can* be measured, is their extensive aspect; this aspect that can be presented under the form of terms that 'can be directly or indirectly superposed on one another and consequently seen to be identical' (TFW, 63).

Bergson here, anticipating his analysis of number that takes place in the second chapter of *TFW*, points out that we cannot form an ascending series of numbers and derive a sum of different objects, unless we presuppose that they are identical to one another, yet somehow distinct. But the only way in which we can have objects that are at the same time identical and distinct, is by placing them side by side to one another in space. In this way they will differ in terms of their respective positions. (TFW, 76-77) According to the same analysis, we cannot form number in pure succession, for, if we picture the same object e.g. fifty times in succession, we shall never have to do with more than a single object. Hence, even when we retain simply the idea of the fifty objects and proceed to derive their sum abstractly, we use, as Bergson argues, an auxiliary space where we 'retain the successive images and set them alongside each of the new units which we picture to ourselves' (TFW, 77). In short, without the mental activity of retention and the space into which the successive images of the objects are retained we cannot form a sum, or more generally, we cannot form the idea of number (i.e. a collection of units).

Returning now to the problem of the measurement of sensation, we see that, since the latter lacks the property of extension, once its qualitative aspect is withdrawn,

there is no identical residuum that remains. Consequently, sensation does not present any measurable aspect. Fechner, however, perceived this difficulty but did not consider it insurmountable. In fact, he employed the most ingenious operation in order to overcome it. According to Bergson, Fechner's 'fundamental error' resides in this ingenious operation. First though we have to see how Fechner tried to resolve this seemingly insurmountable problem and remind ourselves in this way of the operations that he used in order to derive the measurement of sensation.

Fechner had realized that sensation could not be measured in the same way that physical objects are measured— that is by means of superposition. This amounts to the realization that sensation cannot be measured unless it is resolved into equal units that are identical to one another. Since however, in unextended states, we cannot draw a relation of equality without that of identity, it seems that measurement is not really applicable. This is so, because, either we have a *single* object *identical* to itself and consequently an object which is simple and cannot be divided into parts without changing its nature, or a multiplicity of extended and divisible objects that can be equal and identical to one another yet *distinct* (i.e. a multiplicity of parts or units that differ in terms of their position in space). As we saw, in order to meet this difficulty, Fechner proceeded to derive psychophysical measurement indirectly by turning sensation into a function of the stimulus. This, however, does not seem to resolve the problem. As Bergson observes,

It is no use trying to measure this quality Q by some physical quantity Q' which lies beneath it: for it would be necessary to have previously shown that Q is a function of Q', and this would not be possible unless the quality Q had first been measured by some fraction of itself. (TFW, 65)

The above remark is extracted straight out of Tannery's critique. Bergson considered Tannery as Fechner's most acute critic (C.f. TFW, 67). According to Tannery, it is impossible to draw a mathematical relation between two or more terms, unless we presuppose that they can be expressed directly in numbers. Since however, sensation is

not measured with units that pertain to its own nature and is regarded as a function of the stimulus, Fechner's logarithmic relation is devoid of sense.⁷

In response to the above problem signaled by Tannery, Bergson notes that 'the novel feature in Fechner's treatment is that he did not consider this difficulty insurmountable' (TFW, 64). In his view the source of the problem lies in the *procedure* by means of which Fechner tried to show in what way different sensations can be said to be equal to one another *independently* of their functional relation to the stimulus. Certainly, this enterprise is doomed to revolve into a vicious circle, because in order to establish the functional relation between the sensation and stimulus, Fechner is obliged to presuppose that which he strives to prove; namely, the existence of *psychic units or increments* of sensation. Yet, for Bergson, the most tenuous aspect of the problem does not reside in the mathematical error which is presented by this operation, or the vicious circle towards which it leads. As he observes, Fechner's most fundamental error comes down to the assimilation of the *difference* between two successive sensations to an *arithmetical difference*. This transition from the difference that consciousness *perceives* to the arithmetical difference, which is supposed to subsist within sensation, comprises simultaneously Fechner's most derisory error and the basis for this ingenious transformation that he operates on Weber's law. As Bergson tells us, 'the whole of psychophysics is involved' (TFW, 61) in this transition between Weber's law and Fechner's interpretation: the first is a proven law that concerns the *occurrence* of sensation, the second (i.e. Fechner's law) is a spurious law that claims to give us its *measure*.

Before we proceed to investigate what is involved in this transition between Weber and Fechner, we have to note that the latter postulates the presence of arithmetical difference within the *experience* of consciousness –i.e. the perception of which is attested by the participants in the experiments. In contrast, Weber's law does not claim to impinge on the experience of sensation; it merely notifies us of the *changes* that occur in sensation when the absolute values of the stimulus vary. As Bergson remarks, the physicist might use identical sensations as intermediaries between two physical quantities that can be thereby compared to one another. The physicist nevertheless, does not proceed to measure sensations *per se*. Thus, psychophysics is criticized both for the fact that it advances a reductive view of psychic life and for its non-scientific character: psychophysical measurement is not really grounded upon the facts of

⁷ Bergson cites Tannery's 1885 article (C.f. J. Tannery, 1912, 128-161).

science. It consists rather in a spurious operation: the assimilation of qualitative differences to arithmetical differences. In this way, psychophysics ends up measuring something that does not really belong to the experience of consciousness.⁸

However, at closer look, Bergson's argument indicates that the procedures of psychophysics are not entirely disconnected from the experience of consciousness; it is by exploiting the mixed character of intensity in the representative sensations that the psychophysicist can proceed then to measure the 'intervals' of sensation by means of the quantitative changes of the stimulus. Bergson distinguishes two meanings of intensity: the first derives from the perception of intensity in the self-sufficient, or complex, states and involves the confused perception of the multiplicity of elementary states that take part in the fundamental emotion (TFW, 73). Besides this, intensity presents a second aspect that pertains to the simple states, e.g. representative sensations that are dependent on a physical cause. As Bergson argues, the ongoing association of the idea of the cause and the quality of the effect leads consciousness (i.e. the representative consciousness) to introduce the quantity of the cause into its perception of quality (i.e. the sensation which is caused by the physical stimulus). It is precisely this second type of intensity which is exploited by Fechner when he uses the discrepancy between the continuous growth or diminution of the cause and the discontinuity of the effect, in order to derive his concept of minima (equal differences). The same critique is leveled against Delboeuf. We shall use this second formulation of the problem. As Bergson observes in relation to the perception of 'equal contrasts' in Delboeuf's and Plateau's photometric experiments,

although the extensive cause varies continuously, the changes in the sensation of color are discontinuous, passing from one shade to another shade. However numerous, then, may be the shades intermediate between the two colors, A and B, it will always be possible to count them in thought, at least roughly, and ascertain whether this number is almost equal to that of the shades which separate B from another color C. (TFW, 57)

Fechner now performs a similar operation in order to show the existence of minimal differences or increments of sensation (Cf. TFW, 66-68). If we look closely at this operation, we can see that it exploits the confusion that inheres in the commonsensical apprehension of intensity. In fact, Bergson attests to this when he writes that the interval between two different sensations 'is not even a reality' (TFW, 66) –i.e. for

⁸ As Bergson observes, the continuous transition from state S to state S' does not have a reality for consciousness; the latter experiences only the states S and S' in the form of two different qualities or sensations (TFW, 66).

immediate consciousness. Yet, since we are accustomed to 'thrust the cause into the effect' (TFW, 68) and this association between the magnitude of the cause and the quality of the effect is ongoing already from the 'first glimmerings of consciousness' (TFW, 42), the interval 'becomes' a reality for the naïve consciousness (i.e. the practical consciousness of everyday life and utility). For this reason Bergson concludes his examination of Fechner's and Delboeuf's psychophysics by attesting to their indebtedness to common sense –the latter being the naïve or practical consciousness par excellence. As he writes, 'in truth, psychophysics merely formulates with precision and pushes to its extreme consequences a conception familiar to common sense' (TFW, 70).

However, since the transition from Weber's law to Fechner's interpretation 'involves the whole of psychophysics', with all the critical hints that this phrase entails, we have to see how Bergson understands this transition. Bergson begins by arguing that Weber's law simply determines the exact moment at which an increase of stimulus produces a change in the corresponding sensation (TFW, 61). Moreover, the mathematical relation which is established in it is one that concerns the stimulus and its minimum increase; a relation that determines the amount by which the stimulus must increase in order to produce a noticeable difference in consciousness, but not one that relates the amount of stimulus to the amount of sensation. The latter, according to Bergson, belongs entirely to Fechner, who reformulates 'Weber's law' with his own task in mind. Thus, strictly speaking, Weber's law expresses a relation that concerns the *occurrence* of sensation, not its measure. We have to note here that Fechner would not disagree with this last statement. As he writes, 'Weber's law forms the basis of the most numerous and most important applications of psychological measurement, but does not constitute the general and necessary foundation' (G. Fechner, 1966, 155) of such measurement.

Bergson's point nevertheless, is altogether different: the question is not whether Weber's law presents the foundation or inversely, the application of psychic measurement, but whether it bears any psychological significance altogether. As he writes in an earlier passage, which anticipates his interpretation of Weber's law,

the physicist never brings in sensations which are twice or three times as great as others, but only identical sensations, destined to serve as intermediaries between two physical quantities which can then be equated with one another. The sensation of light here plays the part of the auxiliary unknown quantity which the mathematician introduces into his calculations, and which is not intended to appear in the final result. (TFW, 55)

Likewise, in Weber's law, the differences that consciousness perceives serve as the unknown auxiliary that enables us to establish a relation between the stimulus and its minimum increase, but the differences as such are not meant to appear in the final result; they are not to be measured. So the question is: 'how are we to pass from a relation between the stimulus and its minimum increase to an equation which connects the 'amount of sensation' with the corresponding stimulus?' (TFW, 61) Or, in the light of the above remark, what is involved in the transition from physics to psychophysics? In response to this question Bergson proceeds in the presentation of the various 'artifices' that Fechner employs in order to derive his own law. As he writes,

It is first of all agreed to consider our consciousness of an increase of stimulus as an increase of the sensation S ...It is then asserted that all sensations ΔS , which correspond to the smallest perceptible increase of stimulus, are equal to one another. They are therefore treated as quantities, and while, on the one hand, these quantities are supposed to be always equal, and, on the other, experiment [i.e. Weber's experiments] has given a certain relation $\Delta E = f(E)$ between the stimulus E and its minimum increase, the constancy of ΔS is expressed by writing $\Delta S = C \Delta E / f(E)$, C being a constant quantity. Finally it is agreed to replace the very small differences ΔS and ΔE by the infinitely small differences dS and dE , whence an equation which is, this time, a differential one $dS = C dE / f(E)$. We shall now simply have to integrate on both sides to obtain the desired relation $S = C \int dE / f(E)$. And the transition will thus be made from a proved law, which only concerned the *occurrence* of a sensation, to an unprovable law which gives its *measure*. (TFW, 62)

The above passage presents a faithful summary of Fechner's procedure, but it does not seem to give us, at least not at first sight, any new information about that which is involved in the transition between physics and psychophysics. However, since the latter becomes visible only if we regard Fechner's procedures as a response to the 'real difficulty of the problem' we have to see first how Bergson presents this point. As we saw, the main difficulty that had to be met has to do with the fact that in unextended phenomena – such as sensations – equality and identity have to be taken as synonymous; it is impossible to abstract from quality its qualitative aspect in order to assert that two sensations are equal, because then we would either have to negate the reality of sensation as such – i.e. the fact that it represents a qualitative state – or we would have to admit that these two sensations are in reality one identical state. In other words, two

entities can be equal and distinct only if they differ through their position in space. But Fechner did not have anything like this in mind, since he claimed to measure sensation itself by means of units that belong, allegedly, in the order of quality (i.e. the minimal differences). Yet, there seemed to be something 'in between' pure quality and extensive quantity that appeared to legitimize Fechner's procedures; something that could 'prove' that mental states are subject to quantitative considerations. This element that stands 'in between' quality and quantity is none other than the *mixed apprehension of intensity* endorsed by common sense and empirical psychology alike. Nevertheless, the immediate estimate of the intensity of psychic states does not present any accuracy; it cannot yield mathematical expression. For this reason Fechner resorted, as we saw, to this intricate operation that led him to consider sensation as a function of the stimulus and extract from Weber's law its unrealized potential. However, as far as the immediate judgment (or, in Bergson's terms the commonsensical idea) of intensity is concerned, the question remains: does it only lack precision or is there something else entailed in it that obstructs the measurement of sensation?

If we return now to Weber's law that seems to adhere so closely to the immediate judgment of intensity that risks receding to a mundane observation, we see that if any psychological significance is to be extracted from it, this concerns the consciousness of intensity, or, more accurately, the consciousness of a change in intensity, but by no means the intensity of consciousness. Fechner nevertheless, who knew that the measurement of sensation would be impossible if the relation was stated in such terms – i.e. as a relation between the stimulus augmentation and the sensation of increase – reversed the second term of the relation and replaced the *sensation of increase* with the *increase of sensation*. It is in this reversal that reside both Fechner's ingenuity and his most derisory error.

Coming back now to Bergson's presentation of the transition from the proved to the un-provable law, we see that the reversal in question takes place in the first step of Fechner's operation; that is, when Fechner decides to consider 'our consciousness of an increase of stimulus as an increase of the *sensation S'* (TFW, 62). As soon as this reversal is admitted, or, in Bergson's words, 'by the mere fact that ΔS [i.e. the difference in sensation] is regarded as a quantity and S as a sum, the fundamental postulate of the whole operation is accepted' (TFW, 65).

Bergson proceeds then to show that Fechner's mistake resides in the fact that he takes the perception of *change* – expressed as the transition from sensation S to S' – as

an *arithmetical difference*, $S'-S$. The transition from S to S' could only be called an arithmetical difference, as he notes, 'if I were conscious, so to speak, of an interval between S and S' , and if my sensation were felt to rise from S to S' by the addition of something' (TFW, 66). But then 'not only are you unable to explain in what sense this transition is a quantity, but reflection will show you that it is not even a reality' (TFW, 66); for consciousness, 'the only realities are the states S and S' through which I pass' (TFW, 66).

Bergson here refers to the problem of the discontinuous change in sensation and the continuous variation of the stimulus that we discussed previously. Fechner, as if to confirm Bergson's observation on the conventional character of the continuity that psychophysics ascribes to the discontinuous changes of sensation, writes that, 'according to the general principle of continuity no sensation commences abruptly and suddenly at full strength, above which it will not increase; instead it traverses all intermediate degrees from a level which is not noticeable, although often in such a short time that for us the full strength of the sensation seems to come up suddenly' (G. Fechner, 1966, 51). In other words, while we perceive sensation discontinuously, in reality sensation increases continuously; it is only when it reaches a certain level (value) that consciousness is notified of this increase.

As Bergson argues, the above hypothesis does not stand; or at least, it does not stand from the perspective that Bergson examines sensation in TFW: i.e. the perspective of the immediate experience of consciousness. In MM and the CE, Bergson expressly rejects the idea that quality changes discontinuously. In fact, in the CE the reduction of universal becoming into distinct qualities, forms and acts, represents the utilitarian bent of consciousness, that condenses the continuous of flow of material becoming into snapshots – i.e. distinct qualities, forms and acts – that end up with a reconstruction of material becoming which is infinitely varied (i.e. qualitative and heterogeneous) and in continuous flow. Moreover, from the same condensation and abstraction of universal becoming into qualities, forms and acts, Bergson derives 'the three primordial elements of language' (CE, 303) – adjectives, substantives and verbs – that correspond in their turn to the reconstruction of becoming by ancient and modern science; ancient and modern metaphysics. In short, in the CE the condensation of universal becoming into distinct qualities is regarded by Bergson as a result of the 'natural metaphysics of the human mind' and consequently, an intellectualization of experience; a reconstruction. According to the analysis of MM, which is taken up and expanded in the fourth chapter of the CE

(C.f. CE, 300-304), the perception of quality is due to the contraction of very rapid and numerous movements of matter within *one instant* of conscious perception. In this sense, it is rather the continuity of quality and continuity of change that represents the 'objectivity' of quality, rather than its discontinuity (C.f. MM, 203-218). It is noteworthy that this change of perspective in the Bergsonian apprehension of the problem of quality involves the idea of intensity in three crucial 'moments': the first is the contraction/tension or condensation of the quasi-repetitive movements of matter into one instant of our perception which is sensed from within as quality, the second is the degree of intensity of life of the living being that perceives, while the third corresponds to the inner tensions of matter –i.e. the qualities that vibrate within matter.

In TFW that which presides is the perspective of immediate consciousness, which, as we shall see in the next two sections, is found to impede Bergson from discerning the real significance of Weber's law and the most important problem which is posited by intensity. It is noteworthy that Bergson never really doubted the results of his first inquiry on the problem of quality and quantity. Thus, in the analysis that he devotes to the problem of quality and quantity in the fourth chapter of MM, he notes that 'certainly the difference is irreducible (as we have shown in an earlier work) between quality on the one hand and pure quantity on the other' (MM, 202). The essential point of the analysis resides elsewhere: not in the reduction of the discontinuous changes of quality perceived by consciousness, into a homogeneous continuum of repetitive movements – i.e. the position on matter advanced by realism – but in the affirmation of the *reality of movement*. The latter thesis involves the view that the movements of matter will participate in duration and consequently they will not be homogeneous and infinitely divisible –i.e. the view of movement which is abstracted from its reality (i.e. the reality of movement) and attached to a *mobile*. The movements of matter, 'regarded in themselves, are indivisibles which occupy duration, involve a before and an after, and link together the successive moments of time by a thread of variable quality' (MM, 202).

According to the same analysis, the discontinuity and quasi-instantaneous character of perceived quality is due to the contraction of the qualitative vibrations of matter within an instant of our perception. This condensation/contraction is performed by memory and is necessitated by the rhythm of our duration (MM, 205). It has to be noted that this view of movement, quality and matter presupposes indeed a change of perspective that seems in certain ways to involve the restriction of the perspective of consciousness, or, more accurately, another view of consciousness –i.e. the idea of

consciousness which is endorsed in Bergson's theory of pure perception in the first chapter of *MM*. According to the latter theory, consciousness is essentially turned towards action and practical utility and it is this bent of conscious perception towards action that enables Bergson to obtain the 'immediate vision of matter' and at the same time to explain the relationship between matter and perception in positive terms. However, the transition between Bergson's two positions on the role of consciousness – i.e. the immediate consciousness of TFW, which is essentially contemplative, and the practical consciousness of *MM* – does not necessarily denote the abandonment or negation of the first position. In a certain respect, the idea to place quality within movement represents an 'enlargement' of consciousness.⁹

Returning after this long digression to Bergson's critique of Fechner, we have to note that the thesis on the discontinuous perception of qualitative change posits problems primarily in relation to Bergson's other references to sensation in TFW. As we shall see in a later discussion, in the second chapter of TFW and even at the end of his investigation of intensity, Bergson attributes to sensation an enduring character. In support of Bergson, it could be argued that the opposition between the discontinuous apprehension of change in sensation and the continuous alteration of sensation per se – i.e. as a psychic state that endures and changes integrally – marks the difference between the position of the naïve consciousness – which is the type of consciousness that participates in the psychophysical experiments – and immediate consciousness. Under a Bergsonian perspective, the 'immediate vision' of consciousness presupposes a critical process and the dissection of what is usually taken as immediate experience – i.e. the experience of the naïve consciousness – into its constituents. Bergson discusses this point in the fourth chapter of *MM*, where he exposes his method. As he writes, 'that which is usually called a fact is not reality as it appears to immediate intuition, but an adaptation of the real to the interests of practice and to the exigencies of social life' (*MM*, 183). Thus, qualitative change and its alleged discontinuity will be apprehended in an entirely different way by the naïve consciousness and the immediate consciousness. The

⁹ Jankélévitch advances the view that after TFW, duration ceases to be the exclusive property of consciousness (V. Jankélévitch, 1959, 49) and gradually becomes (mainly after the CE) universal duration, but this 'enlargement' of duration can be seen also as an enlargement of consciousness (V. Jankélévitch, 1959, 49). In confirmation of this view, Bergson introduces in the *Summary and Conclusion* of *MM* the view that 'nature might be regarded as a neutralized and consequently, a latent consciousness' (*MM*, 248). The latter idea of consciousness, or better, of the loss of consciousness that denotes a neutralization of consciousness, is elaborated further in the second chapter of the CE in the discussion of the divergent tendencies of the evolutionary movement in the animal and plant kingdoms (CE, 109-114).

first experiences qualitative change as an *abrupt, unexpected and inexplicable* alteration; for the second qualitative change is a change of state as long as it denotes an *integral* change. In this second sense what stands out is the integrity of the change rather than the discontinuity, which, strictly speaking, is not a view which is endorsed by Bergson even in his first work.¹⁰

Coming back to the critique of Fechner, we do not think that it loses its validity through the attestation of the discontinuous apprehension of change. This is so, because what Fechner claims to measure is the sensation itself; that is to say, what consciousness *feels*; not what it does not feel. According to Bergson, if we are to remain in what consciousness presents to us, we will be confronted with a difference of *shade or nuance* – something like the impression which is produced by the different colors of the spectrum (c.f. TFW, 54) – but not with an interval and even less with a magnitude that comes to ‘fill’ this interval. If, in contrast, we abandoned the standpoint of the immediate givens of consciousness – that are not only evoked by Bergson but by Fechner himself – we would necessarily fall, ‘to a conventional mode of representation’ (TFW, 66). In other words, we would have to admit that we do not measure sensation itself, but rather the magnitude of the physical cause which is responsible for it: ‘but this is only a convention, and *the whole point of psychophysics lies in rejecting this convention*’ (TFW, 66). In short, psychophysics arrives by necessity at an impasse, because it cannot reject the convention unless it abandons its essential task – i.e. the measurement of sensation – and it cannot accomplish its task unless it abandons the stakes that define it – i.e. the rejection of the convention that characterizes all operations of measurement and consists either in the abstraction of the qualitative aspect of experience and the retention of its quantitative or extensive aspect in the case of physical objects, or in the silent agreement that prescribes that we do not measure directly the sensation e.g. of heat but rather the degree of temperature that corresponds to it.

As we can see therefore, psychophysics is bound to arrive at an impasse by dint of the very principle that founds it – i.e. the idea of intensive magnitudes, which, by being contradictory cannot but transmit this contradiction to the theory that aims to prove it.

¹⁰ In the second chapter of TFW, Bergson stresses the enduring character of sensation; the fact that it accumulates and embodies the past into the present. As he writes, trying to defy the view that sensation remains the same under the effect of identical external causes (e.g. a continuous stimulation), ‘each increase of stimulation is taken up in the preceding stimulations...the whole produces on us the effect of a musical phrase which is constantly on the point of ending and constantly altered in its totality by the addition of some new note’ (TFW, 106).

Intensive magnitudes introduce the illusory possibility of measuring that which, in reality, is non-measurable.

From the above presentation of Bergson's critique we could conclude that psychophysics is bound to annihilate itself, manifesting in this way the very impossibility of deriving the measurement of sensation. The impasse upon which this edifice is bound to arrive comes to the fore only if we examine it, as Pradines would say, in the 'logic of its truth' (M. Pradines, 1920, 402). And even though Bergson ends up disclosing what he considers to be the fundamental fallacy in Fechner's reasoning, we cannot, nevertheless, accuse him of neglecting the 'logic of its truth'. For, as we tried to show, it is only by acknowledging the essential difficulty of the psychophysical problem that we were able to discern the root of the problem. That is, in the founding principle of the project of the measurement of sensation – i.e. in the idea of intensive magnitudes that opened up the possibility of the quantitative consideration of our mental states – and not in the fragmentary and sporadic errors that were depicted in its previous critiques.

Bergson's discussion of psychophysics and his critique of intensive magnitudes, triggered various objections and counter-criticisms. Berthelot criticized Bergson for not taking into account the distinction between cardinal and ordinal numbers. This point is part of a critique with a much more general scope. The latter is directed against the Bergsonian consideration of quantity and number and the rigid separation between extensity and succession that grounds the critical exposition of number that takes place in the second chapter of TFW. However, as Miquel observes (c.f. P.A. Miquel, 2007, 28), with his remark on cardinal and ordinal numbers, Berthelot addresses at the same time Bergson's critique of the measurement of sensations. The latter holds because, as Berthelot intimates, sensations can be measured by means of ordinal magnitudes. As he notes, at the time when TFW was written, physicists were familiar with magnitudes that are not exactly measurable, but localized (*grandeurs réperées*) (C.f. R. Berthelot, 1911, n.175).

Yet it seems that we have to insist on the more general scope of Berthelot's critique because in the opposite case we risk misunderstanding the secondary targets with the primary. As we mentioned earlier on, Berthelot criticizes the very distinction which is drawn by Bergson between pure succession and space in the formation of the idea of number and quantity. Consequently, his critique is directed against the very foundation of the inquiry of duration; at least, in the form that it assumes in TFW. As he argues, by placing all idea of quantity and number on the side of geometrical extensity

and, inversely, by negating the role of succession in the formation of number, Bergson negates a fundamental aspect of the history of mathematics: that is, the introduction of succession within arithmetic; a tendency that becomes more and more marked since Galileo and Leibniz (C.f. R. Berthelot, 1911, 176-178). Ultimately, he reprehends Bergson for adopting the idea of Descartes on the spatial character of quantity; something that leads Bergson to adopt also the position of a rigid dualism regarding the problem of quality and quantity (viz. the problem of intensity).

In response to Berthelot's point, we could say that Bergson did not really neglect the distinction between cardinal and ordinal numbers, but considered ordinal magnitudes equally problematic with cardinal numbers. In his discussion of duration, succession and space in the second chapter of TFW,¹¹ Bergson argues that a succession cannot be ordered, unless it is first refracted into space and separated in distinct and contiguous parts that are first perceived simultaneously and then ordered according to the determinations of 'before' and 'after'. Moreover, against Berthelot's general objection, we could say that Bergson does not really deny the role of succession in the formation of number and for sure he does not set into question the importance of variable relations in the evolution of astronomy and mathematics.¹² His objection is directed rather at the *type* of succession that science uses. Bergson argues that the latter idea comes down to a *symbolical representation* of time by means of space (i.e. time as the fourth dimension of space). It is the latter type of succession which is used when we try to count or measure phenomena that do not admit of measurement, or more

¹¹ C.f. TFW, 99-102 In his critical analysis of succession, order and the alleged reversibility of time, Bergson criticizes mainly Bain and Spencer (i.e. the English school). The latter tried to deduce the idea of space from the successive order of sensations and the reversibility of this order. For a more elaborate discussion and critique of the nativist and empiricist theories of space by the English and German schools c.f. (H. Bergson, 1992, 400-405). Th. Ribot provides a thorough and pertinent analysis and history of the problem of the origin of space and its cardinal position in the history of empirical psychology in (Th. Ribot, 1879, 67-103).

¹² In the CE, Bergson distinguishes modern from ancient science in terms of the important position of variability in the former. Stated more strongly, in the fourth chapter of the CE, Bergson argues that 'modern science must be defined pre-eminently by its aspiration to take time as an independent variable' (CE, 336). It is true that in TFW the Bergsonian analysis of science appears more 'static' since it emphasizes the importance of the relations of simultaneity and the negation of true succession (TFW, 115-119). However, at a closer look, Bergson's argument on the abstraction of true duration by modern science is not essentially different in TFW and CE. What differs mostly is the Bergsonian view of matter and material becoming. It is the latter point that presents probably the greatest problem in the consideration of astronomy and mathematics in TFW, since, as Bergson attests at various instances, material things do not seem to endure. In contrast, from MM onwards matter is endowed with its own rhythm of duration. The entire analysis of the fourth chapter of MM is devoted to the presentation of the outline of a theory of matter which is based on the existence of different rhythms or *tensions* of duration. Nevertheless, the thesis on the enduring character of the material world and the most dynamic theory of matter is not elaborated until the CE.

accurately, phenomena that cannot be measured without the aid of 'the inventive faculty or of symbolical representation' (TFW, 85). The latter phenomena are precisely the ones that psychophysics claims to measure, that is, states of consciousness.

Another general objection is that the Bergsonian critique of psychophysics and his refutation of the confused concept of intensive magnitudes are based upon the view that sensations are unextended. The latter criticism finds its most subtle statement in the philosophical work of Jean Jaurès. He argues that Bergson's attempt to expel all quantity from sensation ends up breaking all vital connection between the self and space, while, at the same time, endorsing a very superficial idea of space not far from the geometrical extensity assumed by mechanism (J. Jaurès, 1891, 149). In this way, the critique of intensive magnitudes which is set forth in the discussion of psychophysics and the expulsion of quantity from psychic life ends up breaking all intimate relation with extensity that would enable Bergson to explain how sensations acquire extension (J. Jaurès, 1891, 136). Moreover, through the abolition of quantity from sensation, Bergson's critique ends up becoming ineffective, because it is impossible to distinguish one sensation from the other *solely* in terms of quality (J. Jaurès, 1891, 136-137).

According to Jaurès, the impossibility of Bergson's edifice is reflected most flagrantly in the critique of psychophysics. For, when Bergson proceeds to detach the qualitative aspect of sensation from the quantitative apprehension of its cause he is obliged to bring back quantity within sensation (J. Jaurès, 1891, 166-167). Jaurès traces the problem in this essential moment of the inquiry where Bergson exposes the conventional character of Fechner's and Delboeuf's psychophysics: i.e. in the discussion of the discontinuous apprehension of sensation and the continuous growth of the stimulus.

As we saw in our previous discussion, according to Bergson the experience of equal contrasts attested by the participants in the photometric experiments originates from the combined influence of two sorts of experience: the perception of change in sensation which is qualitative and discontinuous and the alteration of the stimulus that varies continuously and involves a change of magnitude (augmentation/ diminution). Bergson argues that the impression of equal contrasts is generated because consciousness enumerates roughly the leaps of sensation by means of the continuous augmentation or diminution of the stimulus. Jaurès nevertheless, argues that this particular argument demonstrates Bergson's tacit admittance of quantity in sensation. This is so, because without this quantitative element it would be impossible to interpose the intermediary sensations with which Bergson tries to explain how consciousness forms the idea of equal

contrasts. According to Jaurès, if quantity was not implicitly admitted, the series of intermediary sensations that consciousness discerns between the initial two sensations that are contrasted, would be entirely fortuitous.

Jaurès' first objection concerning the unextended character of sensation addresses a cardinal problem of the treatment of sensation in TFW. This is so, because Bergson indeed seems to consider sensations unextended throughout the various analyses that he devotes to sensation in his first work. In MM, in contrast he strongly objects to the belief in the 'originally unextended character of our external perception' (MM, 48). As he argues in the second of the two aforementioned works, the belief in the unextended character of sensations, springs from the same great 'metaphysical error' that leads us to 'confound pure perception with memory' (MM, 48). By considering the difference between memory and pure perception as a mere *difference of intensity* (whereby memory is regarded as a weak perception) rather than a *difference in kind*, the associationists end up endowing properties to the one, that belong to the other: 'they are led by the logic of their hypothesis to materialize memory and to idealize sensation' (MM, 140). Part of this 'idealization' of sensation is to regard it incorporeal and unextended.

In the light of the above remarks, it seems that besides the problem that arises in relation to the refutation of psychophysics, Bergson's insistence on the unextended character of sensation presents difficulties in respect to his later view of the same problem. However, there are two questions that arise at this point. The first is whether the critique of psychophysics is affected in the least by this objection and the second is whether it really holds that sensations are presented as unextended throughout TFW. In response to the first question, we do not really think that the problem of the extended or unextended character of sensation affects the Bergsonian critique of psychophysics. This is so because the psychophysical methods of measurement claim to measure the *unextended* impression that consciousness experiences. The second question will be examined more thoroughly in the fourth chapter of the thesis. As we shall see, sensation has a dual character: on the one hand, it is a state of consciousness and, as such, unextended, but on the other it maintains always an intimate relationship to space. In this later analysis we shall also investigate the transition between the theory of sensation in TFW and in MM.

The most rigorous critique of Bergson's interpretation of Fechner was leveled by Pradines in his essay, *La Vraie Signification de la Loi de Weber* (M. Pradines, 1920). This is

not Pradines' only criticism of Bergson's theory of intensity. He re-examines Bergson's views on intensity, quality and affectivity in *La Philosophie de la Sensation* (M. Pradines, 1928) and levels a comprehensive critique of the Bergsonian philosophy and its relation to psychology in his essay, *Spiritualisme et psychologie chez Henri Bergson* (M. Pradines, 1942).

However, Pradines' 1920 essay *La vraie signification de la loi de Weber*, represents the most radical criticism of the Bergsonian position. Indeed the implications of this critique extend far beyond Bergson's critique of Fechner and the problem that he failed to see. What is put into question is Bergson's project of studying intensity as an *immediate given of consciousness*. But even this transposition of the weight of the problem does not really address the most radical aspect of Pradines' analysis. As we shall see in the next section of the chapter, Pradines discloses an internal problem in the Bergsonian consideration of intensity that assumes the form of an irremediable contradiction. The latter aspect of Pradines' critique represents the main focus of the analysis that follows.

4) The psychophysical problem of intensity and Pradines' critique of Bergson

As we saw in the preceding section, Bergson levels a radical critique against Fechner's and Delboeuf's psychophysics. The main aim of this critical discussion is to expose the conventional character and the contradiction which is entailed in every attempt to measure sensation. Against the measurable intensities of psychophysics Bergson contrasts the reality of sensation as it is truly perceived by consciousness. According to Philonenko, Bergson opposes the irreducible and incompressible feeling of *difference* –which is what consciousness *experiences* in sensation – against the mathematical concept of the *differential* (A. Philonenko, 1994, 24). By pursuing this route, Bergson performs a critique of psychophysics that displaces the problem altogether. Unlike other critics of Fechner, he does not really target Fechner for the errors presented by his methods of measurement, or even for the paradox that is disclosed by his logarithmic law. Bergson objects to the very introduction of measurement into psychic life.

However, this twofold critique –i.e. of the methods for the measurement of sensation and the concept of intensive magnitude that underlies it – is not exhausted in the dissipation of the illusion that informs the psychophysical project. Ultimately, by alleviating sensation of the quantity which is erroneously projected upon it, Bergson aims to recover the *experience* of freedom; an experience that tends to be obliterated by the *discourse* on freedom.¹³ The relationship between sensation and freedom has been considered as one of the most intriguing aspects of Bergson's first work. As Philonenko remarks, at first sight it is not obvious at all how the problem of sensation is related to the problem of freedom (A. Philonenko, 1994, 22). The same question is posed by Miquel in *Bergson ou l'imagination métaphysique* (P.A Miquel, 2007, 36). Philonenko and Miquel respond to this question in two different ways. Philonenko stresses, as we saw, the distinction between the *difference* experienced by consciousness and the *differential* which is imposed upon the former and denatures it. According to Philonenko if this distinction is pursued to its ultimate consequences it leads to the idea of duration, or more correctly, the view of consciousness *as* duration (A. Philonenko, 1994, 102).

¹³ In the third chapter of TFW the false statement of the problem of freedom derives explicitly from the discourse between the determinists and the partisans of free will. However, as Prado shows, if we endow the Bergsonian critique of language with its proper depth, we can see that the problem is more tenacious and interesting: Bergson seeks to retrieve freedom from the discourse around it (B. Prado, 2002, 46).

Ultimately, it is the experience of consciousness as inner duration that gives us access to the experience of freedom (A. Philonenko, 1994, 102). In this way, we could say that for Philonenko the analysis of intensity and the distinction between quality and quantity, difference and differential, represents a necessary stage for the inquiry on time and freedom that stands at the core of TFW. Miquel, in contrast, underlines the *temporal* character of sensation in the analysis of intensity and shows in this way that the two problems – i.e. the problem of sensation and that of freedom – are immediately related with one another. According to Miquel, sensation, by recovering its temporal character, also retrieves the power to act upon itself and to transform the set of ideas and relations that surround it. Finally, it is this power of auto-affection which is found in sensation that transforms the subject (agent) into the author of his acts (i.e. the Bergsonian conception of freedom).

Despite the importance of Philonenko's and Miquel's analyses, we will approach the relationship of intensity and freedom from another perspective that borrows elements from the two aforementioned inquiries, but aims to address a different problem. For us it is not a question of trying to re-establish the link between the problem of intensity and that of freedom, but to see whether the dissipation of the illusory form of intensity promotes the solution of the problem of freedom or whether, in contrast, the former is opposed to the latter. The latter view is endorsed by Pradines. First, though, we have to see in what ways the analysis of intensity engages with the problem of freedom. There are two main points, both raised in the discussion of psychophysics, that address the problem of freedom directly: the first is the problem of psycho-physical parallelism and the second is the discovery of a purely qualitative sense of difference which is refractory to any attempt to force a relation of necessary causality between psychic states. In fact, these two sides of the problem are intimately related under the perspective of TFW. This is so, because by refuting the extension of psycho-physical parallelism to all phenomena –i.e. psychic and physical – Bergson tries to safeguard the heterogeneity of the inner states of consciousness from a forced homogenization that intrudes, as it were, with the spatial forms that we usually mingle with inner perception, as e.g. the mixed idea of intensive magnitude. But this relationship works also inversely. The investigation of this inverse relation has been pursued by Fedi in his essay *Bergson et Boutroux, la critique du modèle physicaliste et des lois de conservation en psychologie* (L. Fedi, 2001). Fedi shows how Bergson puts into question two models of deterministic causality by refuting the possibility of the mathematical comparison between psychic

states: the 'strong model' that applies to the extension of the law of the conservation of energy to all phenomena – physical and psychic, inert and living bodies – and the 'weak model' of psychological determinism (Hume's model of causality) (L. Fedi, 2001, 105, 106). As Fedi argues, with his critique of the methods of measurement and the refutation of intensive magnitudes, Bergson levels a rigorous criticism of the strong model of determinism that derives from the universal application of the law of the conservation of energy. The latter implies that there is nothing more in the effect B than the cause A. By showing that the difference between psychic states is irreducible, Bergson stipulates that the strong model of causality is inadmissible in psychic life (L. Fedi, 2001, 106).

In the light of Fedi's reading, it becomes evident that the critique of psychophysics and the insistence on the qualitative heterogeneity of sensation, hold a cardinal position in Bergson's critique of determinism. Yet, if we follow Pradines' critical exposition in *La Vraie Signification de la Loi de Weber*, it is precisely these two points – the critique of Fechner's psychophysics and the insistence on the problem of quality and quantity – that call into question the Bergsonian project for the restitution of the fact of freedom, or, more generally Bergson's relation to freedom. Before we proceed into the presentation and examination of Pradines' critique, we have to note that the term 'freedom' does not appear even a single time in Pradines' article on the true significance of Weber's law. It is rather intimated, since Pradines appears to recognize the same meaning in freedom as Bergson does when he accuses the latter of not acknowledging any active participation of the individual consciousness in the formation of its own givens. As we shall see later on, with his analysis of intensity, Bergson introduces the idea of a *creative sensibility* that represents at the same time one of the core ideas in his analysis of freedom. Following from this, we could say that Pradines states the problem in Bergson's terms but against him. This indirect critique of Bergson and the *inactive spiritualism* that he allegedly endorses are rendered explicit much later, in Pradines' essay *Spiritualisme et psychologie chez Henri Bergson* (M. Pradines, 1943). One could argue, however, that this line of argument is prepared already in Pradines' 1920's essay, *La vraie signification de la loi de Weber* (M. Pradines, 1920). The source of the problem in *La vraie signification de la loi de Weber*, appears to lie in the central role of the immediate givens of consciousness for the study of intensity and, more generally, the use of immediate consciousness as a means for studying psychological phenomena. In his *Philosophie de la Sensation*, Pradines proposes the genetic method instead of the dialectical or the intuitive methods

(i.e. Bergson's) (C.f. M. Pradines, 1928, 10) and claims that there are no 'immediate givens', meaning by this, sensations that can be taken as primary. Sensations and affects involve a process of *formation* in which the spirit actively participates. In contrast, for Pradines, the very idea of 'immediate consciousness' represents a contradictory term, since there is always a process of formation that precedes what we usually term the 'immediate givens of consciousness'. Bergson's insistence to examine consciousness through its 'immediate givens' condemns him to revolve into the closed circle of that which is *given* (i.e. ready-made and fixed). Consequently, it becomes impossible to apprehend consciousness as a dynamic phenomenon if we adopt, with Bergson, the perspective of immediate consciousness. Pradines underlines this static character of Bergson's analysis both in *La vraie signification de la loi de Weber* and in *La philosophie de la sensation*.

The uniqueness of Pradines' edifice in *La vraie signification de la loi de Weber*, lies in his attempt to derive the very genesis of consciousness out of a particular interpretation of Fechner's logarithmic law. According to Pradines, the problem of intensity addresses the *occurrence* of consciousness and not its content –as Bergson erroneously thought. For Pradines the greatest merit of Fechner's interpretation of Weber's law, resides precisely in this dynamic view of consciousness that comes to the fore as soon as we endow this law with its proper significance. Thus, unlike Fechner's successors that criticized and tried to suppress the paradox entailed in the logarithmic law for the measurement of sensation, Pradines embraces this paradoxical relation and tries to set the problem in its right terms. In his view the essential problem posed by Weber's law is that of the *apparition of sensation*. The problem that Bergson discusses is derivative, because ultimately the representative aspect of sensation – i.e. the perception of quality – is the *outcome* of the work operated silently by the individual *while* it reacts to the intensity of the stimulus.

What interests us in Pradines' critique of Bergson is the way in which he explains the latter's inability to see the true meaning of Weber's law. As he argues, Bergson was unable to see the real problem posed by Weber's law, because he considered sensation as the pure reflection or image of the stimulus (M. Pradines, 1920, 394). He concludes thereof that the real problem entailed in Weber's law is obscured by Bergson in the same way that it is obliterated by Fechner's critics and by Fechner himself. More to the point, if we follow Pradines' argument to its ultimate consequences, we could say that in his critique of Fechner, Bergson falls into the same postulate that he contests in

psychophysics: namely, the idea that sensation is a replica of the stimulus, or in other words, the idea that between the psychic and the physical realms there is a rigorous parallelism.

Yet, although the problem of parallelism is addressed in *La vraie signification de la loi de Weber* (c.f. M. Pradines, 1920, 396, 397, 398, 426) it does not really represent Pradines' strongest objection. Although he considers the belief in the contemplative character of perception as a persistent prejudice (M. Pradines, 1920, 396) and although he believes that this is the main reason for Bergson's inability to grasp the real meaning of Weber's law and the most radical consequences of the psychophysical problem, the stress is not really placed on the problem of parallelism per se, but rather on the *passive* or merely receptive character which is imparted upon sensibility when we consider sensation as a mere register of the action of the external stimulus. This idea which is shared by Fechner and his critics –including Bergson – obscures both the real character of Weber's phenomenon –the fact that it concerns the *apparition* of consciousness – and the specific significance of internal intensity that should not be confounded with the perceptive content of sensation, qualitative or quantitative.

If we leave aside for the moment Bergson's critique of Fechner, we have to note here that he actually formulates Weber's law in a way that discloses its proper meaning – its true significance in Pradines' sense. If we recall Bergson's interpretation of Weber's law it is not really that far from Pradines' view. The divergence between Bergson and Pradines lies rather in the *use* of Weber's law. According to Bergson, Weber's law does not intend to measure sensation but only to determine 'the *exact moment* at which an increase of stimulus produces a change in it' (TFW, 61, emphasis added). We can derive from this that Bergson considered, just like Pradines, that Weber's law addresses the *occurrence* of sensation and not its content. For this reason, he discerns in Weber's law a truth that concerns physics but not psychology. Pradines, nevertheless, thinks that the opposite holds: 'the mystery of the psychophysical law...is transparent and of an entirely psychological nature; it does not concern the opposition of the subject and the object, but of the subject with itself' (M. Pradines, 1920, 422).¹⁴

Following the overview of Pradines' argument we are going to discuss two main issues: the first concerns the illusion that Bergson allegedly shares with the other critics of Fechner; i.e. the view that sensation merely registers or reflects the external

¹⁴Voilà tout le mystère de la loi psycho-physique: c'est un mystère transparent de nature en réalité toute *psychologique*, une opposition, non pas du sujet à l'objet, mais du sujet à lui-même'

stimulation. The second, concerns the idea of a purely passive sensibility. According to the perspective opened in *La vraie signification de la loi de Weber* and pursued further in Pradines' later accounts –mainly in his 1942 essay, *Spiritualisme et psychologie chez Henri Bergson* – the second issue is in reality the cause of the first. However, we shall examine them separately. Let us begin by briefly reviewing why in Pradines' view Weber's law concerns the *occurrence* of consciousness and the *apparition* of sensation. As he observes, the real problem posed by Weber's law,

does not concern sensation, but the *apparition* of sensation; not its *content*, but its *existence*; not what we perceive, but the fact that we perceive only this; not consciousness, but the *transition* from the unconscious to consciousness; that is to say, the *creation* of consciousness (M. Pradines, 1920, 425, emphases added).¹⁵

In order to prove the above point, Pradines departs, just like Bergson, from Fechner's interpretation of Weber's observations or, in his expression, from the law that Fechner 'deciphered' in the work of his predecessor (M. Pradines, 1920, 393). Unlike Bergson, who, as we saw above, considered Fechner's psychophysical law an illicit transformation of Weber's relation, Pradines thinks that the real problem posed by Weber's law comes to the fore through Fechner's logarithmic law. Pradines, just like Fechner's critics and Fechner himself, traces the problem in the disproportional growth of the stimulus and the sensation. As he notes, the fact that under the continuous action of a stimulus the whole 'living force' (i.e. *vis viva*, or '*force vive*') augments *continuously*, while the subject changes *discontinuously* and always *slower* than the stimulus (M. Pradines, 1920, 397) is something that should make us wonder. In his view, the retardation in the apprehension of the external intensity –i.e. the intensity of the stimulus – and the fact that the individual consciousness does not reflect the whole amount of external intensity, have to be taken as two definitive signs of the *independence of the perceiving subject* that participates actively in the formation of its representations (M. Pradines, 1920, 397). In this sense, the true significance of Weber's

¹⁵ 'Il ne s'agit pas de la sensation, mais de l'apparition de la sensation; non pas du contenu de l'état, mais de son existence; non pas de ce que l'on perçoit, mais du fait qu'on perçoit cela et qu'on perçoit cela seulement; non pas de la conscience, mais du passage de l'inconscience à la conscience, c'est-à-dire de la création de la conscience' (M. Pradines, 1920, 425).

law has to be sought in the *rhythm* by means of which consciousness changes –under the action of an external stimulus – and *not* in the content of our perception of this change - i.e. the alleged focus Bergson's analysis (M. Pradines, 1920, 417).

We have to note at this point that, although Pradines disagrees both with Bergson – who confounds the perception of internal intensity with that of quality – and those theorists that confuse Weber's phenomenon with the problem of measurement –i.e. Fechner, Delboeuf, Wundt – he believes that this phenomenon only comes into view through the mathematical radicalization of Weber's law by Fechner. Ultimately it is in Fechner's paradox –i.e. the disproportional relation between the augmentation of the stimulus and that of the minimal differences – that Pradines discerns the signs of the independence of individual consciousness. For this reason he insists that Fechner's method and law should be pursued in the logic of its truth. In contrast, if the critique focuses exclusively on the content of internal representations –i.e. on the question of whether the action of external intensity is perceived as quality or quantity – then it becomes impossible to apprehend the really intriguing phenomenon at issue. Ultimately, for Pradines, Weber's law concerns the way in which the individual consciousness *forms* its contents.

As we saw in the first section of this chapter, Fechner tried to explain the paradoxical relation that he discovered, first by employing another law that shows the increments of stimulus and those of sensation to be in direct proportion when the changes are very small and then by denying the discontinuous character of sensation. As he argues, sensation is only apparently discontinuous – i.e. it is perceived as such but it is not in itself discontinuous. When this disproportion became the incontrovertible conclusion of his own logarithmic law, Fechner employed the mysterious intervention of the 'psychophysical processes' and while refraining to explain into what this intervention consists of, he ascribed to it the role of a protective mechanism, something that inhibits the entire magnitude of external stimulation to 'enter into consciousness'.

According to Pradines, Fechner's use of the above-mentioned procedures arrived at 'burying' the problem and turned the paradox that he revealed into something imponderable (M. Pradines, 1920, 424). Moreover, according to Pradines, Fechner's attempt to explain this retardation through the physiological processes that inhibit us from perceiving the physical cause in its full magnitude, initiated a history of a misunderstanding that would afflict all subsequent discussions, including Bergson's radical critique. For one thing, both Fechner and his critics (i.e., Wundt, Delboeuf and

Merkel), mistook the 'mystery' for an evidence that had either to be explained, or rejected together with the law that posits it. Weber, for his part, who was the person that first pronounced it, was also the first to have misunderstood his own discovery to such an extent that he saw in it only a self-evident, *a priori* and mundane relation between the ratio of stimulus growth and the equal differences perceived by consciousness.

In Pradines' view, Bergson participates in this general confusion regarding the true significance of Weber's law. Put more strongly, he effectively obliterates the problem altogether by considering the *internal* or *psychological intensity* as a mirage or illusory reflection of the external intensity of the stimulus (M. Pradines, 1920, 396). According to Pradines, Bergson negates entirely the psychological significance of intensity by assimilating it to quality (M. Pradines, 401). In the light of the analysis which is presented in the *Philosophie de la Sensation*, quality is a much later phenomenon, one that presupposes the creative activity of the spirit which forms its givens along with the activity of intensity upon the individual consciousness that triggers the creative process (M. Pradines, 1928, 23-36). Although this expulsion of intensity represents the symptom rather than the cause of the problem in the Bergsonian apprehension of consciousness, for the purposes of our analysis this element in Pradines' critique is extremely important. For, as we shall see in the second chapter of the thesis, the view that Bergson has only a negative apprehension of intensity in TFW is not just restricted to Pradines' critique.

As we mentioned at the beginning of this section, in Pradines' view the cause of Bergson's inability to apprehend the real significance of Weber's law lies in the fact that he confuses intensity with quality and regards both as purely *receptive*: intensity and quality are supposed merely to register or reflect the action of the stimulus. In this way, Bergson is seen to endorse the same view of the relationship between consciousness and external perception, or the psychic aspect of sensation and the action of the physical cause, as that proposed by the psychophysicists. In other words, Bergson is held to concede to the thesis of psycho-physical parallelism, but in a form which is not addressed in TFW: i.e. the view that perception is purely contemplative and it is formed as the reflection of the external excitation. According to Pradines, due to this illusory idea of sensation, Bergson is led to disregard entirely the essential character of intensity. As he argues, intensity is neither quantitative nor qualitative: it operates on a much more profound level of experience. Intensity is felt as an *action* upon us (M. Pradines, 1928, 34) that presses for a reaction towards which the individual resists. In this interval of

resistance that assumes externally the form of retardation –i.e. of the registration of the stimulus into felt difference – the individual spirit is seen to create its own givens and not simply to receive them. In this way, through his consideration of the problem of psychological intensity, Pradines pronounces a radical conception of sensibility that moves away from the Kantian idea of a merely receptive (passive) spirit and at the same time it traces the foundation of the problem in Bergson's apprehension of intensity, in the latter's alleged adoption of a similar view of sensibility –as the one which is pronounced by Kant and endorsed by most subsequent psychologists and philosophers – i.e. the view of a merely passive faculty that registers docilely the action that it receives from the environment.

The easiest way to respond to Pradines' critique would be to oppose to it Bergson's own theory of pure perception as it is presented in the first chapter of MM. In the latter analysis, Bergson deems the belief in the speculative character of perception as one of the greatest metaphysical illusions –shared both by idealism and realism – that obscures the relationship between matter and perception, on the one hand, and matter and spirit on the other (MM, 28, 68).¹⁶ In the same discussion, Bergson explains perception by means of the *virtual action* of the body and the *intensity of action* that the living being has at its disposal.

Considering the above remarks, we could say that Pradines depicts a provisional problem in Bergson's philosophy; one that holds only for the analysis of intensity in TFW, but not for his later accounts and especially that in MM, where Bergson appears to have revised his first position and to adopt another perspective in his study of sensibility than the one that he endorses in TFW. Moreover, it would seem that he uses a very similar argument to the one that Bergson sets forth in MM. Would it be the case that he traces just an internal opposition within Bergson's thought; a discrepancy between the analysis

¹⁶ The belief in the speculative character of perception obscures the relationship between perception and matter because it impedes us from seeing the truly active character of perception. Ultimately it is the virtual action of the body upon matter that explains perception and supports Bergson's general thesis on matter –i.e. that between individual perception and matter there is a *difference of degree* and not a *difference in kind* (MM, 71). As Bergson notes, this is a prejudice which is common to both realism and idealism. At the same time, the belief in the contemplative character of external perception confounds memory with perception. As Bergson observes, this prejudice on the role of perception impedes us from apprehending the radical difference between memory and perception and underlies the associationist theory memory that regards the latter as a weak form or less intense perception. Thus, the belief in the contemplative character of perception drives us to raise an impassable barrier between matter and perception – by supporting the view that the intrinsic properties of matter are entirely foreign to our perception of it – and by obstructing us from drawing an adequate distinction between matter and spirit (MM, 68-69).

of intensity and perception in TFW and MM? If we take Pradines' detailed account of Bergson's position on the problem of quality and affection in TFW and MM, as it appears in *La philosophie de la sensation*, we could say that he does draw a distinction between the first and the second analysis. As he notes, Bergson gives us two opposite definitions of quality, perception and affection (M. Pradines, 1928, 29). However, although he considers Bergson's theory of pure perception in the first chapter of MM as a positive attempt to restore the connection between perception and extension and at the same time to draw an adequate distinction between the affective states –including intensity – and the representative states, he believes that, ultimately, the solution of the opposition is sought in terms of the analysis of immediate consciousness that takes place in TFW (M. Pradines, 1928, 28, 29).

Moreover, in his comprehensive account of Bergson's philosophy, which is presented in the 1942 essay *Spiritualisme et psychologie chez Henri Bergson*, Pradines reiterates and elaborates further his initial criticism of Bergson. If we follow Guendouz's interpretation, we could say that the touchstone of Pradines' critique of Bergson rests on the latter's failure to provide an adequate explanation of 'the role (activity) of action within perception' (C. Guendouz, 2007, 414).¹⁷ The question that arises at this point, however, is whether this critique is really justified, considering the preponderant role of action in Bergson's explanation of perception in MM. Is it not rather the case that Pradines himself borrows certain elements of Bergson's theory of pure perception and sets them against Bergson's first account of sensation (i.e. in TFW)?

Yet, as Guendouz astutely remarks, we do not have much to gain by setting Pradines and Bergson into a direct confrontation, or just by comparing their respective explanations of intensity and sensation. What would be more fruitful, according to Guendouz, is to view Pradines' critique of Bergson from a positive perspective; that is, as a critique that would enable us to discover and uncover a hidden truth in Bergsonism; one that eludes Bergson himself. Following this insight, Guendouz undertakes to disclose the hidden truth of Bergsonism via Pradines' critical analysis of Weber's law and the problem that Bergson failed to see.

According to Guendouz –and Pradines – the truth that Bergson discovers – inadvertently and against the principal aims of his analysis of intensity in TFW – lies in his observation that the perceptive content of the representative sensations is the outcome

¹⁷ 'Bergson...manque dans sa philosophie, une véritable explication de l'action en tant qu'action, de l'action de l'action dans la perception' (C. Guendouz, 2007, 414).

of an ongoing experience of association between the external intensity and the perceived sensation (M. Pradines, 1920, 426, C. Guendouz, 2007, 410). From this discovery, Bergson could have proceeded to show against Fechner and the psychophysicists that consciousness changes to a certain degree independently from the action that it receives –precisely because it has formed its perception through this ongoing process of association of the quantity of the stimulus and the quality of sensation– and hence its sensations cannot be regarded as a function of the stimulus. However, if we follow Guendouz’s analysis to the end, the ‘truth’ that Bergson discovers is not a truth that affects him: he discovers it inadvertently and does not really pursue it.

Perhaps it is possible to follow the same approach pursued by Guendouz in her parallel reading of Bergson and Pradines and ask whether, through his critical scrutiny, Pradines does not really uncover a truth about Bergson, inadvertently. This truth is problematic, because it reveals Bergson criticizing psychophysics on the basis of its parallelism and at the same time considering sensation as a reflection of the stimulus. In other words, Pradines discloses a contradiction right at the heart of Bergson’s argument against psychophysics, considering that the main target of the Bergsonian critique of psychophysics is the theory of psycho-physical parallelism that informs the various attempts of experimental psychology to measure sensations. However, the question arises of whether Bergson really considers sensation to be mere reflection of the action of the stimulus, or whether he discovers a new type of affectivity that emerges when we set aside the mathematical representation and together with it *all* representation of the states of consciousness. The latter point has been formulated in the most original way by Miquel in his work, *Bergson ou l’imagination métaphysique* (P.A. Miquel, 29). Looking at the passage in the third chapter of TFW, where Bergson discusses the impact of the mathematical *representation* of intensity –i.e. in his refutation of deterministic prediction – it becomes apparent that the problem is focused on the *representation* of intensity as opposed to its *experience* (C.f. TFW, 185). As we shall see in the next three chapters of the thesis, by freeing intensity from its quantitative expression, Bergson sets forth at the same time the idea of a qualitative synthesis, one that is creative without being necessarily active.

In the next three chapters of the thesis we will examine intensity from the perspective of its positive significance, as qualitative difference and felt multiplicity. Yet, we have to note also that the line of inquiry that was initiated by Pradines and Guendouz is not exhausted in this ‘positive’ response to their criticism. By considering the

psychophysical problem of intensity in terms of the occurrence of sensation, there is also another path that opens up; one that consists in pursuing the analysis of the two meanings of intensity, i.e. the pure intensity that consists in a confused *feeling* of multiplicity and the *psycho-physical* intensity of the representative states, in order to see how they are related to one another.

Chapter Two

Differences of intensity, qualitative difference and the positive significance of intensity

1) Introduction

In the previous chapter we examined the critique of the confused idea of intensive magnitude and the various methods of the measurement of sensation and particularly Fechner's psychophysical law. As we saw in the last section of the chapter, the criticism of psychophysical parallelism was turned against Bergson by Pradines and his ingenious interpretation of Fechner's logarithmic law.

In this chapter we are going to investigate the problem of the intensity of psychic states from two main perspectives: the first addresses the *object* of the critique, while the second attempts to recover the *positive idea* of intensity that can be derived from Bergson's analysis. These two aspects are dependent upon each other. Sometimes the radical character of the Bergsonian critique of intensity has been mistaken for a direct refutation of the very concept of intensity in psychic life. As we saw Pradines considers that Bergson negates the psychological significance of intensity altogether (M. Pradines, 1920, 426). Jaurès also regards Bergson's critique of intensive magnitudes as one directed against the very idea of intensity. The same holds for Berthelot and in a certain sense for Deleuze as well, despite the fact that Deleuze emphasizes the methodological importance of Bergson's critique of intensity. This view is countered by another that moves in the opposite direction and consists in a defense of the positive meaning of intensity in TFW. Yet, sometimes the attempt to save the positive meaning of Bergson's concept of intensity puts into question the stakes of the critique. Our main aim in this chapter will be to try and re-position the problem of intensity in such a way as to preserve both the radical character of the Bergsonian critique and show in what ways there might be a positive idea of intensity and what this idea entails. As we shall see, the

great difficulty presented by the inquiry into the intensity of psychic states derives from the attempt to think intensity beyond the ideas of magnitude and quantity. At the same time, the idea of pure intensity – i.e. pure from all admixture to quantity – puts into question the second aspect of intensity introduced by Bergson. We saw in the previous chapter, that Bergson distinguishes two aspects or meanings of intensity: the first pertains to the complex or self-sufficient states and the second to the simple states. The second type of intensity maintains an intimate relation to extensity and magnitude because it derives from psychic states that depend upon an external cause. The problem that arises is whether this second aspect represents an illusory form of intensity, or whether it manifests the emergence of another idea of intensity, which is not really illusory, but not pure either. Ultimately, we shall see that the status of the second aspect of intensity remains undetermined throughout the analysis. At the same time, Bergson indicates that the source of the illusion has to be sought in the mixture of the two aspects of intensity – i.e. of the self-sufficient and the simple states; pure and psychophysical intensity.

The distinction between pure and psycho-physical intensity is going to be examined through the perspective of the two main apprehensions of difference introduced by Bergson: i.e. qualitative and quantitative differences; differences in kind and differences in degree. This aspect of Bergson's argument is going to be explored in relation to Worms' and Deleuze's statement of the problem and their apprehension of the two meanings of intensity. As we will try to show, although pure intensity is adequately expressed in the idea of qualitative differences or differences in kind, the psychophysical intensity, which is essentially the intensity of the simple states, has to be differentiated from the idea of differences in degree, because the latter concept only half grasps them. At the same time, Deleuze's and Worms' apprehensions of the problem of intensity entail some significant insights into the relationship between Bergson's first account and his later considerations of the problem of intensity (TFW, MM, CE). As we shall see, the most intriguing aspect of Worms' analysis at this point consists in showing how a certain apprehension of the two aspects of intensity can serve as the terms into which we can state in the most fecund way the problem of the relationship between Bergson's first and second works in terms of intensity. At the same time, Deleuze's interpretation opens the direction for a new examination of the problem of intensity and its two aspects in relation to the Bergsonian theory of multiplicities and the idea of duration.

2) *The object of the critique and the positive sense(s) of intensity*

As we saw in the previous chapter, Bergson advances a rigorous critique against Fechner's and Delboeuf's attempts to derive the measurement of sensation. It emerged that Bergson's critique was directed against *all* attempts to reduce psychic life to a mathematical representation. However, as we also saw, this first 'expansion' of the object of the critique –i.e. from the specific methods of measurement to all measurement of psychic states – occurs because ultimately the main object of the Bergsonian critique in the first chapter of TFW is the idea of intensive magnitudes. The latter idea presents, in Bergson's view, the common source of all illusory representations of intensity. Bergson deemed the notion of intensive magnitude to be contradictory, because it is seen to entail the confused representation, or even, the 'confused intuition' (TFW, 4) of quantity within quality and extensity within the unextended. The latter view is presented as the outcome of Bergson's conceptual analysis and critique of intensive magnitudes that takes place in the first part of the inquiry (TFW, 1-4). In this first part, Bergson refutes the distinction between intensity and extensity *in terms of magnitude* (TFW, 3), engaging in this way both with the Kantian conception of intensive magnitude in the *Critique of Pure Reason* (*Anticipations of Perception*) and the later uses and apprehension of the same concept of intensity (i.e. intensive magnitudes) by empirical psychology.

The Bergsonian critique of intensive magnitudes generated quite a few new problems. To begin with, it is not clear whether Bergson's critique is directed against all quantitative consideration and against all conception of 'degree' in psychic life. As we shall see, according to Deleuze's perspective, the two –i.e. quantitative apprehension and considerations of degree – are not equivalent. So, limiting our question to the refutation, or not, of all quantitative considerations of psychic life, does this mean that the critique of intensive magnitudes –regarded in this 'expanded' perspective – comprises also the apprehension of differences of intensity? This problem is presented indirectly in Miquel's apprehension of the main object of the Bergsonian critique in the first chapter of TFW. Miquel approaches the Bergsonian theory of the intensity of psychic states from two angles. The first foregrounds the scientific problems raised by the Bergsonian critique of psychophysics, while the second engages with the philosophical problem of freedom.

The problem of the relationship between the apprehension of differences of intensity and quantitative differences is posited indirectly at the outset of Miquel's analysis. He observes that certain critiques leveled against TFW are based upon a misunderstanding of Bergson's intentions. A major source of misunderstanding relates to the object of Bergson's critique in the first chapter of TFW, which, in Miquel's view, comes down to the confusion between the critique of the psychophysical methods of measurement and the existence in Bergson's analysis of a positive apprehension of differences in intensity. As Miquel argues, Bergson never doubted the apprehension of differences of intensity. There is however a problem with the way Miquel proceeds to support this argument. As he writes,

[Bergson] is criticized for negating the possibility of experiencing differences of intensity between sensations, although he never really doubted it. Quite on the contrary, he admits such possibility, following common sense at this point. In his view, common sense is always closer to reality than philosophical speculation. As he writes,

Common sense...has not the slightest hesitation in giving its verdict on this point; people say they are more or less warm, or more or less sad, and this distinction of more and less, even when it is carried over to the region of subjective facts and unextended objects, surprises nobody (TFW, 1).

Thus, we can see that Bergson questions whether it is possible for us to measure these differences of intensity that we feel; that is, whether we have the appropriate tools to proceed to such measurement, but not the possibility of apprehending differences of intensity (P.A. Miquel, 2007, 19-20).¹⁸

¹⁸ 'On va lui reprocher d'abord ce qu'il n'a pourtant jamais mis en doute: que nous puissions éprouver des différences d'intensité entre les sensations. Il [viz. Bergson] l'admet au contraire 'avec le sens commun', toujours plus proche de la réalité, selon lui, que la spéculation philosophique:

Le sens commun se prononce d'ailleurs sans la moindre hésitation sur ce point: on dit qu'on a plus ou moins chaud, qu'on est plus ou moins triste, et cette distinction du plus et du moins, même quand on la prolonge dans la région des faits subjectifs et des choses inévidentes, ne surprend personne (Bergson, 1959/2001, 5)

Il se demande simplement si nous savons mesurer avec des outils appropriés ces différences avec des outils appropriés ces différences d'intensité que nous ressentons. Éprouver des différences d'intensité, ce n'est pas les mesurer. Passer sans précaution de la première idée à la seconde ne peut se faire que par un coup de force caractéristique de la position fechnerienne' (P. A. Miquel, 2007, 19-20).

As we can see, Miquel advances the view that the apprehension of differences of intensity comes down to the common sense view of intensity; i.e. the vague estimate of quantitative variation which is also expressed in everyday language. So, if we follow Miquel's interpretation, when 'people say they are more or less warm, or more or less sad' (TFW, 1), they are just expressing the apprehension of differences of intensity. Yet, would Bergson admit this, that is to say, is it at all plausible that he would agree with common sense at this point? This seems very unlikely if we recall the conclusion of our analysis of Bergson's critique of psychophysics. Thus, at the end of the discussion he traces in the common sense apprehension of quantitative difference the very foundation upon which psychophysics builds its edifice. This foundation is nothing else than the idea of intensive magnitudes. As he writes, in support to our view, 'in truth, psychophysics merely formulates with precision and pushes to its extreme consequences a conception familiar to common sense' (TFW, 70). At an earlier passage he notes that 'this conception of intensive magnitude, seems indeed, to be that of common sense' (TFW, 2) –i.e. the view that sensations of higher intensity will contain ones of lesser intensity (TFW, 2).

Of course what has been presented here is not Miquel's sole contribution to the formulation of the problem of intensity in Bergson's first work. Actually, Miquel wrests Bergson's analysis from a superficial reading that reduces its stakes to the opposition between quality and quantity statically perceived, and discloses the most profound source of the problem in a distinction that takes place between *sensation* and *representation*. In this sense, the greatest problem that occurs with psychophysical measurement is not so much the mathematization of sensation but its reduction to a conceptual representation. However, Miquel's first formulation of the differences of intensity in terms of the vague apprehension of quantitative change (or change of magnitudes) is decisive despite the obvious mistake that it appears to entail. This is so because it sets forth, albeit indirectly, an essential problem of Bergson's analysis: whether the idea of a purely qualitative change, that stands at the center of Bergson's presentation, signifies the emergence a new concept of intensity or whether it represents a view of psychic life that seeks to substitute the confused amalgam of intensity with the pure experience of psychic life *per se*. But besides this first problem, that is easily resolved through an attentive reading of the first chapter of TFW and various later

references to it, there emerges a second and much more intricate problem: can we really *think* intensity beyond all idea of magnitude and quantity?

In relation to the second problem, Miquel's insistence on the positive consideration of *differences of intensity* in Bergson's analysis is helpful, because the attestation of the differential element of intensity connects Bergson's inquiry with the tradition of philosophical and psychological interpretations of intensity that he criticizes.

The differential element of intensity is attested in the common sense apprehension, in Kant's definition of intensive magnitudes;¹⁹ it is raised to the status of a condition for the emergence of consciousness in Pradines' theory of intensity and finally intensity is considered by Deleuze, 'the form of difference in so far as this is the reason of the sensible' (G. Deleuze, 1994, 222). For Bergson the crucial problem is to *interpret* this difference and see whether intensity denotes necessarily a change of magnitude or whether it can take another sense. In fact, Bergson makes this point clear in *Le parallélisme psycho-physique et la métaphysique positive* in his answer to Halévy's remark on the false notion of intensity allegedly depicted in TFW. Bergson emphasizes that in TFW he did not criticize the notion of *intensity* as false, but as a concept that demanded to be interpreted. In the same discussion, he notes that 'nobody can deny the fact that psychic states present intensity. The point is to determine whether this type of intensity presents magnitude' (Bergson, 1972, 491).²⁰ The main part of the investigation of intensity in the first chapter of TFW can be read as a response to this question.

Thus, in the main part of the inquiry, Bergson pursues a distinction between two ways of perceiving change: the first comes down to a purely qualitative apprehension, while the second is presented under the form of quantitative alteration or change of magnitude. At the same time, with his critical investigation of intensity, Bergson attempts to wrest this dynamic sense of alteration that takes place at the depths of consciousness from the immobilizing, externalizing and objectifying effects of language. So, 'when *it* is said that an object occupies a large space in the soul or even that it fills it entirely, we ought to understand by this simply that its image has altered the shade of a thousand

¹⁹ The differential apprehension of intensive magnitudes in Kant is not immediately evident from the definition that he provides in the *Anticipations of Perception*, that consists in the view that intensive magnitude is a 'magnitude which is apprehended only as unity, and in which multiplicity can be represented only through approximation to negation=0' (I. Kant, 1929, A169/B211). However, it is implied throughout Kant's exposition and in a certain sense it is implied also in the definition of intensive magnitudes. This is so, because the apprehension of degree as unity is always informed by the comparison and positioning of this particular degree in the scale of intensive magnitudes (C.f. I. Kant, 1929, A168/B210).

²⁰ 'personne ne peut nier qu' un état psychologique ait une intensité. La question est simplement de savoir si cette intensité est une grandeur.' (H. Bergson, 1972, 491)

perceptions or memories' (TFW, 9, emphasis added). This first sense of alteration that comes down to a change of *nuance* or *shade* is juxtaposed against another view of change which is flat and one-directional. Thus, in the same example of the deep-seated states, the reflective consciousness that 'delights in clean-cut distinctions...and in things with well-defined outlines' (TFW, 9), assumes that 'everything else remaining identical, such and such desire has gone up a scale of magnitudes' (TFW, 9). Likewise, in the feeling of muscular effort, consciousness,

accustomed to think in terms of space and to translate its thoughts into words, will denote the feeling by a single word and will localize the effort at the exact point where it yields a useful result: it will then become aware of an effort which is always of the same nature and increases at the spot assigned to it, and a feeling which, retaining the same name, grows without changing its nature. (TFW, 26)

In contrast, the feeling of effort, given in immediate experience, comes down to 'the twofold perception of a greater number of peripheral sensations, and of a qualitative change occurring in some of them. The analysis of the aesthetic feelings reveals the stakes of the distinction between the two apprehensions of change even more clearly. As Bergson observes, 'there are...distinct phases in the progress of an aesthetic feeling, as in the state of hypnosis; and these phases correspond less to *variations of degree* than to *differences of state* or of *nature*' (TFW, 17, emphasis added).

Returning now to the problem that emerged from Miquel's interpretation, we could say that Bergson draws a rigorous distinction between two different apprehensions of differences of intensity: one that pertains to the psychic states themselves and another that involves something else as well. If psychic states are regarded in themselves they present only qualitative differences. Consequently, the change that occurs in them is purely qualitative. The representation of quantity or magnitude that comes into play in the quantitative apprehension of change of psychic life involves either the *representation* of space, or the *action* of something extended. In the cited passages that we discussed above, we encountered the first factor of spatialization that represents the most general source of illusion in TFW. This is the objectifying tendency of consciousness that responds in its turn to the exigencies of language, social life and practical activity.

Thus, by refracting psychic states in space, representative consciousness prepares their insertion in the stable and well-defined molds of language that can only express things with well-defined outlines like objects in space. The same procedure leads to the

refraction of pure duration in space that is contested throughout Bergson's first work. The difference is that in the first case –i.e. where psychic states are taken in isolation – we have to do with the confusion between two apprehensions of change –qualitative and quantitative – while in the second –i.e. in the refraction of pure duration in space – the problem becomes even more tenacious. The confusion between quality and quantity, 'by invading the series of our psychic states, by introducing space into our perception of duration, it corrupts at its very source our feeling of outer and inner change, of movement and of freedom' (TFW, 74).

Besides this first source of illusion, there is a second that pertains exclusively to the problem of intensity: the role of the extended (physical) cause that comes into play in the perception of intensity in the simple states. We saw that Bergson attributes the perception of intensity to the association of the quantity of the physical cause with the quality of the effect. However, if the existence of a physical cause renders the problem of intensity and its illusory representation into a much more intricate problem than what it would seem at first there is also another new factor of spatialization and objectification that comes into play in the perception of intensity that turns the illusion of intensive magnitudes into a much more profound problem.²¹ Besides the action of the physical cause that comes into play in the perception of intensity in the simple states, most states of consciousness present physical symptoms that take place upon the body in the form of muscular contractions, sketched and executed movements that contribute to a great extent to the perception of intensity in the intermediate states that are 'situated' in between the deep seated or self-sufficient states (i.e. the ones that provide the image of pure intensity) and the simple states. The intermediate states are the feelings of effort, psychic tension and attention. As we shall see at a later part of the thesis, the mixed experience of intensity that accounts for the genesis of the illusion of intensive magnitudes and its persistence involves the concurrent action of the three sources of illusion that we have just discussed: 1) the spatializing effect of language and the

²¹ Worms devotes a pertinent analysis of these two new factors of spatialization in *Bergson ou les deux sens de la vie* (F. Worms, 2004, 51-52, 56, 103-104). According to Worms, the twofold character of sensation represents the psychological foundation of the symbolical representation of time and in this sense sensation complements the analysis of movement. While science exploits the twofold nature of movement in order to introduce measurement in duration, consciousness legitimizes this process through sensation and its twofold nature (i.e. its immediate contact with space and psychic life at once) (F. Worms, 2004, 51-52). At the same time, Worms stresses the importance of this new factor of spatialization that emerges in Bergson's analysis of the intermediate states (muscular effort, psychic tension and attention) which is the body. According to Worms, this new cause of spatialization which is the body gives to Bergson's analysis of the 'mixed states' a new dynamic dimension that foretells the analysis of MM (F. Worms, 2004, 102).

necessary implication of space in conceptual representation that accounts also for the quantitative representation of psychic states; 2) the acquired perception of quantity in quality that comes into play in the intensity of the simple states; and 3) the introduction of a new factor of spatialization and objectification which is the body with its movements and affective sensations.

In spite of the tenacious character of the problem of intensity, we do not think that Bergson admits quantitative differences within his concept of pure intensity, that is, if we keep to the meaning that Bergson gave to it: that of purely qualitative change that occurs both in the apprehension of deep-seated states and that of simple states, once consciousness converts its attention to its immediate givens and refrains from perceiving them under their quantitative cause (i.e. in the simple states), or as things with well-defined outlines (objects) and clean cut distinctions 'like those perceived in space' (TFW, 9).

Miquel's interpretation of differences of intensity is misleading because if we accept that Bergson adopts the position of common sense and its vague apprehension of quantitative differences, then we have to restrict the object of Bergson's critique to the problem of measurement and understate in this way the stakes of the inquiry and the distinction that informs it. The latter distinction is expressly stated by Bergson as that of quality and quantity. It is true that the distinction between quality and quantity leads in its turn to a more profound distinction between two ways of apprehending change – or two apprehensions of difference – and obtains thereby a level of intricacy and subtlety that eludes certain criticisms that are leveled against it and seek to reduce its stakes to a parochial metaphysical dichotomy between extensity and the unextended, space and consciousness. Nevertheless, the intricacy of the distinction and of the problem that is formulated through it – i.e. the problem of intensity – should not work against the originality of Bergson's undertaking. The inquiry into the intensity of psychic states represents one of the boldest attempts to think *pure quality* and to perceive change solely in terms of quality. The idea to study quality and psychic alteration beyond all reference to quantity represents Bergson's main intention. Stretched to its ultimate consequences, this intention can be thought as an attempt to free quality from the negative. The latter dimension of Bergson's inquiry is emphasized by Deleuze and we shall discuss it in a later section of this chapter.

Returning to the distinction between the qualitative and quantitative apprehension of change, the problem that arises is whether the qualitative apprehension of difference

denotes really difference of intensity, or, more generally, whether pure quality and qualitative change present really a new conception of intensity. As we saw, in his retrospective reference to the investigation of intensity in TFW, Bergson insists that he never really intended to deny the existence of intensity in psychic life. Quite on the contrary, he reveals in the same later discussion –in *Le parallélisme psycho-physique et la métaphysique positive* – that his main task in the first chapter of TFW was to interpret intensity. In the same text he adds that actually, not only he does not deny intensity but distinguishes two meanings, or aspects of intensity: one that derives from the examination of the self-sufficient or complex states, which is also termed ‘pure intensity’ (c.f. TFW), and that of the simple states. But, stated in this way, Bergson’s definition of intensity raises two problems rather than one. The first concerns the view of intensity in terms of pure quality –termed by Bergson ‘pure intensity’ – and the second relates to the status of the intensity of the simple states. For, if we admit that Bergson’s principal intention is to try and think qualitative difference without any admixture of quantity and defines the first way of apprehending difference as pure intensity, then the problem that emerges concerns the status of the second sense of intensity: does it follow that the intensity of the simple states is necessarily mixed? And, if this holds, can we say that the intensity of the simple states is illusory? If we assume that Bergson pursues the distinction between pure quality and quantity in all different categories of psychic states examined in the text, what form does this distinction assume in the simple states? Or, is it the case that the first and second meanings of intensity represent two inseparable components of one phenomenon –i.e. what we commonly call intensity – and is necessarily mixed?

We shall start with the last problem. At the very end of the inquiry into the intensity of psychic states, Bergson points out the two aspects of intensity that we have been discussing so far: the intensity of the complex states and that of the simple states. The first is defined as pure intensity, although Bergson does not really emphasize this point in TFW. He just observes that ‘pure intensity ought to be more easily definable in these simple cases, where no extensive element seems to be involved’ (TFW, 7-8). These ‘simple cases’ are the self-sufficient or complex feelings. From the examination of the complex feelings Bergson derives the definition of the first aspect of intensity – i.e. ‘pure intensity’. As he writes, intensity ‘is reducible here to a certain quality or shade which spreads over a more or less considerable mass of psychic states’ (TFW, 8). The second aspect or meaning of intensity is presented only at the very end of the inquiry after the

critical discussion of psychophysics. Now, if we follow Bergson's statement of the distinction between the two aspects or meanings of intensity at the end of the first chapter of TFW, it would seem that the first aspect pertains to the deep-seated or complex states only, while the second belongs to the simple states –i.e. sensations. However, the analysis that appears to lead to this conclusion challenges this distribution. For example, if we accept that the intensity of the representative sensations (i.e. the states that are defined as simple) is adequately expressed in this vague estimate of the magnitude of the cause in the quality of the effect that Bergson describes at the end of the inquiry, then either we have to admit that his critique of psychophysics is vitiated *ab origine*, or that there is an aspect in sensation that remains ostensibly pure from any admixture with the external cause; an aspect which is purely psychic and can be envisaged as such.

Thus, when Bergson criticizes psychophysics he juxtaposes to the 'mixed' perception of sensation that psychophysics exploits –i.e. the idea of sensation as function of the stimulus – a purely qualitative apprehension of difference, which is quite close to the first meaning of intensity. 'The variations in brightness of a given color....would...be nothing but qualitative changes, were it not our custom to transfer the cause to the effect and to replace our immediate impressions by what we learn from experience and science' (TFW, 54). We can derive from this observation that although sensation presents an aspect which is irremediably linked to space and objectivity –i.e. its physical cause – it maintains always a purely qualitative aspect, which is usually taken as a *sign* of the quantity of the extensive cause that acts upon it, although it is given to the immediate consciousness as a purely qualitative state. In other words, sensation presents a side that is pure quality. What remains indeterminate from this perspective is whether the perception of *intensity* in the simple states is necessarily mixed with the perception of their external cause. Bergson's statement at the end of the first chapter of TFW seems to indicate that this holds and that the intensity of the representative sensations is due to the acquired perception of the cause in the effect that drives us to regard the qualitative reality of sensation as a *sign* of the quantity that we suspect behind it (TFW, 224).

From these observations on the intensity of the simple and the complex states, we can conclude that the confusion that we discerned in the beginning between pure intensity and the psycho-physical aspect of intensity in the simple states pertains really to a confusion between two different aspects of Bergson's analysis: one that addresses the presentation of all the different categories of psychic states in immediate experience and

another that addresses the perception of their intensity. This distinction of the two aspects/ levels of Bergson's *analysis* –that should not be confused with the two aspects of intensity – explains also why Bergson pursues the distinction between the qualitative and quantitative apprehensions of difference throughout the various categories of psychic states: from the profound emotions that give us the 'image' of pure intensity, up to the simple sensations that are formed at the 'point of contact' between consciousness and space.

However, besides the distinction between the two aspects of intensity and the two levels of Bergson's *analysis*, there is the examination of the intermediate states that can be confusing in certain respects. This is so because the perception of intensity in the intermediate states –muscular effort, effort of attention and psychic tension – appears to be constituted at once from the pure aspect of intensity –i.e. a certain tone or nuance – and a physical aspect, which is no longer due to the acquired perception of the cause in the effect –as in the perception of intensity in the simple states – but to the presence of physical symptoms. Thus, Bergson will be led to define, 'the intensity of a superficial effort in the same way as that of a deep-seated psychic state' (TFW, 26), because in both cases we have to do with states that are self-sufficient and complex. At the same time, the intensity of a muscular effort is 'reducible to the twofold perception of a greater number of peripheral sensations, and of a qualitative change occurring in some of them' (TFW, 26).

Likewise, the intensity of the effort of attention and that of psychic tension –e.g. uncontrolled anger, passionate love, violent hatred – is likely to be 'nothing but the muscular tension which accompanies' the violent emotions or the feeling of effort in attention. The difference between the two is that the intensity of intellectual attention 'may be reduced to a system of muscular contractions co-ordinated by...the more or less reflective idea of knowing; in the case of emotion, the unreflective idea of acting' (TFW, 28). Considering these examples, we can conclude, that the intensity of the intermediate states is defined in the same way as pure intensity –i.e. in terms of the confused perception of the elementary psychic phenomena that are dimly discerned in the fundamental state – with the difference that the elementary states in the case of the intermediate states, are muscular contractions and peripheral sensations that occur on the body and present for this reason an extensive and quantitative multiplicity.

It transpires from this last observation on the intensity of the intermediate states, that the most tenacious character of the problem and the source of the illusion of

intensive magnitudes has to be sought in the intensity of the intermediate states rather than in that of the simple states. The feelings of effort, tension and attention with the extended multiplicity of movements that they comprise represent the main reason for the persistence of the idea of intensive magnitudes in common sense, philosophy and science, since these psychic states do not simply represent an extensive cause –as e.g. the simple states – but *produce* the feeling of magnitude. For example, in the case of attention, the impression of the ‘immaterial effort which increases’ is nothing ‘but the feeling of a muscular contraction which spreads over a wider surface *or changes its nature*, so that the tension becomes pressure, fatigue and pain’ (TFW, 28). We can derive from the explanation of intensity in the feelings of attention that the perception of intensity in the intermediate states is mixed: on the one hand it involves an organic disturbance ‘which consciousness has no difficulty in measuring by the number and extent of the bodily surfaces concerned’ (TFW, 29) and, at the same time, it denotes a purely qualitative change ‘so that the tension becomes pressure, fatigue and pain’ (TFW, 28). In defiance with our observation, Bergson defines the mixed experience of intensity in terms of *all* of the aforementioned components –i.e. the two declared aspects of intensity and that of the intermediate states that stands, as its name indicates, ‘in between’ the other two. So, immediately after his exposition of the two meanings of intensity, Bergson advances the following remark:

In fact, these two meanings of the word usually intermingle, because the simpler phenomena involved in an emotion or an effort are generally representative, and because the majority of representative states, being at the same time affective, themselves include a multiplicity of elementary psychic phenomena. (TFW, 73)

We can derive from this statement that the mixed experience of intensity is composed by both meanings. At the same time, the role of the body and the physical symptoms comes in surreptitiously. As we shall see at a later part of the thesis, it is the body, which is at once *extended* and *sensed*, that accounts for the twofold character of the simple states. However, if we assume that the intensity of the complex states, or else pure intensity is composed by simple states that are both affective and representative and consequently mixed, is it not the case that intensity *per se* represents a mixed state? If we follow Bergson’s last remark on this matter, it would seem that indeed intensity *per*

se represents a mixed state that serves as the ground of the illusion of intensive magnitudes. As he writes,

The idea of *intensity* is thus situated at the junction of two streams, one of which brings us the idea of extensive magnitude from without, while the other brings us from within, in fact from the very depths of our consciousness, the image of an inner multiplicity. (TFW, 73, emphasis added)

We shall not insist for the moment on the relationship between intensity and the two kinds of multiplicity which is addressed directly in the cited statement. We will examine this problem in the next chapter of the thesis. However, what derives most clearly from the above formulation of the problem is that the idea of intensity *per se* represents a mixture of quality –i.e. the inner multiplicity that comes from the depths of consciousness – and quantity –the idea of extensive magnitude that comes from space. In the light of this last remark it would seem that it would be futile to seek for a positive definition of intensity in the first chapter of TFW and that the idea of purely qualitative change does not really represent a property of intensity, but of psychic life. Is it not the case that this dynamic perception of change comes to the fore only once the confused amalgam of intensity has been set aside?

Although the latter view would be the natural conclusion of our discussion, there are two significant factors that seem to lead towards the opposite view –i.e. that there is a positive sense of intensity which is advanced in TFW and a second sense, which is neither positive nor negative and instead is left indeterminate. The second aspect is the intensity of the simple states that contributes to the illusory representation of intensity, but cannot really be deemed illusory *per se*. First though we have to see which are the two factors that contribute to the view that the intensity of the complex states represents for Bergson a new concept of intensity. The first and probably most significant indication is given in the discussion of intensity in *Le parallélisme psycho-physique et la métaphysique positive*. In this presentation, that was delivered at the Société de Philosophie in 1901 and consequently five years after the publication of MM and twelve years after the first appearance of TFW, Bergson defends, as we saw already, his first exposition of the problem of intensity in TFW and emphasizes the positive character of the inquiry.

In the same discussion, Bergson emphasizes the continuity between two accounts of intensity that are usually held apart and even opposed to one another: the idea of pure intensity in TFW and that of the various *degrees of tension*, introduced in his second

work, MM. The theory of tensions with the various degrees of contraction and expansion that it comprises represents probably this theory which is generally acknowledged as Bergson's positive conception of intensity. At the same time, the theory of tensions holds a central position in the statement and solution of the problem of matter and spirit in MM and in Bergson's theory of memory. The latter theory is usually held apart from Bergson's first account of intensity because it embraces the idea of degree that seems to be discarded in the first and contributes to an apprehension of the problem of quantity and quality that seems to move towards the opposite direction than the analysis of TFW. Thus, in TFW the investigation of intensity is used in order to dissipate the confused amalgam of quantity and quality, while in the fourth chapter of MM intensity –i.e. tension – is employed in order to narrow 'the interval between the two terms which it is usual to oppose to each other' (MM, 202) –i.e. qualities and movements, heterogeneity and homogeneity. We shall leave for the moment the problem of quality and quantity to which we shall return later on and focus instead on the two definitions of intensity. Regarding the two conceptions of intensity in TFW and MM, what appears disconcerting is that the idea of pure intensity in TFW appears to discard the very notion of degree that represents the core of the theory of tensions in MM. As we shall see in the second and third sections of the chapter in our discussion of Worms' and Deleuze's interpretations, the relationship between the theory of pure intensity and the idea of degree which is pronounced in the theory of tensions represents a controversial subject. In the discussion that takes place in *Le parallélisme psycho-physique et la métaphysique positive*, Bergson responds to an objection voiced by Halévy on the alleged opposition between these two conceptions of intensity. More accurately, Halévy observes that in TFW Bergson criticized the idea of intensity as false, while in MM the notions of tension and extension are seen to resolve the enigma of the universe precisely because they present a synthesis of pure quality and pure quantity (H. Bergson, 1972, 491). It is in response to this critical remark by Halévy that Bergson defends the positive character of his first inquiry into the problem of intensity. The essential point that demonstrates, in our view, that pure intensity is considered by Bergson as a new concept of intensity, is entailed in the relation that Bergson draws between the idea of the various degrees of tension and the perception of intensity in the complex states. Thus, stating once again his definition of the two aspects of intensity –i.e. that of the complex and the simple states – he emphasizes the difference between the two meanings of intensity (i.e. in the simple and complex states) with the following statement:

The intensity of a simple state is a certain quality or nuance of this state that informs us, though the association of ideas and the aid of acquired experience, on the approximate magnitude of the cause out of which this state emanates. The intensity of a complex state is something quite different. It consists of the *felt multiplicity* of the elements that compose this state...and it is this second sense of the word that comes into play when I attribute to consciousness different degrees of tension (H. Bergson, 1972, 491).²²

The above observation is crucial because it introduces the possibility of another apprehension and a new consideration of the relationship between the first and second accounts of intensity in Bergson. In addition, the possibility of another reading of the theory of intensity in TFW is thereby introduced; one that would necessitate examining once again the problem of degree in relation to the distinction between qualitative and quantitative differences that frame the discussion of intensity in the first chapter of TFW and, finally, a positive examination of the relationship between intensity and multiplicity. Thus, it transpires most clearly that it is the idea of pure intensity that comes into play in the theory of the different tensions and rhythms of duration that mark the different degrees of contraction and relaxation between matter and spirit in MM. However, we have to note that the idea of tension which is advanced in MM denotes primarily an activity of contraction. Memory contracts the vibrations of matter –that are defined also as tensions – into sensed quality –i.e. the subjective part of perception. Memory once again contracts itself and creates within itself various degrees of contraction and expansion; the body represents the most contracted aspect of memory –i.e. its insertion within matter. Finally, duration presents all the different rhythms of tension and extension between matter and fully developed spirit. Considering these examples, can we say that the idea of pure intensity, re-defined as *felt multiplicity* (*multiplicité sentie*) denotes the same idea of *tension* that we encounter in MM?

Yet, there is a problem that emerges from this one-sided formulation of the relationship between the first and second accounts of intensity. The idea of tension in

²² L' intensité d'un état simple est une certaine qualité ou nuance de cet état qui nous averti, par une association d'idées et grace a notre expérience acquise, de la grandeur approximative de la cause extérieure d'ou il émane. Mais l'intensité d'un état complexe est quelque chose d'assez différent. C'est la multiplicité *sentie* des éléments qui entrent dans la composition de cet état...or, c'est la second sens du mot que je retiens quand j'attribue des degrés de tension à la conscience. (H. Bergson, 1972, 491)

MM certainly reaches its most elaborated significance in Bergson's theory of memory and its most fundamental application in the statement and solution of the problem of matter and spirit – a statement and a solution that are sought in duration. Tension represents an exemplary form of flexible concept in Bergson's philosophy or, if we follow Worms' definition in *Le vocabulaire de Bergson*, the very idea of flexible concept²³ derives from the consideration of intensity and the notion of intensive degrees. The same remark had been advanced earlier by Deleuze in *Bergson's Conception of Difference*, where the degrees of tension or nuances, denote the *degrees of difference* of the concept *per se* and not just particular dimensions or aspects that are subsumed *under* a concept (G. Deleuze, 1999, 54).

Now, even a hasty glance at the various uses of the term tension in MM displays the polyvalent and flexible character of this concept – which is used later on in order to define what is meant by flexible concepts. In MM Bergson refers to the particular *tension* of cerebral energy (H. Bergson, 2008, 109), the relaxation of the '*tension* of the threads which go from periphery to the periphery by way of the center' (MM, 85) upsetting in this way the equilibrium which is maintained by the brain between the external stimulation and the motor reaction, the '*mutual tension*' between the perceived object, memory and perception in attentive perception (MM, 103-104), the different degrees of tension of memory that repeats our psychic life in different tones and levels (MM, 169-171) and finally all the different degrees of tension that fill the '*distance*' between the vibrations of matter and fully developed spirit.

As we can see from the cited examples, tension is an idea that always maintains a twofold aspect, while at the same time it denotes the unity between the two aspects: the psychic and physical, or physiological. The concept of tension is one that Bergson draws from the idea of *τόνος* that has its origins in ancient Stoicism.²⁴ In his lectures on the philosophy of the Stoics at Lycée Henri-IV in 1894-1995, Bergson presents *τόνος* as a response to the problem of quantity and quality. As he writes, in contrast to Plato's and Aristotle's conceptions of the irreducible character of qualities or forms – i.e. the fact that

²³ Bergson discusses the idea of flexible concepts for the first time in his famous essay *Introduction to Metaphysics* written in 1903 (CM, 159-200) and provides a significant analysis of the idea of flexible concept in his 1904 essay, *The life and work of Ravaissan* (CM, 220-252). Deleuze focuses on the analysis of colors that takes place in the second of these two essays. But the definition of flexible concepts is given in the *Introduction to Metaphysics*. According to this definition, flexible concepts are '*mobile, almost fluid representations, always ready to mold themselves on the fleeting forms of intuition*' (CM, 168).

²⁴ The term *τόνος* signifies at once tension, strain, stretching of e.g. chords and ropes, intensity, the tension of the nerves, pitch (of sound, voice), tonality, intellectual tension (Liddell & Scott, 1997).

they could not be transformed into one another, 'the Stoics tried to trace back differences of quality into differences of quantity' (H. Bergson, 2000, 122).²⁵ In the same lectures, Bergson notes that for the Stoics the qualities that are developed space represent diverse degrees of tension and relaxation of the same principle. Moreover, he notes that with the idea of tension the Stoics denote effort, concentrated action, active force (H. Bergson, 2000, 122). We can derive from this brief presentation of Bergson's 1894-1895 lectures on the Stoics, the conclusion, that the theory of quality and quantity which is developed in the fourth chapter of the thesis, as indeed the theory of the various tensions and tones of memory, is deeply influenced by Bergson's reading of the philosophy of the Stoics.²⁶

Moreover, it seems that the intensity of the simple states, which is left out of the picture in the discussion of the origins of tension in *Le parallélisme psycho-physique et la métaphysique positive*, maintains an active role in Bergson's later apprehension of intensity, so long as the latter represents the unity of the psychic and the physical, quality and quantity under a 'third' concept which is that of tension and its degrees of contraction and expansion. The reason for Bergson's insistence on the continuity between the qualitative intensity of the complex states and the psycho-physical intensity of the simple states is easy to understand. First, the intensity of the complex states represents the most profound notion of intensity in TFW because it is composed in terms of the qualitative multiplicity of duration and as such it indicates the direction that should be followed in order to state anew the problem of quality and quantity. Second, Bergson wants to avoid all possible misunderstanding regarding the meaning of the *degrees* of tension and more specifically, the idea that this sense of degree is reducible to the quantitative differences that he depicts in his critique of intensive magnitudes in TFW. Third, the physical aspect of tension only makes sense if one takes the problem from its most profound side, which is that of duration and the qualitative multiplicity that it involves.

So, even if we admit that the relationship between the first and second theories of intensity in Bergson's philosophy assumes a much more intriguing and profound significance when it is approached from the perspective of pure intensity, this does not amount to the idea that the intensity of the simple states represents necessarily a

²⁵ 'les Stoïciens sont efforcés de ramener les différences de qualité à des différences de quantité'

²⁶ The only extensive reference we have found on the relationship between Bergson and Stoicism that entails some insights on the concept of *tóvoç* is in the work of K. P. Romanos, *Heimkehr. Henri Bergson's lebensphilosophische Ansätze von Heilung von erstarrtem Leben*, Francfort-sur le-Main, Athenäum, 1988, pp.105-146)

problematic and illusory aspect of intensity; one which is discarded in favor of the first. As we shall try to show in the fourth chapter of the thesis, the intensity of the simple states and that of the intermediate states – especially the feelings of effort and psychic tension – are vital for Bergson's conception of freedom and the free act. Put more strongly, without the idea of the *sui generis* feeling of effort and the psycho-physiological processes that intervene between the idea and the executed act, the experience of freedom would recede into an internal and self-referential act.

However, since we have undertaken to show in what ways pure intensity represents a positive concept of intensity and not just its substitution with the notion of quality, we have to examine more closely its significance. First though we have to see if intensity really assumes a positive significance in the analysis that takes place in TFW, or whether Bergson's retrospective remarks on this subject represent just an attempt to 'save' his first account of intensity from its critics. As we saw in the first chapter of the thesis, Pradines considers that Bergson expels intensity from subjectivity. For Pradines quality represents a derivative state and the reduction of intensity to quality negates the psychological significance of intensity (M. Pradines, 1920, 403). Jaurès regards as the main object of Bergson's critique the idea of intensive magnitudes and considers as Bergson's greatest contribution on this subject the dependence of intensive quantity on the extensive quantity that comes to the fore with Bergson's critique.²⁷ At the same time, Jaurès does not distinguish another concept of intensity to which Bergson's view could be attached. Instead he focuses on the problems that emerge from the expelling of quantity from psychic life and especially from sensation; ones that he considers insurmountable.

Now, even if we turn towards positive responses to Bergson's theory of intensity, such as Philonenko's, Fedi's and Miquel's interpretations, the emphasis resides mostly in the original examination of affectivity (Miquel), the idea of difference that derives from Bergson's analysis of sensation (Philonenko) and the repercussions of Bergson's critique of empirical psychology for the range of application of physical determinism by Fedi. Even Deleuze, who has attached great importance to Bergson's theory of intensity, traces a positive notion of intensity in Bergson from MM onwards. In Deleuze's view, the investigation of intensity that takes place in TFW is extremely important but its

²⁷ The impact of Bergson's formulation of the problem of intensive magnitudes on Jaurès' view can be derived from the context of Jaurès' analysis and critique in the fourth chapter of his work *De la réalité du monde sensible, La sensation et la quantité* (J. Jaurès, 1891). Jaurès considers intensive quantity dependent upon extensive quantities and recognizes in the first the most intimate connection between the self and extensity (J. Jaurès, 1891, 145).

significance should not be sought really in the conception of intensity that it brings forth, but in the distinction that it introduces. In fact, if we look at Deleuze's various references on the problem of intensity in Bergson's first work, it is questionable whether Deleuze really discerns a positive concept of intensity in TFW. It is only in Worms' exposition of the problem in *Bergson ou les deux sens de la vie* and in his presentation of the term intensity in *Le vocabulaire de Bergson*, that we find direct references to the two meanings of intensity in TFW. We will leave for the moment the presentation of Worms' interpretation that will be discussed in the next section of the chapter and return once again to the two critiques of Bergson's investigation of intensity.

Both Pradines and Jaurès bring an argument against Bergson on the subject of intensity that is crucial because it puts the analysis of intensity at odds with its ultimate task, which is to dissipate the illusions that turn freedom into an insoluble problem. Stated positively, the inquiry into intensity, and that of duration that succeeds it, aims to restore the *experience* of freedom from the sterile debate around its problem –i.e. the debate between the determinists and the partisans of free will. However, according to Jaurès and Pradines it is especially in this aim that Bergson's exposition of intensity fails. At the same time, we can trace in these two critiques of Bergson the reasons why the idea of *intensive magnitude or intensive quantity* is absolutely necessary in the analysis of psychic life and consequently, why intensity cannot be thought separately from the idea of intensive quantity. Moreover, for both philosophers, intensive magnitudes represent incentives of action. In the light of Pradines' and Jaurès' analyses, individual activity is absolutely impossible without the previous 'action' of intensity within psychic life.

We discussed Jaurès' objections to Bergson's position on the unextended character of sensation in the first chapter of the thesis. As we saw, according to Jaurès, the absolute separation of sensation from extensity and quantity performed by Bergson presents two main problems: the first is that it renders inexplicable the transition from the unextended sensations to the extended and, at the same time, it turns the distinction between various sensations into something fortuitous. Strictly speaking, for Jaurès it is impossible to distinguish sensations solely in terms of quality (J. Jaurès, 1891, 136-137). But the most tenacious problem, according to Jaurès, is posited by Bergson's refutation of the existence of intensive quantities in sensations. For Jaurès, intensive quantities represent the knot that binds the profound self with extensity. At the same time, intensive quantities work as invitations to action. Especially the varying intensities of the feeling of effort are crucial in Jaurès' view for the motivation and execution of the free

act (J. Jaurès, 1891, 161-162). Jaurès argues that Bergson reduces effort to its purely physical aspect –i.e. muscular effort – and consequently to a superficial state dissociated from the profound self. But this dissociation entails a curious consequence:

Bergson attempted to re-establish the absolute spontaneity and profound freedom of the self, by liberating it from the passive and banal quantity of determinism. Yet, the first consequence of his doctrine is to reduce all acts by means of which the self can come into contact with other forces, into a multiple automatism where the self is absent...if we want to dispense of quantity, we have to reduce the self into something inactive; something that cannot act outside of itself (J. Jaurès, 1891, 162).²⁸

So, by breaking all positive contact between the self and space and depriving psychic life from everything that could motivate it to act –i.e. intensive quantity – Bergson ends up setting at the heart of the experience of freedom an impenetrable and incommunicable ego enveloped by fate. In his critique, Jaurès advances a remark on the role of effort in freedom and the relationship to the external world which is presupposed for the occurrence of the free act which is of outmost importance for the understanding of Bergson's own conception of freedom and the position of intensity within it. In Jaurès' view, effort marks the unity of the internal and external realm; a type of unity which is not the compromised, superficial and submissive unity that Bergson denounces. As we shall see at a later part of the thesis, effort plays a similar role in Bergson, provided that we examine both aspects of effort: the analysis of the feelings of effort and their intensity in the first chapter of TFW and the idea of spontaneous effort that acquires central role in Bergson's idea of freedom.

In the first chapter of the thesis we examined Pradines' critique of Bergson in relation to the true significance of Weber's law. It transpired from our examination of Pradines' argument that the real cause of Bergson's inability to discern the real problem involved in the psychophysical law was his adherence to a passive idea of sensibility in terms of receptivity. The latter position is reflected, according to Pradines in Bergson's insistence on reducing the problem of intensity to one that concerns the *givens* of

²⁸ M. Bergson se proposait de rétablir la spontanéité absolue et la liberté profonde du moi, en l'affranchissant de la quantité banale et passive où s'exerce le déterminisme. Et le premier effet de sa doctrine est de réduire toutes les actes par lesquels le moi entre en contact avec d'autres forces à un automatisme multiple d'où le moi est absent...il faut réduire le moi à ne pas agir hors de lui-même, si l'on veut qu'il échappe à la quantité. (J. Jaurès, 1891, 162)

consciousness. In contrast, as Pradines shows, intensity accounts for the *emergence* of consciousness and for the activity of the spirit in the creation of its givens. Forty-two years after the appearance of *Le vraie signification de la loi de Weber* (1920), in 1942, Pradines wrote an essay on the relationship between Bergson's metaphysics and his critique of psychology that was published in the first volume of the *Études Bergsoniennes*, just one year after Bergson's death. In this essay, Pradines develops his earlier view on Bergson's philosophy and the mystical and passive spiritualism that allegedly stands at its center. In this essay, Pradines examines once again the problem of intensity in Bergson's first work from a different angle than his earlier account – i.e. in *La vraie signification de la loi de Weber*. Intensity no longer appears as something that surpasses the immediate givens of consciousness – although this might still hold for Pradines. This is to say, the critique that Pradines levels against Bergson in this late essay reveals in intensity a state of consciousness – i.e. a feeling – far more immediate than the qualitative states that Bergson regards as immediate (M. Pradines, 1942, 76). Yet, Pradines' notion of the immediate feeling of intensity is not that of a self-reflected or inner feeling. Intensity is regarded as an incentive to act that denotes at the same time the feeling of the immediate participation of the living being in the magnitude of the effects that it provokes and of the forces that act upon it. In other words, the view of intensity advanced by Pradines in his essay *Spiritualisme et psychologie chez Henri Bergson*, is not that far from Jaurès' analysis.

In both cases, the intimate relation of intensity to action takes place through a simultaneous intimacy of the self or the individual living being with the world. The difference between these two readings resides probably in the acknowledgment of Bergson's main intention by Jaurès – i.e. the attempt to establish an idea of freedom based on the expression of the fundamental self – and Pradines' own interpretation of these intentions – i.e. the attempt to give back to the sensibility its spiritual purity that expresses the most fundamental tendency of Bergson's philosophy that comes down, according to Pradines, to the establishing of a passive and mystical spiritualism (M. Pradines, 1942, 76). It is in this attempt to deconstruct the mixed character of experience – that constitutes our proper nature (M. Pradines, 1942, 76) – that Pradines traces the greatest problem with Bergson's analysis of intensity and the distinction that informs it – i.e. between quality and quantity.

However, despite the respective differences, both Jaurès and Pradines consider that Bergson's explanation of intensity dissolves these two elements that enable the

individual to carry out an act that inserts itself within the world and has some impact upon it. These two indispensable elements that drive our acts and secure their external, common and communicable aspect come down, both for Jaurès and Pradines, to the immediate feeling of magnitude or quantity that takes place in intensity and in the positive relation to space and exteriority which is established through this concept of intensity. Due to the absence of both elements in Bergson's analysis of pure intensity, neither Jaurès nor Pradines regard the qualitative apprehension of difference as a new concept of intensity. Pradines who discerned, as we saw, positive features in Bergson's idea of the intensity of the simple states in his earlier exposition –i.e. in *La vraie signification de la loi de Weber* – in his account of the problem of intensity in *Spiritualisme et psychologie chez Henri Bergson*, he considers problematic even the explanation of the intensity of the simple states. Thus, in his first account –i.e. in *La vraie signification de la loi de Weber* – Pradines regards Bergson's explanation of intensity in the simple states as the sole positive feature in an otherwise problematic interpretation of intensity. According to Pradines, the positive aspect of Bergson's analysis consists in the fact that he considers the representative element of sensation as the product of an experience which is associated with sensation and consequently an experience that presupposes a certain activity of consciousness in the formation of its givens (i.e. the representative aspect of sensation). In *Spiritualisme et psychologie chez Henri Bergson*, Pradines deems even this explanation problematic. As he writes, the intensities of representation have to be regarded as active or volitional passions (*passions actives ou volontaires*) (M. Pradines, 1942, 74) in relation to which we decide our course of action and modify our behavior.

It is through the augmentation of smell that the hound feels the hare approaching

C'est par l'augmentation de l'odeur que le chien de chasse sent l'approche du lièvre, et non pas évidemment par ce qu'il peut savoir de l'approche du lièvre qu'il sent l'augmentation de l'odeur...Tous les sens semblent perdre leur moyen principal de nous instruire dès qu'on leur refuse un sentiment immédiat de leurs intensités. (M. Pradines, 1942, 74-75)

As is evident the second position, where the hunting dog judges the intensity of the odor through the knowledge of the approaching rabbit, is the position attributed to Bergson. One could argue against Pradines that Bergson explains in this way the alleged

magnitude of intensity and not intensity per se that can be viewed even in this case as a distinctive quality through which the hunting dog feels the approach of the rabbit without necessarily measuring the distance. Similarly, against Jaurès' argument on the feeling of growth that accompanies almost every conscious state, where the profundity of a certain state is measured by the degree of its exclusiveness (J. Jaurès, 1891, 151-152), Bergson advances a positive explanation of 'psychic growth', notably in his account of the deep-seated states. However, these responses would represent a fragmented and superficial apprehension of a much more profound problem. For, although each objection taken by itself might find an adequate answer in Bergson's treatment of intensity, the two fundamental objections, voiced both by Jaurès and Pradines, might not be that easy to contradict.

The first objection is that Bergson, by denying from consciousness the immediate feeling of its varying intensities –i.e. intensive magnitudes or intensive quantities – deprives it also from the capacity to perform acts that are manifested externally and have a certain effect upon the external world. The second objection is that intensive magnitudes represent a positive relation to space, considered as the intimate link situated within the self in Jaurès' analysis and an immediate participation within 'things' (*notre participation immédiate aux choses*) (M. Pradines, 1942, 76). This intimate link is achieved through this *sui generis* apprehension of magnitude introduced by intensity. So, the first objection addresses Bergson's concept of action –according to Pradines' analysis – or, more profoundly, the *active* character of Bergson's idea of freedom and its capacity to manifest itself externally –i.e. Jaurès' critical remark. The second objection raises the problem of dualism in Bergson's analysis and more particularly the strict dualism introduced with the distinction between quality and quantity.

Ultimately, for Jaurès the real cause of this internal contradiction that he discerns in Bergson's idea of freedom –i.e. of a free act that institutes itself by destroying the means that would enable it to realize itself as an act – has its source in the rigid dualism between sensation (quality) and quantity. Pradines' thesis is more intricate. In a more profound level the cause of all problems that haunt Bergson's philosophy –but also its great originality – reside in the fact that Bergson used the most advanced scientific theories of his time –particularly in the domain of psychology – in order to install right at the heart of experience the position of a mystical and inactive spiritualism that he adopted ready-made, as it were, from ancient spiritualism. It follows from this that, according to Pradines' analysis, the rigorous dualism introduced by Bergson between

quality and quantity is caused by a deep and deliberate reluctance to consider action in a positive way: that is, as the effective activity of a living being that tries to interact and come to terms with the world that surrounds it. So, it seems that before we can respond positively to the question whether Bergson's idea of qualitative difference denotes a positive concept of intensity and whether it meets the objections and problems that seem to arise from its application in the theory of freedom, we have to examine more thoroughly the *form* of the distinction between qualitative and quantitative differences and see whether the dualism that they introduce is insurmountable.

3) Worms on the immediate feeling of difference, the two meanings of intensity and the idea of intensive degrees

In the preceding section, we examined two interrelated problems that emerged around the object of Bergson's critique and the positive significance of intensity. As we saw, differences of intensity seemed to refer to the presence of a certain consideration of quantity—i.e. the vague estimate or feeling of quantity that Bergson attributes to common sense. However, the common sense apprehension of intensity was strongly criticized by Bergson. Against the habitual concept of intensive magnitudes, Bergson juxtaposes the distinction between two aspects of intensity: the first is pure from all admixtures of quantity and extensity and consists in a change of nuance or shade that penetrates and changes the aspect of a multiplicity of elementary psychic states that enrich in their turn the fundamental emotion. The second aspect of intensity is mixed by definition, since it pertains to psychic states that are formed at the point of contact between consciousness and space. The perception of intensity in the simple states consists in a certain estimate of the magnitude of the cause through the quality of the effect. 'In between' these two aspects of intensity the body intervenes, with its affective sensations and movements, that contributes a lot to the intermingling of the two other aspects. Out of this examination of the two aspects of intensity and the mediating role of the intermediate states, emerged three main problems: the first concerned the positive meaning of intensity in TFW, the second addressed the status of the intensity of the simple states and the third, the problem of the main distinction that informs the examination of intensity in TFW, that is, the distinction between quality and quantity. As we saw, according to Bergson's critics, the rigid and absolute character of the distinction between quality and quantity negates the reality of intensity. At the same time, this negative apprehension of the problem of intensity turns Bergson's idea of freedom into a chimerical concept.

Worms, in a concise but penetrating presentation of the term 'intensity' in *Le vocabulaire de Bergson* (F. Worms, 2000, 35-37) examines the three afore-mentioned problems and their relation. This is not the only interpretation of Bergson's theory of intensity to be found in Worms. In fact, as we shall see in the third chapter of the thesis, Worms' most original contribution on the subject of intensity in TFW takes place in the first chapter of *Bergson ou les deux sens de la vie*. Yet, for the purposes of the present analysis the examination of intensity in *Le vocabulaire de Bergson* might prove more helpful. According to Worms' definition 'intensity is an absolute difference, immediately

felt, between individual realities' (F. Worms, 2000, 36).²⁹ Yet, this first significance of intensity as immediate feeling of difference can manifest itself externally 'through a calculable and relative difference between elements of the same nature, although it is never reduced to it' (F. Worms, 2000, 36, text modified).³⁰

At first it would seem that this second aspect of difference – i.e. the calculative and external difference between things of the same nature – refers to the intensity of the simple states. However, this is not really the point that Worms addresses here. The problem pertains rather to the confusion between differences in intensity and differences in degree. As Worms intimates, this confusion institutes an irreparable rupture between the inquiry into the intensity of psychic states in TFW and Bergson's later views on intensity – i.e. the theory of the various degrees of tension and conversely the idea of intensive degrees that are advanced in MM, in relation to the problem of spirit and matter (F. Worms, 2000, 35-36).

Moreover, the same confusion leads to a misapprehension of the positive significance of intensity in TFW and the positive idea of degree that is already entailed in this first exposition of the problem. Worms explores the idea of intensive degrees in TFW in *Bergson ou les deux sens de la vie*. According to the latter analysis, the examination of the various categories of psychic states that takes place in TFW can be read as so many *intensive descriptions* that move from the most superficial states – i.e. e.g. affective and representative sensations, muscular efforts – towards the most profound, all organized in terms of depth and their respective resistance to spatialization. In this way, we can see emerging a new concept of degree that corresponds to the qualitative mode of discrimination introduced with the concept of nuance. We could say in addition that this idea of degree indicates how Bergson's first notion of intensity (i.e. re-defined as nuance) is related to the concept of tension and the degrees of tension that are explored in MM.

We could say provisionally that the succinct nuances could be seen to correspond to the various degrees of depth between the most superficial and the most complex and resistant states. However, as we shall see in our examination of the relationship between intensity and multiplicity, nuance maintains such an intricate relationship with multiplicity – i.e. both qualitative and quantitative multiplicities – that it forbids such direct correspondence between nuances and the vertical organization and distinction of

²⁹ 'l'intensité est...la différence immédiatement ressentie et absolue entre des réalités individuelles' (F. Worms, 2000, 36).

³⁰ 'par une différence calculable et relative entre des éléments de même nature mais elle ne s'y réduit jamais' (F. Worms, 2000, 36).

psychic states proposed by Worms. Yet, although the problem of the relationship between degrees and intensity might not be that easy to resolve at least it would be best to avoid turning it into an insoluble problem. As is intimated in *Le vocabulaire de Bergson*, the positive significance of intensity – as difference immediately felt (*ressentie*) (F. Worms, 2000, 36) – and the idea of degree that it entails –i.e. degrees of difference between singular realities – cannot be really apprehended if we do not dissipate a confusion that arises around the distinction that informs Bergson's first inquiry into intensity. As Worms notes,

In Bergson, the fundamental opposition is not that of 'differences in degree' and 'differences in nature'; it takes place rather, between differences of *intensity*, that are always differences *in nature*, and differences of *quantity*, that never differ in nature since they always act within the same magnitude or measure. Therefore, 'differences in degree' can have two meanings: relative difference of quantity, or absolute difference of quality or of nature. Deleuze's analyses in *Bergsonism* that are founded on this distinction (between differences in degree and differences of nature), are of capital importance, but need to be elucidated through the preceding observation. Without this clarification, we run the risk of precipitating a critique of the concept of differences of degree or intensity, which is regarded as the essence of the real, both by Bergson and Deleuze. (F. Worms, 2000, 36)³¹

As we can see, according to Worms there is a conception of 'differences in intensity' which is succinctly distinguished from the 'differences in quantity'. Moreover, a concept of difference that alludes to a more profound apprehension of the idea of degree. In this way, he attempts to reconcile both the theory of intensity in Bergson's first two works and Deleuze's apprehension of the problem. The most prominent aspect of Deleuze's reading of intensity in TFW resides in his distinction between differences in kind and differences in degree. As we shall see in the next section of the chapter, for Deleuze this distinction is provisional and in a certain sense it is not really a distinction *between* differences in kind and differences in degree, but between one side of the distinction that

³¹ 'L'opposition fondamentale n'est pas chez Bergson entre 'différences de degré' et 'différences de nature' mais entre les différences *d'intensité*, qui *sont* toujours des différences *de nature*, et les différences de *quantité*, qui n'en sont jamais, étant toujours opérées au sein d'une même grandeur, ou d'une commune mesure. Ainsi les 'différences de degré' peuvent-elles avoir deux sens: différence relative de quantité, ou différence absolue de qualité, donc de nature. Les analyses de Deleuze dans *Le Bergsonisme*, qui se fondent sur cette distinction (entre différences 'de degré' et 'de nature'), restent capitales, au prix cependant de cette précision, sans laquelle on risque de critiquer précipitamment les différences de degré ou d'intensité, où Deleuze comme Bergson voient l'essentiel du réel' (F. Worms, 2000, 36).

differs in kind from itself and the other side that presents only external differences between homogeneous things.

Worms observes that we cannot identify the second term of the distinction – i.e. the differences in degree – with the differences in intensity, even though sometimes both Bergson and Deleuze use the two expressions as equivalent.³² The two terms cannot be identified because intensity, as Worms remarks, always denotes an absolute difference of quality and hence a difference in nature; not a relative and external difference of quantity. In this way, by separating the concept of intensity and the differences of intensity which is implied in the concept, from the differences in degree, he removes the alleged contradiction between the concepts of intensity in TFW and MM.

The new element in Worms' approach to the problem resides in the fact that he considers the two meanings of intensity complementary to one another and at the same time he specifies that pure intensity is never reducible to this calculative multiplicity of the second intensity. There are two issues that emerge at this point: the first is whether the 'external' intensity of differences in degree refers really to the intensity of the simple states. The second is to determine the relation between the two.

In response to the first issue, we have to note that Worms, brings to the fore a sense of degree – intensive degree – that seems to unite the two aspects and retain, at the same time, the absolute feeling of difference. Intensive degrees are apprehended from within as absolute differences between singular realities. It is this meaning which is evoked in the concept of differences of intensity. The idea of intensive degrees can be traced back in the analysis of intensity in TFW and especially in the analysis of the aesthetic feelings where the notion of degree acquires this sense of absolute difference between different 'degrees of depth and elevation' (TFW, 17) and hence degrees that can be arranged into an ascending or descending scale, while at the same time each denotes an absolute threshold (F. Worms, 2000, 37).

Worms' most invaluable insights reside 1) in his positive definition of intensity and 2) in his contribution to the solution of the problem of consistency that arises between the

³² Bergson sometimes uses the expression 'differences of intensity' as equivalent to 'differences in degree'; e.g. when he criticizes associationism 'which sees only a difference of intensity instead of a difference of nature between pure perception and pure memory' (MM, 67). Deleuze in *Bergson's Conception of Difference*, uses 'differences in intensity' in order to depict philosophy's tendency to neglect differences in kind; a tendency which is analogous to the tendency of science to see only differences in degree between things (G. Deleuze, 1999, 44). As we will see in more detail later on in this section, for Deleuze the essential 'turn' in Bergson's consideration of intensity occurs around the idea of degree: intensive degree, or intensive magnitude. It is the latter idea of degree that comes into play in Deleuze's concept of 'degrees of difference'.

theory of the intensity of psychic states in TFW, and the idea of intensive degrees, or degrees of tension, by means of which Bergson endeavors to explain the union of the spirit and the body in MM. At the same time, he brings to the fore two elements of the Bergsonian theory of intensity that are present both in TFW and in MM and usually pass unnoticed. The first is the immediate feeling of difference between singular realities. The second is the relationship between the internal feeling of difference and the calculable differences into which the former is either translated or to which it is somehow attached –as e.g. in the case of the representative sensations that are attached to an external and calculable cause (i.e. physical stimulus). We will present now these two insights into the nature and different senses of intensity and then proceed to the examination of Deleuze's statement of the problem of intensity in Bergson.

As we saw, according to Worms, intensity is the immediate and absolute feeling of difference between individual realities. The latter are defined by the indivisible multiplicities that constitute them and the acts that unify them.³³

As difference, intensity applies to [holds for] realities without common genus or common measure. For this reason, the intensities of duration are different durations and not variations of the same duration. Therefore, this type of difference is not measured, but *felt* (through its effects and according to thresholds). In addition, each singular reality comes into contact with other realities (intensity supposing alterity) and it is this contact that gives us the idea of *difference* and even that of a *scale* [different degrees] of intensity. This pure difference [i.e. intensity as difference] is translated externally according to a relative term of comparison: the quantity of the luminous source for the intensive sensations of light, the quantity of cerebral complexity for perception or for the intensive action of the living being, the quantity of material vibrations that are contracted into different rhythms of duration... (F. Worms, 2000, 36).³⁴

³³ According to Worms, there is in duration a subjective act of unification; an immanent act of synthesis that operates 'within' the qualitative multiplicity of the successive states that are unified. In this way, he endeavors to wrest the idea of duration from a purely passive synthesis which is sometimes read into it (C.f. F. Worms, 1997, 79) & (F. Worms, 2004, 60-67). In relation to the passive synthesis which is implied in the Bergsonian idea of time there are two readings that are of capital importance: Deleuze's first synthesis of time in *Difference and Repetition* and Levinas' view of the passive character of the interval or lapse of time which is posited through the Bergsonian idea of duration; the very temporality of time (I. Levinas, 1998, 143). In *Difference and Repetition*, the Bergsonian concept of inner duration is defined as a passive synthesis which is non representative and intratemporal and constitutes the living present (C.f. G. Deleuze, 1997, 76-78).

³⁴ En tant que différence l'intensité ne vaut que par relation entre des réalités, sans genre commune ou commune mesure: ainsi les intensités de durée sont des durées différentes et non des variétés d'une «même» durée; cette différence n'est donc pas calculée, mais *ressentie* (par ses *effets*, et selon des *seuils*); de plus, chaque réalité singulière en étant en contact avec d'autres réalités (l'intensité supposant l'altérité), c'est ce contact qui donne l'idée d'une différence et même d'une *échelle* d'intensité. Cette pure différence se traduit extérieurement selon un terme relatif de comparaison: quantité de la source lumineuse pour les sensations intensives de lumière, quantité de complexité cérébrale pour la perception ou l'action intensives du vivant, quantité de vibrations matérielles contractées pour les rythmes de durée... (F. Worms, 2000, 36)

At first sight it would seem that the above definition refers mainly if not exclusively to the idea of intensity which is elaborated in MM. As we saw briefly in our previous discussion, in MM Bergson advances the idea of tension –e.g. the different tensions of memory – and that of the various degrees of intensity –e.g. degrees of intensity of action, of life etc. What appear decisive in this respect are the various tensions or rhythms that are ascribed in duration in the fourth chapter and the *Summary and Conclusion* of MM. The latter dimension of Bergson's argument is crucial, because it is by means of this new conception of tensions and rhythms of duration that Bergson succeeds in stating the problem of matter and spirit anew; that is, *in terms of time* rather than space. This new statement of the problem of matter and spirit involves, as we have already seen, the idea of the different *degrees of tension* and consequently a new concept of degree that has to be strongly distinguished from the differences in degree that are criticized in the first chapter of TFW. At the same time these two meanings of degree come into play in Bergson's positive definition of the relationship between matter and spirit:

we can conceive an infinite number of degrees between matter and fully developed spirit...Each of these successive degrees, which measures a growing intensity of life, corresponds to a higher tension of duration and is made manifest externally by a greater development of the sensori-motor system. (MM, 221)

As we can see, the above statement confirms the existence of the two aspects of intensity that Worms distinguishes. The successive degrees that reflect the various degrees of a growing intensity of life –i.e. as we move from matter to fully developed spirit – are *felt* under the form of successive degrees of independence whereby memory contracts matter and forms in this way perceived qualities, or more profoundly, it retains (conserves) the past in order to influence the future. Probably the greatest contribution of Worms' analysis in this respect is to show that the degrees of intensity are not equivalent with the idea of a homogeneous continuity that would nullify the whole edifice and would betray the very idea of duration. To use Deleuze's terms, each successive degree is a 'degree of difference', because it corresponds to a *singular* but not isolated reality. According to Worms, this contact accounts for the continuity between the different intensities, and at the same time it denotes an absolute difference which is felt from within as a threshold. In this way, he brings together two features of Bergson's

analysis that are usually held apart: the first corresponds to the different intensities of life, or different tensions of duration that we discussed above and the second to this internal feeling of difference, the qualitative alteration, that represents the core of psychic intensity. At the same time, by considering the quantitative differences that are usually attached to the illusory representation of intensity –at least in the context of TFW – as an external translation of intensity, Worms indicates that the dichotomy between the two apprehensions of intensity is not absolute. The conception of intensity that we examined in this section and the idea of ‘intensive descriptions’ that Worms advances in *Bergson ou les deux sens de la vie*, represent two key-ideas for overcoming those seemingly insurmountable dichotomies introduced through the critique of intensive magnitudes, between quality and quantity, qualitative and quantitative differences and qualitative and quantitative multiplicities.

4) Deleuze and the ambiguity of Bergson’s critique of intensive magnitudes: the degrees of difference and the tension between qualitative intensity and duration

In the previous two sections, we examined the idea of intensity from the standpoint of qualitative difference and inquired into the relationship between the two meanings of intensity: the perception of intensity in the complex feelings and the simple states. As we saw, the two aspects of intensity taken together produce the mixed form of intensity which is the basis of the illusory representation of intensive magnitudes. In Bergson's later accounts of intensity and especially in his second work, MM, emerges another form of relation between the two aspects of intensity; one that finds its most profound and versatile significance in the theory of tensions. At the same time, Bergson indicates in his retrospective analysis in *Le parallélisme psycho-physique et la métaphysique positive*, that the key for the overcoming of the dichotomy between quality and quantity and his later theory of tensions has to be sought in the intensity of the complex states and the idea of *felt multiplicity* that informs the type of qualitative change or difference that characterizes the deep seated states. The latter indication was further developed in Worms' presentation of the term intensity in *Le Vocabulaire de Bergson*.

In Worms' analysis the intensity of the simple states was reduced in the calculable and relative differences between elements of the same kind: e.g. the repetitive vibrations of matter, the degrees of complexity of cerebral matter; the intensity of the luminous source and so on. Yet, from the very definition of the intensity of the simple states – i.e. in terms of the mixed perception of quantity in quality or quantity *through* quality – it derives that there is something far more intriguing in this second aspect of intensity that cannot be reduced to the perception of differences in degree. The most important insight of Worms' analysis resides in his definition and treatment of the relationship between the immediate and absolute feeling of difference in intensive differences and the relative and calculable differences of degree. Worms' contribution in the elucidation of this point is invaluable, because by showing that the distinction between intensive degrees – or differences in intensity – is perfectly in accordance with the qualitative apprehension of difference in TFW, he restores the positive meaning of intensity in the analysis of TFW and the consistency between TFW and MM on the issue of intensity. At the same time, through the positive relation that he establishes between the differences in intensity and differences in degree, he responds to the ongoing critique leveled against Bergson on the subject of quality and quantity. As we saw, Pradines and Jaurès considered this dichotomy forbidding for any positive apprehension of the problems of intensity and freedom.

In this section we are going to present Deleuze's interpretation of the Bergsonian theory of intensity in conjunction with the problem of the distinction between differences in kind and differences in degree. The meaning of intensity that derives from the examination of the simple states is not really addressed as such in Deleuze's analysis. It is addressed indirectly under the form of a problem that leads in Deleuze's view to the overcoming of the perspective of the analysis of intensity in TFW. As we shall see the latter problem addresses the relationship between the perception of qualitative difference –or pure intensity – and the virtual multiplicity of duration. However, this problem is one that emerges right at the end of our presentation and does not represent the most prominent or widely discussed aspect of Deleuze's interpretation of the problem of intensity in Bergson. So we shall begin with the examination of the predominant aspect of Deleuze's analysis that represents also one of the most important contributions in the study of Bergson's philosophy *per se*: the distinction of differences in kind and differences in degree.

Deleuze's reading of the Bergsonian theory of intensity is presented mainly in *Bergson's Conception of Difference and Bergsonism*. His interpretation of the problem of intensity throughout Bergson's philosophy had a profound effect on subsequent readings of Bergson especially on the subject of difference and the problem of the method. In terms of the theory of intensity we could say that Deleuze has wrested Bergson's critique of intensive magnitude from the constraints of a parochial distinction between quality and quantity. The latter view, as we saw, is endorsed by Pradines and Jaurès. Berthelot also advances a similar argument in his work, *Un romantisme utilitaire, Étude sur le mouvement pragmatiste, tome 2, Le pragmatisme chez Bergson* (R. Berthelot, 1913, 174-175).

Deleuze displaces the stakes of the Bergsonian critique and distinction from its proximity to a static and rigid distinction between quality and quantity, to the dynamic distinction of *differences in kind* and *differences in degree*. In his view, the importance of this distinction for Bergson's philosophy has to be sought in two directions: the first concerns the direction of the method –notably, the method of intuition which is introduced by Bergson – and the conception of difference that it entails. At the same time, Deleuze advances a dynamic reading of Bergson's thought, which, assumes two slightly different forms in *Bergson's Conception of Difference and Bergsonism*. In the first of these two texts, the emphasis is on the idea of difference and its internal dynamics, while in *Bergsonism* the emphasis lies in the idea of the 'virtual' and its actualization.

Both considerations involve a critique of the Bergsonian theory of psychic intensity that derives almost as an exigency from the way in which Deleuze apprehends the evolution of Bergson's thought. Both the evolution of the concept of difference (*Bergson's Conception of Difference*) and the virtual multiplicity of duration (*Bergsonism*) involve a reconsideration of the idea of *intensive degrees* that sets into question the Bergsonian critique of intensive magnitudes in TFW. Curiously, the future dynamic of these two notions, which in reality come down to one, that is, the idea of duration considered as internal difference and as virtual multiplicity – do not put into question the distinction itself – i.e. the distinction of differences in kind and differences in degree. What is questioned rather is *our* interpretation of the way in which it is drawn – i.e. what its terms comprise – and what constitutes its most fundamental moment.

The first task of the presentation that follows is to investigate the ways in which the idea of the purely qualitative difference of intensity presents an obstacle to the idea of intensive degrees, or, in Deleuze's terms, 'degrees of difference'. The second task is to bring to the fore what represents in our view the most profound apprehension of the problem in Deleuze's analysis. As we will try to show, what Deleuze ultimately uncovers is an inner tension between the purely qualitative idea of intensity and the idea of duration. First though we have to see how the Bergsonian theory of intensity is presented and interpreted by Deleuze.

The problem of intensity is examined in *Bergson's Conception of Difference*, *Bergsonism* and *Difference and Repetition*. Although at least the first two inquiries – i.e. *Bergson's Conception of Difference* and *Bergsonism* – present quite a few common elements, it is in *Bergsonism* that we find the most extended and systematic examination of intensity. In *Difference and Repetition*, Deleuze's exposition is mainly critical: it continues a line of argument inaugurated in the fifth chapter of *Bergsonism*, where Deleuze exposes what he considers as an essential ambiguity in Bergson's first account of intensity in TFW. We will begin our presentation from the latter perspective since it addresses the problem that we have been examining in the first section of the chapter of locating or identifying the specific object and direction of Bergson's critique of intensity.

Regarding the latter, Deleuze remarks that 'the critique of intensity in *Time and Free Will* is highly ambiguous. Is it directed against the very notion of intensive quantity, or merely against the idea of an intensity of psychic states? If it is true that intensity is never given in a pure experience, is it not then intensity that *gives* all the qualities with which we make experience?' (G. Deleuze, 1991, 91-92). Now, it has to be noted that this

statement of the problem of intensity should be situated in the particular context of Deleuze's previous analysis of the theory of intensity – in *Bergsonism* and in his earlier essay, *Bergson's Conception of Difference* – along with his apprehension of the evolution of Bergson's thought. Without any reference to the latter two dimensions, Deleuze's statement risks becoming as ambiguous as the inquiry that it depicts (i.e. the Bergsonian inquiry). It is not clear for example, whether Deleuze criticizes Bergson for refuting the idea of psychic intensity, or that of intensive magnitudes. At first sight, it would seem that Deleuze depicts Bergson because he allegedly negates all considerations of intensity – i.e. both the differences of intensity that we encountered in our previous discussion – together with intensive magnitudes, which is the most obvious object of Bergson's critique. Under a closer consideration however, it becomes apparent that the weight of Deleuze's question inclines in the opposite direction: he criticizes the theory of the intensity of psychic states in TFW for depriving intensive magnitudes of all positive significance. As Deleuze emphasizes at various instances, it is precisely because Bergson defines intensive magnitudes in an entirely negative way that he ends up refuting the most profound aspect of difference established in Bergson's later accounts of intensity: the idea of 'degrees of difference'.

The latter idea evokes Bergson's later account of the various degrees of tension and extension between matter and fully developed spirit; that is to say, the different tensions or rhythms of duration. As we saw in our previous discussion, the various degrees of tension and different rhythms of duration designate the way in which Bergson accounts for the union of matter and spirit, and, at the same time, the advent of a new concept of duration which is 'coextensive' with the real so long as its most contracted (intense) moments designate spirit and its most 'expanded' or 'relaxed' tensions denote the calculable changes of matter. Moreover, the degrees of intensity or tension and this radical 'turn' in the theory of knowledge which is effectuated with the statement of the problem of matter and spirit in terms of time, come together towards the end of the fourth chapter of MM, where Bergson juxtaposes his gradualist consideration of the union between matter and spirit to the crude or ordinary dualism that 'puts...matter with its modifications in space' and 'places unextended sensations in consciousness' (MM, 221).³⁵

³⁵ The importance of the idea of degree for the Bergsonian theory of knowledge is further elaborated in *Le parallélisme psycho-physique et la métaphysique positive*, where Bergson distinguishes his own idea of spiritualism – i.e. the 'new' spiritualism, which is at the same time a 'superior empiricism' – from ancient spiritualism. As he observes, ancient spiritualism (i.e. of the Platonic but also of the

Deleuze distinguishes two main aspects in the Bergsonian theory of intensity that appear at first to correspond to the exposition found in TFW and the one developed in MM. The first designates the first movement of the method, whereas the second denotes the passage to ontology. However, the distinction of differences in kind and differences in degree is not exclusive to TFW: it refers to an ongoing application of the method that moves throughout Bergson's oeuvre.

In *Bergson's Conception of Difference*, the determination of the 'differences of nature' between things represents the first step of the method of intuition: the discovery of the articulations of the real as against a metaphysics and science that have buried, each in their own way, the true differences of nature between things. As he writes, 'to neglect differences of nature in favor of genres is thus to belie philosophy. We have lost these differences of nature. We find ourselves before a science which has substituted in their place simple *differences of degree*, and before a metaphysics which has more specially substituted *differences of intensity* (G. Deleuze, 1999, 44). According to Deleuze, the problem that arises when differences of degree or of intensity prevail is that we no longer know how to distinguish between things that differ in nature, or, more radically we are incapable of perceiving differences of nature. The theory of intensity responds primarily to this problem which is essentially one of distinction; notably, the inability to discern anything else besides the differences of degree or intensity that spread upon everything. Now, before we move on to the investigation of the meaning of the distinction of differences in kind and differences in degree we have to note, first, that differences in degree succeed in covering up everything because this is the mode in which experience is given to us and, second, experience is given to our understanding under a *mixed* or *composite* form. In other words, Deleuze undertakes to show that number, homogeneity and degree are *mixed* or *composite* ideas. This means that one of the two sides of the distinction is mixed, composite and impure (i.e. the side of space, homogeneity, number, degree) and only the other side is pure.

Cartesian type) is sterile and vulnerable to the materialist critique precisely because it examines the two extremes: spirit in its most elevated form and matter in its lowest, neglecting in this way entirely the intermediary *degrees* –i.e. the degrees of materiality and spirituality. [The term 'superior empiricism' is borrowed from Schelling and it is applied by Deleuze on Bergson's philosophy (C.f. G. Deleuze, 1999, 46)] In the same passage we find a remarkable comment on the form of questioning in philosophy. As Bergson observes, 'the "yes" and the "no" are sterile in philosophy. What is interesting, instructive, fecund is the question "to what extent", or "to what degree"' (H. Bergson, 1972, 477). [*Le oui et le non sont stériles en philosophie. Ce qui est intéressant, instructif, féconde, c'est le dans quelle mesure* (H. Bergson, 1972, 477).] The same idea of degree finds probably its most significant application in terms of the Bergsonian theory of knowledge in the idea of 'fluid', 'flexible' or 'malleable' concepts, which are explored in the *Introduction to Metaphysics*. On the relationship between 'flexible concepts' and intensive degrees (c.f. Worms, 2000, 35-37).

The fundamental asymmetry that Deleuze discerns between the two 'sides' of the distinction is decisive for both the apprehension of the true character of the distinction and for the role that he imparts to intensity as the first movement of Bergson's method of intuition and the overcoming of dualism. Moreover, as we shall see in the fourth chapter of the thesis, the emphasis on the methodological significance of the 'mixed' states is decisive for the apprehension of the way in which the persistence of certain mixed notions – such as movement and sensation – amidst the purifying dualisms that are advanced throughout TFW and in a certain sense throughout Bergson's oeuvre, can be used as insights and indications for new ways of stating the problem of dualism. Here we have to note that besides Deleuze, Jankélévitch had emphasized the importance of the dissociation of the mixed forms or amalgams in TFW and, more generally, the importance of the problem of the mixed forms for Bergson's conception of truth (V. Jankélévitch, 1959, 48). One of the most intriguing aspects of Jankélévitch's analysis of the issue of the mixed forms, comes down to the idea that Bergson reconsiders his initial position on the relationship between duration, consciousness and space – i.e. the position of strict dualism – because he realizes that certain of the incriminated amalgams – e.g. movement – respond to an organic exigency of the spirit (V. Jankélévitch, 1959, 48-49). According to Jankélévitch this realization leads Bergson to adopt a different approach to the problem of the mixed forms and to treat illusions in an entirely different way from his first work. Illusions acquire a necessary and increasingly profound character from MM onwards. According to Jankélévitch this change of attitude regarding illusions occurs at this particular 'moment' of the Bergsonian oeuvre where duration reveals itself as the reality of things as well as the mind (V. Jankélévitch, 1959, 107-108, 117-121). Worms also builds his theory of intensive descriptions on a rigorous analysis of the problem of the mixed forms in Bergson and of the ways in which the amalgams can be used for a more profound apprehension of the two sense(s) of the distinction between duration and space (F. Worms, 2004, 50, 53-56, 104-105).

Returning to Deleuze's exposition of the problem of the distinction and its two forms – i.e. differences in kind and differences in degree – we saw the two sides of the distinction are incommensurable. The radical incommensurability between the two sides of the distinction demarcates the first step for the overcoming of dualism and the introduction of another sense of division. It also denotes the transition from the method to the ontology. The latter is defined by Deleuze as the ontology of the virtual. Intensity plays a crucial role for both 'moments': as the first movement of the method it uncovers

a dynamic view of the real beyond the static apprehension of composites. This corresponds to the division of the composite (i.e. the mixed form, or amalgam) in its articulations –i.e. the articulations of the real (G. Deleuze, 1991, 22). In a second ‘movement’, intensity opens the way for the unification of the previously distinguished tendencies –i.e. differences in kind and differences in degree. This occurs through the emergence of another sense of degree: the intensive degrees that we encountered in our presentation of Worms’ analysis. In the most elaborate analysis that takes place in *Bergsonism* these two ‘moments’ are multiplied into four ‘moments’: 1) the moment of ‘pure dualism’, which is that of the distinction between differences in kind and differences in degree; 2) the moment of ‘neutralized dualism’ where the one of the two tendencies has absorbed all differences in kind; 3) the moment of monism where the two tendencies, i.e. differences in kind and differences in degree are unified in a virtual point of unification that denotes the coexistence of all the ‘degrees of difference’; and 4) the rediscovery of dualism where the latter assumes a new genetic sense.

In Deleuze’s account in *Bergsonism* that was summarized above, the analysis of intensity in TFW leads to the first step of the method, i.e. pure dualism. It consists, as we saw, in the discovery of the articulations of the real through the introduction of differences in kind between things and tendencies. The importance of this first methodological movement is stressed throughout Deleuze’s reading. Moreover, Deleuze ascertains that with the transition to monism the moment of dualism is not suppressed at all (G. Deleuze, 1991, 91). But, if we admit that dualism retains its sense all the way through, the question is: why does Deleuze end up condemning Bergson’s critique of intensive magnitudes? In *Bergsonism* he deems this critique ambiguous, whereas in *Difference and Repetition*, he characterizes it ‘unconvincing’, ‘provisional’ and ‘from without’ (G. Deleuze, 1997, 239).

We will remain for the moment within the context of Deleuze’s critique in *Bergsonism*, where the paradox assumes a more flagrant form. The assertion that the ‘critique of intensity in TFW is highly ambiguous’ (G. Deleuze, 1991, 91) occurs immediately after it is admitted that ‘the moment of dualism has not been suppressed at all, but completely retains its sense’ (G. Deleuze, 1991, 91). So, the question now is how Deleuze can reconcile these two theses. There are three factors that contribute to dissipating this apparent paradox: the first is that Deleuze’s analysis of the differences in kind and differences in degree is not extracted solely from the theory of the intensity of psychic states in TFW. His point of departure is the persistence of this theme throughout

Bergson's oeuvre. For sure it is inaugurated in the first chapter of TFW, but the discovery and distribution of the true differences in kind is a constant theme operating in Bergson's various critiques throughout his oeuvre. The examples that are cited by Deleuze are numerous: in TFW Bergson criticizes his predecessors for failing to draw an adequate distinction between duration and space that entails in its turn a failure to apprehend the true nature of duration; in MM he criticizes the associationist philosophers and psychologists for discerning between memory and perception only a difference in degree or intensity, whereas in reality there is a difference in kind, or inversely, the view that our perception of matter differs in kind from matter itself whereas in reality there is only a difference in degree between the two and so on.

The second factor consists in the idea that certain aspects of the analysis of intensity obscure the true character and the real stakes of the distinction. This view is pronounced in *Bergsonism*, but finds even stronger statement in *Difference and Repetition*. The third factor is a continuation of the second: it consists in a view of the evolution of Bergson's thought that involves a radical reconsideration of the idea of *intensive magnitude*. However, the essential point lies in the second and the third factors that necessitate almost the critique of the theory of intensive magnitudes in TFW.

We will begin with the distinction itself. Deleuze remarks, in both *Bergson's Conception of Difference* and *Bergsonism*, that differences in kind do not find their more profound aspect in a distinction between two things and even between two tendencies. However, this is only a provisional statement. What really happens is that one of the two tendencies tends to absorb all differences in kind, while the other presents only differences in degree; between the two there is a fundamental asymmetry. As Deleuze writes,

At first sight it would seem that a difference in kind is established between two things, or rather between two tendencies. This is true, but only superficially. Let us consider the principal Bergsonian division: that between duration and space. All the other dualisms involve it, derive from it, or result in it. Now, we cannot simply confine ourselves to affirming a difference in kind between duration and space. The division occurs between (1) duration, which 'tends' for its part to take on or bear all the differences in kind (because it is endowed with the power of qualitatively varying with itself), and (2) space, which never presents anything but differences of degree (since it is quantitative homogeneity). (G. Deleuze, 1991, 31)

If we draw the full consequences from this statement then it would seem that duration absorbs all differences in kind, but the same will not occur in relation to space and the differences in degree. So, as Deleuze emphasizes at various instances, there will not be a difference in kind *between* the two sides of the distinction. To be more precise, there are not two sides in the distinction, but *two modes of distinction*: the first, takes place within a tendency that differs in kind from itself and the second is a distinction of a spatial nature where all parts are external from one another and differ only in degree or in position. Now, what appears paradoxical at first is that the dichotomy between these two modes of distinction, or tendencies, is bridged precisely because it is absolute: these two modes of distinction have nothing in common and they are not related. However, since the one of the two sides of the distinction has absorbed all difference –i.e. duration which is defined as that which differs from itself – would this not amount in admitting that duration contains ‘the secret of the other half? How would it still leave outside of itself *that from which it differs, the other tendency?*’ (G. Deleuze, 1999, 49). In other words, between duration which is ‘difference in kind and for itself’ and ‘space or matter’ which is ‘difference in degree outside itself and for us’ (G. Deleuze, 1991, 93) there are all the ‘degrees of difference, or, in other words, the whole *nature of difference*’ (G. Deleuze, 1991, 93).

So, the first type of dualism that was introduced with the theory of intensity, i.e. the dualism between the two tendencies –i.e. duration and space, matter and memory, present and past – leads to a monism, although dualism maintains always its methodological significance as the division of composites into their pure tendencies. The idea of ‘degrees of difference’ is introduced with the advent of monism and it is this sense of degree that unites the two tendencies without reducing them into composites. This uncompromised unity occurs, according to Deleuze, because the coexistence of all the degrees and all the levels of difference (i.e. of contraction and expansion) is itself virtual (G. Deleuze, 1991, 93).

We could deduce from the above analysis that for Deleuze the greatest problem presented by the critique of intensity in TFW lies in the type of distinction between differences in kind and differences in degree that it introduces. According to the critical analysis of intensity in TFW the difference in kind inheres *between* the two tendencies. This position results in the affirmation of pure dualism. However, this is not really the most important aspect of the problem or of Deleuze’s analysis and maybe not his most profound insight into the problem of psychic intensity. At most, the view that there is a

difference in kind between the two tendencies obstructs a more profound apprehension of the distinction, but it does not represent the core of the problem. Nevertheless, since the 'core' of the problem involves the relationship between a problematic apprehension of dualism and the perspective adopted in TFW –i.e. one that encloses the problem of intensity in this problematic formula, we will present first this relationship and then move to the core of the problem.

As we saw at the beginning of our presentation of Deleuze's reading and critique, the problem of intensity in TFW is stated in such a way and from such a perspective that it encloses the distinction between differences in kind and differences in degree within a static dichotomy. In MM, by contrast, Bergson recognizes, 'degrees or vibrations in the qualities that we live as such outside ourselves' (G. Deleuze, 1991, 92), but also 'within' duration: 'there are numbers enclosed in qualities, intensities included in duration' (G. Deleuze, 1991, 92). According to the same passage from *Bergsonism*, these degrees or vibrations belong to matter, but at the same time, they are included in duration (G. Deleuze, 1991, 92). In Deleuze's view, the reason why Bergson did not conceive this deeper aspect of the problem of intensity is that he tried to examine intensity *from the perspective of pure experience*, which is, the pure experience of consciousness. The latter experience is purified through the exclusion of all external forms, or else through its opposition with space and matter. For this reason, it is impossible to apprehend positively the idea of intensive degrees that are degrees of difference –i.e. degrees of contraction, expansion and internal tension that inhere both in matter and consciousness, distributing qualities within matter and intensive degrees within consciousness.

However, although the above statement of the problem of psychic intensity represents a major tenet of Deleuze's argument, it does not really grasp the core of the problem. Or, more accurately, the problem of the *perception of qualitative differences* presents part of the core problem but only if it is viewed from the perspective of duration and its latent potential. Moreover, Pradines' apprehension of the problem of intensity in Bergson –analyzed in the first chapter of the thesis – shows that the problematic relationship that Deleuze discerns between the inquiry into the problem of intensity in TFW and the experience of consciousness does not represent his most original contribution on this matter. According to Guendouz, in his critique of the confinement of intensity within the experience of consciousness, Deleuze's approach to the problem of intensity in Bergson is indebted to Pradines' interpretation of the Bergsonian critique of

psychophysics (C. Guendouz, 2007, 415). In fact, as Guendouz observes, Deleuze pays tribute to Pradines in the fifth chapter of *Difference and Repetition*, where he (viz. Deleuze) endorses Pradines' view of intensity against Bergson. Nevertheless, we will leave the latter point for our later discussion and present that part of Deleuze's analysis that represents in our view his most original contribution to the understanding of the problem of intensity in Bergson.

As we mentioned previously, in our view the most tenacious aspect of the problem foregrounded by Deleuze resides in an internal tension between the idea of psychic intensity and duration. The question is, whether under this second perspective, where qualitative intensity is somehow opposed to the evolution and internal dynamics of duration, we can also seek a new approach to the second aspect of intensity –i.e. the intensity of the simple states. In our view, the latter cannot be identified either with the external differences of degree –precisely because it maintains always a purely qualitative and affective side – or with qualitative intensity –i.e. the intensity of the complex states – since it is distinguished from it in the first place.

Finally, we do not think that it is possible to identify this second meaning of intensity with the profound sense of intensive degrees that are introduced in MM. As we shall try to show, the second meaning of intensity is posited as a problem through the apprehension of the inner tension between duration and psychic intensity. So, we are going to see now how the latter problem emerges in Deleuze's reading. The problem of the relationship between the qualitative intensity, or, in Deleuze's terms, qualitative difference and duration is explicitly presented in *Difference and Repetition*, but it has its origins in the analysis of *Bergsonism* and in *Bergson's Conception of Difference*, although it is not explicitly discussed as such in either of the two latter works.

We shall begin with the explicit statement and then we will proceed to show in what ways it involves Deleuze's previous analysis. As he writes in *Difference and Repetition*,

the Bergsonian critique of intensity seems unconvincing. It assumes qualities ready-made and extensities already constituted. It distributes difference into differences in kind in the case of qualities and differences in degree in the case of extensity. From this point of view, intensity necessarily appears as an impure mixture, no longer sensible or perceptible. However, Bergson has thereby already attributed to quality everything that belongs to intensive quantities. He wanted to free quality from the superficial movement which ties it to contrariety or contradiction (that is why he opposed duration to becoming); but he could do so only by attributing to quality a depth which is precisely that of intensive quantity. One cannot be against both the negative and intensity at

once. It is striking that Bergson should define qualitative duration not as indivisible but as that which changes in nature in dividing, that which does not cease to divide and change its nature: virtual multiplicity, he says, in opposition to the actual multiplicities of number and extensity which retain only differences of degree. There comes a moment, however, in this philosophy of Difference which the whole of Bergsonism represents, when Bergson raises the question of the double genesis of quality and extensity. This fundamental differentiation (quality-extensity) can find its reason only in the great synthesis of Memory which allows all the degrees of difference to co-exist as degrees of relaxation and contraction, and rediscovers at the heart of duration the implicated order of that intensity which had been denounced only provisionally and from without (G. Deleuze, 1997, 239).

The first part of Deleuze's critical remark refers to the problem that we encountered in our previous discussion, namely, the problem of perspective that confines the examination of intensity in the pure experience of consciousness. As he argues, under the perspective of consciousness, intensity is bound to appear as an impure mixture, precisely because it is viewed from the aspect of its results: intensity –understood as intensive magnitude – constitutes qualitative differences in quality and quantitative differences in extensity. In other words, intensive magnitude –in the profound sense that it assumes within duration and 'without' the superficial critique which is advanced upon it in TFW – introduces the differential element both in quality and extensity. So, in this first sense, the critique of intensive magnitudes in TFW is prescribed by the adoption of the wrong perspective for the study of intensity and obstructs the truly dynamic aspect of the constitution of perceptible experience. This change of perspective that allows Bergson to account for emergence of perceptible experience –i.e. the 'double genesis of quality and extensity' (G. Deleuze, 1997, 239) – takes place between TFW and MM.

At first sight, it would seem as if Deleuze merely reiterates this movement of reversal in the conception of intensive degrees that takes place between TFW and MM. However, at a closer glance we can see that the weight of the inquiry and the stakes of the critique are displaced. To begin with, it would seem that quality has absorbed everything that belongs to intensive quantity. This interpretation could explain potentially also the problem that we encountered previously, regarding the implicit presence of number and quantity within the Bergsonian idea of pure intensity. Thus, as we saw, pure intensity is defined by Bergson as a change of nuance or shade that spreads over a 'larger or smaller number of elementary psychic phenomena' (TFW, 18). As we shall see later on, although this 'larger or smaller number of elementary phenomena' represents a key-idea for the apprehension of the relationship between intensity and

multiplicity, Bergson would not agree with the idea that this vague allusion to number complies with the admittance of intensive quantities.

The latter proposition alludes primarily to the qualitative multiplicity of duration, which is disclosed right at the heart of intensity. Nevertheless, Deleuze's reference to quality in the text from *Difference and Repetition* that was cited above is not really directed to the intensive quality of psychic intensity, but rather to the qualitative multiplicity of duration. Quality, taken by itself, cannot be freed 'from the superficial movement which carries it to contrariety or contradiction' (G. Deleuze, 1997, 239). It is only when it affirms itself in a virtual multiplicity that it is freed from the dialectical notions of contrariety, opposition and contradiction. But, it cannot become a virtual multiplicity unless it absorbs 'everything that belongs to intensive quantities' (G. Deleuze, 1997, 239). In Deleuze's view the purely qualitative difference and the superficial critique which is leveled by Bergson against the idea of intensive magnitudes, are problematic because they stand against the principal insight of the Bergsonian philosophy, which is to 'to free quality from the superficial movement that ties it to contrariety or contradiction' (G. Deleuze, 1997, 239). Yet, this deliverance of quality from contrariety and contradiction cannot take place unless Bergson attributes to quality 'a depth which is precisely that of intensive quantity' (G. Deleuze, 1997, 239). This formulation of the problem of intensity is intriguing because it is situated between the initial idea of intensity – i.e. as qualitative difference – and its inner dynamism, so to say, that lead it to rediscover at its heart – i.e. the heart of duration – 'the implicated order of that intensity which had been denounced only provisionally and from without' (G. Deleuze, 1997, 239).

Yet, returning to the problem of the two meanings of intensity, can we say that the above analysis by Deleuze and this new statement of the problem of intensity in *Difference and Repetition*, elucidates at all the relationship between the two meanings of intensity? Now, although it is true that Deleuze never really examines the problem of intensity under this perspective, we could say that this 'implicated order of intensity' that beats its rhythm at the heart of duration, although it cannot be identified with the acquired perception of quantity within quality, indicates the direction that has to be pursued in order to elucidate the problem. This direction will take us to the examination of the relationship between intensity and multiplicity, or rather, the relationship between the two meanings of intensity and the two kinds of multiplicity that are distinguished by

Bergson: i.e. the qualitative/ continuous multiplicities and the discrete/ quantitative multiplicities.

Chapter Three

Intensity and Multiplicity: Pure quality, intensive degrees and the problem of division

1) Introduction

In the last chapter we examined the problem of intensity from three angles. The first addressed the relationship between the object of Bergson's critique and the positive idea of intensity. As we saw, the latter idea comprises most definitively the perception of a purely qualitative difference that entails at the same time a mode of discrimination or distinction –i.e. the idea of differences in kind. The status of the second sense of intensity –i.e. the intensity of the simple states – remained indeterminate throughout our analysis. However, as we tried to show in the second section of the chapter in response to Worms' interpretation of the two meanings of intensity, the perception of intensity in the simple states (i.e. psycho-physical intensity) did not really coincide with the 'external' or spatial differentiation of differences in degree. This last clarification is crucial because in this way we can establish that the psycho-physical intensity cannot be identified with the confused notion of intensive magnitudes or with the superficial sense of degree that the latter is seen to entail, from the perspective of Bergson's analysis. In the last section of the chapter we examined Deleuze's analysis of the methodological importance and the problems that are entailed in the exposition of intensity in TFW. Besides the most prominent aspect(s) of Deleuze's formulation of the problem –i.e. the different movements of the method and the evolution of Bergson's thought – we saw emerging a new problem that will be the main object of our current inquiry: namely, the relationship between intensity and multiplicity.

In the first part of the chapter we are going to examine the distinction between the two kinds of multiplicity as they are presented in the second chapter of TFW with an emphasis on the problem of division and the distinction between the 'subjective' and the 'objective' which is pronounced in the critical analysis of number. The choice of this particular line of inquiry is prescribed by two exigencies: the first is to examine the relationship between intensity and multiplicity beyond its most evident aspect, which is the critique of psychophysics that encloses this relation into an introductory and partly negative statement. This is so, because examined from the perspective of Bergson's

critique of the methods of measurement, intensity is either dissimulated by the extensive and quantitative multiplicity which is erroneously 'read' into it, or it intimates a more profound relation with qualitative multiplicity that remains unexplored in this critique. Instead, intensity acquires a vital role in the very statement of the problem of multiplicities in the second chapter of TFW, where the distinction between the two kinds of multiplicity appears to emerge from the analysis of the intensity of the complex states. The second objective that prescribes the chosen route of inquiry concerns Deleuze's statement of the problem in terms of this *sui generis* division which is entailed in the idea of duration re-defined as *virtual multiplicity*. There are two ideas found in Deleuze's formulation of the problem of intensity and division – i.e. the genetic division which is an actualization of a virtual – that are important for our analysis: 1) the fundamental position of the concept of intensive degrees in the apprehension of virtual multiplicity and 2) the problem that emerges from the *perception* of intensity in terms of pure quality.

The first section of the chapter aims to see in what sense duration can be divided, or if there is indeed such an idea of division that would denote a mode of differentiation that derives from duration and does not annul it or distort it. At the same time, besides the most prominent aspect of Bergson's argument that consists in placing division at the side of spatial differentiation, in the examination of the subjective and objective aspects of number, the problem assumes a more intriguing form; one that could be used in order to reverse the relation between intensity and multiplicity and at the same time to introduce a new significance in the division of qualitative multiplicity: the formation of indivisibles and the role of intensity therein.

In the second section of the chapter we will examine Deleuze's interpretation of the same distinction between the 'subjective' and the 'objective' in the Bergsonian analysis of number. This second part of our analysis has three main aims: 1) to see how Deleuze derives this positive sense of division from the initial idea of duration; 2) what this reading presupposes; and 3) the way in which he states the problem of the relationship between intensity and multiplicity. As we shall see, there are two main factors that come into play in Deleuze's interpretation of duration as a virtual multiplicity. The first emerges from Deleuze's apprehension of the internal dynamism of duration –i.e. its future evolution that coincides with his view of the increasing importance of the idea of the virtual and the process of its actualization, which is a process of division. The second emerges under the form of a hypothesis on the origins of the distinction between the

two kinds of multiplicity in Bergson; notably, Riemann's theory of multiplicities. Deleuze's statement of the problem of intensity and multiplicity is going to be pursued in these two directions. As we shall see, from Deleuze's standpoint, qualitative intensity presents an obstacle in relation to the virtual multiplicity of duration in two major ways: 1) because it advances a superficial critique of intensive degrees that can be seen as the varying metric principle which is read into the idea of duration by Deleuze, in response to the definition of Riemann's metric principles and 2) because it introduces a perspective that covers up what is essential in the internal differentiation of memory and life (understood as a virtual whole); that is the virtual differentiations between divergent levels of actualization that denote different degrees of *tension*. The perspective that covers up this latter aspect of intensity is the *perception* of qualitative difference. In this sense the *perception* will be distinguished from the idea of intensive degrees, or to use Bergson's term, from the *degrees of tension*.

2) Qualitative and quantitative multiplicities and the distinction between the 'subjective' and the 'objective' in the analysis of number: The complex states and the problem of division

In this section we are going to examine the distinction between the qualitative and quantitative multiplicities in relation to the Bergsonian analysis of number and the problem of division. In the second chapter of TFW, Bergson draws a distinction between *two kinds of multiplicity* that denote at the same time 'two senses of the word "distinguish", two conceptions, the one qualitative and the other quantitative, of the difference between *same* and *other*' (TFW, 121). 'Sometimes this multiplicity, this distinctness, this heterogeneity contains number only potentially' (TFW, 121). Thus, this first kind of multiplicity is a multiplicity without quantity; a *purely qualitative multiplicity* that advances at the same time a *qualitative mode of distinction*. Besides the qualitative multiplicity there is another kind of multiplicity, which is the most common: i.e. the quantitative multiplicity of parts that are juxtaposed side by side to one another and simultaneously perceived. According to Bergson, this second type of multiplicity is a multiplicity of terms 'that are counted or which are conceived as capable of being counted' (TFW, 122). Thus, number is not directly applicable in the first kind of multiplicity – i.e. the qualitative multiplicity – while in the second it is.

The problem of division occupies a central position in the Bergsonian analysis of number, space and duration. Division is explicitly defined as this mode of differentiation that pertains to space. The latter is defined by Bergson as 'a principle of differentiation other than that of qualitative differentiation' (TFW, 95), *because* it enables us to separate and divide the continuous multiplicity of duration into a number of identical, simultaneous and distinct moments. In contrast, the continuous multiplicity of duration is defined as this mode of discrimination or differentiation that changes integrally with the addition of every new element and cannot be divided without changing in nature. As it can be derived from this initial statement of the distinction between the two kinds of multiplicities, one of the most crucial problems posited by the Bergsonian inquiry of numerical time and duration, resides in the interpretation of this second form of change – i.e. the change in nature – that occurs when enduring realities are divided. The latter problem is vital also for another reason: it occurs through an analysis of affective states and more specifically, the analysis of complex feelings. As we saw in the second chapter of the thesis, the complex psychic states provide us with the idea of *pure intensity*. So we have to see what occurs in the complex state when it is divided, or more accurately, analyzed. First though we have to see how Bergson introduces the problem of division.

Generally speaking, Bergson defines duration in terms of an *indivisible* and *continuous* multiplicity, a distinctness and heterogeneity that contains 'number only potentially' (TFW, 121). In contrast, all sense of division, separation and discreteness involves the representation of space. It is true that Bergson never really defines duration as 'the indivisible.' In fact, throughout the numerous references in Bergson's oeuvre, duration is very rarely attached to indivisibility, or directly opposed to division.³⁶ The opposition of duration to divisibility is derived rather from the distinction between duration and space which is elaborated in the second chapter of TFW. We will present now the main steps of Bergson's argument regarding the distinction between duration and space as it is elaborated in the analysis of number. Besides the fundamental importance of this analysis for Bergson's idea of duration and the distinction between the two kinds of multiplicity that it sets forth, the investigation of number and more particularly the distinction between its subjective and the objective aspects, represent this part of the Bergsonian inquiry on which Deleuze bases his argument on the divisibility of duration. As we shall see a little further on, Deleuze's major insight is drawn from Riemann and his distinction between discrete and continuous multiplicities. According to Deleuze's hypothesis,³⁷ Riemann's distinction stands at the origins of the Bergsonian distinction and in a certain sense it presents the key of how the latter should be interpreted. First though we will proceed to summarize the major steps of the Bergsonian analysis of number, the distinction between its subjective and objective aspects and finally, the distinction between the two kinds of multiplicity.

Bergson begins his analysis of the concept of number, with a definition that bears more than one point in common with the Kantian definition of number.³⁸ According to Bergson, number is the 'synthesis of the one and the many' (TFW, 75). Consequently, since it is a synthesis it presupposes 'a multiplicity of parts which can be considered

³⁶ The most direct opposition of duration to divisibility takes place in the definition of duration in DS. In order to apprehend duration in its original purity – i.e. as the continuity of our inner life – we must envisage, a 'multiplicity without divisibility and succession without separation' (DS, 30).

³⁷ Deleuze advances the view that Riemann's distinction stands at the origins of Bergson's thought of multiplicities under the form of a plausible hypothesis. This detail has a certain importance because Bergson does not mention Riemann anywhere in his published oeuvre. This is not to say that Deleuze's hypothesis does not stand. Quite on the contrary, through this hypothesis Deleuze succeeds to justify the occurrence of *Duration and Simultaneity* and Bergson's later renunciation of this book (C. f. G. Deleuze, 1991, 39-40). However, the fact that Riemann's impact on Bergson is set forth as a hypothesis and not as a fact means also that the distinction between the two kinds of multiplicity in Bergson can be read independently of Riemann's lecture *On the hypotheses that lie at the foundation of geometry*.

³⁸ C.f. I. Kant, 1929, A143/ B182

separately' (TFW, 76) and a mental activity that synthesizes this multiplicity of parts into a unity, which, in the case of number it is always the unity of a sum (C.f. TFW, 76).

Bergson adds immediately after this initial definition of number that 'it is not enough to say that number is a collection of units; we must add that these units are identical with one another, or at least they are assumed to be identical when they are counted' (TFW, 76). According to Worms (F. Worms, 2004, 42), Bergson, just like Kant, admits that number is the product of a mental activity – i.e. the 'simple intuition of the mind' (TFW, 76), or, in Kant's terms, the 'synthesis of the manifold of a homogeneous intuition in general' (I. Kant, 1929, A143/B 182). This is to say that unity is not something that belongs objectively to number: the unity of number and of the units with which we make up number is always a provisional unity and depends always on an act of unification. The latter observation, as we shall see, is important for Bergson's definition of the objective and subjective aspects of number.

With the investigation of number Bergson aims to establish two main points: the first is that space is the absolute principle for the formation of number. The second comes down to the idea that the succession that takes part in the activity of counting – when e.g. we envisage that we built up number through repetition – is not pure succession but an amalgam of time and space; something like the fourth dimension of space. It has to be stressed that the demonstration of these two points involves two separate processes: the first serves to show the necessary involvement of space in the idea of number and the second the necessary implication of succession. Of course, in this operation succession ceases to be pure: its moments are separated from one another and set out in an ideal space in order to be counted. Yet, without the involvement of succession the addition would not be possible. Bergson's analysis of numerical multiplicity is liable to a number of objections and misunderstandings, if we disregard the fact that he employs two and not just one operation in order to illustrate the role of space and time in the formation of number. For example, it does not hold, as Berthelot has argued, that Bergson tries to build number and quantity solely in space – a procedure that would place the Bergsonian edifice and the critique of mathematical time right back to Descartes and his concept of fixed quantities.³⁹ Quite on the contrary, pure succession

³⁹C.f. (R. Berthelot, 1911, 176, 177). As it has been noted by Berthelot, by placing all ideas of quantity and number on the side of geometrical extensity and, inversely, by negating the role of succession in the formation of number and quantity, Bergson negates a fundamental aspect of the history of mathematics that comes down to the introduction of succession within arithmetic; a tendency that becomes more and more marked since Galileo and Leibniz. The latter effectuates the transition from the geometrical algebra of Descartes to mathematical analysis, from the

and the qualitative synthesis which is operated within pure succession, as well as the preservation of the past within the present which is effectuated in memory, represent two indispensable aspects in the procedure of the formation of number and the activity of counting. Ultimately, when succession is reintroduced within number Bergson ascertains that it is impossible to 'form the idea of discrete multiplicity without considering at the same time a qualitative multiplicity' (TFW, 122-123).

In terms of the purposes of our analysis two points are important: the first is that we cannot envisage a multiplicity of parts or units that are absolutely identical yet somehow distinct without the aid of space (C.f. TFW, 77, 78). The second point is that it is impossible to retain these distinct parts or units as *identical* and *distinct* in pure succession (C.f. TFW, 79). This is another part of Bergson's analysis that can lead to misunderstandings. When Bergson argues that it would be impossible to retain the past moments in pure succession in order to refute the idea that we can count and build up number *exclusively* in pure succession, he does not mean by this that pure succession cannot preserve the past. Quite on the contrary, as it is shown later on in the text, the past *cannot be preserved in space*: without this 'process of organization or interpenetration' (TFW, 108) that takes place in pure duration, there is no past or future; just an ever recurring present. Coming back to the second point that was raised in relation to the mode of preservation (retention) of the past in the present, we could say that Bergson objects against the idea that past *moments* or *units* cannot be preserved in pure succession as *identical* and *discrete* things (TFW, 79). Thus, when we say that we *count* moments of duration, in reality 'we have counted the moments of duration by means of points in space' (TFW, 78). This is so because, in order to count them, we have first to separate, juxtapose and perceive them simultaneously set alongside one another in an empty homogeneous medium, which is space.

However, it is not enough to show that space is an indispensable component in the activity of counting. It has to be shown also that number *per se* involves a discrete

equation to the function and finally from fixed to variable quantities. Ultimately, Berthelot criticizes Bergson for adopting the idea of Descartes on the spatial character of quantity; something that leads Bergson to endorse also the position of a rigid dualism regarding the problem of quality and quantity (viz. the problem of intensity). Berthelot recognizes that the static dichotomy and the rigid opposition between quality and quantity is reformed in Bergson's second work, MM. However, in Berthelot's view, this new statement of the problem of quality and quantity is gained at the expense of the objectivity of space. Berthelot apprehends Bergson's theory of concrete extensity which is elaborated in the first and fourth chapters of MM as a psychological extensity; a reading which is not very far from the one which is advanced by Pradines in *La Philosophie de la Sensation*.

multiplicity of parts that are set out side by side in space. It is at this point that Bergson introduces the two aspects of number: the one that appeals to the *process of the formation* of number whereby each unit is considered as indivisible and ultimate (TFW, 80) and the other that refers to number *already formed* and objectified. As we mentioned, Bergson believes that all unity in number is a provisional unity, 'which can be subdivided without limit' (TFW, 81). For this reason, as soon as number is formed we can divide it according to any system we please, whereas when we are in the process of forming number we have to build it according to a definite law where the unit is irreducible (TFW, 83). The first process involves 'a simple act of the mind' (TFW, 80), an act of unification or mental synthesis. Strictly speaking, without this act we would not be able to perceive units.

However, since the unity of number is always provisional this means that it is possible to divide the unit into as many parts as we like. From this observation Bergson draws the conclusion that the possibility of subdividing number into as many parts as we like, 'shows that we regard it as extended' (TFW, 82). Yet, the admittance of this possibility of infinite subdivisions is not enough for the definition of the objectivity of number. It could be the case, for example, that something is divisible but the parts into which it is divided are not identical either with one another or with what they were before the division. In this case, it would be impossible to reconstruct number. Moreover, the parts that change during the process of division can be hardly called parts, or units. With this observation on the realities that change in nature when they are divided we have precipitated in a sense the conclusion of the analysis of the subjective and objective aspects of number. However, without this precipitated analysis, Bergson's definition of the 'subjective' as 'what seems to be completely and adequately known' (TFW, 83) and the 'objective' as 'what is known in such a way that a constantly increasing number of new impressions could be substituted for the idea we have of it' would be obscure and incomprehensible.

This definition intimates that the appearance of something objective (e.g. a body or material object) will not change no matter how we analyze it by thought 'because these different analyses, and an infinity of others, are already visible in the mental image which we form of the body' (TFW, 84). Then he proceeds to define objectivity as the 'actual and not merely virtual perception of subdivisions in what is undivided' (TFW, 84). In contrast, if we try to perceive distinctly the confused heap of simple elements that make up a complex feeling —elements that are not completely realized but in process of formation

and mutual organization – and analyze it to its constituents –distinctly perceived and realized – then the psychic state which is composed by these elements ‘will have changed for this very reason’ (TFW, 84).

With the distinction between the subjective and the objective Bergson introduces for the first time, albeit implicitly, the distinction between the two kinds of multiplicity. The multiplicity of the complex feeling is composed by ‘a fairly large number of simple elements’ (TFW, 84). As is intimated already in the definition of the subjective, these elements are not completely realized and in this sense they cannot be treated as distinct and complete entities.

Now, the interpretation that appears to be suggested by Bergson’s subsequent analysis consists in the view that the ‘subjective’ alludes to the continuous multiplicity of duration and for this reason it cannot be divided without changing in nature. This is so because duration is defined as a succession that prolongs the past into the present and forms in this way an ‘organic whole’ (TFW, 100) that changes integrally with the addition of each new impression. At the same time, duration is compared to a ‘living being whose parts, although distinct, permeate one another’ (TFW, 100). In other words, duration is at once a continuous multiplicity of interpenetrating elements that form an organic whole that changes integrally with every new addition. From this fundamental property of duration changing integrally with the addition of each new element, we could derive the conclusion that an integral change of this sort can be postulated in Bergson’s definition of the subjective. Would it not be the case that something that changes integrally with addition, would also change in nature with division? Would it not be legitimate to identify this change in nature with integral change? This might hold, but the problem is not really whether we can identify integral change with change in nature, but whether this sort of change takes place with division in the same way that it does with addition. But, even before we depart to examine this problem, there are several others that intervene.

The first of these problems is whether it is sound to identify the ‘subjective’ with the idea of continuous or qualitative multiplicity. The second is whether we can identify continuous multiplicity with duration. Certainly, duration is defined in terms of a continuous multiplicity and inversely, from the standpoint of Bergson’s analysis, it is difficult to think a multiplicity of mutual penetration without a succession that prolongs the past into the present and melts the one into the other. At the same time, however, Bergson avoids defining duration in terms of a single property, no matter how

fundamental this might be. The entire analysis of the concept in the *Introduction to Metaphysics* attests to this. Furthermore, there is a certain sequence in the analysis that takes place in the second chapter of TFW that cannot be violated without losing probably what is essential; that is, the idea of duration in its process of emergence, meaning by this an idea that has sprung from an intuition, but at the same time is conceptually elaborated and enriched through its gradual emergence. Yet, no matter its importance, we have to leave this second problem and come back to the first, which is more closely relevant to the purposes of the present inquiry. So, the problem is whether Bergson does indeed anticipate, in the discussion of the subjective and the objective, the distinction between the two kinds of multiplicity.

Considering the example used by Bergson in his definition of the subjective –i.e. the complex feeling – and even more so the resistance of the simple elements that compose it to the direct application of number –i.e. since they change in nature by the very fact of being realized into distinct things – and even more so, the definition of the objective as that which involves the ‘*actual* and not merely virtual perception of subdivisions’ (TFW, 84), then the close connection between these two parts of Bergson’s analysis is evidently clear. In fact, this is attested by the very course of the inquiry since the discussion of the subjective and the objective aspects in the formation of number serves as an introduction to the distinction between the two kinds of multiplicity (C.f. TFW, 85).

Moreover, the provisional indivisibility of the unit which is used in the *process of formation* of number is due to the synthesizing activity of the mind that ‘pays more attention to its own acts than to the material on which it works’ (TFW, 85). However, if we were to rest simply on this statement of indivisibility –i.e. the one which is the product of the synthesizing activity of the spirit – then a number of problems and objections would emerge. The most serious of these problems would be that the mental synthesis used in the intuition of number as a provisionally indivisible unit, is the synthesis of a manifold of discrete and identical things and consequently the synthesis of a quantitative or numerical multiplicity. Thus, if there is any direct affinity between the ‘subjective’ and the qualitative multiplicity employed in the definition of true succession (duration), then this has to be sought at the side of the example which is used by Bergson in order to elucidate his definition of the ‘subjective’: that is to say, the complex feeling. In fact, in almost every single reference to the distinction between the two kinds of multiplicity Bergson employs an example which is taken from the affective life.

When we speak of material objects we refer to the possibility of seeing and touching them; we localize them in space. In that case, no effort of the inventive faculty or of symbolical representation is necessary in order to count them; we have only to think them, at first separately, and then simultaneously, within the very medium in which they come under our observation. The case is no longer the same when we consider purely affective states, or even mental images other than those built up by means of sight and touch. Here, the terms being no longer given in space, it seems, a priori, that we can hardly count them except by some process of symbolical representation. (TFW, 85-86)

The above statement of the distinction between the two kinds of multiplicity in conjunction with the description of the complex feeling in the discussion of the 'subjective' and the 'objective' –i.e. a complex feeling which is itself defined in terms of a multiplicity of simpler elements – suggests the idea that the change in nature that occurs in the feeling when we try to perceive distinctly the elementary states that compose it, involves a similar process to the one that takes place when we try to apply number upon 'purely affective states' (TFW, 84). This view seems to be suggested also by our previous analysis of the perception of intensity in the complex states. As we saw, Bergson defines the intensity of the complex states *in terms* of a multiplicity of elementary states that are dimly discerned in the fundamental emotion. This intimate relation between the intensity of the complex feelings and multiplicity is even more emphasized in *Le parallélisme psycho-physique et la métaphysique positive*. The intensity of a complex feeling consists in a '*felt multiplicity*' (*multiplicité sentie*) of the elements to which we could decompose it (H. Bergson, 1972, 491).

From this definition of intensity we can derive the idea that, when we try to perceive distinctly the elements that compose the fundamental state, this state changes precisely because its distinctive character, its nuance, is constituted in its turn by the felt multiplicity of the elementary states that would change in nature irrevocably if we were to *dissociate* the multiplicity that forms it, into distinct things (objects). In other words, it would seem that the complex states do not simply *form* a continuous multiplicity when they are taken together with the other states of consciousness in their concrete succession. Complex states are themselves composed of a continuous multiplicity of simpler states. In confirmation of this idea, Bergson adds the following remark in his discussion of the intensity of the complex states in *Le parallélisme psycho-physique et la métaphysique positive*. As he notes, 'in reality, this multiplicity exists only potentially in

consciousness: it is our reflection that realizes it by analyzing it and dissociating it' (H. Bergson, 1972, 491).⁴⁰

This observation is crucial because it raises at once the problem of analysis (dissociation/ division) in the definition of the 'subjective', the idea of a qualitative multiplicity that 'contains number only potentially' (TFW, 121) and of course the definition of the intensity of the complex states that seems to comprise at once the idea of a 'felt multiplicity', a distinctive nuance which is composed by this multiplicity, the confused perception and a purely qualitative discrimination that *feels* the multiplicity that composes it without separating or analyzing its elements. The relationship between the intensity of the complex states and qualitative multiplicity will be more thoroughly examined in a later part of this chapter. However, if we are to admit that the complex states are composed in terms of a qualitative multiplicity of elementary states –an idea that seems to be suggested at various parts of Bergson's analysis in the second and third chapters of TFW – then it seems that the change of nature that occurs in the complex feeling when we analyze it into its constituents, would not be much different from the profound alteration that takes place when we represent symbolically the continuous multiplicity of conscious states in order to count them.

So, every time that we try to count realities and states to which number is not directly applicable –i.e. continuous multiplicities – we have to employ the 'inventive faculty' of the mind, or else to represent them symbolically, by projecting them into a homogeneous medium, which is space. As Bergson argues, this very process of refraction and distinction, 'is likely to influence these states themselves and to give them in reflective consciousness a new form, which immediate perception did not attribute to them' (TFW, 90). What seems to occur whenever a separation and spatialization of psychic states takes place is a loss of originality; the emergence of common and common place forms that end up covering up the initial state of consciousness.

If we return once again to the distinction between the 'subjective' and the 'objective' and the type of alteration that each 'side' of the distinction undergoes, whenever it is analyzed we could conclude that in both cases presides this type of differentiation that belongs to space. The latter is 'a principle of differentiation other than that of qualitative differentiation' (TFW, 95); it 'enables us to distinguish a number of identical and simultaneous sensations from one another' (TFW, 95). Analysis, division, discretion involve the representation of space and denote this mode of differentiation

⁴⁰ 'A vrai dire, cette multiplicité n'existe pas dans la conscience lui-même, sinon en puissance: c'est notre réflexion qui achèvera de la réaliser en analysant et dissociant' (H. Bergson, 1972, 491).

that pertains to space. For this reason it is immediately applicable to 'material objects' – or at least it is immediately applicable to these objects⁴¹ and extended things, but not to conscious states that form a multiplicity of interpenetrating terms.

Due to the fact that the complex feeling is itself composed by a qualitative multiplicity in order to be analyzed in its constituents it has to be refracted into space whereby each element will be dissociated from the moving multiplicity in which it takes part, immobilized and finally set out alongside the others as something complete and realized. So, when we try to divide the 'subjective', it is the abolition of the qualitative mode of differentiation; this indistinct or dim perception sustains the elementary states in a process of mobility and becoming, while, at the same time it is composed by this perpetual becoming and change that occurs from within. Conversely, the distinct character of the feeling, its nuance, is composed by the indistinct multiplicity of elementary states. When they are analyzed and dissociated by thought these states lose their natural articulations and their originality, while at the same time, their distinct perception will 'alter the psychic state which results from their synthesis for this very reason' (TFW, 84). Thus, when a complex and profound feeling such as 'a violent love or a deep melancholy takes possession of our soul' (TFW, 132), this means that we feel

a thousand different elements which dissolve into and permeate one another without any precise outlines, without the least tendency to externalize themselves in relation to one another; hence their originality. We distort them as soon as we distinguish a numerical multiplicity in their confused mass (TFW, 132).

Conversely, the feeling which is composed by this heterogeneous and internal multiplicity –i.e. the complex state – is a being,

⁴¹ The question whether the material universe endures remains indeterminate in TFW and has become the object of vivid discussions amongst Bergson's readers. Throughout the analysis Bergson tends to draw a rigorous separating line between inner duration and the 'material universe', which is supposed to be governed by the laws of physical determinism. This strict distinction finds its most rigorous expression in the third chapter of TFW, where Bergson advances the paradoxical thesis that the more we abide to the meaning of necessary causality in nature the more we reinforce the hypothesis of another type of causality: the spontaneous causality of the enduring self that can be regarded as such –i.e. the self – as a free force. However, this strict distinction is complicated and even put into question at various instances. One of the most flagrant examples that put into question this distribution and division of domains is given in the example of the impenetrability of matter. In this discussion not only numerical multiplicity is not directly applicable upon matter, but it appears that the law of impenetrability is a law that does not pertain to a physical but rather a logical necessity: one that confirms simply the interconnection of number and space, but not that of number and matter (TFW, 88-89).

which lives and develops and is therefore constantly changing...But it lives because the duration in which it develops is a duration whose moments permeate one another. By separating these moments from each other, by spreading out time in space, we have caused this feeling to lose its life and its color (TFW, 133).

We can conclude from the above remarks that division remains in the analysis of TFW a mode of differentiation that pertains to space and as such when it is applied upon non-spatial realities it abstracts and deforms them. However, there are certain features in Bergson's analysis that suggest that this might not be necessarily the case and that the 'change of nature' that occurs in the feeling when its constituents are distinctly perceived might not necessarily be a negative change. In fact, one of the most positive and fecund features of the discussion of the subjective and the objective is that it leaves the direction of this change indeterminate.

So it would seem that there can be another view of division that derives almost directly from the definition of duration, but one that does not necessarily move in the direction of the division of the virtual multiplicity set forth by Deleuze. This other sense of division seems to derive directly from the integral change of all enduring realities with the addition or prolongation of a certain impression. Bergson often compares duration with a melody or a 'musical phrase which is constantly on the point of ending and constantly altered in its totality by the addition of some new note' (TFW, 106). The question that emerges is whether such a change of nature can occur also when we try to divide e.g. a sensation, an emotion, or even the succession of our conscious states in duration. In other words, if duration has the ability to totalize change with the addition of each new element, can't we say that this holds also for division?

This is an idea advanced by Jankélévitch, in the first chapter of *Henri Bergson*, known as the theory of organic totalities (V. Jankélévitch, 1959). According to the latter theory all spiritual and enduring realities have the power to totalize themselves. In this sense, division becomes impossible in its habitual sense because when spiritual or enduring realities are divided they do not present parts or fragments, but a totality (V. Jankélévitch, 1959, 10).

Bergson actually provides an example of the totalization of change in the division, or rather the interruption of duration. As he writes, comparing once again duration with a melody,

if we interrupt the rhythm by dwelling longer than is right on the note of the tune, it is not its exaggerated length as length, which will warn us of our mistake, but the qualitative change thereby caused in the whole of the musical phrase (TFW, 101).

One can object that this example is not really a good example of division, since we have to do rather with an interruption, caused by a prolongation of one element, rather than a division into parts. But, probably this is also the meaning of this *sui generis* form of division that occurs in duration: a division whereby at each phase of the division duration remains integral and it does so precisely because there is a qualitative change that occurs at all moments; a change that creates indivisibles. As we shall try to show in the third section of the chapter, one can discern this *sui generis* creation of indivisibles within duration in the idea of *nuance*.

However, before we pass to this examination and even before we proceed to the presentation of Deleuze's idea of genetic division in the actualization of the virtual multiplicity of duration, we must say that the problem of the distinct perception of the complex feeling and the change that occurs through this perception can also have a different significance altogether; one that relates to the problem of measurement and division, but from the perspective of the analysis of intensity. This direction is pursued by Durie in the *Introduction* of DS. Durie considers the problem of the measurement of intensity decisive for the introduction of the idea of duration and the elaboration of the distinction between the two kinds of multiplicity (DS, vi). We saw in the first chapter of the thesis that the attempt of psychophysics to measure sensation and, more generally, the quantitative representation of intensity which is expressed in the idea of intensive magnitudes, stumbles upon the fact that psychic states do not present parts that can be superposed upon one another. The most straightforward approach to the problem of superposition would be to assume that psychic states cannot be superposed upon one another because they are unextended. However, this is not the only problem. In fact, if we follow Durie's interpretation, the greatest problem occurs when we separate a psychic state from its *perception* in order to measure it.

When we say that we are happy, we mean that the 'image [of happiness] has altered [*modifié*] the shade of a thousand perceptions or memories, and that in this sense it penetrates [*pénètre*] them (TFW, 9)...The happiness cannot be separated from the perception in order to be measured, for it would undergo a radical change in kind; equally, the presence of happiness provokes a 'qualitative alteration' in an experience. (TFW, 10)

The above formulation of the problem of measurement is intriguing because it indicates that its most profound aspect does not reside in the conceptual confusion between the quantitative differences of the stimulus and the qualitative effect, but in that which occurs to the psychic state once it is separated from its perception and *vice versa* the alteration that perception undergoes from its experience. In this way, it becomes impossible for psychophysics to measure sensation: the very perception of sensation will alter the latter profoundly. Inversely, sensation itself with its changeable character and its prolongations within the moving mass of the totality of psychic states – i.e. the fact that it forms with the rest a continuous whole – will impede measurement from the 'other side', as it were. 'Psychic states are continuous, and so parts of such states cannot be separated out and juxtaposed without changing their nature' (DS, vii).

Coming back to the example of the complex state in the discussion of the subjective and the objective, we could say that this type of alteration and intricate relation between the perception and the feeling can shed a new light on the definition of the subjective. In this light the change in nature will not necessarily be negative, but rather indeterminate. At the same time, the most profound aspect of the problem will not reside on the division (analysis) of the qualitative multiplicity that composes the complex feeling, but rather what occurs to the *feeling* when it is perceived.

In the present section we examined the problem of division in Bergson's analysis of number and its position in the definition of the subjective and objective aspects of number. We saw that the latter distinction holds a pivotal position for the distinction between quantitative and qualitative multiplicities. Moreover, the definition of the term 'subjective' entails, as we saw, important insights for the relationship between intensity and multiplicity. In the next section of the chapter we are going to explore further a problem that was posed already at the end of the second chapter of the thesis. This problem emerges from Deleuze's analysis of the relationship between the virtual multiplicity of duration and the idea of pure quality or qualitative intensity.

***3) Deleuze's concept of virtual multiplicity and the problem of division:
Intensive degrees and the power of differentiation***

Deleuze defines the Bergsonian idea of duration as a 'virtual multiplicity'. This idea condenses everything which is distinctive in his apprehension of duration and this new type of division which is thereby introduced. Both in *Bergsonism* and in *Difference and Repetition* it is the *virtual multiplicity* of duration which is distinguished from, but not really opposed to, the *actual multiplicities* of number. The term appears as early as *Bergson's Conception of Difference*, but it is overshadowed somehow by the idea of internal difference that holds the primary position in this text.

The virtual multiplicity of duration cannot realize itself as a positive and primary difference without introducing at the same time a new sense of division that denotes the *actualization* of a virtual. Stated more strongly, for Deleuze,

Duration...is the virtual insofar as it is actualized, in the course of being actualized, it is inseparable from the movement of its actualization. For actualization comes about through differentiation, through divergent lines, and creates so many differences in kind by virtue of its own movement. (G. Deleuze, 1991, 43)

According to Deleuze, the qualitative difference of pure intensity presents an obstacle in relation to this type of division which is involved in the movement of the actualization of duration. However, qualitative intensity, or, in Deleuze's terms, pure quality, does not present a problem in relation to the type of division that we examined in the first section of the chapter –i.e. the division that involves the idea of numerical multiplicity and the representation of space. And even if it does present a problem in relation to numerical multiplicity, this is so because, in Deleuze's view, qualitative intensity and the critique of intensive magnitudes that informs it are imbued by an ambiguity that confines them to a superficial critique. As Deleuze indicates in his critical analysis of Bergson's theory of intensity in *Difference and Repetition*, the critique of intensive magnitudes in TFW is ambiguous because it aims to 'free quality from the movement that ties it to contrariety or contradiction...but he could do so only by attributing to quality a depth which is precisely that of intensive quantity' (G. Deleuze, 1997, 239). As we shall try to show, this second movement that attributes to quality everything that belongs to intensive quantity, takes place through the discovery of the fundamental role of intensity within the virtual multiplicity of duration. This process that

denotes a reversal of the habitual apprehension of the problem of intensity and duration, involves also the transition from the superficial critique of intensive degrees (intensive quantities) to a deeper apprehension of degree: one that has a vital role for the conception of duration as a virtual multiplicity in process of actualization. First though we have to see how Deleuze states the problem of division and what sense division assumes when it is no longer tied up in space, but emerges rather as an internal exigency of duration.

In the cited passage, Deleuze advances the view that duration is inseparable from the process of its actualization. This process involves the division of duration –defined as a virtual multiplicity inseparable from the movement of its actualization – into divergent lines and tendencies that differ in kind. In this way, duration will not be defined simply as that which differs in kind from itself and is opposed to space that presents only differences of degree between things, but as the ‘virtual in process of actualization’ that *creates* differences in kind. The Bergsonian idea of a purely qualitative intensity stands as an obstacle against the view of duration as a ‘virtual multiplicity in process of actualization’ in two different ways: the first is by setting up a sense of difference which is defined as indivisible, but most importantly, a sense of difference which is defined *in opposition* to the idea of intensive magnitudes.

However, before we proceed to show in what ways psychic intensity is seen to present an obstacle against this sense of division that takes place in the actualization of the virtual, we have to see how Deleuze proceeds to show that this sense of division is entailed in the idea of duration. One could object against Deleuze that when he defines duration as that which changes in nature when it divides –which is, what takes place really in the process of its actualization – in reality, he brings into this first conception of duration elements that belong to later stages of Bergson’s thought, or even to other notions as e.g. the *élan vital*. Yet, although it is true that Deleuze develops his conception of the virtual in relation to the *élan vital*, the idea of the divisibility of duration precedes the latter analysis. So, we have to see how he derives this idea from the exposition of duration and the distinction between the two kinds of multiplicity in TFW and what sense division assumes when it derives from duration and the distinction between the two kinds of multiplicity that informs it.

What appears paradoxical at first is that Deleuze bases his argument on this *sui generis* type of division in duration, on the distinction between the subjective and the objective aspects in the formation of number that we examined in the previous section.

This presents a paradox because, if we consider everything that has been said so far, the distinction between the subjective and the objective is precisely this part of the analysis where division appears to assume an entirely negative form when it is applied upon states of consciousness. In our previous discussion we saw that the division of the 'subjective' results in the annihilation of all qualitative differences and the prevailing of spatial forms and quantitative differences. If there is a differentiation that occurs when we divide that which is 'subjective' this is only a spatial differentiation that reduces the heterogeneous to the homogeneous. Yet, Deleuze does not really think so. In fact, he proceeds to an analysis of the same example that we discussed before – i.e. that of the complex feeling – whereby he shows that when the constituents of this feeling are actualized, what takes place really is the differentiation of a virtual whole –in this case the 'complex feeling' – that breaks up into two constituents (i.e. feelings) that differ in kind from one another and from the unconscious complex out of which they have emerged. After this first remark on the nature of the change, Deleuze proceeds to the following statement:

It would be therefore a serious mistake to think that duration was simply the indivisible, although for convenience, Bergson often expresses himself in this way. In reality, duration divides up and does so constantly: That is why it is a *multiplicity*. But it does not divide up without changing in kind in the process of dividing up: This is why it is a nonnumerical multiplicity, where we can speak of 'indivisibles' at each stage of the division (G. Deleuze, 1991, 42).

As we can see the negative aspect of the division is completely reversed. The process of realization⁴² of the simple elements that are contained in a complex feeling does not need to be negative as we have postulated in our previous analysis. In fact, under Deleuze's perspective it can only be positive, since the very process of realization, or, in his terms, *actualization*, involves a differentiation. In contrast, as we saw earlier on, the division that occurs in the 'objective' that pertains to a spatial mode of differentiation does not really change anything in the aspect of the object which is divided. If we follow Deleuze's argument to its ultimate consequences it is not only the object that does not change –i.e. because all the possible subdivisions are actually perceived in the image of the object – but it is the type of division itself that does not cause any change, or, more accurately, if it causes an alteration this is always negative.

⁴² Bergson actually uses the term 'realization' also in the French original. C.f. (H. Bergson, 2007, 63).

Thus, as we saw, when this spatial differentiation or division is applied to states of consciousness, it produces indeed a change in them, but this alteration moves always towards the same direction –i.e. impoverishment, loss of originality and content, common and common place forms. However, Deleuze completely reverses this reading. This reversal is informed by three lines of inquiry that converge in the idea of the division of the virtual multiplicity of duration.

The first is the dynamic reading of Bergson's philosophy that we discussed in the previous chapter. Thus, Deleuze reads the distinction between the subjective and the objective in TFW, both from the perspective of what is actually pronounced through it – i.e. in relation to the analysis of TFW – and in terms of what it anticipates. Viewed under the latter perspective, the definition of the objective in TFW, Bergson introduces the idea of objectivity which is elaborated in the first chapter of MM –i.e. the idea of matter as that which has no hidden powers, no virtuality. At the same time, this relation works also in the reverse way: the affinity between these two analyses invites to another reading of the 'subjective' than the one that appears to be suggested by the most prominent line of argument in TFW, which is more or less the reading that we presented in our previous discussion.

The second tenet pertains once again to the evolution of Bergson's thought and the prospective analysis of duration. However, this second factor is far more decisive than the first for the understanding of the relationship between psychic intensity and the virtual multiplicity of duration and the problem that Deleuze discerns between the two. So, if we go back once again to the previously cited passage from *Bergsonism* where Deleuze indicates in what way duration is divisible, it is easy to recognize the direction towards which this view of duration moves. Duration is defined as the 'virtual insofar as it is actualized'; 'it is inseparable from the movement of its actualization'; 'actualization comes about through differentiation, through divergent lines' (G. Deleuze, 1991, 42). In other words, what seems to be anticipated with this *sui generis* division that takes place through the virtual multiplicity of duration, is the *élan vital* and the movement of life, which is a movement of differentiation, understood in terms of a division between divergent tendencies.

Thus, if we consider the various ways in which Bergson describes the evolutionary movement of life in the CE, the affinity between the type of division which is traced by Deleuze in the initial statement of duration and the dissociating movement of life –i.e. the division of the initial impulse into divergent evolutionary lines, species or individuals,

or, more generally *tendencies* – is more than evident. We read accordingly in the CE: ‘Life does not proceed by the association and addition of elements, but by dissociation and division’ (CE, 89). Or again, ‘life is a tendency, and the essence of a tendency is to develop in the form of a sheaf, creating, by its very growth, divergent directions among which its impetus is divided’ (CE, 99).

Moreover, Deleuze describes the division that occurs in the non-numerical multiplicity of duration in terms of ‘indivisibles’ that occur at each stage of the division. These indivisibles are nothing else than the divergent tendencies that are produced at each stage of the division; each tendency carrying something from the initial tendency that gave birth to it and at the same time it is individual (whole and indivisible) at each stage of the division.

However, by bringing into Deleuze’s interpretation of duration the features of Bergson’s later analysis of the evolutionary movement of life, we do not intend to level the worn out argument of a retrospective reading. In a certain sense, Deleuze has remained faithful to Bergson’s central insight: i.e. the idea of duration as the deepest intuition and most prodigious idea around which his entire philosophy has evolved. Besides, it is not our intention here to judge the question of the consistency of Deleuze’s interpretation in relation to the Bergsonian texts. What we aim at rather is a deeper apprehension of the sources of Deleuze’s critique of psychic intensity and his objection against the Bergsonian critique of intensive magnitudes, in order to bring to the fore this aspect of the problem of intensity which is at once the most tenacious and fecund; a problem ‘pregnant with a future’. The latter, however, is not stated explicitly by Deleuze. It is rather the case of using his critique as a guiding thread in order to trace its sources back into Bergson’s thought.

To return however, after this parenthesis, to Deleuze’s interpretation of duration as a virtual multiplicity that divides constantly and changes in kind when it divides, we could say that what is really posited and anticipated with this reading is the problem of life and the mode of division that characterizes it, which is nothing else than the differentiation/dissociation of the original impetus into divergent evolutionary lines, species and individuals; in short, the problem of individuation. The problem of the differentiation or actualization of the virtual is certainly one of the central problems in Deleuze’s reading of Bergson. Thus if we look at both expositions –in *Bergson’s Conception of Difference* and *Bergsonism* – ultimately it is to this problem that the analyses culminate.

However, the latter problem is the external aspect of another problem that concerns the causes of variation. This problem maintains a cardinal position in the CE: it is at the center of Bergson's twofold critique of evolutionism and transformism, mechanism and finalism. Against mechanism, Bergson posits an internal cause of variations –variation being the 'constant' of life, but not a principle determined from the 'external circumstances' as mechanism would argue. At the same time, this internalization of the causes of variation results in a conception of evolution that transcends the position of finalism as well. If there is a unity, this is placed at the beginning and is both explosive and prolific (C.f. CE, 104-105). The internal cause of variation is described by Bergson as an 'unstable balance of tendencies' (CE, 98), a state of *inner tension*.

We saw in the second chapter of the thesis that the idea of tension represents probably one of the most important ideas in MM. Considering its fundamental role in Bergson's philosophy of life (i.e. in the CE) and in his later writings on the problem of morality (TSMR), we could say that it represents one of the central concepts of Bergson's philosophy as a whole: it is elaborated in MM and represents the most important concept in the theory of memory and the mind, it re-appears in the philosophy of life as this inner tension between the competing tendencies –i.e. the unstable balance of tendencies – it is used once again in the theory of life to describe the proximity of life and will; the image of life as an immense effort.

Considering the above remarks on the importance of the idea of tension for the concept of an internal cause of variations, it seems that Deleuze's objection against Bergson's first theory of intensity is centered in the fact that the latter obstructs a deeper apprehension of the problem of intensity, which is inseparable from a profound sense of intensive degrees: the different degrees of tension, or contraction, that denote at once degrees of difference and degrees of life, in short, different levels of contraction and expansion in this virtual whole; this original identity which is posited in the Bergsonian theory of life at the start.

When a virtuality is actualized, is differentiated, is 'developed', when it actualizes and develops its parts, it does so according to lines that are divergent, but each of which corresponds to a particular degree in the virtual totality.' (G. Deleuze, 1991, 100)

Now, if we recall our previous discussion of differences in kind and differences in degree, every criticism which is leveled by Deleuze against the Bergsonian critique of intensive magnitudes always comes back to the superficial character of the latter; the fact that it obstructs the consideration of a more profound sense of degree which is enfolded in the notion of intensive magnitudes. It is these varying degrees of contraction and expansion that denote the internal differentiations *within* the simple virtual that manifest the vital character of intensive degrees for the actualization of the virtual multiplicity of duration. These internal differences of degree within the virtual or the simple, have a vital role because they allow the actualization of divergent lines in different 'heights', in different layers of reality that correspond to different intensities of life. This problem is posited also in Deleuze's account of the Bergsonian theory of memory, or more accurately it is the problem of memory *par excellence*. So, faced with the problem whether each memory in order to actualize itself has to pass through all the planes of consciousness up to the more narrowed point that denotes the contact between the body and experience (G. Deleuze, 1991, 64), Deleuze distinguishes two sorts of contraction: the intensive ontological contraction whereby all the levels of the past coexist in a more or less contracted state, but always *virtually*, and the translativ, psychological contraction through which each recollection must pass in order to become actualized into a recollection-image. (G. Deleuze, 1991, 65) In a sense, the problem which is posited in both cases is similar; i.e. the actualization of memory and the differentiation of the *élan*. In the case of memory it is a question of an actualization that does not pass from all different levels of experience in order to be embodied. If it were so it would lose its individual character. For this reason there has to be another contraction which is intensive and ontological and denotes the *virtual coexistence* of different degrees of contraction and expansion, because it is only in this way and through the support of this ontological contraction that there can be actualization in different levels. Likewise, in the differentiation of the simple virtual which is life itself, the problem is how 'the Simple or the One, 'the original identity,' has the power to be differentiated' (G. Deleuze, 1991, 100). Using the terms in which the problem is stated by Bergson we could say that this power of internal differentiation is that which causes the explosion; the internal cause of variations.

In our view, it is this last sense of intensive degrees and their role in the internal differentiation and actualization of the virtual multiplicity that motivate really the critique which is leveled against the Bergsonian theory of qualitative intensity by Deleuze. Yet, if we remain with the above conclusion the problem will appear to inhere once again in a discrepancy between Bergson's first and later accounts of intensity. Although the latter view holds, we do not think that the problem is centered exclusively on the role of intensive degrees for the internal differentiation of the *élan vital*. As far as Deleuze's analysis of duration is concerned, there is another element that comes into play and indicates that the genetic division that acquires a primary importance in Bergson's philosophy of life is a concept that emerges already in the first definition of duration as a virtual multiplicity. This third tenet in Deleuze's interpretation of duration assumes the form of a hypothesis on the origins of the Bergsonian distinction between continuous and discrete multiplicities. As he writes,

In fact for Bergson it is not a question of opposing the Multiple to the One but, on the contrary, of distinguishing two types of multiplicity. Now, this problem goes back to a scholar of genius, G. B. R. Riemann, a physicist and a mathematician. Riemann defined as 'multiplicities' those things that could be determined in terms of their dimensions or their independent variables. He distinguished discrete multiplicities and continuous multiplicities. The former contain the principle of their own metrics (the measure of one of their parts being given by the number of elements they contain.) The latter found a metrical principle in something else, even if only in phenomena unfolding in them or in the forces acting in them (G. Deleuze, 1991, 39).

According to Deleuze, the hypothesis of the Riemannian origins of the distinction between the two kinds of multiplicity is plausible, since Bergson himself was a mathematician and it is very likely that he had heard of Riemann's theories. However, what indicates mostly in the direction of Riemann is Bergson's undertaking in DS and the confrontation with Einstein's relativity theory. As is well known, Einstein's theory of relativity drew significant insights from Riemann's geometry. According to Deleuze, by postulating Riemann's multiplicities at the origins of Bergson's theory of multiplicities, DS 'loses its doubly strange character' (G. Deleuze, 1991, 39). This is so, because 'it brings into the open a confrontation that until then had been implicit between Riemannian and Bergsonian interpretations of continuous multiplicities' (G. Deleuze, 1991, 39). At the same time, in this way we can explain why Bergson renounced this book. 'Bergson's

renunciation and condemnation of this book is perhaps due to the fact that he did not feel able to pursue the mathematical implications of a theory of multiplicities' (G. Deleuze, 1991, 39).

Bergson's response to Einstein's theory of relativity is certainly imbued with a certain degree of ambiguity. If we follow Durie's presentation of the discussion between Bergson and Einstein in the Philosophical Society of Paris in 1922 (DS, xiii-xiv) and Metz's critical review of DS (DS, xv-xvi) there are two major problems that vitiate Bergson's critical analysis of the special theory of relativity. The first was depicted by Einstein himself and it involves the illegitimate introduction of the perspective of the observer in the special theory of relativity (DS, xix). The second is discussed by Metz and consists in Bergson's inappropriate application of Lorentz's equations (DS, xvi).⁴³ However, as Durie intimates in his discussion of the appropriation of Riemann's multiplicities by Bergson, by stating the problem of time in terms of continuous and discontinuous multiplicities, Bergson's objection against Einstein acquires a legitimate ground. This is so, because by displacing 'the paradigm of the One and the many...the fundamental issue between Bergson and Einstein is in understanding the *nature of the multiplicity* which is called time' (DS, xx, emphasis added). According to Durie, Bergson defines the character (nature) of the relations that determine the elements of time –i.e. the formally determinate relations – in *terms of continuity*: 'the contraction of moments from which succession emerges' (DS, xx), or else the continuity of mutual penetration. The controlling factor for this break with the traditional metaphysical dilemma of the One and the Multiple, has to be sought in the definition of Riemann's multiplicities, because the latter do not determine the objects that constitute them, but just the operations to which they are subject (DS, xix).

Yet, in Deleuze's apprehension of the problem of intensity and its role within duration there is another element in the relationship between Riemann's and Bergson's conception of multiplicities that becomes crucial. As we saw, according to Deleuze's formulation, in Riemann's theory of multiplicities, discrete multiplicities are those that contain the principle of their own metrics, whereas continuous multiplicities find their metric principle in something else. Now, if we recall the definition that Bergson gives of

⁴³ According to Metz, Bergson's argument on the perfect reciprocity and uniform character of motion between the different systems of reference in the theory of special relativity is 'utterly imprecise [*absolument inexact*], because this perfect reciprocity no longer applies when the rocket's motion has turned in the opposite direction. The reciprocity does indeed hold for the outward half of the rocket's journey. Likewise, the reciprocity holds for the return journey. But it does not hold for both halves of the journey taken together, since the Lorentz equations *change* at the midpoint of the journey (because the 'sign' of the velocity of the rocket changes)' (DS, xv-xvi & DS, Appendix VI).

objectivity and quantitative multiplicities it would seem that it corresponds directly with Riemann's idea of discrete multiplicities. Moreover, as we saw in the first chapter of the thesis, Fechner encounters this problem in his attempt to measure sensations: the general law of measurement is that a magnitude has to be measured by its own units and hence the magnitude of sensations has to be measured by increments of the same kind – i.e. sensations. Yet, in this first sense, the affinity between Riemann's discrete multiplicities and Bergson's quantitative or spatial multiplicities has nothing remarkable about it. What is remarkable, rather, is the difference between the two conceptions of the metric principle in the continuous multiplicities.

According to Deleuze's formulation, in Riemann's theory the metrical principle of continuous multiplicities is found in something else. It is precisely this last conception that Bergson changes profoundly. At first this change appears to come down to the introduction of a new field of application: Riemann's distinction between discrete and continuous multiplicities radicalizes the concept of space; Bergson 'transfers' the field of application of the two kinds of multiplicity to the sphere of duration (C.f. G. Deleuze, 1991, 40). However, this would be a superficial way of stating the problem. The 'profound changes' effectuated by Bergson in Riemann's conception of continuous multiplicities, have to be sought rather in the way in which Bergson envisaged their division. Duration, 'was not simply the indivisible, nor was it the non-measurable. Rather, it was that which divided only by changing in kind, that which was susceptible to measurement only by varying its metrical principle at each stage of the division' (G. Deleuze, 1991, 40).

If we recall now the major stages that we distinguished in Deleuze's analysis of intensity and multiplicity, we will see how the various lines of argument find their point of convergence in the above observation on the metrical principle of duration that represents, in our view, the key to Deleuze's critique of Bergson's theory of intensity in TFW. As we saw in the second chapter of the thesis, Deleuze discerns in the Bergsonian theory of intensity and the critique of intensive magnitudes the first act of the method of intuition that consists in the distinction between differences in kind and differences in degree, or else the moment of pure dualism. However, it soon became apparent that this consideration of the distinction was insufficient. The first factor that seems to put into question the position of pure dualism is that through this perspective it is impossible to find which is the 'right side' of the division.

we measure the mixtures with a unit that is itself impure and already mixed. We have lost the ground of composites. The obsession with the *pure* in Bergson goes back to this restoration of differences in kind. Only that which differs in kind can be said to be pure, but only *tendencies* differ in kind (G. Deleuze, 1991, 22).

As we saw, the criterion of the distinction is only given when the method realizes itself into a distinction between two tendencies, of which only the one is pure: i.e. the tendency that differs in kind from itself: duration as that which differs from itself becomes a principle of differentiation other than space that holds the key for the division of the mixture. Yet, precisely because it becomes a principle of differentiation, duration has to entail within itself a metric principle that would be adequate to what is actualized – i.e. differences in kind that actualize themselves in divergent tendencies – and at the same time, a metric principle that would ensure that the cause of differentiation (or, in Bergson's terms, the cause of variations) is not something entirely contingent and accidental. The cause of variations, as we saw, has to be internal: it has to hold the key of what differentiates itself and not succumb in an external metrical principle. The idea of intensive degree or degree of difference comes in response to the latter exigency.

The proposed explanation of Deleuze's critique of Bergson's first account of intensity is never explicitly stated. It consists in a hypothesis rather than a fact. This hypothesis comes to complete what is expressly stated in *Bergsonism* and *Difference and Repetition* on the problematic character of the Bergsonian critique of intensive magnitudes. It completes the two other main sources of this critique: the first that addresses the problem of the consistency between the two main aspects of the method: the position of 'pure dualism' that finds its peak in the theory of intensity in TFW (G. Deleuze, 1991, 92) and the 'restored monism' in MM – the ontological proposition on the past and the present (G. Deleuze, 1991, 74) – and finally, the thesis on the monism of Time in the one virtual whole that finds its most adequate expression in the CE (G. Deleuze, 1991, 93). The second source of the critique is motivated by the exigency of introducing a positive concept of intensive degrees – the internal degrees of difference within the virtual multiplicity of duration, memory or life, that ensure that actualization can take place in different levels or rhythms of contraction and expansion; levels and rhythms that are virtual. These two explicit sources of Deleuze's critique were completed by a third source that derives from Bergson's implicit confrontation with Riemann on the subject of

multiplicities and the varying metric principle that makes possible this *sui generis* division which is at work in duration.

The conception of a purely qualitative intensity which is advanced in TFW presents a problem in relation to the above consideration(s) of duration and the evolution that it involves –i.e. virtual multiplicity, memory and *élan vital* – because:

- 1) It juxtaposes itself to a superficial sense of quantity and degree.
- 2) It posits an idea of quality that ‘covers up’ the deeper sense of degree that constitutes it –e.g. the creation of sensed quality through the contraction of matter in MM (G. Deleuze, 1991, 92 & G. Deleuze, 1997, 239).
- 3) It advances an inefficient critique of mechanism (C.f. G. Deleuze, 1997, 239).
- 4) It obstructs the full emancipation of duration from the negative through the superficial opposition of quality and quantity that it presupposes.

However, in spite of everything that has been noted so far regarding Deleuze’s critique of pure quality (i.e. qualitative intensity), we do not really think that this critique bears only negative conclusions in relation to Bergson’s first account of intensity. By setting the problem of pure quality in confrontation with Bergson’s initial intention –i.e. the aspiration ‘to free quality from the superficial movement that ties it to contrariety or contradiction’ (G. Deleuze, 1997, 239) – and consequently in confrontation with itself, Deleuze succeeds in disclosing the crucial role of intensity within duration. As we tried to show, the concept of intensive degrees, or degrees of difference, informs the internal differentiation of duration as virtual multiplicity –i.e. the various levels of contraction and expansion – and represents the key of this *sui generis* form of division or differentiation that constitutes duration’s movement of actualization. In relation to this last aspect, intensive degrees represent the varying metric principle of the virtual multiplicity that does not divide fortuitously. In this latter sense, intensive degrees could be seen to represent the inmost tendency of duration; the affirmative movement of difference that has freed itself from the negative of opposition, contrariety and contradiction (G. Deleuze, 1997, 239 & G. Deleuze, 1999, 49). It is remarkable in this respect that Bergson proceeds to define duration as *intensive magnitude*, in his discussion of this *sui generis* form of accumulation (addition) that is entailed in the idea of duration, in the second chapter of TFW. As Bergson writes,

Pure duration, that which consciousness perceives, must thus be reckoned among the so-called intensive magnitudes, if intensities can be called magnitudes: strictly speaking, however, it is not a quantity, and as soon as we try to measure it, we unwittingly replace it by space. (TFW, 106)

This paradoxical observation comes after a famous example –the example of the oscillations of the pendulum, which is used by Bergson in order to illustrate his distinction between numerical multiplicity and pure succession. The idea of defining duration as an intensive magnitude is paradoxical in relation to the analysis of intensity in TFW, due to Bergson's rigorous critique of intensive magnitudes. However, this observation can be read as a sign that duration does indeed need to be completed by a more profound concept of intensive magnitudes than the one which is criticized in the first chapter of TFW.

Sensation plays a preponderant role in this example, as in most examples that are employed by Bergson in order to emphasize the difference between pure succession and numerical succession (homogeneous time). Sensation maintains a pivotal position in the analysis of numerical time and pure succession, because it is a psychic state which is essentially mixed: it is formed at the point of contact between consciousness and space. For this reason it is both a powerful medium of spatialization and a point of transition from the perception of the objective cause to its subjective effects.⁴⁴

However, the point which is raised by Bergson in the passage cited above is quite different. What he aims to show is that a relation can appear as entirely homogeneous and repetitive from 'without' – as e.g. that of a continuous stimulation where the quantity of the stimulus remains constant – and the profound alteration experienced 'from within', by consciousness; a sensation that has become unbearable due to the

⁴⁴Bergson uses several times the example of successive representative sensations in order to illustrate the difference between the two kinds of multiplicity. E.g. he uses the representative sensations of sound in his first reference to the distinction between the two kinds of multiplicity (TFW, 86), in his critique of the empiricist and nativist theories of space where he tries to show that we cannot conceive of a number of simultaneous sensations unless we project them into space (TFW, 95). However, as we shall see in the third chapter of the thesis, representative sensations operate in both directions: as much as they point towards the continuous multiplicity and mutual penetration of elements of duration, they are also the most powerful means of spatialization; the ones that introduce the *feeling* of magnitude and extensity within inner perception and hence complete the symbolical process of spatialization with another dimension that turns the illusion of intensity into something that encroaches within inner experience.

continuous effect of a slight stimulus. However, this happens because sensation has retained within itself all the previous sensations caused by the preceding stimulations. In other words, the sensation of a slight but continuous stimulation becomes at a certain point unbearable, because it has accumulated within itself the past. In contrast the objective cause has remained the same. As it can be derived from the above analysis, Bergson introduces in a certain sense the idea of magnitude, since sensation 'grows' and changes as it grows, by preserving its past. Moreover, it would seem that Bergson advances here an analogy between the stimulus and the sensation that works in the reverse way to the one which is advanced by Fechner. According to the latter, sensation grows at a slower rate and does not reflect the whole amount of the stimulus. In contrast, in Bergson's explanation sensation grows while the stimulus remains constant. Following from this, we could say that Bergson employs here the idea of intensive magnitudes, in order to explain this *sui generis* growth (accumulation) that takes place in pure succession. With every new addition the whole (e.g. the retained sounds) is altered integrally, but at the same time it 'grows' since it preserves the past which is thereby altered. In this sense, we could say that there is addition without discrete terms that are juxtaposed in space. The view that there can be growth, without the presupposition of distinct units or moments, is essential to the Bergsonian idea of duration. However, as it transpires from the previously cited passage, Bergson considers the term 'magnitude' problematic, because, in his view, it is bound with the idea of measurement. What is significant for the aims of our analysis, however, is that while he discards the term magnitude from duration, the same does not really take place with the idea of 'intensity'.

Returning to Deleuze's critique, we have to note that even in his later account Bergson does not bring to intensity the idea of magnitude. The 'turn' occurs around the idea of 'degree' and the concept of 'tension'. In fact, at a closer look Deleuze's properly 'Bergsonian' critique – i.e. as it appears in *Bergsonism* and not in *Difference and Repetition*, where Deleuze develops his own concept of intensive *magnitudes* – is directed against the superficial critique of *degree*, which is allegedly set forth with the Bergsonian inquiry into the intensity of *psychic states*. More accurately, Deleuze's main problem with the Bergsonian critique of intensive magnitudes in TFW, resides in the fact that Bergson recognizes this superficial form of degree *only*.

Besides the problem of intensive degrees, Deleuze's analysis impinges upon another problem as well; one which is crucial for our own investigation of the relationship between the purely qualitative intensity of the deep-seated states and the psycho-

physical intensity of the simple states. If we follow the formulation of the problem of the relationship between the intensive degrees of duration and qualitative differences in *Difference and Repetition*, we can see that, besides the superficial critique that is pronounced from the perspective of qualitative differences, there is a further problem that resides in the perception of quality per se. As Deleuze argues, our tendency to 'consider intensive quantity as a badly grounded empirical concept' (G. Deleuze, 1997, 223) impinges upon a real problem. This is so, because intensity 'for its own part' (G. Deleuze, 1997, 223) presents 'a corresponding tendency within the extensity in which it develops and under the quality which covers it. Intensity is difference, but this difference tends to deny or to cancel itself out in extensity and underneath quality' (G. Deleuze, 1997, 223).

As we can see, quality and qualitative intensity are not problematic only in the sense of the superficial idea of intensive degree that they impose through the critique of intensive magnitudes. Quality covers up intensity (i.e. intensive magnitude); it does not let its true meaning appear. The question is: does the same problem appear in relation to the Bergsonian idea of intensive degrees; that is of the various degrees of *tension* that demarcate the transition from the analysis of intensity in TFW to MM and the CE? If we follow Deleuze's statement of the problem in *Bergsonism*, where we have to do with the Bergsonian 'instance' of intensive degrees and not with Deleuze's later concept of intensive quantities as the differential conditions of all sensible experience – i.e. the concept of intensity which is set forth in *Difference and Repetition* – we can see that the problem does not reside solely in the expulsion of intensive degrees from the experience of intensity, but rather with the experience itself.

If it is true that intensity is never given in a pure experience, is it not then intensity that gives all the qualities with which we make experience? Hence, *Matter and Memory* recognizes intensities, degrees or vibrations in the qualities that we live as such outside ourselves and that, as such, belong to matter. (G. Deleuze, 1991, 92)

Now, if we combine this statement with the one that appears in *Difference and Repetition*, it would seem that it is the *perception of quality* that presents the greatest obstacle against the apprehension of this idea of intensity, which is set forth in MM with the theory of tensions: the tensions of memory and the intensive degrees of contraction and expansion of this all-encompassing duration which is set at the stead of the

Bergsonian 'solution' to the problem of matter and spirit. Although it is not elaborated further, the argument which is set forth by Deleuze in the above passage from *Bergsonism* is not essentially different from the one that he advances in *Difference and Repetition*. What seems to be at stake in both instances is the adoption of the wrong perspective: the vain attempt to discover the true meaning of intensity from this particular perspective that covers it. This viewpoint is none other than that of the immediate *givens* of consciousness (i.e. 'pure experience') that denotes the perspective of the *outcome* (i.e. the qualities that are *given by means of* intensity). In this latter sense, Deleuze appears to adopt the direction of Pradines' critique of Bergson that we examined in the first chapter of the thesis. In both cases, quality is presented as the *outcome* of intensity and this form of the problem that covers up the real problem which is posited by intensity.

Moreover, as Guendouz notes, in *Difference and Repetition*, Deleuze pays homage to Pradines, because he considers space as something which is 'enveloped' and 'implicated' in intensity and consequently not its opposite, but rather a new concept of 'distance' both spatial and temporal (C. Guendouz, 2007, 416). Yet, despite the similarities between Pradines' and Deleuze's critique of the Bergsonian theory of intensity, there is an essential difference that affects the whole. This is due to the fact that Deleuze locates this 'turn' in the apprehension of intensity, between Bergson's first and second works. Pradines in contrast, does not really see an essential change of perspective in Bergson's treatment of sensibility apart from the latter's theory of pure perception, but even so, provisionally.

As we tried to show, Deleuze's formulation of the problem is motivated, on the one hand, by his specific interpretation of duration as virtual multiplicity and on the other, through the fundamental position of intensive degrees in his apprehension of the virtual. Both dimensions of Deleuze's critique involve a change of perspective that occurs within the transition between Bergson's consecutive works as his thought evolves. In *Bergsonism* this change is described in terms of an 'opening' towards an 'ontological duration' (G. Deleuze, 1991, 49). This 'opening' is at once effectuated by this new consideration of intensity that drives Bergson to place qualities within matter (G. Deleuze, 1991, 48) and tensions within duration. At the same time, this 'opening' involves a new conception of movement, which is the other 'component' of the transition to the ontological duration. In both respects, it is the exclusive perspective of consciousness that appears to present an obstacle: first, by identifying pure intensity

with quality and second, by enclosing movement within the experience of a conscious spectator. According to the definition that we find in the second chapter of TFW, 'motion in so far as it is passage from one point to another, is a mental synthesis, a psychic and therefore unextended process' (TFW, 111). As Deleuze argues, it is only when movement and duration cease to be considered as parts of the psychological experience of an enduring subject, that duration affirms its ontological character. (G. Deleuze, 1991, 48)

However, the question that arises at this point is whether the above formulation of the problem of intensity by Deleuze derives necessarily from Bergson's texts. Or, more accurately, whether it is the only possible direction that can be followed in order to see how Bergson moves from the theory of intensity in TFW to the theory of tensions in MM. Moreover, we have to see whether the problem is centered between the *perception of quality* and the degrees of *tension*, or whether, in contrast, it involves, more radically, the distinction between *nuance* and *tension*. In the forthcoming chapter, we are going to examine the relationship between intensity and multiplicity under these two perspectives. As we shall try to show, beyond the *perception of quality* (qualitative impression) and *intensive degrees* – i.e. the degrees of tension in Bergson's terms – resides a more profound distinction which is set in terms of the concept of *pure intensity*, which, when it is confronted with the qualitative multiplicity of duration, manifests itself as the unity of *feeling and nuance*, and the state of *tension*, which is characteristic of the will, or, according to François' reading, *it is the will*.

Chapter four

The mixed experience of intensity and the distinction between nuance and tension: from the critique of psycho-physical parallelism to the emergence of the psycho-physiological problem

1) Introduction

In the previous chapter we examined the relationship between intensity and multiplicity indirectly and only in relation to the intensity of the complex states. Bergson defines the intensity of the complex states, in terms of a multiplicity of elementary states that are *dimly perceived* within the fundamental state; a *felt multiplicity* of elements that are so closely connected to one another that it can only be realized as a multiplicity only after analysis. In contrast, the intensity of the simple states is related to the quantitative multiplicity of its cause, but this relation remains indirect and at first sight negative. This negative relation of the intensity of the simple states to the quantitative multiplicity of the stimulus is attested throughout Bergson's critique of psychophysics. The most evident conclusion of this critique is that once we represent sensations under the quantitative alterations of their cause they are deprived of their enduring character and lose part of their reality: sensations are treated 'as *signs* of reality, not as reality itself' (TFW, 223).

Thus, at first sight it would seem that the relationship between intensity and multiplicity is trapped in a double bind: on the one hand, it seems to present just an incomplete image of the qualitative multiplicity of duration and, on the other, it seems to be condemned to reproduce in itself the dualism between the qualitative multiplicity of its affective aspect and the quantitative multiplicity of its representative aspect. In response to this twofold problem, we examined the relationship between intensity and multiplicity indirectly and in a reversed way. Instead of inquiring how the problem of intensity leads to the distinction of the two kinds of multiplicity, we tried to see how a re-examination of the problem of intensity emerges as an exigency of the distinction between the two kinds of multiplicity. In our examination of the problem of division we advanced a hypothesis on the role of intensity within duration. As we said, intensity might represent the capacity of duration to change integrally with the addition of each

new element. In this sense, pure intensity or nuance might be a qualitative difference that is constitutive of indivisibles.

In this chapter we shall pursue further the theme of multiplicities in the direction of both aspects of intensity. As we shall see, when examined from its positive significance the relationship between the two kinds of multiplicity and the two aspects of intensity gives rise to the mixed experience of intensity that involves the meeting of the two kinds of multiplicity. The two kinds of multiplicity and the two aspects of intensity meet in a 'third' term, which is the body with its affective sensations, muscular contractions and movements. As we shall try to show, with the introduction of the body the mixed phenomenon of intensity acquires a status which is hard to place on the side of illusion while, at the same time, it presents a new direction for the apprehension of the distinction and relationship between the two multiplicities.

However, what we aim to address with the examination of the mixed experience of intensity is the problem of the 'distinction' and, more particularly, the significance of the distinction between the different types of psychic states when the latter are considered as mixed states –i.e. all presenting psychic and physical or psychic and physiological aspects. The idea of regarding the mixed states in a positive way and describing their difference in terms of the intensive differentiations between the mixed states was introduced for the first time by Worms in *Bergson ou les deux sens de la vie* (F. Worms, 2004). As we shall try to show, in response to Worms' theory of the intensive degrees of differentiation between the mixed forms of intensity, the idea of differentiating the mixtures according to their degree of resistance to spatialization is complicated by the distinction between the deep-seated emotions and the feelings of psychic tension. As we shall try to show, the latter distinction gives rise to a new sense of distinction; one that takes place between two fundamental *psychic dispositions*: the disposition of a feeling that spreads its nuance and forms a qualitative synthesis between a mass of elementary states that it attracts and the disposition of a feeling of psychic tension that moves centrifugally and seeks to explode into action. The relationship and meaning of the two dispositions of the psyche is further explored in relation to the analysis of mental tones that takes place in the third chapter of MM in Bergson's theory of memory.

In the second section of the chapter we will explore the first of the two psychic dispositions –i.e. that of the deep-seated states presided by the concept of *nuance* – in relation to the qualitative multiplicity of duration. As we shall try to show, by discovering pure intensity right at the heart of duration –in the form of a psychic disposition that

institutes indivisibles and performs a qualitative synthesis of the past and the present – the idea of nuance can give rise to a new sense of intensive degrees that are no longer defined as degrees of resistance to space (Worms), or as degrees of division/differentiation (Deleuze), or at least, not exclusively. There is a new sense of intensive degrees that emerges out of this qualitative synthesis that takes place at various different levels of psychic life, by means of a certain *disposition* of the psyche that denotes at the same time a *distinctive nuance*; a qualitative distinction; an immediate feeling of difference that has ceased being solely a self-reflective feeling absorbed into the perception of its quality and instead pervades a number of other states (sensations, perceptions, memories) and forms a *felt multiplicity* of interpenetrating terms. In other words, we shall try to show that the idea of change that derives from the analysis of pure intensity denotes a qualitative synthesis that operates at different ‘levels’ of psychic life; it presents different *degrees* of profundity that denote the degree of ability of a certain feeling to attract and mold into one another a variety of heterogeneous elements.

However, once duration recovers the internal differentiations and the different levels or tones of synthesis, it becomes apparent that not all deep-seated states lead to the free act, or more generally, what becomes evident is the inadequacy of the first disposition of duration – of the deep-seated feelings that unify heterogeneous multiplicities under a common tone or inspiration – for the occurrence of the free act. In short, what becomes apparent through the introduction of different tonalities of synthesis is the necessity of a different disposition; one that will be able to embody the content of freedom – i.e. duration – into a free act. This second disposition finds its most adequate analysis in François’ definition of the will as a state of *tension*. The latter idea, as we shall see, approximates to the concept of tension presented in MM, but at the same time it entails features of tension that are directly linked to Bergson’s theory of life and later psychological and psycho-pathological inquiries. As we shall see, the disposition of psychic tension that derives from Bergson’s analysis of intensity cannot be identified with this fundamental idea of tension – which is defined by François as the will itself – but it can serve as a means for a new apprehension of the tension of the will and of the Bergsonian idea of freedom *per se*. As we shall see in the third section of the chapter, Bergson’s idea of freedom and the free act, when it is viewed from the perspective of psychic tension and the feelings of effort, acquires a new character. Freedom in this respect will be seen to revive the problem of incorporation: between the inner experience of freedom and the act intervenes the feeling of effort with its psycho-

physiological processes. In the final section of the chapter we shall investigate further the psycho-physiological problem as it is posed in Bergson's explanation of affective sensation.

2) The mixed experience of intensity and the distinction between deep-seated emotions and feelings of psychic tension: the problem of intensive differentiation and the two dispositions of psychic life

In this section we shall examine two problems that appear to move in opposite directions. The first could be termed the problem of the 'mixed forms' or 'composites' that usually denote for Bergson illusory compounds. The second is the problem of distinction, but no longer the distinction between the differences in kind and differences in degree that informs the critique of intensive magnitudes. What we aim to investigate rather is the meaning of the distinction between the various categories of psychic states. The first of these problems relates more particularly to the role of nuance in duration and the second with the significance of intensive differentiations and the new meaning of intensive degree that arises out of the examination of intensive distinctions between composite forms.

We already examined briefly the problem of the mixed forms in the second chapter of the thesis, in our discussion of the distinction of differences in degree and differences in kind. We saw then that Deleuze traces a mixture of this type in the one side of the distinction –namely, homogeneity that denotes a derivative state (i.e. the mixture of duration and space). We also presented briefly Jankélévitch's view of the mixtures in relation to the problem of truth in Bergson and the pivotal role of certain amalgams that are deeply rooted within experience for Bergson's reconsideration of his initial position on duration and the dualism introduced thereby, between consciousness and space, psychic and physical causality.

The problem of the mixtures assumes a tenacious form in Bergson's theory of intensity. This is so because there is a new factor of spatialization and objectification that comes forth in the perception of intensity: i.e. the body with its muscular contractions and movements; its affective and representative sensations. This new cause of spatialization that denotes, at the same time, a new source of the illusion of intensive magnitudes, has not attracted the attention of Bergson's commentators. Thus, although the persevering character of the illusory representation of intensity and its particular treatment by Bergson have been the object of discussion among his readers,⁴⁵ this new

⁴⁵ Philonenko and Prado present profound insights on the meaning of illusion in the first chapter of TFW and its pivotal position in Bergson's inquiry. They both stress the vital importance of practical adaptation conveyed by language and conceptual thought. The impact of this 'practical' and necessary illusion is explored in two different directions. Philonenko is primarily concerned with the problem of knowledge and so he examines mainly the impact of this deep apprehension of the illusion for the statement of the problem of cognition –i.e. mainly the relationship between Bergson's notion of intuition and a conceptual knowledge that has been built upon the model of mathematical knowledge (A. Philonenko, 1994, 26-27). One of the most interesting dimensions of Philonenko's

source of 'illusion' which is the body has been addressed, as far as we know, solely by Fedi and Worms. Fedi distinguishes two complementary aspects in Bergson's analysis of intensity: the first is explicative and the second critical. According to Fedi, the first aspect consists in the explanation of the formation of the illusion of intensive magnitudes, through a form of schematism where an intermediate term serves to transport the quantity into the order of quality (L. Fedi, 2001, 102). This intermediate term is the body with its organic disturbances and movements. Worms also notes the important role of the body as a means of spatialization (F. Worms, 2004, 56). But we have to see first how the problem of the body emerges in the investigation of intensity and in what ways it influences our apprehension of the illusion and the significance of the mixed forms.

We shall begin with the investigation of the mixed phenomenon of intensity in its most direct definition: that is, as it emerges out of the examination of the relationship between intensity and multiplicity. Citing once again the important passage from the discussion in *Le parallélisme psycho-physique et la métaphysique positive*, the intensity of a complex state is due,

To the *felt* multiplicity of the simpler elements that compose this state, or better, the multiplicity of the elements in which we could decompose it [i.e. the complex state]. In reality, this multiplicity exists only potentially in the state of consciousness: it is our reflection that can realize this multiplicity by decomposing and dissociating it (H. Bergson, 1972, 491).⁴⁶

We can derive from this observation the conclusion that the complex feeling is composed by a continuous multiplicity of simple states that are so well melded with one another that consciousness begets the impression of a *single feeling*. Like the qualitative multiplicity of duration, the multiplicity that composes the complex feeling, 'contains

reading of the first chapter of TFW consists in his emphasis on the positive examination of the illusion of intensive magnitudes by Bergson. As he observes, 'one of Bergson's greatest strengths, was to examine the conditions of the possibility of error and not just to denounce it' (A. Philonenko, 1994, 25). ['Ce fut toujours une grande force de Bergson...que de réfléchir sur les conditions de possibilité de l'erreur et de ne pas se contenter de la dénoncer' (A. Philonenko, 1994, 25). Prado examines also the way in which the illusion of the human praxis informs the categories of the understanding, but at the same time, his main focus lies in the experience of consciousness and the loss of internal presence that takes place with the objectification of consciousness (B. Prado, 2002, 51-53).

⁴⁶ C'est la multiplicité *sentie* des éléments qui entrent dans la composition de cet état, ou plutôt la multiplicité des éléments en lesquelles on pourrait le décomposer. A vraie dire, cette multiplicité n'existe pas dans l'état de conscience lui-même, sinon en puissance: c'est notre réflexion qui achèvera de la réaliser en analysant et dissociant. (H. Bergson, 1972, 491)

number only potentially' (TFW, 121): it is our *reflection* that succeeds in analyzing and realizing the *latent multiplicity* which is contained in the feeling itself into an *actual multiplicity* of distinct elements.

Coming back to the distinction between the subjective and the objective and the problem of division that we examined in the last chapter, we could say that through this dissociation and analysis, the complex feeling changes in nature and in a certain respect fades away. 'The feeling itself is a being which lives and develops...but it lives because the duration in which it develops is a duration whose moments permeate one another' (TFW, 133). In this sense, the intensity of the complex feeling will bear all the features of a qualitative multiplicity: the elementary states that compose it are molded into a moving mass through the nuance of the fundamental feeling that alters their shade and in this sense 'it pervades them, although it does not itself come into view' (TFW, 9). At the same time, the multiplicity of sensations, feelings or ideas that compose the complex feeling take part in the creation of this indefinable shade (nuance) that characterizes the fundamental feeling. The richness and depth of the complex feeling will depend upon the multiplicity of the simpler states that it has succeeded to mold under its nuance.

In contrast, the definition of the intensity of the simple states betrays their intimate connection to space and quantitative multiplicity: sensations are dependent upon a physical and quantitative cause and hence they always maintain an intimate connection with the realm of quantity and space; they are mixed states par excellence. The twofold character of sensation enables Bergson to illustrate the process by means of which consciousness dissociates and arranges e.g. the successive sounds that it beholds from within as a continuous multiplicity of interpenetrating terms, into juxtaposed and discrete units that are set out in space.

Certainly the examples where sensation is used in order to emphasize the symbolical and conventional character of spatial representation are also numerous. Probably, the most effective example in this respect is the use of sensation in the Bergsonian critique of psychophysics. Thus, although sensation is caused by an extensive and quantitative stimulus, it is perceived by consciousness as pure quality. 'The variations in brightness of a given color...would thus be nothing but qualitative changes, were it not our custom to transfer the cause to the effect and to replace our immediate impressions by what we learn from experience and science' (TFW, 54).

However, if we admit that sensations present a twofold character being at once spatial and temporal, physical and psychic, representative and affective,⁴⁷ can we still hold that their relationship to multiplicity is exclusively negative and limited solely to the quantitative multiplicity of their cause that they transform into an *inner feeling* of quality? In other words, can we say that the 'simplicity' of sensations that Bergson stresses throughout his analysis of intensity, is due to the fact that they present a unitary character, being something like psychic atoms or elements? The latter view would be evidently wrong. The sound of the distant bell, the blows of the hammer and the notes of the melody 'in so far as they are pure sensations...give rise to a dynamic progress' (TFW, 125). In fact, Bergson expressly states that *perceptions, sensations, emotions* and *ideas* occur 'under two aspects' (TFW, 129) according as we consider them 'within a discrete multiplicity or a confused multiplicity' (TFW, 129).

Moreover, it would seem that the majority of the examples that refer to the distinction between the two kinds of multiplicity display the enduring character of sensation; the fact that sensation, when it is considered in itself and not through its objective cause, presents an ever changing reality 'which is constantly at the point of ending and constantly altered in its totality by the addition of some new note' (TFW,

⁴⁷ Bergson examines the affective and representative sensations separately, although he admits that 'we pass gradually from the one to the other and...some affective element enters into the majority of our simple representations' (TFW, 32). The distinction between the affective and representative aspects of sensation is drawn in order to trace the specific source of the feeling of magnitude (i.e. the growing and diminishing intensity) in these two aspects of sensation. Thus, in sensations that are predominantly affective it is the organic disturbance and movements of the body that preside in the feeling (estimate) of intensity. In the representative sensations in contrast, the estimate of intensity is due to the representation of the objective cause which is transported in the quality of the effect: i.e. the intensity of the simple states that we have been discussing in the first and second chapters of the thesis. It is noteworthy that Bergson draws the same distinction between the representative and affective aspects of perception in the first chapter of MM, but in view of the 'opposite problem'. This is to say that, while in TFW Bergson's main preoccupation is to keep inner perception clear from all admixture with the forms of external perception, in MM he draws the same distinction for the opposite purposes. According to the analysis of pure perception it is the affective side of sensation that represents the 'impure state' that confuses everything. As Bergson argues against Bain and Spencer, who try to reconstruct extensity out of affective states, the problem of the relationship between matter and perception is turned into an insoluble problem if we assume as our point of departure affective sensations (MM, 47-48). Affective sensation presents this aspect of perception which is purely subjective and is due to the work of memory (C.f. MM, 48). It is noteworthy that Bergson criticizes the empirical theories of space (i.e. Bain, Spencer, Helmholtz, Lotze) in the second chapter of TFW and regards their formulation of the problem of external perception as a wrong or impossible statement—since it is impossible to show how we obtain the idea of space and extensity out of the juxtaposition or reversible succession of inextensive sensations (TFW, 93-97). However, in TFW Bergson's main concern is to show that in reality the reversible succession, or juxtaposition of sensations by means of which the English and German schools of empirical psychology try to derive the idea of space, in reality *presupposes* the refraction of sensations into space (i.e. because sensations cannot be ordered or juxtaposed without being refracted into space).

106). Thus, in the example of the constant stimulus that we examined in the last chapter, sensation was seen to accumulate its past and mold it into the present producing in this way a new sensation, while the stimulus remained the same (TFW, 106).

If we admit now that the intensity of the simple states is due to the ongoing association of the objective and subjective aspects of sensation, its spatial and enduring aspects, it would follow that this type of intensity entails a fundamental confusion, or more accurately, it is *formed* as a mixture of quantitative and qualitative multiplicity; space and duration. This view is confirmed in the *Conclusion* of TFW. As Bergson ascertains, the intensity of a simple state 'is not quantity but its qualitative sign. You will find that it arises from a compromise between pure quality, which is the state of consciousness, and pure quantity, which is necessarily space' (TFW, 224-225). It is true that in this statement the idea of qualitative multiplicity is missing. However, as we saw, it is practically impossible to examine the psychic aspect of sensation without the idea of qualitative multiplicity. The latter holds, nevertheless, 'because the majority of representative states, being at the same time affective, themselves include a multiplicity of elementary psychic phenomena' (TFW, 73).

During the course of the inquiry, Bergson draws a provisional distinction between the affective and representative aspects of sensation in order to examine the different causes of the phenomenon of intensity (TFW, 32). Thus, the perception of intensity in the affective states will be due to the feeling which is produced by the nascent movements of reaction that are held in check; movements that are sketched but not yet performed. Yet, no matter its important position for the explanation of the phenomenon of intensity, we do not think that the term 'affective' is employed in the same sense at the end of the inquiry and in the analysis of the affective sensations. This becomes transparent if we look at the statement of the mixed phenomenon of intensity in its entirety. Thus, after having distinguished the two aspects of intensity – i.e. in the simple and complex states – Bergson writes that,

In fact, these two meanings of the word usually intermingle, because the simpler phenomena involved in an emotion or an effort are generally representative, and because the majority of representative states, being at the same time affective, themselves include a multiplicity of elementary psychic phenomena. The idea of intensity is thus situated at the junction of two streams, one of which brings us the idea of extensive magnitude from without, while the other brings us from within, in fact from the very depths of consciousness, the image of an inner multiplicity. (TFW, 73)

In the cited passage the 'term' affective appears to refer to the attribute of being felt, or experienced from within. In the opposite case –i.e. if affective signified here strictly, affective sensation – consciousness would be confronted with an extended and quantitative multiplicity –i.e. the surface of the body which is affected from the organic disturbance. So, if we restrict the term affective to affective sensations only, then it becomes impossible to explain why intensity is situated at the junction of 'inner multiplicity' and 'extensive magnitude'. However, perhaps there is something more entailed in the perception of intensity in the affective sensations than a mere translation of the extended multiplicity of movements and muscular contractions into a single sensation that allegedly moves up and down the scale of magnitude. So, we have to examine the perception of intensity in the affective states more closely. Bergson argues that the feeling of growing and diminishing intensity in the affective sensations is due to 'a larger or smaller number of sensations arising at different points of the periphery, muscular contractions, organic movements of every kind' (TFW, 35). In other words, the intensity of the affective sensations includes a multiplicity, but one which is primarily quantitative. The same holds for the feelings of psychic tension, effort and attention. Since they are all accompanied by physical symptoms the feeling of growing and diminishing intensity will be due to the vague estimate of the extent the organic disturbance –meaning by this once again the muscular contractions and peripheral sensations that occur on the surface of the body.

However, although the use of the term 'affective' in the description of the mixed state of intensity should not be restricted exclusively to the affective sensations, but to the affective aspect of all psychic states in general, it is true that affective sensations represent the point of transfer and meeting between quantitative and qualitative multiplicities. This twofold character of the body that represents at once an extended surface that can be perceived, or represented 'from without' and 'felt from within', turns it into the mediating factor par excellence: the locus where the two multiplicities meet. As we shall see below, the analysis of the body that takes place in the examination of the affective sensations foretells the analysis of the body and its role in perception that takes place in the first chapter of MM.

Coming back to the problem of the use of the term 'affective' in the definition of the mixed experience of intensity, we could say that in a certain sense it might denote the presence of affective sensations within most representative states, but this does not

mean either that affective sensations are the only states that are imbued by an inner or qualitative multiplicity, or that the term affective is restricted to the affective sensations. What is depicted, rather, is the essentially mixed character of sensations, the mediating and meddling role of the body that comes into play in most affective states and, finally, the fundamental position of sensations within psychic life. If we take notice of Bergson's descriptions of the various categories of psychic states –from the most profound states that are not accompanied by organic disturbances to the superficial efforts – this element that seems to be 'constant' is sensation.

So, due to this inherent ambiguity of the affective states Bergson will distinguish two processes in the apprehension of intensity in the affective sensations, as he does also in the majority of the psychic states that entail physical symptoms (feelings of effort, tension and attention and finally affective sensations). Besides the muscular contractions and peripheral sensations that occur upon the body and hence are extended and discrete (i.e. they form a quantitative multiplicity), there is the characteristic sensation –i.e. the affective state as such – 'which gives the tone to all the others' (TFW, 35). This 'tone' or 'nuance' accounts for the qualitative alteration that occurs in the peripheral sensations that compose the feeling of effort, or the dominant affect that tunes all others in its own tonality.

However, if this is the case and the majority of the affective states are also representative and the latter are formed as a compromise between quality and quantity, qualitative and quantitative multiplicity, does this not amount to accepting that intensity itself is mixed? Or is it the case that we are confronted here with the emergence of a new perspective that can shed a new light on the distinction between qualitative and quantitative multiplicity? In fact, the first proposition does not really contradict the second. It would probably be the case that intensity addresses a new way of formulating the problem of the distinction and the relationship between the two kinds of multiplicity, precisely because it is mixed. Yet, what interests us primarily in this mixture of qualitative and quantitative multiplicities in intensity is not so much their distinction that has been adequately and explicitly examined by Bergson himself, but rather the view of intensive distinctions or differentiations that can be derived from the investigation of the mixed form of intensity.

The latter direction is pursued by Worms in *Bergson ou les deux sens de la vie*. It is true that Worms examines the mixed form of intensity from a different angle than the one that has been presented above. He examines the mixtures from the perspective of

the distinction and intermingling of duration and space. As is well known the distinction between duration and space represents the ground of the distinction between the two kinds of multiplicity. So we will proceed now to examine Worms' interpretation of the problem of mixtures and its fundamental role for the emergence and specific significance of the idea of intensive degrees in TFW. What appears intriguing in this respect is that Worms departs to deduce the idea of intensive degrees from the same realization that had driven Deleuze to deem this project impossible. In *Bergsonism*, Deleuze considers it impossible to attain intensity in a 'pure experience' (G. Deleuze, 1991, 92). In *Difference and Repetition* he argues that intensity is bound to appear as a confused concept from the perspective of sensible experience. It is true that in both cases Deleuze objects against such investigation of intensity because he regards the immediate experience of consciousness as a derivative experience that cannot really reveal the true character of intensity.

According to Worms, the illusion of spatiality in intensity –i.e. its mixed character – assumes a different form than the formal illusion which is depicted in Bergson's analysis of duration and homogeneous time. More than any other mixture, the mixtures of the 'isolated states' –i.e. the type of examination that takes place in the first chapter of TFW – are the ones that lend themselves more easily to an intensive and differentiated description of their illusion. We have to clarify in advance that when Worms applies the terms intensive description he does not refer to the problem of intensity as such, but to the type of examination that takes place in the first chapter of TFW in view of the problem of intensity –i.e. the examination of all the major categories of sensibility.

Worms proposes a reading of the first chapter of TFW that represents an anticipated application of the distinction between duration and space. This reversal of the order between the first and second chapters of TFW is legitimized by Bergson's retrospective statements on the structure and composition of his first work.⁴⁸ According to Worms, Bergson introduces into the analysis of intensity two factors of spatialization that are missing from the inquiry on space and spatiality which is presented in the second chapter in relation to the problem of time. The first of these factors is the body and the second is the dependence of certain sensations on an external or objective cause that imparts

⁴⁸ According to the *Notes Historiques* at the Édition du Centenaire of Bergson's *Oeuvres*, ed. A. Robinet, Bergson revealed to his friend Du Bos in a visit that must have taken place between 1921-1923, that the inquiry into the intensity of psychic states was written after the rest of the work had been completed in order to meet two exigencies: to render more lucid the distinction between quality and quantity and to confront Fechner's theory of the measurement of sensations (H. Bergson, 2001, 1542).

something of its external and quantitative character upon the sensation itself. The initial hypothesis that drives Worms' reading of *TFW* and motivates the intensive analysis of the mixed forms is that the distinction between duration and space is not just a conceptual distinction or, better, not only a conceptual distinction, but also an intuition that leads in its turn to another apprehension of its stakes: not just a means for the resolution of the false problems or the impure mixtures, but two senses (directions, conduits '*sens*') of reality, and ultimately, two senses (*sens*) of our lives. There are three key-elements in Worms' analysis: the first, is the relation that he discerns between duration and consciousness; one in which duration is the primary term but at the same time an act of synthesis which is individual and internal: 'duration, when it is purified from all spatial element, does not signify solely temporal succession, but the real act of a consciousness or of the self in this succession' (F. Worms, 2004, 35).⁴⁹ Consequently, he regards consciousness as internal to time rather than appropriating it as its object: it is a consciousness which is preceded by its givens (F. Worms 1997, 76-77). The second feature is his interpretation of the problem of space that represents probably the most original and dynamic aspect of his analysis and the third is the close link between the essentially 'mixed' character of experience and the metaphysical apprehension of the ideas of duration and space, in their opposition and concrete unity. In this sense it could be argued that the controlling factor of this reading is the sense of illusion that it discerns. It is this sense of the illusion in relation to the 'mixture' that we are going to examine now.

When Worms employs the term 'mixture', or 'composite' he draws a further distinction between the mixed forms that are produced through the necessary relation between space, conceptualization and representation – space being the condition *sine qua non* of imagination and all imagery of thought – and the mixtures that are given in experience and apply to certain phenomena that are mixed by definition, so to say. It is the latter sense of the problem of duration and space – a sense that evokes in some ways the 'double' nature of movement, i.e. the fact that it appears both as pure mobility and as the space traversed – that incites the 'intensive applications' and 'intensive descriptions' of the amalgams of duration and space. What motivates the 'intensive description' of the mixtures and the 'intensive application' of the distinction between duration and space is not the illusion per se but the essentially mixed character of certain

⁴⁹ 'la durée, loin de désigner seulement la succession temporelle, quand on la purifie de toute spatialité, désigne aussi l'acte réelle d'une conscience ou d'un moi dans cette succession' (F. Worms, 2004, 35).

psychic phenomena that are situated at the 'frontier' with externality and more particularly, sensations.

The critique of the 'homogeneous time' of science is undertaken in a twofold perspective, in relation to which the analysis of movement...represents the peak. The analysis departs from the critical examination of specific psychological phenomena and ends in the critique of the notions of 'time, movement and velocity in astronomy and mechanics.' To be more precise, the critique is first directed against the most external region of our psychological life –this part which is related most closely to external objects- and consequently, this part or region of our psychical life which is closest to space and most easily spatialized: those are e.g. the sensations of sound that are bound to an external cause (as in the example of the bell). The presence of the external or objective cause in certain sensations is what leads us to 'set (unfold) them in space', and enter in this way into the path of the mixtures that directs us straight to the concept of the 'fourth dimension of space', which is none else than the 'homogeneous time'. The object of this critique, therefore, is rooted within certain phenomena of our consciousness. The 'sensations' that put us in direct contact with exteriority represent really the most crucial point of the analysis, where we can find the source of the inevitable intersection of the mixture (that announces most rigorously the diagram of the cone in MM and its most pointed edge) (F. Worms, 2004, 51-52).⁵⁰

Thus, sensation, and especially the representative sensations, represent these 'realized contradictions' that Bergson places at the bottom of the cone in MM, together with movement, as this pointed end of the past that penetrates into the present. The body defined in MM as a system of sensations and movements (MM, 138) institutes a section in the flowing mass of universal becoming (MM, 139), sensation being situated literally at the point of convergence of the past and the future. Or, again in another expression, sensation is the meeting of memory and matter, the spirit and the body so long as it contracts the movements of matter into perceived quality. However, although

⁵⁰ 'la critique du "temps homogène" de la science se fait dans une double perspective, dont l'analyse du concept de mouvement...est bien le point culminant: elle part des phénomènes psychologiques bien précis, et aboutit à une critique des notions "de temps, de mouvement et de vitesse en astronomie et en mécanique." Plus précisément encore, elle part de la pointe extérieure de notre vie psychologique, celle qui est en relation avec les objets extérieurs, et qui est donc la plus aisément 'spatialisable': ce sont par exemple les sensations sonores, reliées à une cause extérieure (une cloche) qui nous amène 'les déployer dans l'espace', et à entrer ainsi dans la voie des mixtes, au bout de laquelle sera cette 'quatrième dimension de l'espace' qu'est 'le temps homogène'. Ainsi, cette critique elle-même est-elle enracinée dans certains phénomènes de notre conscience. Ces 'sensations' qui nous mettent en contact avec l'extériorité sont d'ailleurs le point véritablement critique ou l'intersection inévitable sur laquelle se fonde le mélange tout entier dont nous parlons ici (annonçant donc rigoureusement la pointe du célèbre 'cône' de *Matière et Mémoire*)' (F. Worms, 51-52).

the analysis of sensation in MM is evoked by Worms immediately after the passage that was cited above, this reference to the problem of sensation in Bergson's second work serves another purpose. As we saw, sensation is a mixed phenomenon of 'interiority' and 'exteriority', quality and quantity, duration and space. But since sensation is mixed by nature we cannot employ here the general form of the illusion which is denounced throughout TFW; that is, its formal aspect. Sensation with its twofold nature is the *means* that endows the illusion of homogeneous time a certain degree of objectivity; an incontestable relation with the realm of objects, physical and measurable phenomena, while at the same time, it always maintains its sensed or psychic aspect. In this sense, we could say that the psychological analysis and the critique of the scientific account of sensation – i.e. by psychophysics and psychophysiology – comes to complement the critique of the scientific idea of time and velocity that finds its culminating point in the analysis of the twofold character of movement.

In the same way that Bergson proceeds to dissociate pure mobility from the space traversed, he undertakes to apply the distinction between duration and space in *each* state of consciousness taken separately. We could say that because sensation presents always a psychic equivalent to the process of objectification and spatialization, carrying in this way the illusory forms of space in the very depths of consciousness, the illusion assumes a differentiated form. However, Worms' claim has a more general scope. 'In principle, the illusion itself assumes an intensive and differentiated form, by applying itself in the differentiated and intensive reality of our consciousness' (F. Worms, 2004, 50).⁵¹ So, the examination of each state in isolation from the others and the distinction between the main categories of psychic life – two features of Bergson's examination of intensity that can be seen to contradict the rest of the inquiry – denote, according to Worms view, the application of the intensive and differentiated descriptions of psychic states that are organized in terms of depth. These degrees of profundity correspond in their turn to the degree of resistance of the examined state towards spatialization. So, in this sense, the intensive degrees of differentiation correspond at once to degrees of profundity and resistance that can be arranged in a scale of increasing depth that stretches from the most 'external' states that are less resistant to spatialization – i.e. representative sensations – to the ones that present an individual or temporal totality (F. Worms, 2004, 55).

⁵¹ 'Par principe en effet, en s'appliquant à la réalité différenciée et intensive de notre conscience, cette illusion prend elle-même une forme différenciée et intensive' (F. Worms, 2004, 50).

With his theory of intensive descriptions Worms sheds a new light on Bergson's theory of intensity and solves two mutually dependent problems. The first is a problem that emerges from Bergson's method of procedure in the analysis of intensity: i.e. the idea to study each psychic state in isolation from all others. This approach entails a paradox: first, because this isolation of the examined psychic states contradicts Bergson's major thesis on the concrete multiplicity of psychic states that forms duration and the repercussions of the dissociation and abstraction of the states of consciousness from the continuous multiplicity that endows them with sense. Second, because one of the most decisive conclusions of the inquiry into intensity is that there is no such thing as an isolated state of consciousness: each state either participates in or involves a multiplicity. In this last sense the connection between the analysis of intensity and that of duration is perfectly consistent.

However, once we accept that there are no isolated psychic states, then what becomes inexplicable is the meaning of the distinction between the various types of psychic states and the separate examination of each. This problem seems to find an adequate solution in Worms' analysis of intensive descriptions. This examination is undertaken in response to the differentiated form that the illusion of spatialization tends to assume for the diverse states of consciousness. In its positive aspect, the intensive description of psychic states introduces another criterion of distinction that denotes, at the same time, a new sense of degree: the degrees of resistance to spatialization. The latter sense of degree acquires vital importance in Bergson's theory of freedom, because it is there that Bergson shows in what sense the objectification of certain states of consciousness and even whole groups of psychic states can work as determining forces that stifle the feeling of inner freedom and together with it, freedom per se. Yet, the question that arises at this point is whether this conception of distinction and degree, responds also to the dynamic form that assumes the problem of the mixed state of intensity, when it is viewed from the perspective of the mixture between the two kinds of multiplicity. First though we have to see the problem that emerges as soon as we try to combine the two propositions together: 1) Worms' idea of intensive degrees as degrees of resistance/ degrees of differentiation of the mixtures and 2) the mixed experience of intensity viewed as the point of convergence between quantitative and qualitative multiplicities.

At the beginning of this section, we saw that the two kinds of multiplicity are involved in the definition of the two meanings of intensity. At first, the intensity of the

simple states seemed to be related solely to the quantitative multiplicity of its cause, while that of the complex states seems to approximate more closely to the idea of qualitative multiplicity. Yet, as we subsequently saw, the two kinds of multiplicity tend to intermingle, producing the mixed form of intensity. The distinction between the two kinds of multiplicity will still hold, even in these states that appeared to be mixed by nature, such as sensations (representative and affective). The problem is not really centered in the distinction between the two kinds of multiplicity, but rather in the intensive differentiations between the psychic states themselves. Thus, even if we admit that psychic states can be organized vertically according to their degree of resistance to spatialization, it becomes difficult to understand how this distinction holds in the case of the deep-seated and the intermediate states. And this is a problem that concerns both Worms' interpretation and Bergson's own classification. We shall examine this problem in its most prominent form: that is, the distinction between deep-seated and violent emotions.

In this case we have two kinds of psychic states that are both self-sufficient and entail elementary states that have a physical aspect. The problem that arises is that it becomes impossible to determine in what sense the intensity of the first –i.e. the deep-seated feelings, aesthetic and moral emotions – is defined as 'pure', whereas the intensity of the second –i.e. the violent feelings – appears to depend exclusively on the presence of the peripheral sensations (physical symptoms)? Thus, the feeling of growing intensity in the violent emotions is due to the 'deeper and deeper disturbance of the organism, a disturbance which consciousness has no difficulty in measuring by the number and extent of the bodily surfaces concerned' (TFW, 29). If the latter holds the problem is that it becomes impossible to explain why in the case of the profound feelings consciousness does not estimate their intensity by bringing into play the quantitative multiplicity, which is involved in the representative states that are part of the deep-seated states, and instead re-interprets them by tingeing them with its own color? Is it not the case that the criterion of the distinction between the deep-seated feelings and the violent emotions is inadequate? Moreover, to return to Worms' idea of the degrees of resistance to spatialization it seems to present the same problem. In both cases –i.e. both in Bergson's explicit classification and Worms' proposition of the degrees of resistance – we have two external and negative criteria of distinction.

One could say that the difference between the deep-seated and the violent emotions – e.g. violent anger, acute desire – is due to the fact that the sensations that

come into play in the former do not really involve muscular contractions and that their representative aspect has been diminished or changed through the effect of the fundamental emotion. In fact, Bergson describes the latter process. As he observes we become aware of a deep passion by perceiving that the same objects no longer impress us in the same manner (TFW, 8). But this change in external perception occurs *because* the dominant feeling permeates an increasing number of elementary states (TFW, 8). In contrast, the feeling of effort in psychic tension comes down to 'a system of muscular contractions coordinated by an idea' (TFW, 28). In the case of violent emotions this idea comes down to the 'unreflective idea of acting' (TFW, 28). Would it not be legitimate to say that the essential difference between these two types of psychic states cannot be adequately explained unless we introduce a new criterion of distinction; that is, the *psychic aspect* that comes into play in each of these two states? Would it not be the case that besides the nature of their elementary constituents –i.e. the predominant role of representative sensations in the deep-seated feelings and affective or peripheral sensations in the violent emotions – there is also another factor; a psychic disposition that would testify that psychic states are not purely determined by their proximity or distance from exteriority, but involve rather the action of a psychic cause?

A more subtle exposition of the distinction between the two types of emotions that we examined above is presented in Bergson's 1892-1893 lectures on psychology at the Lycée Henri-IV (H. Bergson, 1992, 205-393). In the lectures Bergson advances another criterion of distinction between the deep-seated states and the violent emotions. As he argues, all emotions involve sensations that are organized around a central idea. But although some have as their 'matter' sensations, movements and actions that are only *prefigured* in consciousness, others are composed by volitions and *actual* movements of reaction that occur on the body (H. Bergson, 1992, 228). Thus, in the first case, action is only sketched, or using the terminology of MM, action is at a *virtual* state. In the violent emotions the movements of reaction are designated and start to take place in the body. In this sense, we could say that the 'mild' (*émotions douces*) (H. Bergson, 1992, 228) and the violent emotions present a difference which is analogous to the difference between perception and affection as they are presented in the first chapter of MM. Perception reflects the virtual action of the body upon matter, while affection reflects the real action received from the surrounding matter, or again the reactions towards the environment that take place first of all in the body. More to the point, the distinction between the

mild and violent emotions appears to engage directly with the analysis that takes place in TFW in relation to the deep-seated and violent emotions.

Despite the respective differences between the two examinations there is an insight in the 1892-1893 lectures that can appear useful for the elucidation of the first –i.e. the examination of intensity in TFW. This insight comes down to the realization that although the deep-seated emotions are composed mainly of sensations that are organized around a central *feeling*, the violent emotions are composed by *volitions* that make their presence felt as it were upon the body under the form of an organic disturbance caused by the movements of reaction that occur, so to say, at the midst of the feeling –of anger, terror, rage etc – and constitute what is felt as an increasing intensity of terror and anger.

What appears to be suggested by this examination is the distinction between two *dispositions* of psychic life: the deep-seated emotion *organizes, shapes* and imparts its *tone or nuance* to the elementary states that appear to compose it, although in a certain sense they are composed by it. The feelings of *psychic tension* are constituted by nascent movements and prefigured acts – are centrifugal: they are constituted by an idea that longs to explode into action, as it were. The question is: can we trace in these two psychic dispositions of the deep-seated feeling that penetrates, re-interprets and attracts a variety of simple states in a totality (a living whole) and the centrifugal movement of psychic tension, the first enunciation of the theory of tones and tensions in MM? Moreover, can we say that this later analysis derives somehow as an exigency of Bergson's account of intensity in TFW?

In response to this question, we could say that is probably the case that the most sustained and profound connection between the problem of the intensive distinctions in TFW and the theory of mental tones and tensions in MM has to be sought in the idea of spontaneity which is introduced by the hypothesis of the two psychic dispositions, rather than the actual psychic states themselves –i.e. the deep-seated emotions and the feelings of psychic tension. We will proceed now to present briefly Bergson's account of the theory of the diverse tones and tensions of memory, where the concept of mental disposition –i.e. mental tone – is explicitly presented and then we shall return once again to the analysis of TFW and the problem of the intensive distinctions and degrees that we left hanging in suspense.

In the third chapter of MM, Bergson advances a theory of the role of memory in the life of the mind based on the idea that there are '*divers tones of mental life*' (MM, 14).

As he notes, 'our psychic life may be lived at different heights, now nearer to action, now further removed from it, according to the degree of our *attention to life*' (MM, 14). We have encountered already the concept of 'tone' in our earlier reference to Bergson's theory of tensions; a theory which is indebted to the Stoic theory of *τόνος*. As we saw, according to Bergson's lectures on ancient Greek philosophy (H. Bergson, 2000, 120-123), with the concept of *τόνος* the Stoics tried to overcome the antithesis between quality and quantity and introduced at the heart of being the idea of an active and immanent force that produces all the main distinctions and forms of being, out of its twofold movement of contraction and relaxation (H. Bergson, 2000, 122). Bergson observes that the various degrees of contraction and relaxation of the tension (*τόνος*), 'denote various degrees of concentration of being' (H. Bergson, 2000, 122).⁵² The Stoic concept of tension appears to correspond directly to Bergson's analysis of the soul and the body in the fourth chapter of MM and in the *Summary and Conclusion* of the same work, where he shows the way in which the different degrees of tension can be used in order to overcome the rigid dichotomy between quality and quantity, spirit and matter.

Yet, the significance of tension (*τόνος*) is not exhausted in the overcoming of the opposition between quality and quantity. *Τόνος* signifies also mental tension, energy, modes, keys or tonalities in music differing in pitch.⁵³ This second set of meanings informs the different tones, levels or *dispositions* of mental life in Bergson's theory of memory and the mind. We cannot really present this theory in detail at present, since this would take us quite far from our current concern, which is to try and see whether such a criterion of internal differentiation (distinction) can be really traced in the analysis of intensity and affective life in TFW. So, we will limit ourselves to what we consider essential in Bergson's account of the tones and tensions of memory for the elucidation of the problem of the intensive differentiations between psychic states in TFW.

Coming back to the cited passage from the *Introduction* of MM, we could say that there are two key-elements in this statement: the first is the attestation of the existence of diverse tones of mental life –or, according to Bergson's subsequent expressions, distinct mental dispositions, degrees of tension or vitality (MM, 169-170). The second, comprises the idea of 'attention to life' that denotes the *bent* of consciousness towards the present and the future and, at the same time, the mechanism by means of which the superfluous memories are inhibited from investing the present. The concept of the 'attention to life' acquires an increasing importance in Bergson's later psychological and

⁵² 'ce sont...autant de concentrations de l'être' (H. Bergson, 2000, 122).

⁵³ Liddle and Scott, *Greek-English Lexicon*, seventh edition, Oxford, 1997

psycho-pathological inquiries, because it denotes the principle that ensures mental health. In MM, the idea of the attention to life is attached to the sensori-motor equilibrium of our nervous system that limits and binds the mind to the exigencies of the present moment, while at the same time, it provides to memory the necessary sensory-motor fulcrum in order to materialize itself into conscious recollection-images and movements.

In his inquiry into the relationship between the two forms of memory –i.e. the independent recollections and the motor or habit memory of the body – in the second chapter of MM, Bergson emphasizes the importance of utility and hence also of the exigencies of the present for the selection and actualization of memories. However, at the same time, he stresses the spontaneous character of memory and the mind against the passive conception of the associationists that regard perception as the determining factor of recollection. The theory of the diverse tones and tensions of memory appears to respond precisely to this latter idea; one that would probably remain obscure in certain ways, if we were to rest simply on the analysis that takes place in the second chapter of MM in view the problem of recognition and its pathologies –i.e. the account of sensory aphasia. So, against the idea of a mind that responds mechanically to the call of the present –i.e. the thesis of associationism – Bergson distinguishes two simultaneous movements by means of which memory responds *spontaneously* to the call of the present:

one of translation, by which it moves in its entirety though without dividing, with a view to action; and the other of rotation upon itself, by which it turns toward the situation of the moment, presenting to it that side of itself which may prove to be the most useful. (MM, 169)

So, Bergson substitutes the mechanical and fortuitous process of the associationist explanation – where the mind would try and find the recollections that would fit better to the present amongst a mass of inert, independent (fragmented) and fixed memories – with a process of selection that occurs by means of the simultaneous movement of translation and rotation of memory. The latter manifests this facet of itself that corresponds best to the appeal of the present. At the same time, due to the fact that memory responds to the call of the present undivided and whole, the past sheds its particular color to all our decisions, perceptions, acts and desires. This color that derives

from the depths of past experience represents the signature of our personality that imbues our perceptions, volitions and desires and actions without coming into consciousness. Likewise, although it is one particular recollection which is actualized into a conscious recollection-image, this recollection is tinged by the whole of past experience.

There are two main problems that arise out of Bergson's exposition of the process of recollection. The first is a problem that we discussed already in our examination of Deleuze's idea of intensive degrees. In order to insert itself into the present, memory has to contract to such a degree that it appears to lose all individuality. Bergson insists on this point: as he writes, recollections 'take a more common form when memory shrinks most, more personal when it widens out' (MM, 169). As we saw, this problem drives Deleuze to introduce an additional type of contraction, i.e. the 'intensive ontological contraction' (G. Deleuze, 1991, 65) that signifies the virtual coexistence of all the different levels of the past – i.e. according to the virtual rhythms of contraction and relaxation (G. Deleuze, 1991, 65, 100). The latter comprise in their turn the totality of intensive degrees or degrees of difference that coexist in the virtual whole of memory.

However, besides this first problem arises a second: namely, the significance of the spontaneity of memory and the mind. By remaining at the theory of the contraction-translation and rotation of memory, we can understand how its relation to the present is consolidated and in what ways mental coherence is also ensured. What is not clear is the meaning of memory's spontaneity. One could argue that the spontaneous movement of memory consists mainly in its direction – i.e. the fact that the process of recollection moves from the past to the present and the virtual to the actual in order to meet the present. It is true that Bergson often expresses himself in this way (MM, 99). Moreover, if we employ Deleuze's analysis of the virtual and the actual and the creative process entailed in the movement of actualization then we could say that the spontaneous movement of memory denotes already in the analysis of MM a creative movement or act. However, this interpretation does not derive either from Bergson's explicit statements on the virtual and the actual, or in Deleuze's reading of MM. The creative aspect of the actualization of a virtuality is an idea which is explored in Bergson's philosophy of life.

The second aspect of memory's spontaneity appears to consist in the fact that memory presses with the totality of its recollections – i.e. the totality of past experience – upon the present moment trying in this way to insert as much of itself as it can. For this

reason a disturbance of the sensori-motor equilibrium –or rather certain types of disturbances – will result in a vertiginous actualization of memories in conscious recollection, images that will aspire to take over the present. This overflowing of the past into the present at the expense of the latter, occurs when we dream and in certain cases of madness (MM, 174-177). But if we are to remain in these two accounts of the spontaneity of memory, we would be left with a fortuitous, restricted and negative sense of spontaneity. According to the first definition of the spontaneous movement of memory, it would seem that this spontaneity is both abstract and limited ‘externally’, so to say. This is so, because finally, the memories that will actualize themselves are those that succeed to fit into the present. In this sense, the process of recollection might not be mechanically determined by the present –as it is in the associationist theory of memory and perception – but the room which is left to the spontaneity of memory is rather restricted; the actualization of memory is decided by the exigencies of the present.

The second sense of spontaneity grasps the aspiration of memory to *live again* into actual recollection images. This aspiration represents probably a deeper sense of spontaneity than the response to practical utility, although in a certain sense it is not that far from the former idea of spontaneity: memory accepts to shrink in order to insert itself into the present precisely because it wants to live again and needs the sensations and movements of the present moment in order to do so. The main difference between the two –i.e. the first and second meanings of spontaneity – is mainly due to the degree of tension of our nervous system –i.e. the latitude that exists between sensations and movements. This latitude or temporary interruption between the sensations that are prolonged into movements will be exploited by memory that will insert into this latitude or rift as much of itself as it can.

However, if we return now to the cited passage from the *Introduction* of MM, we can infer that the level or tone in which we chose to live our mental life is not decided either by the exigencies of perception or through the urge of memory to live once again in an image. It is decided in a certain sense by the degree of *our* attention to life (MM, 14), but even this last expression does not really grasp this new sense of spontaneity that comes through the theory of mental dispositions. Now, the first time that Bergson employs the term ‘disposition’ is in his explanation of the activity of comprehension –i.e. in his account of sensory aphasia. As he writes,

we listen to the words of another person with the desire to understand them...Do we not feel that we are adopting a certain disposition, which varies with our interlocutor, with the language he speaks, with the nature of the ideas which he expresses –and varies, above all, with the general movement of his phrase, as though we were choosing the key in which our own intellect is called upon to play? (MM, 121)

Thus, instead of waiting for perception to activate the corresponding cells in the brain where memory images are supposed to be preserved and lie in wait, the mind immediately adopts its key and level according to the level of abstraction and complexity of the phrase of its interlocutor. Put more strongly, the mind immerses itself at once in the meaning of the uttered phrase and then it tries to develop the latter into distinct images that will come to accrue upon the givens of perception. In this case the present perceptions will work like signposts that indicate to our thought the road, emphasizing the utterance of our interlocutor and providing –through the motor diagram – this empty form that will be filled by memories. In other words, the mind adopts in this case what Bergson will describe in his later essays as the intensive movement or dynamic scheme of thought, that seeks to develop itself into distinct concepts and images by a constant movement to and fro the past and the present. It is this latter view of spontaneity that serves as the foundation of the theory of intellectual invention and creative attention explored in Bergson's later works and essays.

What is important for the purposes of our analysis is to have shown that the mental tone according to which we decide to tune ourselves and our mental life is something which is chosen irrespectively of the conveniences or inconveniences of action. It is a decision that issues from an *internal exigency* of the mind or of memory that chooses the level in which it will move. We could say in addition, that the theory of the mental tones corresponds to Deleuze's idea of internal differentiations in the virtual coexistence of the past with itself –i.e. pure memory. More to the point, the theory of mental tones appears to enrich Deleuze's interpretation of Bergson's theory of memory, because it introduces besides the various degrees of contraction and relaxation, the various tones, pitches and tonalities according to which our mental life might be tuned. At the same time, by introducing an internal cause of differentiation –as e.g. the intensive movement of memory in the activity of comprehension – the theory of mental dispositions foretells Bergson's view of life and the creative *élan* as that which entails the cause of variations internally. This line of thought that detaches, so to say, the movement of memory and intellection from the role of merely responding to the present –i.e. the idea of sensorial

attention, which is elaborated in the second chapter of MM – and discloses the truly inventive process of intellection in the intensive movement by means of which memory chooses its tone, contracts and develops its content, is further developed in Bergson's 1902 essay, *Intellectual Effort*. In this essay, Bergson elaborates the idea of the dynamic scheme, according to which all memories are in a state of mutual penetration that develop subsequently in distinct images. We could discern in the concept of the dynamic scheme common features with the *élan vital*, or, put more strongly, a common statement of the problem of materialization (C.f. ME, 172-183). In the TSMR, Bergson returns once again to this view of creative attention that is elaborated in his 1902 essay on *Intellectual Effort*, and draws a distinction of outmost importance between two types of self-sufficient feelings: the feelings that issue from an intellectual representation and the truly creative emotion which is supra-intellectual and impregnated with representations and images instead of depending upon them. Moreover, in the same analysis of the distinction between the creative and representative emotion, Bergson stresses the fact that the former operates as a cause rather than an effect of intellectual representations (TSMR, 43-49).

Returning now to the analysis of intensity in TFW, can we say that it is possible to discern the origins of a theory of psychic dispositions in the intensive distinction between the deep-seated emotions (aesthetic and moral feelings included) and the feelings of psychic tension? We have to insist on this particular distinction because it presents the most privileged part of inquiry in Bergson's first account of intensity for the examination of the meaning of intensive distinctions and their relation to intensive degrees and the investigation of the origins of this particular line of inquiry that leads to the theory of tones and tensions in MM. The latter theory, as we saw, presents two main aspects: the first and most prominent is that of the degrees of tension and relaxation of memory – i.e. the various rhythms of contraction. The second comes down to the idea of the various tones and mental dispositions that was presented above. Ultimately, both aspects are expressed in the concept of tension that denotes the unity of tones and degrees. The degree of contraction adopted by memory corresponds to its chosen tone. So, in this sense both tones and degrees express a psychic or mental disposition.

In our discussion of the relationship between intensity and tension in *Le parallélisme psycho-physique et la métaphysique positive*, we saw that Bergson emphasized the continuity between his analysis of the intensity of the complex states and the theory of tensions understood in its broad and versatile significance: i.e. the different tensions of

memory, the tensions of matter (cerebral and physical), the degrees of contraction and relaxation of duration that denote the different rhythms of being arranged in a scale of growing and diminishing intensities of life.

Yet, under a closer investigation of both Bergson's own statement and the critiques that were raised against his first account of intensity (by Jaurès, Pradines and Deleuze) it became apparent that the purely qualitative intensity of the deep-seated states was not sufficient to account for the emergence of the theory of tensions in its versatile meanings and uses. At the beginning we traced the problem to the lack of a positive account of the psycho-physical meaning of intensity that was discerned in the intensity of the simple states. However, we saw in our investigation of the mixed idea of intensity that in a certain sense, most forms of intensity present psychic and physical aspects. The problem that emerged from the examination of the mixed state of intensity concerned the meaning of the 'intensive distinctions' between the various types of psychic states. In our attempt to respond to this problem, we presented Worms' theory of intensive descriptions that introduces, at the same time, a new concept of intensive degrees as the various degrees of resistance to spatialization.

Nevertheless, we saw that this conception of intensive differentiation and degrees of resistance lacked an internal criterion of distinction: one that would give an adequate explanation of the distinction between the intensity of psychic states of the same kind – the complex states of deep-seated feelings and feelings of psychic tension. The most intriguing aspect of the latter distinction comes down to the realization that the intensity of the deep-seated states is characterized as *pure* from all admixtures with quantity and space – i.e. it denotes the state of pure quality or nuance – while the second involves an undeniable physical aspect. Thus, as we saw, Bergson defines the intensity of the feelings of tension by means of the organic disturbances (muscular movements and contractions) that take place upon the body.

We can derive from these observations the conclusion that the problem of intensity assumes an intriguing and fecund form when it is examined from the perspective of the distinction between the deep-seated and violent emotions. This is so because the latter distinction addresses at once the problem of the psychic and physical aspects of intensity, the distinction and point of convergence between qualitative and quantitative multiplicities and finally, the relationship between duration and the free act. This last aspect of the problem emerges indirectly from three different lines of inquiry: the first source can be traced back in Jaurès' critique of Bergson and his allegedly negative

treatment of the feelings of effort that presents an insurmountable obstacle against the positive conception of freedom that Bergson seeks to establish: i.e. the realization of the internal feeling of freedom, a *free act* that would maintain a *positive* relation with the realm of extensity. In Jaurès' view the feelings of effort play a crucial role for the realization of the free act because the intensity of our efforts institutes a positive relation between the 'internal' and 'external' realms by connecting the internal feeling of freedom with the external goal that needs to be achieved so that freedom can be realized in an act.

Now, Jaurès' critique is centered in the allegation that Bergson deprives from the feelings of effort their psychic dimension. So, if we can prove that the feelings of psychic tension maintain a psychic as well as a physiological aspect then it seems that we will be able to respond to Jaurès' critique and by the same move, to meet a problem that emerges from Bergson's consideration of freedom in terms of duration. Before we pass to the presentation of the second line of inquiry that leads to the problem of the relationship between duration and freedom, we have to note that Jaurès' critique is centered in Bergson's interpretation of the feelings of muscular effort. While all feelings of effort – and consequently the feelings of psychic tension as well – are treated by Bergson in a similar way, the feelings of muscular effort have a fundamental role for the realization of the free act that the other two forms of effort –i.e. psychic tension and effort of attention – do not seem to have. Or at least they do not seem to have at first sight. As we shall try to show below, psychic tension maintains a predominant position in Bergson's conception of the will. Put more strongly, according to François, psychic tension *is* the will. However, as we shall see, psychic tension and muscular effort correspond to two different phases or aspects of the process by means of which the internal freedom that springs from the depths of time is realized into an act. The role of the feelings of muscular effort for the realization of the free act will be discussed in a later part of this chapter.

We can say though in advance that the feelings of muscular effort and those of psychic tension admit a separate treatment and correspond, as we shall see, to two distinct procedures that are involved in the transition from the internal feeling of freedom to the free act. However, Bergson's explanation of intensity in the feelings of muscular effort, intellectual attention and psychic tension are not essentially different. In all three cases, intensity is due to 'the twofold perception of a greater number of peripheral sensations, and of a qualitative change occurring in some of them' (TFW, 26).

So, it can be derived already from this definition that Bergson's position is more complex than would seem at first: the feelings of effort being intermediate and mixed states they seem to entail at once a psychic and *physiological* aspect –hence also their difference from the intensity of the representative sensations; the latter is defined through the intimate connection between the sensed or psychic element of sensation and the *physical* cause.

We mentioned above that the second line of inquiry that opens up through the distinction between the deep-seated emotions and psychic tension concerns the relationship between duration and freedom, or rather, between a certain apprehension of duration, which is encountered both in critical and positive responses towards Bergson's philosophy. This problem has obtained various formulations, but finds probably its most flagrant form in the idea of the radical passivity which is allegedly involved in Bergson's idea of duration and its relation to the free act, or to activity in general. We have encountered already the critique of the allegedly passive character of Bergson's philosophy in our discussion of Pradines' interpretation of Bergson. However, the idea of a non-representative and passive synthesis of duration has not been advanced solely in critical terms. According to Levinas, for example, the passive synthesis of duration represents one of the most positive features of Bergson's conception of time (E. Levinas, 1998, 143). But, if we admit that duration endows the subject with a qualitative multiplicity, which is self-organized beyond all subjective activity, then there seems to arise a problem which is internal to freedom so long as the latter is defined in terms of duration and, at the same time, it is described as an act of re-possession of the self. As we shall try to show below, this second aspect of the problem of duration and freedom can be adequately resolved once we restore the position and role of the intensity of the deep-seated states within duration.

However, before we proceed to present the latter point, we have to try and respond to the question that we left hanging in suspense above; that is, whether we are entitled to trace the origins of the theory of mental tones and psychic dispositions in the analysis of intensity in TFW and the distinction between the deep-seated emotions and the feelings of psychic tension. Considering the fact that in his account of freedom, Bergson defines the self as a 'free cause' (TFW, 235) that counter-balances the mechanical play of motives and forces, the right question would be the inverse of the one that was posed above. The proper question is whether Bergson's conception of freedom is able to stand without an idea of internal cause; a deep-seated state that would not simply depend on

composition of its constituents in order to be what it is, but one that attracts and shapes anew a whole mass of elementary states. Besides this question there is a second that relates to the distinction between the two types of emotion –deep-seated and violent emotions. If the first denote the capacity or psychic disposition to penetrate and change according to its own nuance a variety of other psychic states, would it not be the case that the second type –i.e. the feelings of psychic tension – designate the transformation of this creative feeling into an act that will be prepared and executed by means of movements and not just experienced internally? However, as we shall see, the contribution of psychic tension and the *sui generis* feeling of effort by means of which Bergson re-defines the idea of psychic force are not limited solely to the process of externalization of freedom, but respond to a more fundamental exigency of the will that discloses, in its turn, the meaning of the distinction between the two psychic states/dispositions that we have been examining so far: the deep-seated states that spread their nuance upon a mass of heterogeneous elements and that of psychic tension that expresses itself centrifugally through movements and nascent acts.

We can derive from the above remarks that the relationship between intensity, duration and freedom is decisive for our response to the problem of psychic dispositions, while at the same time, intensity might shed a new light on the relationship between duration and freedom. Yet, if we turn to the examination of freedom it seems that the role of intensity is restricted and certainly not one that could allow us to regard either the intensity of the deep-seated states or that of psychic tension as profound psychic dispositions or psychic causes: it is rather duration –i.e. the concrete multiplicity of psychic states – that works as a truly free cause. Instead, the role of intensity in freedom seems to be primarily critical: at first sight it would seem that the significance of the theory of intensity for freedom is exhausted in the critique of intensive magnitudes.

The problem of intensity is evoked at a crucial 'moment' of the discussion of freedom, where Bergson tries to refute the determinist argument of prediction. As he argues, determinism grounds the possibility of prediction retrospectively –after the act has been performed. In order to prove that the act can be foreseen through an adequate knowledge of its antecedents, determinism reconstructs the dynamic process that leads to the act. In this reconstruction the mathematical representation of intensity plays a predominant role. Ultimately, the determinist argument on prediction is based upon the mathematical representation of intensity because it is only by being represented as a

mathematical component of a certain feeling that intensity can become a determinant force that compels the self to decide in favor of a certain course of action.

When I myself pass through a certain psychic state, I know exactly the intensity of this state and its importance in relation to the others, not by measurement or comparison, but because the intensity of e.g. a deep-seated feeling is nothing else than the feeling itself. On the other hand, if I try to give you an account of this psychic state, I shall be unable to make you realize its intensity except by some definite sign of a mathematical kind: I shall have to measure its importance, compare it with what goes before and what follows, in short determine the part which it plays in the final act. And I shall say that it is more or less intense, more or less important, according as the final act is explained by it or apart from it. On the other hand, for my own consciousness, which perceived this inner state, there was no need of a comparison of this kind: the intensity was given to it as an inexpressible quality of the state itself. (TFW, 185-186)

In the cited passage Bergson refers to the analysis of pure intensity, while he indicates the ways in which the illusion of intensive magnitudes informs the determinist argument. Yet, the problem of the status of intensity in the dynamic view of the self as a free cause appears to remain unaddressed. Bergson's argument on the mathematical representation of intensity seems to be exhausted in the refutation of the determinist thesis. Thus, while the determinist is able to predict retrospectively the act from its antecedents –that become known only after the act has taken place – he would not have been able to do so if he had adopted the perspective out of which the free act really takes place, which is the perspective of *lived experience*.

Hence we have to distinguish two ways of assimilating the conscious states of other people: the one dynamic, which consists in experiencing them oneself; the other static, which consists in substituting for the consciousness of these states their image or rather their intellectual symbol, their idea. (TFW, 186)

From this statement, it transpires that there is something more that comes into play in the distinction between pure intensity and its mathematical representation than that of the mere reversal of the antecedent and the future states of consciousness. By recovering the lived experience of the feeling, Bergson envisages restoring by the same move the inner dynamism of the self. Would not this amount to recognizing that psychic

states have a more dynamic role in the creation of their own content than can be grasped by the classification of conscious states that was presented above?

The response to this problem is tied up with a second problem that emerges from the first by necessity. For, if it proves that psychic states participate somehow in the creation of their content, then it seems that intensity will have a more significant role in the dynamic experience that leads to the free act than that of a mere alleviation of experience from its shadow –i.e. the mathematical representation of psychic states that turns the process of decision into a mechanical play of forces and psychic life itself into an aggregate of inert states. In other words, if it is shown that the recovery of the lived experience of psychic states discloses the active participation of intensity within this *sui generis* process of creation that precedes the free act –i.e. this molding of sensations, desires and ideas into a personal history, which is thrust whole and undivided within the act – then it is probably the case that intensity maintains a more significant role in this transformation of the creative process that takes place in duration, to the occurrence of the free act. In the following sections of the chapter we shall explore intensity in relation to the *sui generis* synthesis of the past and the present that denotes true duration and Bergson's account of the psychological causality and the idea of free force thereby introduced.

3) Felt Multiplicities and the problem of nuance and tension

In the previous section we examined the mixed forms of intensity in an attempt to discover the significance of the intensive distinctions that can be traced in the investigation of the main categories of psychic states that takes place in the first and the

end of the second chapter of TFW. As we saw through our examination of Worms' interpretation of the intensive differentiations of the mixed forms or amalgams of duration and space, these intensive differentiations can be regarded also as intensive degrees that mark the degree of resistance of each psychic state to spatialization. The latter distinction, nevertheless, does not grasp the dynamic account of psychic life that takes place in TFW and, moreover, it appears incapable of explaining the distinction between deep-seated emotions and the feelings of psychic tension. The latter distinction introduces the theme of psychic tones or dispositions, which is further explored in MM and represents an inseparable aspect of the theory of tensions.

However, the status of the deep-seated emotions and the feelings of psychic tension remained indeterminate from the perspective of our previous investigation –i.e. the analysis of the mixed forms of intensity. In this section we are going to examine the role of these two types of emotions –that were provisionally defined as two psychic dispositions – for the apprehension of the relationship between duration and freedom. More particularly, we are going to examine this relation from two perspectives. The first addresses the constitution of duration and, more specifically, the synthesis between the past and the present that forms and transfigures the qualitative multiplicity of pure succession into an evolving feeling that imparts new significance to the multiplicity that brought it forth. The second engages with the idea of a will that denotes an act of self-possession, which is described, as we shall see, in terms of an inner tension of feelings, ideas and sensations that revolt against given circumstances and social constraints; an inner tension and self-possession that admit of degrees. First though let us see briefly how the idea of duration is set by Bergson as the solution and ultimate experience of freedom.

As is known, with the three sets of distinction that are elaborated in TFW –i.e. the distinction between duration and space, quality and quantity, succession and simultaneity (TFW, xx) – Bergson envisages resolving the false problem of freedom. This solution is inseparable from the process of stating the problem anew in its right terms: no longer in terms of the inconclusive discourse on free will that ends up annihilating freedom, but in terms of an *experience* which is defined as a dynamic process of mutual organization and shaping of feelings, ideas, emotions, that find outward expression in an act that truly belongs to us and bears the signature of the person. Thus, the first and mostly noted aspect of Bergson's idea of freedom comes down to the idea of the expression of the profound self. The latter is essentially the enduring self that heats up,

blazes and takes decisions, often contrary to the reasonable pieces of advice. However, apart from this most notorious aspect of self-expression –which, as we shall see below, when it is taken as the sole significance of freedom it is quite problematic – there is another more controversial aspect. This second aspect of duration alludes to a creative process—although the term creation does not appear explicitly in the text of TFW⁵⁴ – where the self shapes its own ideas (TFW, 169) and feelings by assimilating and molding all new impressions within the continuous whole of its inner experience. Although it is not emphasized as such, we could argue that the very definition of the intensity of the deep-seated states, where a certain feeling takes over a number of others and appropriates them, points towards a *sui generis* process of creation that often passes unperceived.

However, this creative process which is immanent within duration has triggered two opposite interpretations. The first is the one that discerns in freedom, re-defined in terms of the qualitative multiplicity of duration, the position of a radical passivity. We encountered already this thesis in Pradines' reading. At the same time, any attempt to defend Bergson's idea of freedom in terms of a spontaneous activity that presupposes a separate subject or agent, stumbles against the very originality of the Bergsonian conception of freedom in terms of inner duration and this qualitative synthesis of psychic states that seems to happen 'in spite' of any active exercise of the will. Paradoxically, defending the 'active' character of the Bergsonian idea of freedom, i.e. active in terms of the activity of an agent who exerts his/her activity, represents probably the greatest betrayal of the experience of freedom in Bergson's sense. The latter is mysterious and intriguing, because on the one hand it points towards a creative process – i.e. a process of recovery of the fundamental self which is at the same time a dynamic assimilation and shaping of feelings, sensations and ideas – whereas at the same time it seems entirely foreign to any habitual consideration of spontaneous activity that presupposes an agent/subject who is separable both from his/her will and the outcome of this will. In all descriptions that are given in TFW, the experience of freedom points towards the experience of inner duration and the qualitative multiplicity of its successive states. This experience is creative because it is through this process of molding and shaping of the past into the present that the self assimilates its ideas, feelings and sensations, transforming the immediate givens of consciousness into a personal history. It is

⁵⁴ In his later essay, *L'âme et le corps*, Bergson defines free acts as acts that issue from a spirit (soul) that creates itself (H. Bergson, 2009, 31). In *La conscience et la vie* occurs a similar idea of self-creation although not explicitly attached to freedom (H. Bergson, 2009, 24).

precisely this expression of a condensed form of personal history into an act that constitutes freedom under Bergson's perspective. For this reason, 'every demand for explanation in regard to freedom comes back...to the question: 'Can time be adequately represented by space?' (TFW, 221)

Thus, it would seem that once duration recovers its flow and the fundamental self comes into the surface then the free act seems to occur effortlessly: freedom, for Bergson, is the 'outward manifestation' of the fundamental self (TFW, 165). Or again, in another expression 'freedom is the relation of the concrete self to the act which it performs' (TFW, 219). From this consideration of the free act, it follows that the dissociation of freedom and the qualitative multiplicity of the concrete self that grounds it from the active synthesis of consciousness, or the spontaneous activity of an agent/subject who is separable from the contents of his/her experiences, is not just one peculiar feature amongst others: it is a condition *sine qua non* for the consideration of the qualitative multiplicity that forms the fundamental self. This is so, because in the analysis of number and space Bergson recognizes space as the condition *sine qua non* of all representative activity. Strictly speaking, if we exempt the analysis of movement where Bergson attributes pure mobility to a 'mental synthesis' (TFW, 111), the term synthesis in TFW is used mainly in relation to the active synthesis of the representative consciousness in counting. So, it would seem that all traditional senses of spontaneous activity and the active synthesis of a consciousness that ordains its givens, sacrifice the creative process that synthesizes the past into the present and gnaws into the future (i.e. the idea of duration), since they presuppose a consciousness which is separated from its contents and hence the refraction of pure duration into space.

Thus, as a counter-weight to the idea of a spontaneous activity of the self, emerged the view that one of most original aspects of the Bergsonian duration is the idea of *passive synthesis* that occurs beyond the expressed activity of the will, or again, the active synthesis of the representative consciousness. The importance of this passive synthesis which is operated by duration *per se*, has been stressed by Levinas who discerns in this 'passive synthesis' of duration that lies 'totally outside the activity of the self', one of the most radical ruptures with intentional consciousness and this mode of intelligibility which is exhausted in the activity of representation and this all-encompassing 'present' that stands at its stead (E. Levinas, 1998, 143-144). Deleuze as well interprets inner duration in terms of a passive synthesis which is constitutive of the

living present, but it is not active: it occurs *in* the mind, but it is not carried out through the mind (G. Deleuze, 1994, 71).

According to Worms, however, there are three problems that emerge in relation to the idea of a purely passive synthesis. This synthesis which is constitutive of the self and consciousness remains impersonal, its givens are devoid of significance and duration tends to become something objective; something which is given in advance (F. Worms, 2004, 64-65). Moreover, as Worms observes, the idea of passive synthesis would bring Bergson back to the associationist idea of sensibility that represents one of the main objects of the Bergsonian critique (F. Worms, 2004, 65). So, against the idea of a purely passive synthesis and the active synthesis of a consciousness that bears an external relation to its content, Worms interprets the qualitative synthesis of duration in terms of an immanent activity within duration, which is the very process of continuation of the past into the present, the formation of a purely qualitative impression out of objective stimuli (e.g. the successive sounds of a bell) and the retention in memory of that which is past. In this sense, even this famous phrase where duration seems to approximate more closely to pure passivity – i.e. ‘pure duration is the form which the succession of our conscious states assumes when our ego lets itself *live*’ – is not entirely passive: ‘to “let oneself live” is still an act’ (F. Worms, 2004, 67).⁵⁵

Against Worms’ thesis, Lapoujade brings back the idea of passive synthesis and argues that what really characterizes the immediate givens of consciousness is their organic development and auto-organization. In this sense, it is not the self that constitutes the qualitative multiplicities, but rather the latter that form the profound self. However, the most interesting part of Lapoujade’s analysis does not reside in his response to Worms or the re-iteration of the thesis of the passive synthesis (D. Lapoujade, 2010, 30). What is most intriguing for the perspective of our analysis is the way that Lapoujade explains the transition from this passive self – which is constituted as a dynamic multiplicity ‘beyond itself’, so to say – to the free act. According to Lapoujade, that which explains this transition is emotion, because it is emotion that encompasses the whole history of the person without abolishing the differential element of the qualitative multiplicities that constitute the self. Thus, if the free act is defined primarily as the expression of the integral history of the person (C.f. TFW, 170), this ‘synthesis’ takes place inadvertently.

⁵⁵ ‘ce “laisser vivre” est encore un acte’ (F. Worms, 2004, 67).

In Lapoujade's view, there are two mistakes (*contresens*) that have to be avoided when we try to think the 'emotive' or 'felt' multiplicity of duration. The first is to think emotion in terms of a particular multiplicity. 'Emotion is not a particular type of qualitative multiplicity. It is rather the inverse that holds: all qualitative multiplicity is emotion. Put more strongly, it is emotion that assures the qualitative character of experience' (D. Lapoujade, 2010, 42).⁵⁶ In this sense, emotion is what endows each experience and each particular multiplicity with its proper tonality and nuance (D. Lapoujade, 2010, 43). The second mistake that has to be avoided is to attribute to emotion a specific object: 'we are not really moved by an object, or at least, not primarily; we are moved by the whole, at the midst of which this object emerges, after a process of crystallization' (D. Lapoujade, 2010, 43).⁵⁷ Thus, there is no need to postulate a subjective act of synthesis in order to endow semantic content to the qualitative multiplicities that constitute the person. If we follow Lapoujade's analysis in its context it would seem that the passive synthesis of the person is itself a creative emotion – and not something which is *carried through* emotion – that envelops all the particular multiplicities and it is constituted itself as the sum of all the emotions (D. Lapoujade, 45). This genetic or creative emotion at a certain point explodes into a free act, which is not *caused* by it but represents rather its ultimate expression: 'Emotion expresses the qualitative unity that characterizes each experience and it provides the means through which each experience is qualitatively distinguished from all others' (D. Lapoujade, 2010, 44).⁵⁸

In his analysis of emotion Lapoujade draws a lot from the idea of creative emotion in the TSMR. It is in the latter work that Bergson introduces the view of the non-representative emotion which is independent from all particular objects and representations since it precedes both. Thus 'alongside of the emotion which is a result of the representation and which is added to it, there is the emotion which precedes the image, which virtually contains it, and is to a certain extent its cause' (TSMR, 47). The creative emotion is defined as pure form. Moreover, it is whole: through the creative emotion it is the whole that moves forward.

⁵⁶ 'L'émotion n'est pas un type de multiplicité qualitative particulière, c'est toute multiplicité qualitative qui est émotion; bien plus, c'est l'émotion qui assure à l'expérience son caractère qualitatif' (D. Lapoujade, 2010, 42).

⁵⁷ 'nous ne sommes jamais d'abord émus par un objet, nous sommes d'abord émus par le tout au sein duquel cet objet apparaît en suite par cristallisation' (D. Lapoujade, 2010, 43).

⁵⁸ 'L'émotion exprime l'unité qualitative propre à chaque expérience et c'est d'ailleurs ce par quoi elle se distingue qualitativement des autres' (D. Lapoujade, 2010, 44).

However, it is true also that seen in the light of Lapoujade's interpretation, the idea of the multiplicity-emotion seems in many ways to anticipate the theory of the creative emotion in the TSMR as the two other major topics of TFW –the idea of the free act and that of the social self. In terms of the problem that we encountered in our discussion of the intensity of the deep-seated emotions and that of the violent states (i.e. psychic tension etc), Lapoujade's interpretation provides in a sense the key for the understanding of the different relationship to multiplicity that we find in the deep-seated emotions and psychic tension (violent emotions). It would appear that emotion is one with the idea of qualitative multiplicity as such; that it contains the 'secret' of multiplicity because it does not depend on the pre-existence of a multiplicity of parts and ready-made elements that it synthesizes. This view would agree also with the definition of pure intensity in *Le parallélisme psycho-physique*. As we saw in the latter discussion, Bergson defines the intensity of the complex feelings in terms of a *felt multiplicity* of the elementary states that are involved in the complex feeling. Bergson adds that this multiplicity exists in the state of consciousness only potentially.

Moreover, it would seem that in the perspective of Lapoujade's analysis the distinction between the intensity of the deep-seated states and psychic tension would find an adequate explanation since the fundamental emotion contains virtually all other emotions and virtual movements, whereas the violent emotions and the feelings of psychic tension depend on actual movements that take place or are beginning to take place upon the surface of the body. Yet, despite its originality we do not think that this view of emotion is present as such in the analysis of TFW. In a paradoxical way, it presupposes also the other line of inquiry that we have been pursuing so far, which is the one that moves from the psychophysical intensity of the representative states towards the idea of psychic tension and the emergence of the psycho-physiological problem.

Yet, we will remain for the moment into the direction of qualitative multiplicities and the role of the profound emotions. Maybe, besides this fundamental and, so to say, totalizing character of the deep seated emotion in Lapoujade's interpretation, there is room for another view of the relationship between the intensity of deep-seated feelings and multiplicity and, in fact, one which is necessitated by the very idea of qualitative multiplicity as duration. Thus, as we mentioned before, Bergson often refers to a qualitative synthesis between the past and the present and this synthesis, or shaping, maybe is not something which is *given* with the multiplicity –since in many ways the multiplicity itself is not given. At the same time, the fact that there is this *sui generis*

synthesis which is almost indistinguishable from the formation of the multiplicity, does not necessitate either that the multiplicity will be initially discrete, or that the synthesis will take place through a subject agent that carries it through. It could be the case that the successive states of duration are molded into an organic whole in the same way that a nuance takes over the soul by assimilating and accumulating a variety of heterogeneous elements (sensations, perceptions, impressions, memories) that are permeated by the nuance, whilst they enrich it with their own shades. In this sense, the intensity of the deep-seated emotions could be viewed as a fundamental disposition of duration that can be described as the disposition towards the creation of indivisibles, the tendency to totalize itself and each alteration that it undergoes by molding, unifying and contracting the past and present 'moments', constituting at each 'instant' multiplicities that are organized in a dimension of depth. So, the nuance can be seen as this disposition towards the creation of a 'moving, changing, colored and living unity' (CM, 169), which is something like the unity of a common inspiration that the various states develop without necessarily originating from it, but 'interpreted' by it in such a way that they cannot be envisaged without this common inspiration (nuance), unless they lose everything distinctive about them. In this sense we could say that the profound emotion does not depend on the pre-existence of a multiplicity that it incorporates, or synthesizes – in a separate act of synthesis – but it does not really generate this multiplicity either.

In the *Introduction to Metaphysics*, Bergson provides an 'image' of the internal organization of the multiplicity that reveals the unique character of this process of shaping, melting and contracting the past into the present and indicates the complexity of this relation. As Bergson writes in the latter text, if we try to envisage a feeling that absorbs the whole personality in it,

the consciousness which will accompany this feeling will not be able to remain identical with itself for two consecutive moments...We must therefore evoke a spectrum of a thousand shades, with imperceptible gradations leading from one shade to another. A current of feeling running through the spectrum, becoming tinted with each of these shades in turn, would suffer gradual changes, each of which would announce the following and sum up within itself the preceding ones. (CM, 164)

So, the nuance or tonality of the deep-seated emotion is not something that imposes itself and its meaning upon a pre-existing multiplicity, or something that would entail all the virtual movements and particular multiplicities even in this indescribable

form that constitutes the specific color of personality and hence, not a particular feeling. In our view, the greatest privilege which is presented by the conception of the synthesis of the past and the present in terms of the intensity of deep-seated emotions, which is intensity conceived as nuance, is the fact that by means of it we can envisage a multiplicity of *different syntheses* or organizations into a whole that can take place into different levels and regions of psychic life. In this sense, the nuances that effectuate the syntheses in various degrees of depth could be regarded as the anticipation of the theory of *tones* which is advanced in the third chapter of MM. First though we have to see whether, and in what sense, we can speak of different levels or regions of psychic life in TFW. In this way we shall be able also to see how the idea of tension is introduced and why the deep-seated emotion, just by itself, even in its most intricate relation to multiplicity that Lapoujade describes, is not a sufficient description of the process that leads to the free act.

As we mentioned in the beginning of this section, according to Worms' analysis, each broad category of psychic states that Bergson studies in the first chapter of TFW, reveals a vertical differentiation between states that are 'situated' closer or further remotely from space. As we also saw, there is no such thing as an 'isolated' psychic element: psychic life is organized in terms of a multiplicity of interpenetration all the way through. Even the so-called simple states that present what we have termed since the beginning of the thesis another type of intensity than the pure intensity of the self-sufficient states – i.e. psycho-physical intensity – assimilate the external multiplicity of the physical cause with the qualitative multiplicity that comes from their affective aspect. Yet, if this multiplicity did not present different regions, or degrees of depth and a variety of organizations of psychic states – i.e. various minute prolongations and moldings of one element into the other – that coexist in a certain sense and are permeated and animated through distinctive nuances that work into the different levels, then this multiplicity would be turned into a flat and one-dimensional idea that would not be very remote from the category of the multiple that Bergson criticizes. It is in these minute qualitative syntheses that operate in different regions of psychic life that we could probably discern the exigency for introducing different degrees and rhythms of contraction that would correspond to the different regions and tones of psychic life.

Moreover, if the qualitative multiplicity of the self presented this perfect ever-changing and dynamic whole in the totality of psychic life, then the different degrees of freedom as well as the rare character of the truly free act – i.e. an act which is performed

and signed by the whole of the soul and consequently, an act of total self-possession – would become inexplicable. What would also be hard to explain is the emergence of the superficial self that covers up the profound self under its crust of commonplace forms and social predicaments. Thus, as Bergson notes, explaining the existence of various degrees of freedom,

it is by no means the case that all conscious states blend with one another like raindrops with the water of a lake. The self, in so far as it has to do with homogeneous space, develops on a kind of surface, and on this surface independent growths may form and float. Thus a suggestion received in the hypnotic state is not incorporated in the mass of conscious states, but, endowed with a life of its own, it will usurp the whole personality when its time comes. A violent anger roused by some accidental circumstance, a hereditary vice suddenly emerging from the obscure depths of the organism to the surface of consciousness, will act almost like a hypnotic suggestion. Alongside these independent elements there may be found more complex series, the terms of which do permeate one another, but which never succeed blending perfectly with the whole mass of the self. Such is the system of feelings and ideas which are the result of an education which is not properly assimilated...Here will be found, within the fundamental self, a parasitic self which continually encroaches upon the other. (TFW, 166)

Thus, as it transpires from the cited passage, the multiplicity that forms the profound self cannot be envisaged like a harmonic growth of elements that would move ‘necessarily’, as it were, towards the direction of freedom. At the same time, the superficial self, which is socially and spatially determined, is not constituted solely as practical consciousness or spatial intelligence. If there is a distinction between two aspects of the self this is so because there are different complexes of feelings, sensations and ideas that work in many different levels and are animated by different sources. The example of the hereditary vice and the unconscious complex of feelings and ideas that denote a problematic education, are revealing in this respect. The hereditary vice is a profound state that rises from the *depths* of the organism to the *surface* of consciousness. And the fact that it is situated in the organic memory of the body should not mislead us: both the hereditary vice that arises at the surface of consciousness, or the complex of feelings and ideas of an education which is not properly assimilated, are deep-seated states. Their expression, however, does not mark the emergence of a free act. Between the profound emotion that reflects the whole personality and the complex feelings that can arise accidentally through the hypnotic suggestion, there is a *difference in kind* and not one in degree. This is so, because it is the self that has *shaped* these feelings (TFW, 165) and in this sense it is the ‘author’ of the free act (TFW, 165, 166). In

contrast, the hereditary vice or the complex states that have stuck into memory as independent growths are states that are suffered by the individual; states that have a life of their own, just like the hypnotic suggestion that 'will usurp the whole personality when its time comes' (TFW, 166).

In other words, the free act is not just the expression of a deep-seated emotion or a qualitative multiplicity. At the same time, the superficial self is not just a fragmenting force that annuls the subtle distinctions and inserts the indescribable feelings into common and banal forms. As we saw in the preceding analysis, the problem is much deeper. The parasitic self encroaches at all levels of psychic life. So, in this sense it is not just every kind of synthesis of the past and the present that can lead to the free act, since the independent growths as well are complexes. Moreover, the conception of the qualitative synthesis in terms of the nuances that operate in the different regions of the self, presents an inadequate explanation, as indeed the emotive multiplicity that expresses itself (i.e. Lapoujade's interpretation). In other words, the nuance or the emotive multiplicity that Lapoujade describes, account for the process of self-creation, which is essential in the Bergsonian conception of freedom, but it is not of its sense as *free act*.

Against the view of an effortless act that takes place when its time comes, François advances a reading of Bergson's theory of the will based upon the notion of *tension*. In his analysis of the idea of the will as emotion (A. François, 2008, 48-73), François brings to the fore two elements in the Bergsonian theory of the will that usually pass unnoticed, yet are indispensable for the understanding of the process that leads to the free act. As he remarks, the idea of the will in Bergson's first work assumes the form of a certain *tension* which is adopted by our psychic life when it 'ripens' into a free act. As he argues, the will is this tension. The question is: do we encounter here the same idea of tension (psychic effort, or tension) of the violent emotions and the feelings of effort? First though we have to see how this idea is presented in the discussion of freedom and towards which exigency it responds. The concept of 'tension' appears only once in the text of TFW in this significant moment where Bergson describes the will in terms of a revolt against an advised course of action which is not really our own, in the sense that it does not respond to these feelings and ideas that we have shaped ourselves (TFW, 169). As Bergson writes,

at the very minute when the act is going to be performed, *something* may revolt against it. It is the deep-seated self rushing up to the surface. It is the outer crust bursting, suddenly giving way to an irresistible thrust. Hence in the depths of the self, below this most reasonable pondering over most reasonable pieces of advice, something else was going on –a gradual heating (*une tension croissante*)– and a sudden boiling over of feelings and ideas, not unperceived, but rather unnoticed. (TFW, 169)

As François shows, the idea of tension here denotes a state of strain that accompanies the revolt of the will against something that works as a counter-weight to the rush of the profound self: the idea of a 'counter-will' (*contre-volonté*) which is presented under the form of the parasitic self that forms a crust, or even sometimes under the form of this indolence that leads us to adopt certain pieces of advice and even to act like conscious automata. The presence of this 'counter-will' explains why the will that leads to the free *act* is defined in terms of tension, thrust and revolt and not just as an expression of the self. Under this last perspective, we can see also that the qualitative synthesis of the past into the present that we defined in terms of pure intensity, or nuance, responds to another exigency than the one which occurs in relation to the free act. In other words, it would seem that the creative process of shaping our ideas and feelings while we live them denotes what is *expressed* in the free act, but not the way into which the latter occurs. This *sui generis* synthesis which is effectuated in the different regions of psychic life in terms of the distinctive nuances of emotions and impressions that attract around them whole masses of more elementary states has to be completed by a movement of *tension*, which, in Bergson's later works, is defined also as *contraction*. However, the two terms are not equivalent to one another. In a certain sense, contraction is included in the idea of tension, but, as we saw, it is the concept of tension which is central for Bergson's later accounts of intensity and is endowed with a properly 'Bergsonian' significance.

Following François' analysis (A. François, 2008, 52), we could say that there are different *degrees* of tension, by means of which we mold the totality of our psychic states in order to thrust them into action –i.e. into an act which is 'signed' by our character, or else, the free act. In this way, the concept of tension is seen to respond to the various *degrees of freedom* in relation to the various regions of psychic experience –i.e. from the most profound where the totality of psychic life and the whole of its past history are incorporated into the act – to the most 'superficial' voluntary activity; even the one which is carried out by our body and its sensations. Seen under this perspective, the free

act is not just the natural prolongation of an emotional state that expresses itself when its time comes. Although Bergson sometimes uses the metaphor of 'ripening' and 'fructification' – as e.g. in his reference to freedom in MM (MM, 186) – it would be a great misunderstanding to think that the free act takes place just 'when our ego lets itself live' (TFW, 100). That is to say that, although freedom for Bergson ultimately comes down to the idea of duration, it would be entirely wrong to suppose that the free act occurs just because consciousness 'refrains from separating its present state from its former states' (TFW, 100). Or rather, if we follow François' analysis, ultimately, tension is 'internal' to duration in the sense that the continuity and heterogeneity of time is not something that is just 'happening', by itself, as it were. Under a certain perspective, the prolongation of the past into the present denotes the presence of the same 'immanent and internal synthesis' (A. François, 2008, 68) that we encountered also in our discussion of Worms' interpretation of the synthesis of time. As in the analysis of duration in the fourth chapter and the *Summary and Conclusion* of MM shows, this movement of prolongation and contraction of the past into the present, which is described by Worms and François as an immanent synthesis, is itself a *tension*.

So, if we come back to the distinction between the various degrees of freedom as degrees of tension (strain) that mark already at this stage the more or less contracted state of our will and hence the degree in which our past is condensed and incorporated in the free act, can we say that this idea of tension and this qualitative synthesis and mode of differentiation that we discerned in pure intensity, understood as nuance, can come together under the Bergsonian theory of the will and the free act? If we follow the above distinction between the nuance, which is essentially qualitative or pure intensity and the various degrees of tension that can be already anticipated in the Bergsonian theory of the will, it would seem that we arrive through a roundabout way and a diverse route, at the same conclusion as Deleuze's analysis of the relationship between intensity and the virtual multiplicity of duration. As we saw then, the idea of qualitative intensity, or pure quality, presented an obstacle against the emancipation of the profound sense of degree (intensive degrees) that accounted for the internal differentiation of the virtual into diverse degrees of contraction and allowed in this way the actualization of each divergent tendency and each 'level' or 'region of the past' up to its own level. In our investigation of the relationship between intensity and multiplicity, we examined the problem from the aspect of nuance, or pure intensity, and arrived once again to a radical distinction between nuance and tension, the qualitative feeling and the contraction that accounts

for its creation. However, if we look more closely to the outcome of the present analysis, we can see that the distinction is no longer between the perception of quality that covers up the contractive movement that creates it. In our examination of the relationship between pure intensity and qualitative multiplicity we were confronted rather with a *feeling* or *nuance* which is at once *sensed* and *creative*: a feeling that forms something new out of a multiplicity in which it is part. At the same time, we saw that the synthesis which is introduced with the idea of nuance can work at various levels, degrees or regions of psychic life representing something like the distinctive tone of each coalescence of psychic states in the multiplicities that they form. The problem emerged in relation to the transition towards the act and hence the active character of the Bergsonian idea of freedom.

Thus, if there is a distinction, it is no longer between the perception of quality and the intensive degrees that account for its genesis, but rather one that occurs between the *creative nuance* of pure intensity and the state of *tension* and 'gradual heating of feelings and ideas' that ends up in an explosive *act* that embodies the creative nuance within itself. The problem which is crucial from the perspective of our inquiry is to see whether this state of tension that connects the act to the creative process, might be related to the feelings of tension that we examined in our discussion of the distinction between the profound and violent emotions. In this way, we can see also how the psycho-physical intensity of the simple states is related to this idea of tension that defined the Bergsonian concept of the will. At the same time, this consideration of intensity as a mixed phenomenon – i.e. one that involves both the purely psychic factor which is the nuance and the psycho-physical intensity of the simple and intermediate states (i.e. effort and tension) – might elucidate also the way in which the nuance, understood as *feeling*, can be connected to the *free act*, which is carried out by means of the *tension*.

As we saw in TFW Bergson draws a distinction between the intensity of the deep-seated feelings (i.e. pure intensity or nuance) and that of the feelings of effort, tension and psychic tension (i.e. violent emotions) in terms of the presence or absence of physical symptoms. These states are complex and are not dependent on the action of an external cause, but their intensity is due to the movements of tension and muscular contraction that take place on the surface of the body. As he writes,

Now, we do not see any essential difference between the effort of attention and what may be called the effort of psychic tension: acute desire, uncontrolled anger, passionate

love, violent hatred. Each of these states may be reduced, we believe, to a system of muscular contractions coordinated by an idea; but in the case of attention, it is the more or less reflective idea of knowing; in the case of emotion, the unreflective idea of acting. The intensity of these violent emotions is thus likely to be nothing but the muscular tension which accompanies them. (TFW, 28-29)

In the light of the above definition of the intensity of the feelings of effort and psychic tension, it would seem that the idea of tension which is introduced in the theory of the will and the intensity of the intermediate states which is set forth in the investigation of intensity, have nothing in common. The first denotes a state of tension and contraction between *psychic elements*, or more profoundly, a tension that gathers up the past and thrusts it into a present that it creates under the form of an unprecedented act.

In contrast, the *intensity* of what is *commonly described* as psychic tension seems to be reducible to a number of muscular contractions and movements that take place at the surface of the body. Thus, from the perspective of the inquiry into intensity, there is no such thing as *psychic* tension: the latter is reducible to the feeling of muscular contractions (i.e. peripheral sensations). Likewise under the perspective of TFW, the feeling of intensity in attention is entirely due to muscular movements of tension and contraction.

It is noteworthy that in Bergson's later accounts of attention and the feelings of effort and of course in the idea of psychic tension, the mental or psychic element is more and more pronounced to the degree that the analysis of the body becomes more elaborate and profound. For example, in his explanation of voluntary attention in MM, Bergson sees in the movements of arrest and inhibition –by means of which Ribot defines the phenomenon of attention – as the negative condition of attention: the rest of the work is carried out by the mind (MM, 100). At the same time, as Forest has rightly observed, Bergson endows the body with a much more significant role than does any materialist theory of memory and perception (D. Forest, 2005, 191). The same displacement from a view that explains the feelings of effort exclusively in terms of the peripheral sensations (i.e. James' thesis), to one that discerns a predominantly psychic, intellectual and inventive aspect in the feelings of effort occurs in Bergson's later essays and lectures on this matter.

Returning to the problem of the relationship between the state of tension that denotes the state of our psychic life which is in process to thrust itself into the surface

and act and the analysis of psychic tension in view of the problem of intensity, we could say that although it is not obvious at first, the two are intimately related and in fact, they are related in such a way as to bring to the picture the element that seemed to be excluded from the idea of tension in the first place; i.e. the *feeling* of effort. The latter formulation takes place in the discussion of the relationship between real duration and causality. As Bergson endeavors to show, the determinist view of psychological causality (i.e. the associationist conception) is founded upon a mixed idea of cause which is the amalgam of a purely psychological idea of cause and causality – i.e. one that derives from the idea of duration – and physical causality (i.e. the determinist model which is based on the law of the conservation of energy).

So, according to the psychological causality of Hume's type, 1) a series of psychic phenomena a, b, c, d can recur once again in the same order and shape and 2) that a certain phenomenon P, which appeared after the conditions a, b, c, d, will not fail to recur as soon as the same conditions are again present (TFW, 202). As Bergson tries to show, this conception of causality represents a mixture between the deterministic causality in nature (i.e. what was described in the first chapter of the thesis as the 'strong type') and a purely psychological idea of prefiguring that corresponds to the intimate connection between the successive states of consciousness in duration. It is there, in view of the second type of causality (i.e. truly psychological causality), where the self appears as *free force* (TFW, 216) that we find a formulation of the idea of effort that connects all three features that were distinguished in our previous discussion: the state of tension or effort that precedes the act, the feeling of effort and the intermediary states of sensations and movements that render the act possible. As Bergson writes,

there is a prefiguring...familiar to our mind, because immediate consciousness gives us the type of it. We do, in fact, through successive states of consciousness, and although the later was not contained in the earlier, we had before us at the time a more or less confused idea of it. The actual realization of this idea, however, did not appear as certain but merely as possible. Yet, between the idea and the action, some hardly perceptible intermediate processes come in, the whole mass of which takes for us a form *sui generis*, which is called the feeling of effort. And from the idea to the effort, from the effort to the act, the progress has been so continuous that we cannot say where the idea and the effort end and where the act begins. (TFW, 211)

The above consideration of effort represents Bergson's view of free or psychic force, meaning by this a type of force which is alleviated from any mixture with necessary causality, which, under the perspective of TFW, appears synonymous with causality in nature. As we can see, it denotes at once a merging or contraction between the

successive states that are connected, the *feeling* of effort – and the intermediate processes that take place between the idea and the act –i.e. the nascent movements that begin to take place on the body. Would it not be the case that under this definition of effort the initial dichotomy between the purely psychic and physical aspects of intensity, the nuance and the tension, are finally united? Moreover, since this connection between nuance and tension appears to occur by means of sensation and movements (i.e. the *feeling* of effort which is produced by the nascent and actual movements and the *movements* that carry out the act) would it not be the case that these two aspects of intensity find their point of unity upon the living body with its affective and representative sensations?

4) The distinction between physical and psychological causality and the idea of free force: the feelings of effort and the two senses of tension

As we saw in the preceding analysis, the relationship between pure intensity and qualitative multiplicity gave rise to the idea of nuance as this qualitative synthesis that accounts for this *sui generis* idea of creation, which is introduced in TFW and is developed in Bergson's later works (CE, TSMR). That is to say, an idea of a creative process immanent in duration that cannot be adequately conceived either in terms of activity or passivity, but rather a process of self-creation and auto-organization of heterogeneous and continuous multiplicities of sensations, feelings and ideas and consequently, an idea of creation that presupposes something past, a pre-existing material that animates the forming principle of nuance in the same way that it is animated by it. Together with this internal and immanent process of creation, we examined another line of inquiry that appeared at first to address the second aspect of intensity: i.e. what we have defined as its psycho-physical aspect. This second line of inquiry led us to the examination of the concept of *tension* –psychic tension, the tension of the will and the feelings of effort.

One could pursue the theme of intensity up to this multifarious use of tension in MM, where intensity seems to be involved in the most crucial aspects of the Bergsonian analysis. Besides its most prominent and widely discussed aspect –i.e. the one which is explored in the fourth chapter of MM in view of the final statement and solution of the problem of matter and spirit – the idea of tension comes into Bergson's consideration of the nervous system, the theory of perception and most importantly in the theory of memory and the spirit. As we saw in the first section of the chapter, in his theory of memory and the mind, Bergson advances a new concept, that is, the idea of mental *tones*, whereas at the same time, memory contracts itself according to various *degrees of tension*.

The theme of effort and tension informs important aspects of Bergson's later philosophy of life, where he describes the evolution of life as 'one great effort' (CE, 127) that stretches from the bottom to the top of the organized world; an effort that 'often turns short, sometimes paralyzed by contrary forces, sometimes diverted from what it should do by what it does' (CE, 127). In the third chapter of the CE the relationship between the *feeling of effort*, the idea of the will as *tension* and the *creative movement* of life reaches its most systematic examination. In the third chapter of the CE, Bergson attempts to derive the double genesis of matter and intelligence out of the wider movement of life, discarding the factitious unity which is imparted upon nature by the

main metaphysical theories of knowledge (realism, idealism and Kantian criticism). The process that Bergson follows in order to thrust intelligence back into the principle from which it has emerged (CE, 191) is notorious: it involves a transcendence of the understanding which is described as an act of will, but at the same time it entails the same process of re-possession of past psychic life, which is the will understood as a state of extreme tension whereby the personality recoils and gathers up the whole of the past in order to thrust it undivided into the present. This state of extreme strain and tension is defined at once as a *feeling* of effort or tension, as a movement of *contraction* whereby the past is gathered up and condensed in order to thrust it forwards. This feeling of effort and movement of contraction held so tightly together to the point of coinciding with one another determines the Bergsonian idea of creation, which is always envisaged in terms of a creative effort.

In the TSMR, the theme of creative effort recurs once again in order to explain the non-representative character of creative emotion. The analysis of emotion and more specifically of the two *kinds* of emotion, the one which is dependent on an object or a representation and the other that gives birth to representations, images and concepts, represents certainly the peak of all of Bergson's previous inquiries on affectivity and the most mature conception of creativity. At the same time, the non-representative emotion, which is essentially the creative emotion, sets into the fore a new conception of sensibility that appears to reverse entirely the perspective into which we have been examining the affective aspect of intensity so far. When Bergson employs the term *emotion in the second sense*, we are confronted with a feeling that does not feel itself as it forms: quite on the contrary, it is itself a pure form that unfolds into images and particular emotions/ feelings/ sensations that it creates; particular emotions and feelings that aspire to this primary emotion that brought them forth. It is noteworthy that in this latter instance as well, Bergson employs once again the theme of effort.

Between the explanation of the feelings of effort and tension in TFW in 1889 and the publication of the CE in 1907, Bergson wrote a very significant essay in 1902, entitled *Intellectual Effort* and gave a series of lectures on the theories of the will at the *Collège de France* in 1906-1907 that represent the continuation of the same line of argument as the one that takes place in TFW. These two texts form part of an ongoing dialogue between Bergson and major psychological, psycho-physiological and psycho-pathological theories of his time. This ongoing encounter with psychology begins with TFW, is

pursued further in MM and in a series of essays and lectures that cover the period from 1896 –i.e. the publication of MM – up to 1913.

One could trace the origins of the above lines of inquiry developed in Bergson's later works, in this fecund dialogue between the metaphysics of duration and freedom and the empirical psychology of his time that finds one of its most controversial expressions in the theory of intensity and the two fundamental dispositions of our psychic life that we discerned therein: the deep-seated emotions that comprise the unity of feeling and the creative synthesis of nuance and the feelings of effort that impart a psycho-physiological aspect in the idea of the free act. In this light, the transition from inner freedom to the free act can be viewed beyond the superficial and abstract formulation of the problem of 'externalization' or again that of dualism. When it is viewed under the perspective of the analysis of tension and the feelings of effort, the free act poses the problem of incorporation or even that of materialization.

At the same time it seems that we left one problem hanging in suspense throughout this chapter: that is, the problem of the free force. We will begin with this last analysis where effort is presented as free force and accounts for the conception of a purely psychological causality. The latter consideration of causality is distinguished but *not* opposed to the necessary causality in nature. This last part of the third chapter that represents in many ways the culminant point of Bergson's critique of determinism, is informed by a paradox; or, in Bergson's view a seeming paradox. This comes down to the idea that the more we strengthen the physical conception of causality –understood as a relation that 'binds the present with the present' in a material world that *does not endure*(TFW, 210) – the more we affirm the free or spontaneous causality of the enduring consciousness. In contrast both the associationist concept of necessary causality that we saw towards the end of our last discussion and Leibniz's dynamism are seen to present impure forms of force that introduce one way or another the idea of necessity within the realm of freedom, which, as we saw, coincides, in Bergson's view, with the experience of inner duration.

So, in the same way that the associationists negate duration by postulating the existence of ordered and repeatable series of psychic phenomena, Leibniz is seen to endorse determinism with his concept of pre-established harmony; an idea that negates by definition the unpredictable character of true time. According to Bergson, the problem with both views of causality –i.e. the deterministic and the idea of contingency in nature – is that they mix two orders of phenomena: psychological causality which is

characterized by the idea of prefiguring that we encountered in the last section of the chapter, in the discussion of the *sui generis* feeling of effort that fills the interval between the idea and its realization (TFW, 211). Before we pass to the examination of the feeling of effort, we will present first the double paradox which is involved in this inquiry.

The first paradox is noted by Bergson himself and it is immediately refuted as a *seeming* paradox. However, since this seeming paradox informs the most animated discussion around the problem of dualism in TFW and since, as we shall see, it presents the ground upon which the second paradox is raised, we have to see how it is presented by Bergson. As he writes,

The more we tend to set up the causal relation as a relation of necessary determination, the more we assert thereby that things do not *endure* like ourselves. This amounts to saying that the more we strengthen the principle of causality, the more we emphasize the difference between a physical series and a psychical one. Whence, finally, it would result, however paradoxical this opinion may seem that the assumption of a relation of mathematical inherence between external phenomena ought to bring with it, as a natural or at least as a plausible consequence the belief in human free will. (TFW, 210)

The above formulation of dualism has been acknowledged as one of the greatest problems presented by Bergson's first work. We encountered this problem already from the first chapter of the thesis in our discussion of Pradines' critical reading of Bergson. In the light of Pradines' critique, Bergson's critique of psycho-physical parallelism is turned against itself as long as it endorses this rigid dualism of quality and quantity that leads to the alleged expulsion of intensity from subjectivity. One of the most rigorous and subversive critiques of Bergson on this matter, however, is presented by Jaurès. We saw previously that Jaurès considers Bergson's attempt to sever all positive contact between space and the profound self destructive for the very idea of freedom introduced by Bergson. (J. Jaurès, 1891, 162) Jaurès' insight on the problem of freedom in TFW is invaluable, because for him it is not a question of establishing a relation with the realm of extensity at all costs. In any case this relation is given *de facto*. His main objection against Bergson's dualism is directed to the superficial view of exteriority that Bergson endorses; one that turns all contact with space into dissimulation. At the same time, we saw that one of Jaurès' main points against Bergson's theory of intensity is centered in Bergson's account of the feelings of muscular effort.

However, just after the above statement of the relationship between psychological and physical causality, Bergson sets forth the consideration of the feeling of effort that seems to subvert both Jaurès' critique and to set into question, if not the dichotomy between the physical and the psychic realms, at least the meaning that Bergson imparts to the term 'external things' and some clues on the reasons that led him to adopt this dualist position. In addition, we have to note that Bergson employs James' explanation of the feelings of effort in order to explain the feeling of growing and diminishing intensity, but not the feeling of effort as such. The latter, just like the deep-seated states consists in 'a qualitative progress and an increasing complexity, indistinctly perceived' (TFW, 26). This definition and the two processes that account for the feeling of effort and the feeling of its intensity seem to be in total accordance with the exposition of the feeling of effort in the third chapter of TFW and even to elucidate the second. So, as we saw, according to Bergson, between the idea and the act, comes into play a *sui generis* feeling which is the feeling of effort. The latter is due, as he writes, to a whole mass of 'some hardly perceptible intermediate processes' (TFW, 211). We have to see now of what these intermediate processes consist.

Now, in the first chapter of TFW, Bergson gives an explanation of the feeling of muscular effort which is significant for the understanding of the employment of the *sui generis* feeling of effort in his account of free force and the paradox that it entails. First though, we have to note that the discussion of muscular effort represented one of the most controversial subjects amongst psychologists and psycho-physiologists at the time. The extent and persistence of this discussion, as Bergson himself observes in his lectures is due to the fact that the problem of the feeling of muscular effort is related to the metaphysical problem of freedom (H. Bergson, 1972, 688). As if to confirm this point, in the first chapter of TFW Bergson begins his examination of the problem of muscular effort from this part of the discussion that was most greatly indebted to the metaphysical examination of the problem, notably by Main de Biran.⁵⁹ However, Main de Biran's theory is not explicitly presented in TFW; it is rather Bain's theory of the 'outgoing stream energy'⁶⁰ and Wundt's theory of 'central nervous energy.'⁶¹

⁵⁹ Bergson does not refer explicitly to the work of Main de Biran in TFW. It is in his lectures that he presents Main de Biran's argument and his impact on Bain and Wundt (H. Bergson, 1972, 688). Main de Biran's explanation of muscular effort takes place in his *Essai sur les fondements de Psychologie* (2^e section, 1^{er} partie), 1812.

⁶⁰ A. Bain, *The Senses and the Intellect*, 4th ed., 1894, p.79 (Cited in the text of TFW, 21).

⁶¹ W. Wundt, *Grundzüge des Physiologischen Psychologie*, 2nd ed., 1880, vol I, p.375 (Cited in TFW, 21).

What appears really strange in Bergson's first examination of the feeling of muscular effort point is that he negates the metaphysical explanation of effort and deprives it even of any psychical aspect. What appears even stranger is that he directs his critique against the idea of *psychic force*. As he writes,

We picture to our minds a psychic force imprisoned in the soul like the winds of Aeolus, and only waiting for an opportunity to burst forth: our will is supposed to watch over this force and from time to time to open a passage for it, regulating the outflow by the effect which it is desired to produce. (TFW, 21)

According to Bergson, this crude consideration of force is at the basis of Bain's and Wundt's psycho-physiological explanations of the 'outgoing stream of energy' and the 'central nervous energy' and it is one of the main reasons why we believe in the existence of intensive magnitudes (TFW, 21). As he explains, muscular effort has space as its sphere of action and it manifests itself upon things that admit of measure. Consequently, if it is compressed to the point of becoming imperceptible and set into consciousness as a pre-existing force that regulates the outgoing stream of effort, then it seems to affirm one by one all the features of intensive magnitudes. However, it would seem that this is not the only reason that drives Bergson to refute the existence of psychic force. If we recall the critique of the mixed conception of causality, which is present, according to his analysis, both in psychological determinism and in dynamism, this critique of muscular energy seems less strange. Yet, the problem that occurs concerns then the appearance of the feeling of effort right at the heart of the Bergsonian realm of psychological causality – i.e. the realm of duration – and hence this aspect of our experience which is totally independent from space. And this is strange because, if we follow the explanation that Bergson gives to muscular effort – one which is attributed to James⁶² – it appears to pertain to this part of spatial experience which is closest to us: i.e. the body with its muscular sensations and movements.

Thus, according to James' explanation of the feeling of muscular effort, the intensity of the effort comes down to the peripheral sensations that occur whilst we try e.g. to lift a heavy weight. Bergson, taking this theory a bit further, argues that,

The more a given effort seems to us to increase, the greater is the number of muscles which contract in sympathy with it, and that the apparent consciousness of a greater

⁶² W. James, *Principles of Psychology*, 1891, vol. ii (Cited in TFW, 22).

intensity of effort at a given point of the organism is reducible, in reality to the perception of a larger surface of the body being affected. (TFW, 24)

Now, if we admit for the moment that in Bergson's view the feeling of muscular effort is reducible to the peripheral sensations (muscular contractions) that are *extensive* and *quantitative*, can we say that it is the same feeling of effort that comes into play in the analysis of free force? It is true that the intermediate stages that intervene between the idea and the act, in the *interval* of which the feeling of effort springs up, are left indeterminate. It is only much later in the 1906-1907 lectures that Bergson explains what really occurs in the interval between the idea and the action. This explanation however, draws its essential elements from the theory of recognition in MM.

In his theory of recognition Bergson brings into the fore the idea of the motor scheme –i.e. repetitive movements of analysis and synthesis that consolidate perception with movements that draw the outlines of the object providing its motor scheme. Could we say that the intermediate processes that fill the interval between the idea and the action are kinesthetic movements that sketch and 'rehearse' as it were the coming act? In his later analysis of the feeling of muscular effort, in the 1906-1907 lectures Bergson criticizes and completes the theory of the peripheral sensations that he seems to endorse wholeheartedly in TFW –that is, James' theory. As he argues, there is a purely psychic element in the feeling of muscular effort which is due to the *consciousness* between the point where we actually are and the point that we want to reach (H. Bergson, 1972, 692). That is to say, that the feeling of effort, and this holds for all kinds of effort (effort of attention, effort of comprehension or invention, effort of recollection and in a certain sense, intellectual effort), consists into the consciousness of a *temporal interval*. In the case of muscular effort this temporal interval is the interval that occurs between the sketched image of the movement that we wish to accomplish and the point where we actually are in its accomplishment. Without these kinesthetic images, or else the motor scheme that Bergson employs in the analysis of automatic recognition in MM, we would not be able to perform any voluntary movement (H. Bergson, 1972, 694).

5) The distinction between affective and representative sensations: from the psycho-physical to the psycho-physiological problem

In the previous section, we discussed Bergson's idea of spontaneous force and the involvement of the three aspects of tension that come into play in the realization of the free act: the tension of the will, the feelings of psychic tension and muscular effort. As we saw, the feelings of effort play a predominant role in Bergson's later accounts of the self and the will and in the idea of freedom that is introduced in his later works, where freedom does not denote only an internal feeling of self-possession and creation, but also voluntary movements, action and mastery upon the environment and upon other more relaxed intensities of life. At the same time, the twofold character of a feeling that has ceased to be entirely representative and instead is necessitated by the very process of carrying out an act – as its indispensable component – anticipates Bergson's later conceptions of the feeling of effort, where effort is envisaged as an active force immanent within the creative movement of life and at the same time as a feeling in the habitual sense of the word. Strictly speaking we could stop our analysis here since we had undertaken to disclose the origins of the concept of tension in Bergson's theory of the intensity of psychic states in conjunction with the problem of nuance and its relation to the qualitative multiplicity of duration.

Yet, besides these two lines of inquiry, there was also a third that appeared already from the first chapter of the thesis: notably, Bergson's dualist critique of psycho-physical parallelism that posed an internal problem in relation to his idea of freedom and in view of his later account of intensity, as tension, and the positive relation between matter and spirit introduced through the different degrees of tension. According to the latter definition, between matter and fully developed spirit there are infinite degrees of tension and relaxation; different degrees of intensity of life. Now, what is particularly interesting in regarding this view of the relationship between matter and spirit is that it responds to the exigency of stating the problem of matter and spirit anew, in terms of time rather than space (MM, 71). This new statement of the problem of matter and spirit derives as an exigency out of the theory of pure perception explored in the first chapter of MM.

Thus, it is because matter and perception are seen to approximate with one another in the theory of pure perception, that spirit will have to be explained by another principle, yet one that can enter into a positive relation with matter and at the same time, a principle that would not introduce this impassable barrier between matter and perception which is set up by idealism and realism, spiritualism and materialism. As is well known, this other principle is memory and the positive sense of distinction which is

thereby introduced between matter and spirit—i.e. in terms of time and the difference in kind between the virtual and the actual, the past and the present – and the positive definition of their relation in terms of the degrees of tension and extension.

One of the key elements in this mutual transformation of relations that characterizes Bergson's investigation of the traditional problem of dualism –i.e. the relationship between the spirit and the body addressed in MM – comes down to a view of the brain (i.e. the living body) that consists in regarding it as a temporal interval between the received action from the environment (stimulation) and the impending response. Sensation is found to emerge in this temporal interval and in this sense the brain is called also an organ of freedom. By introducing an interval between the action received and the action which is bound to be executed, the temporal interval which is the brain, unleashes a whole new variety of movements –i.e. voluntary – and at the same time, it disengages consciousness from the state of neutrality and unconsciousness –that denotes in Bergson's view the state of matter. At the same time, this view of the body enables Bergson to explain how we pass from matter itself to conscious perception, without postulating a consciousness that would be confined, this time, within cerebral matter and the role of translating the movements of matter –i.e. the role imparted to it by parallelism.

Now, what would appear strange and even paradoxical from the perspective of Bergson's inquiry into intensity and freedom in TFW and the strict dualities that are introduced by these two investigations, is the fact that both in the theory of freedom and in the account of the intensity of affective sensations Bergson introduces a certain consideration of the psycho-physiological relation that puts into question, not dualism per se, but its meaning. We examined already how the most rigorous and problematic aspect of Bergson's dualism was challenged at the very point that it was established: namely, the distinction between psychic and physical causality that was challenged by Bergson's idea of force as free effort and the psycho-physiological processes that it was seen to involve. As we shall try to show in this final section of the chapter, a similar challenge occurs also with Bergson's inquiry into the intensity of sensation. Yet, what would seem doubly strange in relation to this inquiry is that it is not the representative sensations that put into question the meaning of Bergson's distinction between consciousness and matter, the psychic and physical realms, but rather the examination of affective sensations.

Bergson begins his investigation of the intensity of the simple states by drawing a rigorous distinction between the affective and representative aspect of sensations. This distinction aims to disengage the *sensed* element of sensation –which is always partly affective – from any direct dependence on the action and representation of the external cause. This analysis precedes that of representative sensations and prepares the critique which is leveled against psychophysics: the sensation which is sensed and perceived by consciousness *is* caused by a physical (objective) stimulus, but this does not amount that sensation *itself* is measurable and objective.

As we saw in our previous discussion, the mixed perception of intensity in the representative states is due to the association of the quantitative variation of the cause with the quality of the effect. The fact that this perception has the status of acquired perception does not mean that sensation itself is mixed: there is always an aspect of sensation – notably the part which is *sensed* by consciousness – which is purely qualitative. However, the latter distinction holds precisely because there is a part of representative sensations which is always affective. This ‘internal’ distinction within sensation itself is expressly stated at the end of the inquiry (*TFW*, 73), but it is introduced really at the beginning of the examination of the affective states. This seemingly insignificant detail in the Bergsonian inquiry of intensity is crucial in reality, because, on the one hand, it indicates how the various statements on the purely qualitative, discontinuous and inextensive character of sensation should be apprehended and, on the other, it introduces a distinction which is crucial for the way in which the problem of perception and affection is stated in Bergson’s second work, *MM*.

At the same time, the aforementioned distinction between the *sensed* and the *perceived* aspects of sensation, introduces a dynamic consideration of the body and its relation to consciousness that foretells once again the analysis of *MM*. As Bergson argues, instead of trying to explain the feeling of intensive magnitude in affects through the molecular movements that take place in the organism –an explanation which is impossible to provide since what consciousness feels is only the ‘produced’ sensation and not the underlying movements – one might ask whether the meaning of affective sensations is not to be sought in the mobilization of the body as a whole against an automatic reaction that would have taken place if we were not capable for voluntary movements as well as automatic.

If pleasure and pain make their appearance in certain privileged beings, it is probably to call forth a resistance to the automatic reaction which would have taken place: either sensation has nothing to do, or it is nascent freedom. But how would it enable us to resist the reaction which is in preparation if it did not acquaint us with the nature of the latter by some definite sign? And what can this sign be except the sketching, and, as it were the prefiguring of the future automatic movements in the very midst of the sensation which is being experienced? And what can this sign be except the sketching, and, as it were, the prefiguring of the future automatic movements in the very midst of the sensation which is being experienced? The affective state must then correspond not merely to the physical disturbances, movements or phenomena which have taken place, but also and especially, to those which are in preparation, those which are getting ready to be. (TFW, 34)

The above statement is intended as a response to the explanation of intensity by the theory of psycho-physiological parallelism. The 'physiological' interpretation of intensity was advanced by Bernstein⁶³ and represents an attempt to re-formulate Fechner's psycho-physical law. The problem of psycho-physiological parallelism is not Bergson's main preoccupation in the first chapter of TFW. One can say that even in the third chapter of TFW, where the problem of psychophysical parallelism is addressed explicitly as a problem, Bergson tends to transpose the problem to one of the two sides of the distinction. Thus, it is a psychological prejudice that leads to the universalization of the theory of the conservation of energy and it is in the relationship between the past and the present of psychic states that the solution is sought.

Yet, if we look closely at the above statement we can see how the conception of affective sensation which is thereby advanced, dissociates subtly sensation from the role ascribed to it by the parallelist theory which is that of translating cerebral movements. So, instead of assigning to consciousness 'the merely scientific task of informing us about the past or the present' (TFW, 33) – meaning here, the past and the present as molecular movements – nature acquaints consciousness with the reaction which is being prepared automatically by the body and to which it resists. More correctly, consciousness in the form of sensation is the 'intermediate agent' (TFW, 34) that emerges between the automatic reaction which is held in check and the voluntary movement which is being prepared and it serves in order to inform us about the future and in this way assist on the upcoming action.

⁶³ Ribot presents briefly Bernstein's position (Th. Ribot, 1879, 198). Bernstein's thesis on the physiological causes of intensity represents an attempt to reinterpret Fechner's logarithmic law. Ribot cites Bernstein's article, *Zur Theorie des fechnerschen Gesetzes des Empfindung*, *Archives de Reichert et Dubois-Reymond*, 4868.

The common features between the consideration of the body, its role and meaning and its relation to conscious perception between the above exposition and the one which takes place in the first chapter of *MM* are too striking not to be noticed. In both cases affection or sensation springs in the temporal interval which is opened up by the nervous system between automatic and voluntary movements (the immediate past and the future action). Moreover, both here and in *MM*, Bergson shuns the idea that the role of sensation is merely speculative (i.e. to translate into another language cerebral movements) and recognizes in affective sensation the role of acquainting us with the nascent movements that are sketched by the body, movements of reaction in the case of pain that are doomed to be unavailing (pain defined in *MM* as a motor tendency in a sensory nerve). Bergson's analysis of affective sensation and the role of the body therein advance extremely important elements for the reformulation of the problem of dualism and its transposition from the duality of duration and space, quality and quantity, to a new apprehension of the relationship between consciousness and matter which is thought already here in *terms of time*.

Conclusion

During the course of our analysis we pursued three main lines of inquiry. The first consisted in the examination of the two meanings of intensity in Bergson's first work –i.e. the psychic and psycho-physical aspects of intensity – the second in the inquiry into the meaning of nuance –in the twofold sense of a feeling which is at once the object of an experience and a creative process – and the third came down to the attempt to examine the origins of the concept of tension by following the two aforementioned lines of thought at their point of convergence which appeared to involve a 'third' term: the body with its sensations and movements.

The first line of inquiry emerged as a problem from Pradines' critique of Bergson. As we saw, one of the most intriguing aspects of this critique consisted in the idea that Bergson surreptitiously adopts the position of psycho-physical parallelism, by regarding intensity as a representative state. In the light of Pradines' analysis, Bergson was seen to contradict himself since the main motivation for his critique of psychophysics was the critique of psycho-physical parallelism and its detrimental effects for the idea of freedom. In this sense, the problem that was disclosed by Pradines' critique – a problem which is *not* according to him the most tenacious problem presented by Bergson's investigation of intensity – came down to an *internal problem*. Another formulation of the same problem, although stated in different terms, was presented by Jaurès. As we saw, Jaurès discerned an impossibility in Bergson's theory of freedom since the latter consists in a view of freedom as the expression of the profound self, yet this inner freedom is established at the expense of a radical loss of all positive and profound contact between the self and space that would enable inner freedom to be realized into an *act*.

At the antipode of these two critical readings, we examined another apprehension of Bergson's critique of psycho-physical parallelism and the invaluable contribution of the inquiry into intensity in this respect. This positive apprehension of Bergson's critique of psycho-physical parallelism and the determinist thesis that it involves –i.e. the extension of the law of the conservation of energy to the realm of psychology – was advanced by Fedi. This interpretation challenged the habitual reading of Bergson at this point since, far from endorsing the allegation of the presence of a rigid and parochial dualism in Bergson's thought, Fedi showed the ways in which Bergson's dynamic view of psychological experience bears radical consequences against physical determinism.

During the course of our investigation of intensity we left the problem of dualism hanging in suspense and instead tried to approach it indirectly. To begin with we examined the problem of intensity from the perspective of its two aspects: the intensity

of the complex and the simple states. As we saw, through this examination, the problem of quality and quantity is held in suspense until it reaches a statement which is no longer that of the quantitative multiplicity that comes from space and intrudes, as it were, within our inner life. Instead, we pursued the psychic and psycho-physical aspects of intensity independently from one another up to the point where they were seen to converge in a 'third' term, which is the body with its movements and sensations. More to the point, the body, that experiences *affective sensations* from within together with the extensive movements that occur upon its surface, appears as this point of transference and meeting between the two kinds of multiplicity. At the same time, since the confusion between the two kinds of multiplicity represents the source of all the illusions around time and freedom, the body represents the most powerful means for the propagation of the illusory representation of intensity – i.e. intensive magnitude – the illusory representation of duration as homogeneous time, and finally, it provides the means for the application of physical determinism upon the realm of psychology that destroys the inner feeling of freedom.

However, viewed from a different angle – in fact one that informs crucial parts of Bergson's argument – the body is considered as a *living organism* that resists the application of the law of the conservation of energy (TFW, 153) and seems in all respects to be the best medium for the realization of an act which 'subject to the action of time and storing up duration, may thereby escape the law for the conservation of energy' (TFW, 154). In short, the body considered as the means for the realization of the free act. At the same time, this second conception of the body (i.e. as a living organism that resists the laws of conservation) imparts upon Bergson's theory of freedom a new meaning: no longer entangled within the superficial problem of interiority/ exteriority, it affirms itself in terms of movements that bear consequences for the realm of extensity and space. Viewed from this second perspective, the body is no longer the 'carrier' of the illusion – the means that transfers it at the heart of the psyche – but rather this point where the illusion expires into lived experience. It is this consideration of the mixed forms that we explored in the last chapter of the thesis.

Through this positive examination of the mixtures and the new sense of distinction that derives thereof – the distinction between the two psychic dispositions – or the examination of the role of the body in the realization of the free act, we do not intend really to argue that dualism is overcome, or that this is the direction to overcome it. Quite on the contrary, the most intriguing part of Bergson's treatment of dualism in TFW

is that he is never really anxious to resolve the dualities that he introduces; what interests him more is to interpret them. This approach is elaborated in an unparalleled way in Bergson's second work, MM. Yet the first signs of this attitude to dualism can be traced already in TFW in relation to the problem of sensation, the role of the body in affective sensation and finally the paradoxical aspects of the solution to the problem of freedom –i.e. the strict dualism that it introduces between the psychic and physical realms and the simultaneous emergence of the psycho-physiological aspect of the free act. All these concurrent forms of dualism and other forms that seem to overcome it, attest to the idea that perhaps the problem of the soul and the body, as it is examined in MM, has emerged out of this paradoxical relation between the attenuated forms of dualism and other forms that seem to challenge the first, but never really resolve them.

The inquiry that was presented in this thesis could be read as an attempt to formulate the problem of intensity on the brink of Bergson's first and second works, TFW and MM. We tried to cover this 'distance' mainly by examining certain common problems that stretch between the two works and mark the transition from the problem of duration and freedom to the examination of the problem of spirit and matter. In this transition the problem of intensity certainly maintains a leading role and a pivotal position. At the same time, by insisting on the qualitative character of intensity and the dynamism of the idea of nuance we brought to the fore one particular perspective of the idea of *feeling* and sensibility in Bergson's work which is explored in his later works, the CE and the TSMR.

The idea of tension, understood in the twofold sense of the degrees of tension and the various tones or mental dispositions -i.e. nuances – opens up a line of inquiry that connects TFW, to MM and the CE, whereby tension denotes at once a feeling of effort or strain and a creative contraction. The idea of tension is taken up in the third chapter of MM where memory is seen to contract the whole of the past according to various degrees of tension. It appears once again in the fourth chapter of MM where Bergson develops his 'gradualist' theory of the real, where the infinite degrees of tension and extension between matter and spirit are enveloped by a poly-rhythmic duration. Yet, the concept of tension which is introduced in the Bergsonian theory of the will in TFW, is most closely related to the idea of tension, effort and strain which is imparted to the creative tendency of life. Bergson often describes the evolution of life as 'one great effort' (CE, 127) that stretches from the bottom to the top of the organized world; an

effort that 'often turns short, sometimes paralyzed by contrary forces, sometimes diverted from what it should do by what it does' (CE, 127).

However, it is in the third chapter of the CE that this relationship between effort, will and life is presented under the concept of *tension*. There, Bergson attempts to derive the double genesis of matter and intelligence out of the wider movement of life, discarding the factitious unity which is imparted upon nature by the main metaphysical theories of knowledge (realism, idealism and Kantian criticism). The process that Bergson follows in order to thrust intelligence back into the principle from which it has emerged (CE, 191) is notorious: it involves a transcendence of the understanding which is described as an act of will, but at the same time it entails the same process of re-possession of past psychic life, which is the *will* understood as a state of extreme *tension* whereby the personality recoils and gathers up the whole of the past in order to thrust it undivided into the present. This state of extreme strain and tension is defined at once as a *feeling* of effort or tension, as a movement of *contraction* whereby the past is gathered up and condensed in order to thrust it forwards. This feeling of effort and movement of contraction held so tightly together to the point of coinciding with one another, determine the Bergsonian idea of creation, which is always envisaged in terms of a creative effort.

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